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One price for all? Price discrimination and market captivity: Evidence from the Italian city-pair markets ☆

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ABSTRACT

This paper tests whether, and to what extent, airlines exploit market captivity by using price discrimination strategies. The Italian passenger market is particularly fit for this purpose, given the high differentials in the degree of the inter-modal competition amongst domestic connections. Results show that, *ceteris paribus*, airlines adopt a different pricing behaviour depending on the degree of inter-modal market captivity. First, in highly concentrated markets with respect to air competitors, airlines price higher when the inter-modal competition is limited. This proves that inter-modal market captivity strengthens the effect of market power. Second, the inter-temporal price discrimination leads to a J-shaped distribution of fares over time, which is more pronounced when the inter-modal competition is effective. This suggests that airlines need to adopt a pricing technique that allows for a greater market segmentation in order to compete successfully with high-speed rail transport and to extract a larger part of passengers' surplus. These results are relevant in terms of transport-investment implications and competition policy. The indirect benefits that investments in rail infrastructure would yield through downward pressures on competing airline fares should be embedded in any cost-benefit analysis of high-speed networks investments and in any policy evaluation of measures that aim to reduce the territorial gaps in infrastructure endowment and accessibility.

1. Introduction

In the literature, a large number of studies explore pricing behaviour and competition in the air transport sector in various geographical contexts. Special emphasis has been posed on price discrimination, which can be implemented, for instance, through the Saturday-night stay over, the advance purchase discount, etc. More recently, the empirical research has focussed its attention on inter-temporal price discrimination (IPD). This paper differs from existing work, as it attempts to study airline pricing for short-haul flights in response to the different degree of market captivity across city-pairs. A market is said to be captive when consumers have to buy from a particular source, or when they have only one choice. By applying this

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Fig. 1. High speed rail network in Europe, 2012.

definition to this research context, a city-pair market is captive when travellers have no, or highly limited, feasible alternatives to the air transport. In other words, the inter-modal competition is not effective.

The purpose of this work is twofold. First, we would like to understand whether the effect of intra-modal (air-related) competition on fares varies among connections with a different degree of market captivity. Basically, to do this, we empirically test whether the effect of airline market power on fares is curbed or not by competition from rail transport. Second, we verify whether the competitive pressure by the presence of effective rail competition shapes the inter-temporal profile of fares, namely whether airlines modify their IPD strategies, depending on the degree of market captivity.

The Italian passenger market is particularly fit to test the research questions we pose, given the strong heterogeneity in inter-modal competition conditions over the territory. In this regard, Fig. 1 is self-explanatory.

At first glance, one might notice that Italy shows a relevant regional gap in rail transport. First, the rail network is less widespread throughout the country – in particular in southern regions – than in the rest of western Europe. Further, high-speed rail (HSR) lines – depicted in red and orange[1] – connect mostly the central and northern regions. With the exception of the Rome–Naples line, HSR services are scant or even lacking in southern regions mainly served by the traditional rails (in grey) and also by connections (in yellow) that are slower than those in red and orange.

The regional gap in rail transport is not only attributable to the speed of rail services, but also to the extension of the rail network. Fig. 2 shows the Italian rail network.

[1] The *Union Internationale des Chemins de fer* (UIC) identifies HSR services as those running at minimum of 250 km/h (155 mph).