Transport Policy 42 (2015) 180–186

Contents lists available at ScienceDirect

Transport Policy

journal homepage: www.elsevier.com/locate/tranpol

Contestability and public concern about airfares: A case study in the Canary Islands

Javier Campos [a,*,1], Juan Luis Jiménez [a], Jordi Perdiguero [b]

[a] Departamento de Análisis Económico Aplicado, Universidad de Las Palmas de Gran Canaria (ULPGC), Spain
[b] Departament d'Economia Aplicada, Research Group of Applied Economics (GEAP), and Institut de Recerca en Economia Aplicada (IREA), Universitat Autònoma de Barcelona (UAB), Spain

ARTICLE INFO

Article history:
Received 6 November 2014
Received in revised form
12 May 2015
Accepted 9 June 2015
Available online 27 June 2015

JEL classifications:
L41
L93
C50

Keywords:
Air transport
Canary Islands
Entry and exit
Difference in difference

ABSTRACT

This paper studies – both from a theoretical and empirical perspective – a case of contestability in the Canary Islands' domestic air transport market. We show how after the exit of its rival in an initially duopolistic market, the remaining airline did not increase its prices in order not to provoke the entry of new rivals. According to our view, this result was explained by the 'public concern' that was created about the incumbent's behaviour and its attempt of presenting itself as a benevolent monopolist. However, its strategy failed and a new operator finally entered the market, with a subsequent drop in average prices. We prove our hypothesis by developing a theoretical multi-route oligopolistic model with differentiated services and by testing its implications using several difference-in-difference econometric techniques on a monthly prices database collected in 2012–2013.

1. Introduction

The role of *actual* competition as a disciplinary device for market behaviour has traditionally been a central topic in an uncountable number of economic analysis. A little less – but also large – attention has been paid to the same role as played by *potential* competition, which usually takes the form of a real entry menace, preparatory investments or pre-entry advertising campaigns by new rivals or existing ones operating in relatively close market segments.

Since the seminal contribution of Baumol et al. (1982), economic literature has labelled as *contestable* those markets where potential short-term entrants could effectively drive prices down, force quality improvements or – in general – make existing monopolies voluntarily contain their market power. Three general conditions were initially required for this to happen: no entry or exit barriers, absence of sunk costs, and access (both for incumbents and new entrants) to the same technology, although these requirements were later reduced to the overall possibility of a 'hit-and-run' behaviour (Brock, 1983).

Air transport markets provide interesting natural laboratories where several examples of these cases can be found. In Europe, particularly, most barriers to entry have been eased after decades of liberalization, and the sector structure is widely regarded as very dynamic. However, there remain some regional markets where the tensions between competitive and monopolistic forces are still clearly perceived, and where the ties of the airlines with the local society provide new insights for transport policy (Dobruszkes, 2009).

This is the case of the Canary Islands domestic air transport market, where two private competing carriers – *Islas Airways* and *Binter Canarias* – had been operating since 2003, serving almost 3 million passengers per year over a dozen of different local routes. In October 2012, and due to its financial problems, *Islas Airways* abandoned the market and for nearly three months the remaining operator became a *de facto* monopolist. After huge concerns about this situation, and strong public scrutiny of *Binter Canarias'*

* Corresponding author.
E-mail addresses: javier.campos@ulpgc.es (J. Campos), juanluis.jimenez@ulpgc.es (J.L. Jiménez), jordi.perdiguero@uab.cat (J. Perdiguero).

[1] Mr Campos acknowledges support from the EVA-AIR Project, funded by the Spanish Ministry of Economics and Competitiveness, Research Grant ECO 2012-39277

http://dx.doi.org/10.1016/j.tranpol.2015.06.006
0967-070X/

policies, a new charter company, *CanaryFly*, entered the market in December 2012. Since the monopoly did no longer exist (at least, nominally),[2] the pressure was relaxed and the situation achieved an equilibrium where *Binter Canarias* quickly announced that there was competition again. In fact, contrary to what was expected by everyone, the company proudly claimed that the prices did not significantly increase during the monopoly stage, puzzling some observers about the role that *public concern* had played as a mechanism to control prices.[3]

In fact, previous literature of air transport prices had identified in depth their different determinants, such as barriers to entry (Reiss and Spiller, 1989; Berry, 1992; Oliveira, 2008), or changes in market structure, either by newcomers (Morrison, 2001) or by mergers and acquisitions (Merkert and Morell, 2012; Fageda and Perdiguero, 2014), or even how companies' fares reacted to the mere threat of entry (Goolsbee and Sverson, 2008). However, there does not exist in this literature, at least to the best of our knowledge, any paper that analyzed how *public concern* could significantly affect the prices set by the airlines. This paper tries to fill this gap through a simple theoretical modelling and an empirical approximation (using a difference-in-difference estimator) that tries to explain a real-life case study. This sort of estimator has been used in the past to analyze the effect of mergers and acquisitions, but never to analyze the effect of entry or exit in this market.

After this introduction, the structure of the paper is as follows: Section 2 builds on well-known simple theoretical models to identify the effects of public concern (measured via demand parameters) on the pricing policies of the airlines operating into duopolistic and monopolistic markets. Section 3 applies these models to the above described Canary Islands case and estimates an empirical model on the pricing behaviour of the existing companies, showing how they responded to different market circumstances. Section 4 is finally devoted to discuss our theoretical and empirical results and to provide several insights from our analysis.

2. Public concern and competition: an economic approach

There is not a single and clear definition in economics of the term 'public concern'. In pure legal terms, it generally refers to issues related to the conflict between personal freedom and public opinion and to the extent anything can be considered as pertaining to a group of citizens instead of a single one. In fact, as opposed to a 'private matter', the public concern is related to public opinion or the influence of the society on a particular matter. In distinguishing when an issue is or is not a matter of public concern a typical test is to measure its impact on the news and/or its social media coverage (Calvert, 2012).[4]

When translated into more economic terms, it seems obvious that this concept should be approximated by changes in demand as a response to external factors, or more specifically, modelled through demand parameters. A natural candidate is the ratio of market size to price responsiveness of demand because, other things equal, the 'public concern' increases if market grows or demand becomes more price responsive.[5] Taking into account this approach, this section plays with a simple, yet a comprehensive theoretical model that explains why in a context of strategic interaction, entry and exit may yield counterintuitive results under the presence of 'public concern' about prices, measured in terms of the travellers' willingness to pay and other parameters in the demand functions. As a benchmark case we depart from a standard duopolistic setup with strategic interaction in prices, then the market becomes a monopoly, and finally a new entrant comes in but under weaker competition conditions.

2.1. A model of air transport competition with differentiated services

Consider a closed air transport market defined by several independent routes initially served by two competing private carriers, airlines *A* and *B*, which provide differentiated services (in terms of frequencies and quality of service) to domestic passengers.[6] For any given route, their respective demand functions, in terms of total monthly passengers, are assumed to follow standard linear specifications:

$$q_A(p_A, p_B) = a_A - b_A p_A + p_B \qquad q_B(p_A, p_B) = a_B - b_B p_B + p_A \tag{1}$$

with (p_A, p_B) denoting the (final) fares. Note that each airline's services depend on its own price and the rival's, thus reflecting the effects of strategic interaction. Parameters a and b are positive and their subscripts implicitly suggest that firms' demands have specific characteristics. We can assume, for example, that $a_A < a_B$ and $b_A > b_B$, which is compatible with the existence of a larger company (B) and a smaller one (A): the maximum willingness to pay for airline B's services is higher, but its demand is more inelastic. Consequently, the firms' cost structures are also different,

$$C(q_A) = c_A q_A + f_A \qquad C(q_B) = c_B q_B + f_B \tag{2}$$

and the small airline reasonably has higher marginal costs ($c_A > c_B$) and lower fixed ones, $f_A < f_B$.

We finally consider that both private carriers set prices according to a standard one-period profit maximization strategy,[7] whose objectives functions (Π) are respectively defined as the difference between (total) revenues and (total) costs:

$$\Pi_A(p_A, p_B) = p_A q_A(p_A, p_B) - C_A(q_A) \qquad \Pi_B(p_A, p_B) = p_B q_B(p_A, p_B) - C_B(q_B) \tag{3}$$

Once the basic setup has been established in this air transport market, we can now compute the initial duopoly equilibrium.

[2] 4Some sceptical observers criticized the fact that both companies had previous code-sharing agreements on certain routes, and that some key stakeholders retained non-controlling shares in both airlines.

[3] The story did not have a happy ending. Once its financial problems seemed to be solved, *Islas Airways* announced its intention to resume flights, but it could not finally recover its administrative licence and was liquidated in March 2014.

[4] In the case of the Canary Islands air transport market described in the previous section, media coverage was extensive and local newspapers published a series of stories related to the potential effects of monopolization by Binter Canarias. Political leaders, including the president of the regional Government, even demanded tougher price regulation and margin limitations (see, for example, http://www.laprovincia.es/economia/2012/11/21/rivero-exige-fijar-precios-maximos-transporte-aereo/498686.html). Several national news agencies (www.efe.com) and many local public opinion polls also echoed the concern, placing it for three weeks as number #1 of issues that worried local residents.

[5] It could be argued that an inelastic demand situation is more worrying from the point of view of competition authorities, since (*ceteris paribus*) less price responsive demand makes the exercise of market power more likely. However, if we assume that market power *already* exists, this criticism is less relevant. In the same way, a growing market might be associated with a lower degree of concern, as it is likely to attract new entrants, but if entry is difficult or limited, the ratio of market size to price responsiveness is confirmed as a good candidate to model 'public concern'.

[6] The simplifying assumption of *independent* routes allows us to analyse each of them separately and is used to keep the model tractable. In real markets, some routes are monopolised and others are subject to oligopolistic competition allowing them to benefit from cross-subsidies in pricing and/or scale and density economies. As discussed in the main text, all the model features seem suitable to describe the Canary Islands' air transport market.

[7] Alternatively, we also considered a price leadership setup, where the smaller competitor just acted as a price follower. The results were qualitatively the same.