

Andreas Knorr/André Heinemann

Regional airport subsidies in the EU -
the case for a more economic approach in
the application of the EU's state aid rules

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Abstract

With its landmark ruling of December 17th, 2008, in a lawsuit filed by Ryanair the European Union's Court of First Instance unexpectedly declared the European Commission's famous Charleroi decision of early 2004 nil and void. Though essentially based on legalistic technicalities, the verdict, in our view, has opened a rare window of opportunity for embarking on a much-needed more economic approach in the assessment of airport-related state aid cases. By applying the theory of two-sided markets and the theory of interjurisdictional competition to the Charleroi case, we argue in this paper that the EU's current legal framework for the control of state aids is fundamentally flawed. We conclude that a more economic approach, including key insights provided by these two theories, is required for improved decision-making in state aids cases.

Keywords

State aids; two-sided markets; interjurisdictional competition; airport competition; airline competition; regional policy

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I. Introduction

With¹ its landmark ruling of December 17th, 2008², in a lawsuit filed by Ryanair the European Union's Court of First Instance (CFI) unexpectedly declared the European Commission's famous Charleroi decision of early 2004³ nil and void. On February 19th, 2009, the Commission decided not to appeal. Though essentially based on legalistic technicalities instead of economic considerations, the verdict, in our view, has opened a rare window of opportunity for embarking on a much-needed more economic approach in the assessment of airport-related state aid cases.

Using the example of the classic Charleroi case, our paper starts out with the working hypothesis that the EU's current legal framework for the control of state aids (as laid down in articles 87 to 89 of the EC Treaty plus an enormous body of secondary and tertiary law) is fundamentally flawed from an economic perspective and, as a result, susceptible to inefficient misjudgments.

In our analysis of the Charleroi case we will therefore apply two theoretical approaches to the case which have hitherto been largely ignored in the academic debate of the decision: the theory of two-sided markets and the theory of interjurisdictional competition. First, we hold that, unlike the conventional literature on multi-product firms, the theory of two-sided markets provides for a realistic understanding of the highly complex economics of airport ↔ airline relations in general and, more specifically, of the (anti)competitive effects of the controversial contractual arrangements such as the one between Ryanair and the (public) operator of Charleroi airport. Second, the theory of interjurisdictional competition is a useful tool to assess if financial in-

¹ A draft version of this paper was presented at the 13th Annual Conference of the Air Transport Research Society (ATRS) in Abu Dhabi (UAE) on June 29th, 2009.

² <http://curia.europa.eu/jurisp/cgi-bin/form.pl?lang=EN&Submit=rechercher&numaff=T-196/04>.

³ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32004D0393:EN:HTML>.

centives such as those offered to Ryanair by Charleroi airport are likely to result in airlines engaging in an economically inefficient ‘shopping for subsidies’ (i.e. a special form of a ‘race to the bottom’ style, i.e. potentially welfare destroying interjurisdictional competition) or whether they rather constitute an efficient way to internalise the positive externalities generated locally/regionally by the airlines serving these airports.

The nullification of the Commission’s Charleroi decision by the CFI is just the culmination in a long-standing series of legal fights between traditional airlines and their low-cost competitors over (allegedly) unfair competition through (alleged) state aids. For instance, the Administrative District Court of Strasbourg, France, had ruled on July 23rd, 2003, on the basis of a complaint filed by Brit Air, an Air France affiliate, Ryanair had received illegal subsidies from the local Chamber of Commerce, the operator of Strasbourg airport – a decision upheld by the Court of Appeals in Nancy in its verdict of September 18th, 2003.⁴ An even stricter legal stance was adopted by the District Court of Potsdam, Germany, which, on October 20th, 2004, denied easyJet, Europe’s second largest LCC, the right to receive any form of start-up or marketing support from the operator of Berlin’s Schönefeld Airport after setting up a base there in April 2004.⁵ However, pertinent jurisprudence on the issue in Germany is contradictory as the following two more recent decisions demonstrate. On November 23rd, 2006, the same court dismissed a plea by Germania, a small German airline, which had sought the court to force Berlin Schönefeld Airport to disclose and claim back any financial support it (allegedly) had granted Ryanair. A similar complaint, this time filed by Lufthansa against Frankfurt Hahn Airport, was rejected on January 23rd, 2008, by the Higher Regional Court of Koblenz.⁶

At the EU level, the CFI’s decision notwithstanding the Commission is still investigating similar contractual arrangements between Ryanair and the operators of eight other airports (Alghero, Aarhus, Berlin Schönefeld, Bratislava, Frankfurt Hahn, Hamburg-Lübeck, Pau

4 For the full texts see http://www.rajf.org/article.php3?id_article=1774 (Strasbourg Court) and http://www.rajf.org/article.php3?id_article=2108 (Nancy Court of Appeals) (available in French only).

5 The decision – reference: LG Postdam 2 O 70/04 – was not published by the court.

6 The decision – reference: OLG Koblenz 4 U 759/07 – was not published by the court.

and Tampere).⁷ Even in the US, there is growing concern about the compatibility of subsidies granted to individual airlines by some airports with the FAA's revenue use policy for airports.⁸

Though all the court decisions mentioned before, including the CFI's Charleroi decision, were essentially based on legalistic technicalities, the latter, in our view, has opened a rare window of opportunity for embarking on a much-needed more economic approach in the EU's state aids control procedures. We therefore propose the application of two analytical tools – the theory of two-sided markets and the theory of interjurisdictional competition – to enhance the EU's current legal framework for a more realistic assessment of airport-related state aid cases.

II. The economic and legal context of the Charleroi decision

1. Changing the rules of the game – air transport liberalization in the EU

Before 1987, when the Commission's first liberalization package (of three) took effect, each member state's flag carrier (i.e. Lufthansa or Air France or British Airways or Alitalia etc.) enjoyed a far-reaching legal monopoly on most domestic traffic; typically only some regional services on commuter planes were exempt. As for cross-border services, a universal web of very restrictive bilateral air service agreements provided for the cartelization of all scheduled traffic in favour of the two respective flag carriers. However, charter services were quite common to the Mediterranean (and to North America), though these were subject to numerous cumbersome legal restrictions to keep low-fare leisure and high-fare business markets separate (e.g. flights could

7 For the details see Ryanair's press release of February, 19th, 2009. (<http://www.ryanair.com/site/EN/news.php?yr=09&month=feb&story=gen-en-190209>).

8 Since 2002, Wichita Airport has granted Air Tran an operating subsidy of several million US\$ so far for it to offer low-fare services to and from Atlanta. The subsidy is currently being legally challenged by the FAA and Delta Airlines. (<http://www.airportbusiness.com/article/article.jsp?%20siteSection=3%20&id=1832>).

only be booked as an integral part of a package tours). Inversely, there was little scope for non-hub airports to attract new airline services.

The negative effects of this regulatory regime have been discussed ad nauseam in the economic literature. In a nutshell

- airlines and airport operators grew accustomed to a pervasive cost-plus mentality which stifled any incentive to produce efficiently; and
- newcomers – both airlines and airports – faced (often) insurmountable regulatory barriers to entry.

In short, all this resulted in smaller airlines (in particular regional and charter carriers) and underused airports being deprived of any meaningful opportunities to attract new business in order to expand their operations and to compete effectively with the large incumbents. Moreover, the tight regulation of prices (fares and airport fees) nipped the emergence and evolution of new business models – such as low-cost airline and airport services – effectively in the bud.

By April 1997, however, the intra-EU air transport market was finally fully opened to competition, including cabotage traffic. Aside from unrestricted access to any intra-Community route,⁹ all air carriers registered in any member-state have ever since enjoyed full pricing discretion, subject only to antitrust laws. Accordingly, the ancient “world of non-competing airlines ... mirrored in non-competing airports” (Barrett 2000, 13) has been undergoing a fundamental transformation ever since, essentially driven by a substantial number of new entrants in search of opportunities for profitable growth.

In the airline business, regional carriers and low-cost carriers experienced the fastest growth rates after deregulation. While most of the former quickly tied up with one of the incumbents through extensive codeshare arrangements – with their role confined to providing feeder services to their hubs from secondary airports and to connecting thinly travelled city-pairs –, low-cost carriers essentially embarked on a strategy of organic growth. In terms of revenue passengers car-

9 Later on, the EU’s internal open skies policy was extended to also include the member states of the European Economic Area (EEA) and, through a separate bilateral agreement, Switzerland.

ried in Europe, the two largest LCCs, Ryanair (59.1m)¹⁰ and easyJet (44.2m),¹¹ today rank as Europe's number one and number four airlines. For comparison: Lufthansa (incl. SWISS but excluding Germanwings) ranks second at 54.3m¹² while Air France KLM rank third at 51.7m¹³.

Nevertheless, substantial entry barriers persist to this day in the EU's airline industry. These include

- congestion-induced infrastructure bottlenecks at most major hubs (compounded by the grandfathering of slots); and
- massive restructuring aids for flagging flag carriers (such as, most recently, Austrian Airlines, the 'new' Alitalia, Olympic Airlines, and, last not least, SWISS).

At the airport level, the end of the cold war prompted many local and regional governments to invest substantial sums of taxpayers' money to make former military airfields fit for civilian use. As a result, a large number of small regional airports – including, in Germany, the former US air forces bases in Hahn and Zweibrücken as well as the former RAF base in Weeze – have entered the market. More often than not, the implementation of these conversion projects was co-financed – i.e. subsidised – by the EU itself under its very generous cohesion and regional development policies (which are exempt from the EU's state aid control system as it only applies to state aids granted by individual member states). With 3.9m passengers in 2008 Hahn (Ryanair's biggest base on the Continent and renamed Frankfurt-Hahn by the airline) has meanwhile grown into Germany's tenth largest passenger and fifth largest cargo airport.¹⁴

In sum, liberalisation has substantially increased the number of players both at the airline and the airport levels in the EU. Moreover,

10 Cf. Ryanair (2009). – The figure refers to the twelve months period to April 30th, 2009.

11 Cf. easyJet (2009). – The figure refers to the twelve months period to April 30th, 2009.

12 Cf. Lufthansa (2009, 80). – The figure refers to Lufthansa's fiscal year 2008.

13 Cf. Air France (2009). – The figure refers to the twelve months to March 31st, 2008.

14 Cf. ADV (2009, 4).

it has given rise to new business models, most notably low-cost carriers and low-cost airports.

2. The EU's state aid regulations

a) General provisions – a brief overview

The EU's state aid regulations are laid down in articles 87-89 of the EC Treaty (Rydelski 2006). They are complemented and specified, however, by an ever more complex – and fast growing – body of secondary law, including a substantial number of pertinent regulations and directives as well as hundreds of decisions by the Commission and the European Court of Justice.¹⁵ As mentioned above, the EU's state aid rules do not apply to the EU's own subsidy programs – most of which are earmarked for so-called structural measures (i.e. regional policy) and the common agricultural (and fisheries) policy (which together add up to around 86 per cent of the EU's current €120bn annual budget) – but only to state aids granted by member states to firms operating on/from their territories. The objective is to prevent national governments of member states from distorting competition on the internal market. In a nutshell, the EC Treaty bans state aids per se, although EC law also contains a large number of legal exemptions and implementation rules for specific forms of state aids, subject to the Commission's state aid control system. In short, all state aid must be notified to the Commission for final approval which may not come unconditionally although around 95 per cent of all subsidy requests pass this test.

b) Two critical issues in the application of state aid regulations

State aids versus general measures

In economics, state aid is typically defined as a payment or in-kind transfer – i.e. some form of (mostly financial) assistance – from a gov-

15 Cf. European Commission (2008). – This compilation does not, however, include the specific state aid rule with respect to agriculture, fisheries, coal and transport; the latter may be found here:
http://ec.europa.eu/dgs/energy_transport/state_aid/procedure_en.htm.

ernment to select private entities (companies, industry sectors or private households) or to (an)other state(s) which is not in line with market conditions. The final objective is to increase the recipient's income either directly – by paying higher than market prices for the services the recipient has provided or by not expecting any service in return for the handout – or indirectly by not demanding the (full) payment of taxes, fees or other charges (a variant which is also referred to as tax subsidy). An alternative definition describes subsidies as a tool “to keep prices below what they would be in a free market, or to keep alive businesses that would otherwise go bust, or to make activities happen that otherwise would not take place” and as “a form of protectionism by making domestic goods and services artificially competitive against imports” (The Economist 2009).

In practice, state aid control is significantly complicated by the lack of clear-cut solutions to some key issues involved. Most of all, the legal definition of what constitutes state aid which has been developed over time by the EU's institutions is partly at odds with the aforementioned economic definition of the term. For example, it does not extend to floor and ceiling prices set by governments although, from an economic perspective, these interventions are fully covered by the definition given above. To begin with, article 87 of the EC Treaty stipulates that “save as otherwise provided in this Treaty, any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the common market.” Based on this general provision and the pertinent jurisprudence, the Commission (2009a) defines state aid “as an advantage in any form whatsoever conferred on a selective basis to undertakings by national public authorities.”

As a result, all “subsidies granted to individuals or general measures open to all enterprises are not covered by Article 87 of the EC Treaty and do not constitute State aid” (ibd.). However, in real-world cases, it is often impossible to draw a clear line between general measures – which are considered not to favour individual corporations but rather to enhance a country's or a region's general attractiveness as a location for business – and (illegal) state aid (see below at II.3 for a more detailed discussion).

The market economy investor test/Private investor test

With only minor exceptions, the EU's competition rules apply to private and public enterprises alike. Therefore, governments' financial relations with state-owned enterprises will not constitute state aid under EC law if a "private investor operating under normal market conditions" were to act in the same manner with respect to a private company.

This reflects the fact that most companies accept losses for some products which are cross-subsidized out of the profits earned with other products, or in other geographical markets, or by other divisions of the company.

Generally speaking, under EC law a state aid is legally assumed to be inexistent in the "straightforward partial or total acquisition of a holding in the capital of an existing company, without any injection of fresh capital" (European Commission 2008, H-2f.). Moreover, no state aid is considered to be involved

- "where a new company is set up with the public authorities holding the entire capital or a majority or minority interest, provided the authorities apply the same criteria as provider of capital under normal market economy conditions; where fresh capital is injected into a public enterprise, provided this fresh capital corresponds to new investment needs and to costs directly linked to them, that the industry in which the enterprise operates does not suffer from structural overcapacity in the common market, and that the enterprise's financial position is sound;
- where the public holding in a company is to be increased, provided the capital injected is proportionate to the number of shares held by the authorities and goes together with the injection of capital by a private shareholder; the private investor's holding must have real economic significance;
- where the strategic nature of the investment in terms of markets or supplies is such that acquisition of a shareholding could be regarded as the normal behaviour of a provider of capital, although profitability is delayed;
- where the recipient company's development potential, reflected in innovative capacity from investment of all kinds, is such that the operation may be regarded as an investment involving a special risk but likely to pay off ultimately."

Obviously, the private market investor principle, though economically sound in principle, can offer decision-makers only a broad guideline to assess the economic viability of investment decisions by public entities. Inevitably, its application is therefore prone to some degree of arbitrariness.

3. The EU's policy with respect to state aids in the airline industry

a) Criteria

As early as 1984, the Commission developed some basic criteria for the evaluation of state aids for airlines (European Commission 1984). In 1994, when the industry was still dominated by state-owned flag carriers, a committee of civil aviation experts, established by the Commission in 1993, published its recommendations on the conditions that should be met for state aids to airlines to be approvable. In a nutshell (European Parliament (2000), they demanded that

- “the aid should be a one-off measure”;
- “linked to a restructuring plan, to be assessed and monitored by independent professionals appointed by the Commission and ultimately leading to privatisation”;
- “the government concerned must undertake to refrain from interfering in commercial decision-making by the airline concerned, which, for its part, must not use the aid to buy new capacities”; and
- “the interests of other carriers must not be adversely affected.”

b) State aid to airlines

In its 1994 guidelines on the application of the state aid rules to the aviation sector, the Commission, however, chose not to include the recommendation to privatise, nor to strictly enforce the condition that aid should only be granted on a one-off basis – which, later on, it would nevertheless apply as the so-called ‘one time, last time principle’ (Doganis 2006, 49). As a result, the Commission, at least in the 1990ies, generally demonstrated a very relaxed attitude towards state aids in the airline industry, thereby effectively shielding most flag carriers from extinction. The following table which is based on Doganis

(2006, 246) provides a good overview over legal state aids to individual carriers during this period.

Table 1: State aid to EU-based airlines (1990-1997)

State-owned airlines	Amount of approved state aid (in US\$)
Sabena (1991)	\$ 1.8bn
Iberia (1992)	\$ 830m
Aer Lingus (1993)	\$ 240m
TAP (1994)	\$ 1.2bn
Air France (1994)	\$ 3.3bn
Olympic (1994)	\$ 2.2bn
Alitalia (1997)	\$ 1.7bn
Private-sector airlines	Amount of approved state aid (in US\$)
British Airways (1993)	\$ 690m
KLM (1994)	\$ 620m
Lufthansa (1994)	\$ 710m (plus DM 1.55bn contribution to Lufthansa's pension fund)
Finnair (1992, 1994 and 1995)	\$ 175m

Source: *Doganis* (2006, 246)

Not included are those capital injections which were not classified as state aids by the Commission to be in accordance with the private market investor principle.¹⁶ Moreover, in early 2009 the European Commission (2009b) approved a €200m capital injection for the re-

16 These included \$ 338m for Air France in 1993, \$ 267 to Sabena, \$ 49m to AOM and \$ 593m to Iberia (all in 1995) (ibd.).

structuring of (near) bankrupt Austrian Airlines in preparation of its takeover by Lufthansa. In addition, the legality of the €300m emergency loan for Alitalia in 2008 is still under scrutiny.

c) PSO routes

A distinct scheme for the approval of state aids applies to domestic routes for which a member state has chosen to impose a public service obligation (PSO) (European Commission 2009c). Generally speaking, member states are allowed under a specific set of rules to compensate the airline which has been designated by the government by public tender to operate these ‘lifeline services’ for the losses incurred in doing so. Moreover, the government is legally authorized to restrict access to these routes to a single carrier – an option which, according to the Commission has been misused by the Italian government to illegally ban LCCs easyJet and Ryanair from operating 16 domestic route linking mainland Italy with Sardinia (European Commission 2007). In the same vein, the French government did not permit easyJet to operate between Paris (Orly) and Ajaccio on Corse – after all the 12th most popular domestic route on the French market (easyJet 2006), and a rather profitable one at that, too.

Obviously, the PSO scheme may be abused by governments not only to restrict market access, but also indirectly subsidize the incumbent by overcompensating it for the losses incurred on the route (although this practice is banned under EC law, it is hard to detect by outsiders, including competition authorities).

d) Infrastructure investments

With very few exceptions, infrastructure investments financed by the member states’ governments are generally held to be general measures – as opposed to state aid – under EC law. The following aviation-related example illustrates, however, that in many instances no clear-cut, economically convincing distinction is possible. In June 2004, Cologne/Bonn airport – Germanwings’ main base, and a major destination for TUIfly, too – was connected to Deutsche Bahn AG’s high-speed rail network. Construction costs for the airport railway station and the airport tunnel amounted to some €530m, €255m of which were contributed by the Federal government. Arguing that this project

would benefit all airlines serving the airport, this investment was legally classified as a general measure. Obviously, however, improving landside access at this airport may have attracted passengers which otherwise would have used alternative airports – including nearby Hahn airport, Ryanair's main base in Germany which is not accessible by train. Obviously, from this broader perspective a valid case may be made to classify that investment as selective and, hence, state aid.

III. The Charleroi decision – an overview

1. Some basic facts on the city and the airport

With a population of slightly more than 200,000 inhabitants – down from 220,000 in the mid-1970ies – and 520,000 for the metro area Charleroi is Belgium's third largest city (and the country's fifth largest metro area). Located around 60 kilometers (40 miles) south of Brussels, the unemployment in this former coal-mining and steel community rate stands at 26.2 % (January 2009)¹⁷ which is Belgium's highest.

The origins of Charleroi Airport date back to 1919 when a flying school was set up at the site. After World War II, all attempts to attract commercial airline services failed. In anticipation of Belgium's government decision to transfer the responsibility of operating and financing the country's regional airports to the regions on January 1st, 1992, the Brussels South Charleroi Airport Company (BSCA) is established on July 9th, 1991 with the objective of reviving the airports' fortunes. However, it is only after Ryanair's decision to serve Charleroi from May 1st, 1997, that passenger traffic has picked up, with a vengeance (see table 2 below). Today, with more than 2.9m passengers per year, Charleroi has become Belgium's second largest airport after Brussels Zaventem which attracted 18.5m passenger in 2008 (Brussels Airport 2009, 11).

17 Source: <http://fr.wikipedia.org/wiki/Charleroi>.

Table 2: Passenger numbers at Charleroi Airport (1996-2008)

Year	Passengers
1996	< 20,000
1997	200,000
2001	773,431
2002	1.271,979
2003	1.803,587
2004	2.034.797
2005	1.873,349
2006	2.166,360
2007	2.458,255
2008	2.957,026

Sources: European Commission (2004); <http://en.wikipedia.org> (2009)

2. A chronology of events

In 2000, three years after it started services to Charleroi, Ryanair decided to set up its first basis on the European Continent at the airport.¹⁸ The commercial conditions were fixed in two separate agreements between the airline and the government of the Walloon region and the airport operating company BSCA – which, in turn, is controlled by the Walloon regional government –, respectively. Both agreements guaranteed Ryanair substantial discounts over published groundhandling fees and passenger charges as well as some other forms of financial support (see below at III.3 for details). Before reaching the agreement with Ryanair, the airport's negotiations with 35 other airlines had not resulted in any market entry.

18 For the following cf. European Commission (2004).

On November 11, 2002, the Commission – at the request of complaint it had received from (unknown) competitors, initiated a formal investigation under the EC Treaty's state aid regulations. Fifteen months later, on February 12th, 2004, the Commission declared substantial parts of the financial arrangements in two contracts as illegal state aid and hence incompatible with the single market and ordered the Belgium government to claim around € 4.5m back from the airline (The Wall Street Journal Europe 2004). On May 25th, 2005, Ryanair filed a complaint against the decision before the Court of First Instance at the European Court of Justice.

In order to transform its findings in this case into a general framework of legal principles, the Commission, on December 09th, 2005, published a policy document entitled *Community Guidelines on Financing of Airports and Start-up Aid to Airlines Departing from Regional Airports* (European Commission 2005).

However, on December 17th, 2009, the CFI nullified the Commission's Charleroi decision (as well as, by implication, the aforementioned guidelines), essentially accusing the Commission of substantial errors in law (especially its refusal to properly apply the private market investor principle) (Court of First Instance 2008). Finally, on February 19th, 2009, the Commission decided not to appeal the decision.

3. Crucial contract provisions

Under its agreement with Ryanair which covers a contract period of 15 years, the government of the Walloon region, in its role as the owner of the airport, grants the airline a 50 % discount compared to the regular landing fees at Charleroi Airport. Moreover, it undertakes to compensate the carriers for any losses which the latter may incur in the 2001-2016 period due to a “change of the levels of because of a possible change in the level of all airport taxes or airport opening hours during the years“, provided these are not forced upon the government by a change in international law such as ICAO regulations (European Commission 2004, 2).

Covering the same contract length, in the second agreement BSCA commits itself to sharing some of the set-up cost for the new base with Ryanair. To be more specific, the airport operators is obliged to provide (European Commission 2004, 2)

- a reduction of the landing charge from the published rate of €10 per passenger to €1 per passenger;
- €250,000 for “hotel costs and Ryanair staff subsistence”;
- €160,000 for “each new route opened up to a maximum of three new routes for each based aircraft”, translating into a maximum total of €1.92m;
- €768,000 for “participation in the cost of recruiting and training pilots and crews assigned to the new destinations served by the airport”; and
- € 4,000 for office equipment plus “free provision of 100m³ of office space”, “100m³ of ‘engineering store’”, access to the training room and “a minimum or zero contribution for the use of a hangar”.

In return, Ryanair committed itself (ibid, 3)

- to base a minimum number of 2-4 aircraft at Charleroi during the contract period and to perform a minimum of three daily rotations (i.e. round trips) with each of these aircraft;
- to “repay to BSCA the ‘participation’ in the expenditure connected with the opening of Ryanair’s base and the ‘marketing contribution’”, should the airline choose to reduce services to Charleroi below the mutually agreed upon levels;
- to set up and jointly finance an advertising and publicity company with BSCA to promote Ryanair’s services from Charleroi Airport.

Obviously, both sides – Ryanair and the Walloon government plus BSCA – benefitted from these two arrangements. Ryanair, which faced substantial uncertainty regarding the economic viability of its first base on the Continent, received financial and legal assurances that would allow it to operate in a rather stable economic environment for the contract period. At the same time, the provided BSCA with a rather reliable estimate of future airside revenues in return.

IV. A critical appraisal of the Charleroi decision

1. The Commission's line of reasoning

In a nutshell, the Commission concluded in its decision “that Belgium has unlawfully provided aid for the benefit of the airline Ryanair in violation of Article 88(3) of the Treaty” but acknowledged that a (small) “portion of this aid may be declared compatible with the common market” for the contribution it “can make to the launching of new air transport services and the sustainable development of a regional airport” (European Commission 2004, 61). Moreover, it argued that the payments to Ryanair ran afoul the private market investor test (which, according to the Commission, was not applicable at all to the airline’s agreement with the Walloon government – an assessment which would later be judged a fundamental error of law by the CFI) and ought to be repaid to the Belgium government. Finally, the Commission summoned the Belgium government to “set up a non-discriminatory aid scheme intended to ensure equality of treatment for airlines wishing to develop new air services departing from Charleroi airport” (ibid., 62).

2. Economic assessment

a) Insights from the theory of two-sided markets

Two-sided market: key concepts

The theoretical and empirical literature on two-sided markets has grown significantly in the past few years but has not yet played a prominent role in the academic writings on antitrust issues. So, arguably, its influence on antitrust authorities and courts is still very limited, although it may prove to be a very useful tool in analysing and to better understand complex contractual relationships between airlines and airport in general and the pricing strategies of underused (regional) airports in particular.

Generally speaking, two-sided markets, which include some of the most important sectors of the economy, “are characterized by the presence of two distinct sides whose ultimate benefit stems from interacting through a common platform” (Rochet and Tirole 2003, 990).

In other words, the platform provider is in the business of matchmaking and needs to get two distinct sets of customers ‘on board’ at the same time, i.e. to induce them to interact through its platform, in order for it to run a commercially successful operation (Evans 2003). Speaking more technically, two-sided markets are characterised by two features which distinguish them from one-sided markets and, accordingly, also distinguish platform providers from traditional multi-product firms:

- Demand for the two products is complementary. In other words, if one group of customers cannot be attracted by the platform provider in sufficient numbers, or not at all, all business, and hence revenues, will be lost. By contrast, traditional multi-product firms typically offer goods/services the demand for which is not complementary; and
- strong network externalities exist, meaning that the value of and the (potential) demand for the good/service in question will increase overproportionately to the number of other users of the good/service (Evans 2003).

Contrary to traditional firms which cater to one-sided markets, platform operators therefore need to adopt sophisticated and often out-of-the-ordinary pricing and investment strategies to attract both sides of the market. Effectively this means that platform providers need to devise a profit-maximizing price structure instead of just a profit-maximizing price level. Moreover, the platform providers face a chicken-egg problem in creating sufficient demand for their matchmaking services.

To solve both – related – problems, “platforms often treat one side as a profit center and the other as a loss leader, or, at best, as financially neutral” (Rochet and Tirole 2003, 991). As will be demonstrated in more detail below, these peculiarities of platforms compared to ‘normal’ multi-product firms also have profound implications for competition policy, and not least for the EU’s rules on state aid.

The following table which draws heavily on Rochet and Tirole (2003, 992) and Evans (2003) provides, for illustrative purposes, a survey of many real-world examples of important two-sided markets.

Table 3: Examples of two-sided discussed in the economic literature

Product	Subsidized segment/ Loss leader	Profitable segment
Credit and debit cards	Cardholders	Merchants
Night clubs	Female clients	Male clients
Dating agencies (heterosexual orientation)	Female clients	Male clients
Conferences/other social gatherings	Celebrities	Other participants
Shopping malls	Consumers (free parking, cheap gasoline)	Shops
Real estate brokers	Buyers	Sellers
Newspapers	Readers	Advertisers
Free TV	Viewers	Advertisers

Source: *Rochet and Tirole (2003, 992); Evans 2003, 282 f.).*

All this results in the pricing structure being the platform providers key tool “to get both sides on board, ... to keep them happy and ... to encourage them to take advantage of each other” (The Economist 2005, 84). In a nutshell, this means that the platform provider needs to ‘bribe’ (pay) one group of consumers to make use of its services in order to be able to attract the other; if this strategy fails, the market, in a worst case scenario, will collapse (Peitz 2006, 323). As shown in the table above, the typical outcome then is to charge one group of consumers very low prices – often below costs – or even offer it the service for free, especially in the early period after market entry. Last not least, this pricing strategy should not be confused with the cross-subsidies which are common in many multi-product firms as it serves a completely different purpose.

To summarize: As “the product jointly benefits two parties, there is no basis for separating benefits and costs” which means that the prices charged to either side of the market will not bear a (strong) “relationship either to the marginal cost of making the match or to costs specific to that side” (Evans 2002,7).

Last not least, most consumers have access to more than one platform; they may therefore connect to any one of several available competing platforms, a situation which is commonly referred to as multi-homing in the topical literature (Rochet and Tirole 2003, 991f.). Obviously, and provided no collusion exists and no platform can effectively deter multi-homing, it will intensify price competition between alternative platform providers as “platforms use low prices in an attempt to ‘steer’ [one group of users] ... towards an exclusive relationship” (ibid., 993).

These insights into the functioning of two-sided markets have profound implications for the proper conduct of competition policy (and state aid control) which are as obvious as they are straightforward (Peitz 2006, 331):

- Regulators and courts cannot analyse the prices charged by the platform to either side in isolation; otherwise ‘high’ or ‘low’ prices might be misinterpreted as anticompetitive behaviour on the part of the platform provider;
- in other words, even a price which is set way above marginal costs does not necessarily prove an abuse of market power;
- in the same vein, a price way below marginal costs, or even zero, does not necessarily signal predatory pricing;
- therefore, forcing a platform provider to charge prices which reflect marginal costs would result in not achieving the social optimum (Peitz 2006, 326).

Application to the Charleroi decision

Although this fact has been largely overlooked by most of the literature on two-sided markets with the notable exception of Peitz (2006, 319), airport operators obviously are a textbook example of platform providers. Airports might even be considered three-sided markets (at least), bringing together airlines, passengers and retailers.

According to the theory of two-sided markets, the payments and discounts offered by the Walloon government and BSCA to Ryanair may not be considered state aid, but rather a perfectly sensible business decision – and as such one that would have been taken by a comparable rational private investors as well –, for the following reasons:

- Charleroi Airport was a newcomer to the market in need to offer a critical mass of air services so as to attract a sufficient number of passenger to at least break even;
- experience shows that regional airports typically must serve between 500,000 and 2m passengers a year to turn a profit, depending on local conditions (Starkie 2002);
- the special conditions granted to Ryanair must be considered as the local governments and the airport's attempt to solve the chicken-egg problem (with Ryanair de facto guaranteeing a minimum number of passengers – with the concomitant demand for ancillary services at the airport and throughout the region – and hence a rather predictable income stream to airport and the region);
- given the specific economics of platform operations, the payments and discounts should be considered as an integral part of a (perfectly legal) strategy of penetration pricing, and/or some form of bilateral risk-sharing arrangement to convince Ryanair to enter an untested market;
- finally, and drawing an analogy between the Charleroi case and pricing strategies of platform providers in other sectors of the economy, there is no convincing economic evidence of a breach of the private market investor principle on the part of the Walloon government and BSCA.

b) Insights from the theory of interjurisdictional competition

Interjurisdictional competition: key concepts

The enormous political progress made in recent decades in opening up markets and international trade has – compounded by ever decreasing transportation, communication and translocation cost – substantially reduced most firms' dependence on local factors of productions. As a result, the costs of relocating production facilities have significantly declined (Gröteke 2007). This is especially true in the airline industry, whose main means of production – aircraft – may be easily redeployed to other routes and bases due to very low sunk costs.

The vast majority of economists and political scientists are thoroughly convinced of the welfare enhancing effects of competitive market processes (if market failure is absent). It is not surprising, therefore, that a lively debate on the merits and demerits of competition between political entities – referred to in the topical literature as either interjurisdictional, institutional, locational or systems competition – has evolved. This is particularly true of the EU, where the process of market integration has since its founding days followed a sometimes erratic path between the two poles of ex ante harmonization of standards and policies on the one hand (as a prerequisite for creating a level playing field and fair competition) and interjurisdictional competition on the other (as a tool to identify and help spread the most efficient standards and policies through the well-known voice-or-exit mechanism all over the Community) (Siebert 1990).

With the benefit of hindsight, it is perfectly safe to argue that the latter approach has clearly prevailed in the EU's concept of market integration, at least in the European Court of Justice's landmark *Cassis de Dijon* decision of February 20th, 1979.¹⁹ It stipulated the so-called country of origin principle as the prevailing approach to market integration in the single market which ever since has only in some cases been complemented by ex ante harmonization; especially, due to the existence of or potential for substantial negative cross-border externalities.

Nevertheless, the economics of interjurisdictional competition – which were brought to the attention of the scientific community by the seminal treatises by Hayek (1939), Tiebout (1956) and Oates (1972, 1999, 2005) – are more controversially discussed among economists compared to the effects of competitive market processes for goods and services. While some argue that interjurisdictional competition is a powerful tool to tame Leviathan, i.e. to keep governments in check lest they 'fleece' their immobile citizens by imposing ever higher taxes on them and by lacking any meaningful incentive for an efficient provision of public goods and services (Sinn 1992), others fear it inevitably leads to a welfare destroying 'race to the bottom' (McGuire 1991; Sinn 2003).

According to the 'optimists', interjurisdictional competition unfolds its positive effects as follows: In the famous, though analytically very

19 The complete text of this decision is available online at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:61978J0120:EN:HTML>.

simple, Tiebout model (1956) independent consumer-voters with perfect knowledge choose their preferred place of residence based on their demands for local services and the price they have to pay for it through local taxes by comparing the alternative tax-benefit packages of competing jurisdictions. In this model, no restrictions to mobility exist and all individuals are only earning dividend income. Also, no interjurisdictional spillover effects are assumed to be present and every jurisdiction will reach its optimal size with minimum production costs. As a result, both allocative and productive efficiency are realized. However, the model makes no mention of income redistribution policies and their impact on the efficiency of interjurisdictional competition.

To put it in more general terms: In a world with capital mobility or labour mobility (local) governments are tempted to choose a policy (which can be described as a custom-tailored policy) to attract the mobile factors of productions which are in short supply locally and which are need to increase local output and, as a result, local income (Hayek 1939; Tiebout, 1956). In their competition for investors, governments have several policy instruments at their disposal to influence a firm's locational decision to broaden the local tax base and increase local employment and income. These include all general measures in the meaning of the EU's state aid regulations (i.e. infrastructure investments), the granting of state aids and regulatory action (or the abdication thereof).

Accordingly, inefficient governments (or jurisdictions, respectively) which "steal or waste resources are likely to lose residents and businesses to other regions, reducing their tax base" (Fan, Lin and Treisman, 2009, 18). By implication, some pressure is exerted on each jurisdiction "to provide good governance" (Kessing, Konrad and Kotsogiannis 2009, 106.). What is more, provided there is sufficient transparency, interjurisdictional competition allows the individuals respectively inhabitants of a (local) jurisdiction to use information of other jurisdictions to gauge and evaluate the performance of their own government an outcome typically referred to as yardstick competition (Kenyon, 1997; Breton, 1991, 40). Last not least, Garcia-Mila and McGuire (2002) hold that in some cases tax competition in the form of firm-specific tax breaks in an attempt to lure or retain businesses can be welfare improving for the city and may be considered a positive sum game.

According to the 'pessimists', interjurisdictional competition unfolds its welfare destroying effects in a manner which we illustrate with

McGuire's (1991) model of "destructive competition" within a federal state. He assumes an informal model of interjurisdictional competition with preferences for redistribution. Accordingly, individuals prefer ability-to-pay-taxes instead of benefit taxes. In the theoretical welfare optimum for the world as a whole, in all jurisdictions public goods are provided and redistribution is conducted in a uniform manner and at identical levels. Additionally, he assumes that the nation's population is heterogeneous in terms of income and mobility. In this setting, he demonstrates that the theoretical welfare optimum cannot be attained because of a "ruinous competition of the jurisdictions". This is because any jurisdiction has a strong incentive to reduce local taxes "for relatively wealthy and mobile individuals or businesses in order to lure them to relocate" (Kenyon, 1997, 21). If all jurisdictions follow the same incentive, the national tax revenue will fall under the welfare optimum level. As a result the optimal level of public services cannot be attained. Rather the provision of public services will be suboptimal. In conclusion, allocative efficiency cannot be achieved without tax policy harmonization. A review of the topical literature also suggests that, depending on model specifications, horizontal tax competition can result in either too little or too much taxation, an outcome Goodspeed (1998, 581 ff.) describes as "destructive downward" and "destructive upward" tax competition. Other economists warn that 'too much' decentralization might give rise to welfare losses due to increased corruption and the higher likelihood of (regulatory) capture of local policymakers by lobbies (Feld, Kirchgässner and Schaltegger, 2004, 4).

Over time, a rather broad consensus has emerged, that at least in those policy areas which generate significant cross-border externalities (a new variant of the classical beggar-my-neighbor phenomenon), i.e. where fiscal equivalence is absent, a set of rules are required to prevent governments from engaging in some forms of interjurisdictional competition which might yield suboptimal outcomes as a result. In short, in federal systems these rules should be included into the constitution. In an entity like the EU, the supranational level has to assume the role as the guardian of the interjurisdictional competition (Erlei, Leschke and Sauerland 2007, 415). Moreover, these rules should provide for maximum fiscal equivalence and include a hard budget constraint (Kornai 1986), plus some form of 'no bailout' and should be complemented by some form of state aid control to prevent a welfare destroying 'subsidy competition' among jurisdictions (Gröteke 2007).

c) Application to the Charleroi decision

Let's first assume that airports will generate positive externalities at the local and/or regional level in terms of better accessibility and local job creation at the airport and among companies which need to use the airport for conducting their businesses. Importantly, it is the airlines, however, which actually use the local airport – which is useless as a tool for economic development of it fails to attract sufficient traffic – that are the producers of these spillover effects.

However, airlines serving the local airport will not typically be compensated for the external benefits their services provide to the jurisdiction they serve. From this perspective, *ceteris paribus*, providing state aid – which exactly reflects must exactly reflect, though not over-compensate these externalities – is an efficient internalisation method. Under these circumstances, state aids granted by the jurisdiction are, *ceteris paribus*, fit to improve the efficiency of interjurisdictional competition (Gröteke 2007). Any form of supranational state aid regulation which ignores these interrelations and imposes a *per se* ban on these subsidies, would accordingly be counterproductive, and ultimately welfare destroying.

However, in a legal setting, which does not provide for the aforementioned three key prerequisites for an efficient interjurisdictional competition – fiscal equivalence, a hard budget constraints and a credible commitment to the 'no bailout' rule –, there is an important role to play for a supranational system of state aid control. However, this assessment should be taken with a grain of salt as it assumes that the supranational body is able to gather and to process all relevant information (including the monetary equivalent of cross-border externalities) which is needed for optimal policy decisions and in a position to enforce the rules against lower-level jurisdictions.

Applying these insights to the Charleroi decision, a strong case can be made that the state aid granted to Ryanair was an attempt to produce meaningful spillover effects for an economically depressed region by improving accessibility and employment by means of low cost flights into the area. While exact data to which degree the benefits created actually outweigh the budgetary costs to attract the airline, are not available (at least not for the general public), the substantial increase in passenger numbers – which has now reached a level as well as the entry of additional carriers indicated a positive rate of return on the invested (local) taxpayers' money. Moreover, the Walloon govern-

ment has decided to open up to 48.98 % of the airport's capital for private investors.

However, we strongly caution not to generalize this conclusion. Not all, if not most, regional airports will ever develop the critical mass of air services needed to achieve this (presumably) positive outcome for the local economy. This is especially true where there is a large overlap of catchment areas with other, bigger airports and these competing airports already offers a mix of both traditional and low cost airline services.

V. Conclusion

We conclude that the EU's existing rules on the legality of state aids to a substantial degree fail to reflect the economic complexity or airport ↔ airline relationships. This crucial shortcoming is likely to mislead competition authorities and courts alike in their analysis of this and similar aviation-related cases. We propose to address it by integrating key insights from the theory of two-sided markets and the theory of interjurisdictional competition into the decision-making process.

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