

Academic Foundations of Air Transportation Research in an Emerging Country: A Bibliometric Analysis

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ABSTRACT

This article explores the progress of academic research of air transportation in an emerging country. The foundations of the air transportation field were scanned in the context of postgraduate theses. Postgraduate theses in air transportation were surveyed to illustrate what kind of themes were researched at Turkish universities and what were the tendencies of Turkish academics to study regarding air transportation. The research that spanned a 44-year period from 1972 to 2016 and was carried out by thoroughly examining the postgraduate theses that exist in the electronic database of the Turkish Council of Higher Education. In this research, 329 postgraduate theses- 58 doctorates (17.6%) and 271 masters (82.4%) - were found. The data were analyzed through a bibliometric method by using content analysis.

KEYWORDS

Airlines, Air Transportation, Bibliometric Analysis

INTRODUCTION

Although there had been some early efforts for flights during the 19th century, commercial flights commenced in the beginning of the 20th century. After deregulation in the late 1970s and the subsequent liberalization in the USA a new era started for civil aviation since this trend has been followed by many other countries around the world. Academic foundation and intellectual structure of the industry have expanded in parallel to the evolution of the industry throughout the world. Today, there is a considerable amount of academic organizations, academic publishing and scientific communication globally. On the other hand, the evolution of air transportation research as a discipline has not been deeply assessed yet especially for developing and underdeveloped countries which also have their emerging air transportation industries.

This paper presents a bibliometric analysis of air transportation research with an emerging country focus. Turkey was selected as an emerging country for two reasons. First, the air transportation industry in Turkey has grown remarkably especially during the last decades. Through deregulation and liberalization steps in 1983 and 2003, civil aviation in Turkey experienced a transformation. Civil aviation in Turkey has been accelerating much more than most other developed and developing countries all over the world.

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Secondly, with these dramatic changes, universities in Turkey focused on civil aviation in a scientific manner. As of 2017, there are 183 universities in Turkey: 112 states, 65 foundation universities and 6 foundation vocational schools of higher education (Turkish Higher Education Council, 2017a). Out of 183 universities, 43 of them have bachelor level education in different areas of aviation and air transportation, including aerospace engineering, aviation management, pilot training, air traffic controller training, aviation mechanics training, cabin crew training, and air logistics departments (Transportation Ministry of Turkey, 2017). Although there has been an increase in the number of bachelor level schools in the recent years, both graduate and postgraduate level programs are low in quantity. Anadolu University first started master and doctoral level education on air transportation both science and social science in 1990s. Lately, a few universities followed Anadolu University such as THK University, Istanbul Technical University for graduate and postgraduate level.

There are different ways of using publications, which varies for different fields of science. While articles provide up-to-date information for some the disciplines, books create the basic sources of information (Ucak & Al, 2009). Scientific research, theses, articles and conference papers contribute to develop air transportation. In many developed countries, aviation has matured as a science and a recognized field of study. On the other hand, it is not easy to say that both quality and quantity of scholarly publishing has reached to a fulfilling level in underdeveloped and developing countries. Universities are traditionally expected to produce science and to disseminate results. In universities, graduation theses of undergraduate students and Master/PhD theses of graduate students are performed as a part of scientific studies. In these studies, authors defend an opinion or a view by relying on many different resources. They arrange, process, evaluate and analyze data, put forward their opinions, and finally defend them. Postgraduate education is an important function of universities. The fundamental aims of postgraduate education are to contribute to science/art and disseminate those, to perceive social problems correctly and offer solutions and to contribute to raise a high-level work force (Benligiray, 2009). Especially for the newer science areas, most of the research and development activities in universities are carried out by the contributions of graduate students via their postgraduate theses. It is possible to see numerous types of information about the scientific communication process of a field of science in those theses (Ucak & Al, 2009).

In aviation and air transport there have been some examples of review studies. Truitt and Kaps (1995) and later in an updated version of this study Kaps and Phillips (2004) identified the number and type of academic publications serving the field of aviation research. Ginieis, Sánchez-Rebull, and Campa-Planas (2012) provided a systemized summary of literature on air transportation between 1997 and 2009 and examined the changing interests of academics publishing in air transportation. Spasojevic, Lohmann and Scott (2017) reviewed the literature at the intersection between air transport and tourism research. Through the content and thematic analysis, ‘environment’, ‘passengers’, and ‘airlines’ are found to be the most common themes identified. These review studies focused on journals and articles.

Sun and Yin (2017) identified fields reveal a research background for transportation. By measuring the variation of topic distributions over time they found some general topics such as sustainability, travel behavior and non-motorized mobility are becoming increasingly popular over time. They also found that different countries/regions do pay special attention to different sub-fields of transportation research. In Turkey, from a scientific standpoint, aviation educators and the aviation industry do not have enough knowledge about what kind of studies have been carried out academically so far. Although there has been a dramatic increase in civil aviation postgraduate studies and research in universities since 2000; these increases have not been documented scientifically yet. As a first study in the literature examining the air transportation literature in Turkey, this study aims to review the postgraduate theses on air transport. In this study, postgraduate studies on air transport are accepted as the fundamentals of an emerging science and with a systematic review, and the aim was to identify gaps in the literature and to find direction for future studies.

This research aimed to look for answers to these questions:

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