

# The Content Analysis of the Post-graduate Theses Related with Competition in Civil Aviation

*Sivil Havacılık Alanında Rekabet ile İlgili Hazırlanan Lisansüstü Tezlerin İçerik Analizi*

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## ABSTRACT

### Keywords:

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*With the deregulation in the civil aviation industry, competition has started to increase. Firms operating in the sector had to continue their services in a competitive environment. For this reason, scientific studies and theses have been conducted on competition for firms operating in the field of civil aviation. The aim of the research is to profile the postgraduate theses prepared in the field of civil aviation and competition in Turkey by examining them bibliometrically. All postgraduate theses prepared in the field of civil aviation and competition in the National Thesis Center were included in the research. The number of theses prepared in the field of civil aviation and competition topics was determined as 24. The content analysis method, which is one of the qualitative research methods, was used in the research. It was determined that most of the theses examined adopted the qualitative research method. When the samples of the theses were examined, Turkish Airlines for 10 theses and Pegasus for 8 theses were taken as samples. The first five frequently used keywords are competition, airlines, airline transportation, competitive strategies, and civil aviation, respectively.*

## ÖZET

### Anahtar Kelimeler:

Sivil Havacılık,  
Rekabet,  
İçerik Analizi,

### Jel Kodları:

M10, M19

*Havayolu taşımacılığında serbestleşme ile sivil havacılık sektörü genişlemiş ve rekabet artmıştır. Her sektörde olduğu gibi sivil havacılık sektöründe de rekabet ortamının şiddeti, daha iyi hizmet verme konusunda işletmeleri motive etmektedir. Bu süreçte sivil havacılık eğitimi de yaygınlaşmıştır. Araştırmanın amacı Türkiye'de sivil havacılık alanında ve rekabet konusunda hazırlanmış olan lisansüstü tezleri bibliyometrik olarak inceleyerek profilini çıkarmaktır. Ulusal Tez Merkezi'nde yer alan sivil havacılık alanında ve rekabet konusunda hazırlanmış olan tüm lisansüstü tezler araştırmaya dahil edilmiştir. Sivil havacılık alanında ve rekabet konusunda hazırlanan tez sayısı 24 olarak belirlenmiştir. Araştırmada nitel araştırma yöntemlerinden biri olan içerik analizi yöntemi kullanılmıştır. İncelenen tezlerin büyük bir çoğunluğunun nitel araştırma yöntemini benimsediği belirlenmiştir. Tezlerin örneklemi incelendiğinde ise 10 tezin Türk Hava Yollarını ve 8 tezin Pegasus'u örneklem olarak aldığı görülmektedir. İlk beş sık kullanılan anahtar kelime sırasıyla rekabet, havayolu işletmeleri, havayolu taşımacılığı, rekabet stratejileri ve sivil havacılıktır.*

## 1. INTRODUCTION

The aviation industry has developed tremendously over the centuries as people have chased their dreams of flying. Early humans performed various experiments by imitating the flight methods of birds (Johnson, 2003). However, the real development of the aviation industry began with the Wright brothers' first flight towards the end of the 19th century. The success of the Wright brothers led to a breakthrough in the aviation industry. At the beginning of the 20th century, many countries worldwide began to work on the production and development of aircrafts. World War I was a milestone in the aviation industry. During this period, aircrafts played an important role in wars and developed rapidly (Maw, 1994). In the postwar period, the aviation industry began to grow rapidly with the rise in civil aviation. New airports, air traffic control systems, and civil aircrafts have been developed.

The first passenger flights were made, and air transportation began to spread around the world. The aviation industry has gained momentum with technological advances and the increasing importance of air transportation. The aviation industry experienced a devastating competitive period in the 1930s and 1940s (Pickrell, 1991). Before deregulation, competitiveness in the aviation industry was shaped by government policies. With the introduction of domestic deregulation in the United States in 1978, many entrepreneurs took part in the decision-making mechanism in the aviation industry (Borenstein & Rose, 2014). Deregulation has also changed the barriers to entry into the aviation industry. The status quo has been lifted and market rules have been rearranged. Thus, airline companies have started to develop strategies and policies to gain a competitive advantage to survive (Kangis & O'reily, 1998). In the 1990s, globalization increased in the markets, and as a result, global competition in the aviation industry intensified with the discovery of new markets and rapid progress in information and communication technologies (Çoban, 2011: 20). The aviation industry also showed serious development in the 1990s, and competition in the aviation industry increased with the increase in intercontinental and international flights (Bakırtaş & Bakırtaş, 2008: 102).

Towards the end of the 20th century, jet planes, supersonic planes, and other technological innovations emerged. These have provided air transport with speed, comfort, and safety (Federal Aviation Administration, 2021). The aviation industry, which is an important part of the global economy, facilitates global trade by enabling people to travel around the world and transport goods and services. It provides jobs for millions of people worldwide and contributes to the economic development of countries (Smith, 2006). The aviation industry, which indirectly supports many sectors and business lines (IATA Annual Review, 2020), facilitates international economic relations by accelerating interactions between many countries (Rajasekar & Fouts, 2009: 94). Therefore, it can be said that the aviation industry provides employment, creates economic growth, and facilitates trade.

The first aviation activities in Turkey started with the initiative of foreign enterprises in the first few years of the republic. In 1933, with nationalization policies, the airline company, which is the basis of today's Turkish Airlines, was established in Turkey (Yurtoğlu, 2016: 305). Until the 1980s, the development of Turkey's aviation industry was limited. The aviation industry developed in our country, with permission to establish private airline companies in 1983 and the deregulation of domestic flights in 2023 (Yalçınkaya, 2019: 432). With the freedom given to the aviation industry, such as capacity, price, market entry, and access, airline companies can operate in a competitive environment as they wish. Competition has intensified both domestically and internationally.

With the increase in competition in the aviation industry, scientific studies have begun to be conducted on this subject. The concepts of competition and competitive strategies have become popular concepts of researchers working in the field of aviation management. (Gerede, 2012; Gündüz, 2013; Sönmez & Eroğlu, 2018; Sönmez & Eroğlu, 2020; Yaşar & Gerede, 2018; Yaşar & Gerede, 2020). With the increase in the number of higher education institutions providing education in the field of aviation in Turkey, the interest in the field has also been reflected in postgraduate theses. These theses not only provide students with the intended competencies, but also contribute to the development of the literature. The constant increase in scientific studies makes it necessary to interpret and summarize the information complexity. In this research, it was aimed to reveal the current status of the scientific development of the subject of competition in postgraduate education in the aviation sector and to give guiding suggestions for future studies. For this purpose, the bibliographic analysis method was used. In the literature part of the research, the aviation industry and the concept of competition are explained. In the method section, the method, purpose, population and sample of the research, research questions, how the data were obtained, data analysis and analysis methods are explained. In the findings section, the findings and comments obtained from the data obtained in the research are presented. In the results and recommendations section, the results and recommendations are included.

## 2. AVIATION INDUSTRY AND COMPETITION

Civil aviation, which is known for the Wright brothers' first flight trials at the beginning of the 20th century, and the first steps taken, has passed through several phases until today. With the phases that the aviation industry has passed through, it has developed, advanced, and matured. These phases enabled the development of the aviation industry, especially in the second half of the 20th century. With the airline deregulation movement in the United States of America in 1978 and the privatization process, the aviation industry has undergone a radical evolution (Ko, 2016: 53). In this process, there has been serious passenger demand, and the sector has developed rapidly. However, with the crisis on September 11, a serious break occurred in the aviation industry. In 2003, there was a crisis due to the SARS virus and the aviation industry was immediately adversely affected. Another crisis that negatively affected the development of the aviation industry and became a breaking point was the 2008 global economic crisis (Cento, 2009: 3). The last breaking point that brought the aviation industry to a standstill is the Covid-19 pandemic, which started in China in 2020 and has affected the whole world. The development of the aviation industry was adversely affected, as airlines could not see their way in times of crises, such as security problems, economic uncertainties, and pandemics. In these processes, airline companies made radical changes in their strategies and policies and started to provide services on different lines and implement various price policies to ensure their sustainability in the sector. With the decrease in prices of airline companies' services, there has been a great increase in demand. Thus, new airline companies that aimed to diversify their passenger demands in the aviation industry entered the sector (Ko, 2016: 53).

To maintain their presence in the sector, achieve their goals and objectives, and maintain their market shares, airline companies should analyze the competitive structure of the markets in which they operate and their competitors (Kılınç et.al., 2009: 174). It is possible to list some of the important factors affecting competition for airline companies, such as members of an airline alliance, free competition structure, the attitude of civil aviation authorities, having a slot at major airports, and the type and size of exit barriers (Peksatıcı, 2010: 14). Reducing risks and costs is more important for businesses competing in the aviation industry than for those in other industries. What airline companies need to do to survive by making their activities sustainable is to develop and implement a competitive strategy jointly to reduce and manage risk, to jointly develop a strategy to manage uncertainty, to ensure customer satisfaction, to create a common synergy and to share information, technology, and experience (Kanbur & Karakavuz, 2015: 487).

The aviation industry is a transportation market in which many different airlines produce similar services and compete (Wells, 1999: 168). Competition in airline companies, which are a part of this market, started in the years when deregulation was achieved. Deregulation was realized in the United States of America in 1978; the effects of this deregulation began to be felt by the sector in the 1980s, and deregulation took place in Europe in the 1990s. Before the deregulation of the airline, airlines were subject to some restrictions to prevent competition in matters such as line structures and fares. With deregulation, the first competition between airlines concerned prices (Fillol, 2009: 966).

When Turkish Civil Aviation was examined, it was seen that the first steps of deregulation were taken in the 1980s. In 1983, the government developed and implemented policies related to deregulation in many different sectors, especially in transportation, communication, and tourism (Yalçınkaya, 2019). To develop and revitalize the tourism sector in our country, the aviation industry, which is one of the most important complements of tourism, has also been included in sectors where deregulation will take place. First, the Turkish Civil Aviation Law was put into effect in 1983, followed by the Commercial Air Transport Operations Regulation was put into effect in 1984. Thus, the establishment of private airline companies in Turkey and their entry into the market were allowed (Gerede, 2011: 510). During this period, many new airline companies took part in the Turkish Civil Aviation industry because of deregulation (Gerede & Orhan, 2015: 189). However, some private airline companies that started operating could not be successful because they could not keep up with competition in the sector (Yaşar & Gerede, 2018: 172). With the Gulf War that started in this period, there was a contraction in the demand for tourism in Turkey, which had a negative impact on Turkey's aviation industry. After the crises and competition, many of the first private airline companies that were established had difficulty continuing their activities and declared bankruptcy within a few years (Yalçınkaya, 2019: 425). For example, during the Covid-19 pandemic, the Turkish aviation industry was adversely affected. In 2020, air passenger traffic in Turkey decreased by 67.2% compared with the previous year (T.R. Ministry of Transport and Infrastructure, 2021). This decrease affected the financial situation of Turkish Airlines and caused operational losses (Çavuşoğlu, 2021). In addition, travel restrictions were imposed worldwide owing to the pandemic, which prevented the Turkish aviation industry from operating in international markets (Yavaş, 2020).

### 3. METHODOLOGY

#### 3.1. Research Model

The research model examines postgraduate theses prepared in the field of civil aviation and competition in Turkey and analyzes the features of these theses, such as the models they used, the years they were written, keywords, sample groups, research methods, and data collection methods. Bibliometric analysis is a research method performed by collecting, organizing, and analyzing numerical data from scientific publications. This method is used to measure the characteristics of scientific publications such as journal effects, citation rates, author performance, publication trends, and interdisciplinary collaboration (Glanzel & Schoepflin, 1999). In addition, bibliometric analysis can be used to analyze the qualities of academic studies on a particular subject (Leta et al., 2016).

This research aims to profile postgraduate theses prepared in the field of civil aviation and competition in Turkey by examining them bibliometrically. Within the scope of the research, the years in which postgraduate theses conducted in the field of civil aviation and competition in Turkey were widely written, their distribution according to keywords, sample groups, distribution according to research and data collection methods, and their findings were examined.

#### 3.2. Population and Sample (Research Group)

In this study, a population was selected in which all postgraduate theses could be used. The theses examined were not limited to their writing language and a certain date range. All postgraduate theses prepared in the field of civil aviation and competition at the National Thesis Center were included in the research. The total number of theses was determined to be 24. All these are open to access, and there are no theses that cannot be accessed. Ethics committee approval was not required as secondary data were used in the study.

#### 3.3. Data Collection Tools

Data were collected from postgraduate theses in the National Thesis Center. The scanning was carried out on 30.12.2022 by writing "civil aviation" on the subject and "competition" in the name of the thesis from the "detailed scanning" section.

The content analysis method, which is one of the qualitative research methods, was used in the research. Content analysis is a method generally used in the analysis of written and visual data (Özsarı et.al., 2016: 211). In the content analysis method, it ensures that the data revealed by the researcher, within the framework of the rules, are accepted as a scientific report to classify and reveal the determined judgments (Koçak & Arun, 2006: 22). Each thesis included in this study was examined one by one within the scope of research questions and the data were collected in the excel program and their percentage distribution was determined.

### 4. RESULTS

In Table 1, the type of distribution of the theses examined within the scope of the research is given. As given in Table 1, 17 (70.83%) theses, which are the majority of these, were prepared as master's theses and the other 7 (29.17%) theses were prepared as doctoral theses. This distribution of thesis types reflects a notable disparity between master's and doctoral theses within the scope of the research. The higher proportion of master's theses indicates that there might be a greater emphasis on investigating topics related to master's level studies.

**Table 1.** Distribution of Types of Theses

Thesis Type	F	%
Master's thesis	17	70.83
Doctoral thesis	7	29.17
Total	24	100

In Table 2, the distribution of theses prepared in the field of civil aviation and competition is given over the years.

**Table 2.** Distribution of Theses by Years

Thesis Type	Master's thesis		Doctoral thesis		Total	
	F	%	F	%	F	%
2006	1	5.88	0	0.00	1	4.17
2007	3	17.65	0	0.00	3	12.50
2008	1	5.88	0	0.00	1	4.17
2014	0	0.00	1	14.29	1	4.17
2015	1	5.88	0	0.00	1	4.17
2016	4	23.53	1	14.29	5	20.83
2017	3	17.65	0	0.00	3	12.50
2018	1	5.88	1	14.29	2	8.33
2019	2	11.76	0	0.00	2	8.33
2020	1	5.88	1	14.29	2	8.33
2021	0	0.00	2	28.57	2	8.33
2022	0	0.00	1	14.29	1	4.17
Total	17	100.00	7	100.00	24	100.00

The first thesis on civil aviation and competition was prepared in 2006. The thesis in 2006 is a master's thesis. Then, 3 master's theses were prepared in 2007 and 1 master thesis in 2008. No thesis was prepared between 2008-2014. The first doctoral thesis was published in 2014. 1 thesis was prepared in 2014 and 2015. 2016 is the year in which the most theses were prepared with 6 theses. While 3 theses were prepared in 2017, 2 theses were prepared in the following years 2018, 2019, 2020 and 2021. In 2022, a thesis was prepared. The findings suggest that the research on competition in the aviation industry has undergone fluctuations over time, likely influenced by industry dynamics and external factors (Smith et al., 1991). It can be said that the subject of competition in the aviation industry, which is one of the sectors according to the stopping point during the Covid-19 pandemic period, has been researched very little. Especially during the pandemic period, the aviation industry experienced a global crisis, which had a significant impact on the shrinkage and bankruptcy of airline companies and the competitive structure in the industry. Therefore, the pandemic process has also caused serious problems in the data collection processes in the sector. Due to the pandemic, it has become more difficult to collect and process the data required for competitive analysis in the aviation industry. For this reason, it can be said that the subject of competition in the aviation industry has been researched very little during the pandemic period. It can be said that the number of doctoral theses is quite low.

In Table 3, the numbers, and distributions of the examined theses according to the language in which they were prepared are given.

**Table 3.** Distribution of Theses by Language

Language	F	%
Turkish	21	87.50
English	2	8.33
German	1	4.17
Total	24	100

As seen in Table 3, most of the theses were prepared in Turkish. Of the theses, 21 (87.50%) were written in Turkish, 2 (8.33%) in English and 1 (4.17%) in German. The theses prepared in English were prepared within Bahçeşehir University and the language of the university is English. The German thesis was the first thesis prepared in 2006 and was prepared at Marmara University.

The number and distribution of the analyzed theses according to the institutes where they were prepared are given in Table 4.

**Table 4.** Distribution of Theses According to the Institute of Preparation

Institute	F	%
Institute of Social Sciences	22	91.67
Institute of Graduate Studies	2	8.33
Total	24	100

As shown in Table 4, 22 (91.67%) of the theses prepared in the field of civil aviation and competition were prepared at the institute of social sciences and 2 (8.33%) in the institute of postgraduate education.

Table 5 shows the number and distribution of theses on civil aviation and competition within the scope of the universities where they were prepared.

**Table 5.** Distribution of Theses According to the University of Preparation

Universty	Master's thesis		Doctoral thesis		Total	
	F	%	F	%	F	%
Anadolu U.	2	11.76	2	28.57	4	16.67
Marmara U.	2	11.76	0	0.00	2	8.33
Türk Hava Kurumu U.	1	5.88	1	14.29	2	8.33
Beykent U.	2	11.76	0	0.00	2	8.33
Akdeniz U.	2	11.76	0	0.00	2	8.33
Bahçeşehir U.	2	11.76	0	0.00	2	8.33
İstanbul Arel U.	1	5.88	1	14.29	2	8.33
Haliç U.	1	5.88	0	0.00	1	4.17
Dokuz Eylül U.	1	5.88	0	0.00	1	4.17
Düzce U.	1	5.88	0	0.00	1	4.17
İstanbul U.	0	0.00	1	14.29	1	4.17
İzmir Katip Çelebi U.	1	5.88	0	0.00	1	4.17
Okan U.	1	5.88	0	0.00	1	4.17
İstanbul Medipol U.	0	0.00	1	14.29	1	4.17
Ondokuz Mayıs U.	0	0.00	1	14.29	1	4.17
Total	17	100.00	7	100.00	24	100.00

When Table 5 is analyzed, it is seen that the theses prepared in the field of civil aviation and competition are mostly prepared within Anadolu University. Four theses (16.66%) were prepared at Anadolu University. Two theses each were prepared at Marmara, Turkish Aeronautical Association, Beykent, Akdeniz, Bahçeşehir and İstanbul Arel Universities and one thesis each at Haliç, Dokuz Eylül, Düzce, İstanbul, İzmir Kâtip Çelebi, Okan, İstanbul Medipol and Ondokuz Mayıs Universities. The highest number of doctoral theses was prepared at Anadolu University with 4 theses.

Table 6 shows the number and distribution of theses according to the gender of the students who prepared the theses. When Table 6 is analyzed, it is seen that 15 (62.50%) theses were prepared by male students and 9 (37.50%) theses were prepared by female students. Of the total of 17 master's theses, 11 were prepared by male students.

**Table 6.** Gender Distribution of the Students Preparing the Theses

Gender	Master's thesis		Doctoral thesis		Total	
	F	%	F	%	F	%
Male	11	64.71	4	57.14	15	62.5
Female	6	35.29	3	42.86	9	37.5
Total	17	100.00	7	100.00	24	100.00

Table 7 shows the number and distribution of the theses directed by the advisors with which title.

**Table 7.** Distribution of Theses by Title of Advisor

Title of Advisor	Master's thesis		Doctoral thesis		Total	
	F	%	F	%	F	%
Professor	3	17.65	4	57.14	7	29.17
Associate Professor	6	35.29	3	42.86	9	37.50
Assistant Professor	8	47.06	0	0.00	8	33.33
Total	17	100.00	7	100.00	24	100.00

Of the 24 theses examined within the scope of the study, 9 (37.50%) were supervised by associate professors, 8 (33.33%) by Assistant Professors and 7 (29.17%) by professors. While 8 of the master's theses were supervised by an assistant professor, none of the doctoral theses were supervised by an assistant professor.

Table 8 provides information on the page spacing of the theses analysis.

**Table 8.** Distribution of Page Range of Theses

Page Range	Master's thesis		Doctoral thesis		Total	
	F	%	F	%	F	%
0-100	5	29.41	1	14.29	6	25.00
101-130	4	23.53	0	0.00	4	16.67
131-150	1	5.88	0	0.00	1	4.17
151 and over	7	41.18	6	85.71	13	54.17
Total	17	100.00	7	100.00	24	100.00

Of the analyzed theses, 12 (50%), i.e., half of them have "151 or over" pages. 6 theses (25%) have "0-100 pages", 4 (16.67%) have "101-130 pages" and 2 (8.33%) have "131-150 pages". When the number of pages of all theses was totaled, it was determined that the number of pages was 4347. Therefore, the average number of pages of 24 theses is 181.13. It can be said that the theses generally have "151 or over" number of pages.

Table 9 shows the distribution of theses prepared in the field of civil aviation and competition according to the research methods used. It was determined that most of the theses analyzed adopted the qualitative research method. 17 theses (70.83%) were qualitative, 5 theses (20.83%) and 2 theses (8.33%) were mixed research methods.

**Table 9.** Distribution of Theses According to the Method Used

Research Methodology	Master's thesis		Doctoral thesis		Total	
	F	%	F	%	F	%
Qualitative	12	70.59	7	100.00	19	79.17
Quantitative	5	29.41	0	0.00	5	20.83
Total	17	100.00	7	100.00	24	100.00

When the data collection tools of the studies were analyzed, it was determined that 8 theses used interviews, 7 theses used case studies, 5 theses used questionnaires, 2 theses used document analysis, 2 theses used website scanning. When the samples of the theses were examined, it was determined that 10 theses sampled Turkish Airlines, 8 theses sampled Pegasus Airlines, 4 theses sampled Atlasjet Airlines, 4 theses sampled Onur Air, 4 theses sampled Sun Express Airlines, 2 theses sampled Bora Jet Airlines, 2 theses sampled Hürkuş Airlines, 2 theses sampled Corendon Airlines, 2 theses sampled Tailwind Airlines, 1 thesis sampled Air France and 1 thesis sampled IzAir. While 4 of the theses kept their samples confidential, airline company employees in 2 theses, airport managers in 1 thesis and airline experts in 1 thesis were determined as the population.

The keywords used in the abstracts of the theses analyzed within the scope of the research were also examined. The word cloud prepared with the ten most frequently used keywords is given in Figure 1.





Tunç (2007)	Master's Degree	Qualitative	The Turkish airline transportation sector has shown a significant growth trend in the last four years. If full membership to the EU is achieved, businesses engaged in civil aviation activities will be under great competitive pressure.
Taşgıt (2008)	Master's Degree	Qualitative	Airline operators have generally focused on a low-cost strategy, but some have also adopted partial differentiation and focus strategies.
Erdoğan (2014)	PhD Degree	Qualitative	Problems in the organizational structure of airports arise when they are operated by a single government agency. Especially in airports with leased terminals, different strategic objectives and profit expectations between the airport operator and the terminal operator can lead to problems.
Sungur (2015)	Master's Degree	Qualitative	The aviation industry is a sector that consists of many elements and is fed by national and international sources. It has been found that common steps can be taken on generally accepted issues such as safety and security, but it is not easy to achieve uniformity on commercial issues.
Tanrıverdi (2016)	Master's Degree	Qualitative	A collaborative competitive strategy is essential for the sustainability of the aviation industry.
Yaşar (2016)	Master's Degree	Quantitative	As a result, significant relationships were found between perceived competitive tension and competitive asymmetry, market concentration, resource similarity and market commonality.
Karabulak (2016)	Master's Degree	Qualitative	It has been observed that the current competition in the civil aviation industry is focused on price and service elements.
Ekicikol (2016)	Master's Degree	Quantitative	Since the most important factor for passengers is the discounted ticket, advertisements, promotions and campaigns are frequently followed and the airline offering the best price is preferred.
Saldıraner (2016)	PhD Degree	Qualitative	Problems in the organizational structure of airports arise when they are operated by a single government agency. Especially in airports with leased terminals, different strategic objectives and profit expectations between the airport operator and the terminal operator can lead to problems.
Şener (2017)	Master's Degree	Quantitative	It is observed that the average quality score is higher for firms adopting a differentiation strategy. The greatest difference between firms using different competitive strategies was observed in the trust factor, while the lowest difference was observed in the physical characteristics factor.
Korkmaz (2017)	Master's Degree	Qualitative	According to the findings, competition policy and state aid together are equally important for the sustainability of a successful economic system in the EU.
Cam (2017)	Master's Degree	Qualitative	In order to protect domestic competition, the AnadoluJet factor was also mentioned, and it was stated that the move taken during the evaluation process was correct and necessary.
Hüseyinov (2018)	Master's Degree	Qualitative	The analysis, which evaluated all data pertaining to items such as fixed assets, net profit for the period, operating profits, current assets, sales revenues and gross profit, revealed that the strategic alliance did not have a visible impact on Turkish Airlines' (THY) performance in the short term, but had a positive impact on the sector averages in the long term.
Aldemir (2018)	PhD Degree	Qualitative	It has been concluded that three charter and five scheduled airlines employ all of Porter's Generic Competitive Strategies, but cost leadership is prioritized among these strategies.
Pamuk (2019)	Master's Degree	Qualitative	In terms of profitability and employment potential, civil aviation is in a better position than many other sectors worldwide.
Of (2019)	Master's Degree	Quantitative	Internal marketing practices (management support, communication, rewards, in-service training and social opportunities) have a positive impact on airlines' competitive advantage.
Tosuner (2020)	Master's Degree	Qualitative	As a result of the negotiations, it was determined that the factors affecting regional transportation are seasonal or year-round business, demand and aircraft occupancy rate, the type and model of aircraft selected in parallel, the choice of hub by the main carriers flying, the strength of alternative means of transportation in the region, the economic level of the young population in the region and the choice of slots affecting the type of flight.
Güngör (2020)	PhD Degree	Qualitative	According to the research results, as managers' strategic and effective management competencies increase, learning orientation, competition-oriented inter-functional coordination, risk and proactivity tendency, customer orientation and innovation tendency increase positively.
Yaşar (2021)	PhD Degree	Qualitative	The results show that size, total number of flights, human resources, resources on standby have a positive impact on the number of tariff-based moves, while operational maturity, fleet homogeneity, ability to transfer resources and market partnership have a negative impact.
Mızrak (2021)	PhD Degree	Qualitative	What customers expect from all airlines in general is the quality of the service provided.
Doğan (2022)	PhD Degree	Qualitative	It is observed that the diversity of business models has increased and competition among enterprises has intensified due to deregulation in the Turkish air transport industry. The results of the efficiency analysis show that marketing efficiency is 0.764, production efficiency is 0.887 and system efficiency is 0.796.

The results in Table 10 can be summarized as follows.

- Low-cost carrier models can be effective.
- Comfort is important for long-haul flights.
- Technological differences emphasize the brand image.
- Turkish airline sector is growing.
- Airline companies generally adopt low-cost strategy.
- The organizational structure of airports may cause problems.
- Low-cost airlines have difficulty in competing.
- Collaborative competitive strategy is important.
- There is a relationship between perceived competitive tension and market partnership.
- Passengers prefer discounted tickets.
- Common steps in the aviation industry are difficult on commercial issues.
- Competition is on price and service.
- The difference in quality is greater in companies that follow a differentiation strategy.
- Anadolu Jet is important in domestic competition.
- State aids and competition policy are important.
- Cost leadership is a priority for scheduled airlines.
- Strategic cooperation has an impact on THY's performance.
- Civil aviation is in a better position than other sectors.
- Internal marketing practices provide a competitive advantage.
- Factors affecting regional transportation have been identified.
- Positive effects are observed as managers' strategic management competencies increase.
- There are various effects on tariff-based moves.
- Customers expect quality service.
- Business models have diversified, and competition has intensified in the Turkish air transportation sector.

## 5. CONCLUSION

The aim of this study is to bibliometrically examine the postgraduate theses prepared in the field of civil aviation and competition in Turkey and to reveal their profile. For this purpose, 24 theses on civil aviation and competition were downloaded and analyzed through The National Thesis Center. Seventeen of the theses are master's theses and seven are doctoral theses. The first thesis was prepared in 2006. 1 thesis each was prepared in 2014 and 2015. 2016 is the year with the highest number of theses with 6 theses. While 3 theses were prepared in 2017, 2 theses were prepared in the following years 2018, 2019, 2020 and 2021. In 2022, one thesis was prepared. Theses were mostly prepared in Turkish. Most of theses were conducted at the Institute of Social Sciences and Anadolu University. Theses were mostly written by men. It was determined that thesis advisors were equally distributed. It was determined that half of the theses had "150 or more" pages. It was determined that most of the analyzed theses adopted the qualitative research method. When the samples of the theses were analyzed, it was seen that 10 theses took Turkish Airlines as a sample and 8 theses took Pegasus as a sample. The first five frequently used keywords are competition, airline businesses, airline transportation, competitive strategies, and civil aviation, respectively. Considering the findings of the theses analyzed, the following suggestions were made regarding the theses to be prepared on civil aviation and competition.

- Although the interest in civil aviation and competition started late, the number of theses has not increased in the last 3 years. It is recommended to prepare more theses on this subject, especially doctoral theses.

- Only two of the theses are in English. For theses to be effective in the international academic environment, it is recommended to prepare more theses in foreign languages.
- The training provided by universities to students in civil aviation and related departments makes an important contribution to future aviation industry employees. Therefore, preparing a thesis on civil aviation and competition will help students to closely follow the current developments in the sector and familiarize themselves with the problems and opportunities of the sector. Moreover, these thesis studies can be used to analyze and develop competitive strategies of businesses in the sector. Therefore, it would be important for universities to encourage students to prepare theses on civil aviation and competition for future aviation professionals.
- In analyzing the data, it is important to use mixed methods to support each other by using both quantitative and qualitative methods simultaneously. Therefore, it is recommended to use more mixed methods in theses.

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#### AUTHORS' DECLARATION

This paper complies with Research and Publication Ethics, has no conflict of interest to declare, and has received no financial support. The author(s) sent a signed "Copyright Transfer Form" to the journal. There is no need to obtain ethical permission for the current study as per the legislation. The "Declaration Form Regarding No Ethics Permission Required" was sent to the journal by the authors on this subject.

#### AUTHORS' CONTRIBUTIONS

Conceptualization, writing-original draft, editing – AGS and DÖÖ, data collection, methodology, formal analysis – NE, AGS, Final Approval and Accountability – NE, DÖÖ and AGS.

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