



Air deregulation in China and its impact on airline competition 1994–2012



Jiaoe Wang^{a,b,*}, David Bonilla^{b,c}, David Banister^b

^a Key Laboratory of Regional Sustainable Development Modeling, Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing 100101, China

^b Transport Studies Unit, School of Geography and the Environment, University of Oxford, Oxford OX1 3QY, United Kingdom

^c Oxford Martin School, University of Oxford, Oxford OX1 3BD, United Kingdom

ARTICLE INFO

Article history:

Received 30 November 2014

Revised 22 March 2015

Accepted 23 March 2015

Available online 8 April 2015

Keywords:

Air deregulation

Airline competition

Monopoly

Geographical context

China

ABSTRACT

China's air transportation has experienced rapid growth and major reforms in the past three decades, some of which have been partially successful and are still ongoing today. The paper aims to analyze China's air deregulation experience over the last two decades and its impact on airline competition from a geographical perspective. After the establishment of the "Big Three" in 2002, the paper reveals that there has been a trade-off between the extent of deregulation and airline competition in China because the central government has tended to strengthen the "Big Three" rather than totally open the market to private and locally owned airlines. The paper uses each airline group as the basic unit of analysis and reveals that (1) the air market has been more concentrated in the "Big Three" as a result of the process of air deregulation; (2) airline competition in over two thirds of the airports and one half of the routes has increased in the last 18 years, but the core airports and trunk routes are chiefly dominated by the "Big Three". The peripheral airports and thin routes have been operated by private and locally owned airlines; and (3) regionally, airline competition has occurred in most airports of the eastern region, and it is more intense than in the central and western regions. But even here, competition in the eastern region has however decreased in 1994–2012. The three main contributions of the paper are: (1) the use of two measures of competition in the airline market; (2) the analysis of the historical evolution of competition; and (3) an understanding the role of the geography of competition in the Chinese airline market.

© 2015 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

Deregulation was first advocated in the U.S. in the 1970s (Kahn, 1971; Baumol, 1977) and then in other Anglo Saxon economies (Graham, 1993; Barrett, 1997). It was seen at that time as a means to achieve lower air fares, greater competition, improved reliability, and better quality airline services (Goetz and Graham, 2004). Since the 1980s, the airline industry of China has grown tremendously as its economy has expanded, and the air passenger volumes have increased from 11.7 billion person-km to 502.6 billion person-km, a 43-fold increase between 1985 and 2012 (National Bureau of Statistics of China, 2013). The rapid growth of air travel in China is a result of the increase in the numbers of flights, and the use of larger aircraft (Wang et al., 2014a). To understand this outcome we need institutional analysis and geographical analysis. At

* Corresponding author at: Key Laboratory of Regional Sustainable Development Modeling, Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing 100101, China.

E-mail address: wangje@igsnr.ac.cn (J. Wang).

<http://dx.doi.org/10.1016/j.jtrangeo.2015.03.007>

0966-6923/© 2015 The Authors. Published by Elsevier Ltd.

This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

this stage China's airline deregulation is only partial because the Government wants to protect its growing domestic market. A key challenge for China is whether to first open up the airlines domestically and then to follow this with international agreements for further deregulation. China's airlines have little market power internationally, unlike the more mature airlines in the United States and the United Kingdom where liberalization started. The latter two have a much more extensive international network of routes, more market power, financial resources and the larger fleets (Fu et al., 2010). China has not yet followed this road because it wishes to create national champions before competing internationally. Hence the strategy of the Chinese central government priority has been airline consolidation and a further strengthening of the "Big Three" – Air China, China Southern, and China Eastern, which has involved mergers and acquisitions of many small airlines (Lei and O'Connell, 2011). This institutional dimension differs from the path taken to market led consolidation in the U.S. and Europe.

This paper attempts to answer three key questions about these circumstances. It will explore (a) what changes have taken place in

response to deregulation; (b) how the airline market has been re-organized; and (c) assessing airline competition from a geographical perspective over an 18 year period.

2. Literature review

The international literature on air deregulation and its impacts on airline competition can be divided into three main groups. The first group discusses the economic rationale for liberalisation (Kahn, 2004; Goetz and Vowles, 2009; Wang et al., 2014b); the second focuses on the spatial character of deregulation, especially on airlines' network characteristics (Shaw et al., 2009; Fu et al., 2010), and this work includes a minor group that focuses on the application of network theory to deregulation (Wang et al., 2011, 2014c; Lin, 2012). The third group refers to the decadal policy evolution of deregulation experience from an institutional viewpoint (Zhang et al., 1998; Zhang and Round, 2008; Lei and O'Connell, 2011; Eaton, 2013; Koo and Lohmann, 2013). This paper identifies the key studies, and it takes an explicit air transport geography bias.

Taaffe (1958) first analyzed the airline competition of the U.S. and its changes during 1940s and 1950s within a geographical perspective and using maps. Other studies have investigated the process of air deregulation and its impacts on airline competition, service and pricing (Hooper, 1998; Vowles, 2000; McHardy and Trotter, 2006), focusing on the U.S. context (Fleming, 1991; Goetz, 2002). The main argument for air transport deregulation has been that markets are contestable, meaning that entry and exit should be costless and easy, that sunk costs are not high, and that the threat of entry is sufficient to prevent anti-competitive strategies from the incumbents (Bailey and Panzar, 1981). Although the airline sector has many actors, it is a sector where multi firm production is more costly than production in a single firm (Baumol, 1977), but this claim has long been disputed by Caves et al. (1984). Brueckner and Spiller (1994) measure airline competition from the perspective of economies of traffic density versus economies of scale, and Dempsey and Goetz (1992) emphasize the role of competition, but with limited information on the role of geography. The literature reveals that deregulation has had both successes and failures. In addition to the economic studies on the subject, geographers have taken considerable interest in the airline industry under deregulation, focusing on the connectivity and accessibility benefits of air travel, network configuration (Chou, 1993; Ivy et al., 1995; Goetz and Sutton, 1997; Reynolds-Feighan, 1998; Bowen, 2002; Shaw and Ivy, 1994; Lei and O'Connell, 2011). These studies do not apply indicators (indices) measuring historical changes in levels of airline competition, but tend to concentrate on the situation at one point in time.

Brazil, India and China are all large developing countries, and each has seen rapid economic growth and so common lessons can be learned. Brazilian deregulation began in 1992 (Koo and Lohmann, 2013) and it did not produce an increased number of competitor airlines, since four airlines dominate the entire Brazilian market. Bettini and Oliveira (2008) provide empirical evidence that re-regulation periods further reduced competition as demonstrated by the supply of seats over time. This is in sharp contrast to China where deregulation is still ongoing. The Brazilian experience shows that policy uncertainty can inhibit competition in the airline market. Koo and Lohmann (2013) find that Brazilian domestic aviation is still undergoing major spatial restructuring in terms of its airport hierarchy, and this might also be occurring in China. In short, Brazil's deregulation was not sufficiently effective in increasing the number of private airlines, but it did widen airport capacity and it produced lower yields (per passenger km), by as much as 50% (BNDES, 2010). India's aviation

sector was state controlled until the 1980s and deregulation was introduced in the 1990s, but it has not delivered what was expected as many private airlines have exited the market (Nathan Associates, 2012). The experience of Brazil and India shows that policy uncertainty inhibits the entry of new competitors. The pace of these deregulation efforts will also be influenced by (1) the deregulation experience of these countries which is far from complete and (2) the pace of international deregulation. Although building new airports many not indicate successful deregulation, China is building new airports more rapidly than both Brazil and India (The Economist, 2011).

In the case of China, some existing literature has been used to illustrate how deregulation of the sector evolved before 2004. Zhang et al. (1998) first observed the air deregulation process in China, but this work is limited to the economic aspects, and in the update analysis Zhang et al. (2008) has included the driving forces of air deregulation of the early 2000s. Recently two key studies (Lei and O'Connell, 2011; Eaton, 2013) have focused on policy changes with respect to air deregulation. Furthermore, geographers (Jin et al., 2004; Wang and Jin, 2007) have examined the spatial patterns of air passenger transport in China after air deregulation. Chi-Lok and Zhang (2009) have investigated the effects of competition and policy changes on Chinese airport productivity and they have explored the efficiency of airports is positively correlated with the process of airport localization. Fan et al. (2014) find that international hub airports are operated at higher efficiency level than other smaller airports. In terms of airline competition, Zhang and Chen (2003) have examined the competition in China and find that up to 1979, the market and route entry, frequency and price were all controlled by a centralized authority. Zhang et al. (2013) find different strategies have been employed for competition by the "Big Three" in China's three busiest air routes (Beijing-Shanghai, Beijing-Guangzhou, and Shanghai-Guangzhou). That situation reflects the greater market power of Air China when compared to China Southern and China Eastern (Zhang et al., 2014). The Chinese approach to deregulation differs from that in western markets (U.S. and Europe) where airlines were allowed to serve any route. As a result, Chinese carriers have enjoyed high yields and low input prices in the domestic market, and this has led to high profitability in recent years (Wang et al., 2014b). These conditions mean that institutional analysis of air transport competition as carried out in the international literature is not of central relevance here. Substantial differences in the institutions, and other factors such as low per capita incomes, the distances flown and the airport capacity (including recent expansion) resemble an economy in the early stages of development. In essence China has an embryonic airline industry that has grown exponentially in the last few decades, and one that retains strong central control.

Existing studies (Zhang and Chen, 2003; Lei and O'Connell, 2011; Eaton, 2013) have tended to dissect the role of these regulatory strategies but they do not focus on the uneven geographical outcomes for certain Chinese regions. Moreover, many of these studies in the field are descriptive, and they do not take a long historical horizon nor examine the changes in airline competition at all airports and air routes. One exception is Shaw et al. (2009), who studied the deregulation experience of China and observed airline consolidation and the changes made by individual airlines in network structure and hub dynamics. These authors only examine two years' data for 2001 and 2004 (or before and after the establishment of the "Big Three") in China. The paper extends this work by considering the latest policies and changes in airline groups, evaluating the dynamics of airline competition in a geographical context.

Hence the contribution here is first to provide a more relevant institutional focus and link that to a geographical insight on

Download English Version:

<https://daneshyari.com/en/article/7485665>

Download Persian Version:

<https://daneshyari.com/article/7485665>

[Daneshyari.com](https://daneshyari.com)