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Two Sides to Every Story? Lessons from the Travelport/Worldspan EC case

For a market to be described in economic terms as "two-sided" two conditions must hold. First, the product at the centre of the analysis is a "platform" that allows or facilitates the interaction of two distinct groups of customers. Second, the benefit that customers in one group derive from the interaction is larger the greater the number of customers on the other side of the platform (the platform creates indirect network externalities). Examples of markets with two-sided features include the media (where advertisers and audience/readership "interact" through newspapers or television channels), credit cards (interaction between merchants and customers) and software platforms such as operating systems or game consoles (interaction between software developers and users). Some authors have argued that even supermarkets can be regarded as two-sided platforms, since consumers value more those supermarkets that offer a larger variety of goods.[1]

In a number of recent merger cases, competition authorities have applied concepts from the economic theory of "two-sided" markets.[2] Indeed, the new French merger guidelines devote one section to this type of cases.[3] It is often claimed that mergers in such markets require a specific competitive assessment and that many of the concepts normally used in merger analysis are not directly applicable. But how do we establish whether a market is two-sided? And how does the fact that a market is two-sided change the competitive assessment? In this Brief we address these questions drawing on experience from the recent Phase II merger of Travelport and Worldspan, which was cleared unconditionally by the European Commission.[4]

Overview of the transaction

The parties operated respectively Galileo and Worldspan, two Global Distribution Systems ("GDS"). These are computerised systems through which travel service providers such as airlines, hotels, and car rental companies can distribute their products to travel agents. A GDS allows travel agents to search and compare prices from hundreds of airlines and other travel service providers, check availability, make reservations, and issue tickets.[5]

The Commission concluded that the transaction concerned the market for electronic travel distribution services through a GDS, thus rejecting the inclusion of other channels of travel content distribution, such as direct sales through the airlines' websites. The transaction reduced the number of GDS suppliers from four to three, the remaining competitors post-merger being Amadeus and Sabre.

The Commission found that a GDS acts as an intermediary in a two-sided market, connecting airlines on the "upstream" side of the market and travel agents on the "downstream" side. The two-sided nature of the GDS market stems from the existence of "indirect network externalities", namely the fact that a GDS is more valuable to travel agents the larger the range of products it offers and, vice versa, the GDS is more valuable to airlines the larger the number of travel agents that subscribe to it.

For travel agents it is generally impractical and costly to subscribe to multiple GDSs since this would require them to install and use multiple terminals in each outlet and/or would entail substantial costs for integrating multiple GDSs in a common interface. As a consequence, airlines have to subscribe to all GDSs if they want to reach all travel agents.[6] This, in turn, largely eliminates the benefit for travel agents to subscribe to several GDSs, since any additional "content" provided by the second or third GDS subscription would be small.

1 M. Armstrong, "Competition in Two-Sided Markets", *RAND Journal of Economics*, Vol.37(3), 2006, pp.668–691

2 J.-C. Rochet and J.Tirole, "Two-Sided Markets: A Progress Report", *RAND Journal of Economics*, Vol.37(3), 2006, pp.645–667; Armstrong, 2006, op.cit.

3 DGCCRF, *Lignes directrices relatives au contrôle des concentrations* (2007), Section 3.2.5, paragraphs 427–442

4 Case COMP/M.4523 Travelport/Worldspan. RBB Economics advised both parties with respect to the Commission's investigation, which was resolved without the need for an SO.

5 Since they represent by far the most important category of travel service provider, in the remainder of this paper we will refer to travel service providers as "airlines". However, many of the arguments presented in the following also apply for other types of travel service providers.

6 Following the terminology of the economic literature on two-sided markets, the Commission's Decision describes travel agents as "single-homing" (that is using only one platform) and airlines as "multi-homing".

This market structure has an impact on the relative bargaining strength of GDS suppliers and their customers on the two sides of the market. Each GDS supplier effectively acts as a gateway which controls the airline's access to a certain group of travel agents. The Commission argued that this provides each GDS supplier with a certain degree of market power. Airlines pay a fee to GDS suppliers for access to their travel agent subscribers which is typically proportional to the number of transactions made by travel agents (e.g. the number of airline tickets booked). Since the revenues of GDS suppliers from the upstream side of the market depend on the number of bookings, GDS suppliers compete hard to expand their installed base of travel agents by offering them lower prices and per-booking financial incentives. Typically, travel agents are net receivers – they do not pay but rather are paid by GDS suppliers for booking through their system. Revenues earned by GDS suppliers from airlines are to a significant extent transferred to travel agents as a result of competition between rival GDSs in the downstream market.

Unilateral effects

In a traditional one-sided market, economic theory predicts that when a firm raises price this has two conflicting effects on the profits of the firm. On one side, it increases the firm's revenues on each unit sold. On the other side, higher prices induce some customers to switch to competing products, thereby reducing the firm's volume of sales. A horizontal merger may give rise to unilateral effects because, post merger, some of the sales lost as a result of a price increase are captured by the other merging party, mitigating the loss of sales volume compared to the pre-merger situation and therefore creating an incentive to raise prices.

In a two-sided market these conflicting incentives also exist, but the mechanism is more complicated due to the interaction between the two sides of the market. If a GDS supplier raises its price to travel agents (or, equivalently, reduces per-booking financial incentives) it may induce some travel agents to switch to a different GDS. This reduces the volume of bookings made through the GDS, and therefore the revenues earned from airlines. Moreover, the reduction in the number of travel agents decreases the attractiveness of the GDS to airlines. This may weaken the GDS provider's bargaining position vis à vis airlines. This additional feedback "interaction" between the downstream and the upstream side of the market, which is specific of two-sided markets, reinforces the competitive constraints existing on GDS suppliers but may also create opportunities for suppliers to "leverage" market power from one side of the market to the other side, as we discuss below.

The merger of Galileo and Worldspan resulted in large market shares in the travel agent market (40–80%), with significant increments, in several Member States (Belgium, Hungary, Ireland, Italy, the Netherlands and the UK).[7] The Commission identified three possible theories of unilateral effects concern.[8]

- First, the merger would create market power with respect to travel agents in those six EU countries where post-merger market shares were high; this would give the merged entity the ability to raise price and/or reduce financial incentives to travel agents.
- Second, the merger would eliminate Worldspan as the alleged "pricing maverick", leading to post-merger price increases to airlines.
- Third, the merged entity would leverage its market power with respect to travel agents in the six member states set out above in order to increase prices to airlines ("vertical cross-market effects").

The assessment of the first and second theories of harm was no different from that undertaken by the Commission for traditional one-sided markets. It was the "vertical cross-market effects" theory which added the distinctive feature arising from the two-sided nature of the GDS market.

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The Commission deemed the geographic scope of the market to be national on the travel agent side and EEA-wide on the airline side.

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The Commission also raised concerns that the merger might give rise to coordinated effects, leading to higher prices being charged to airlines and/or to travel agents. The Commission's analysis of coordinated effects follows the same approach normally used in one-sided markets and is not discussed in this paper.

Assessment of the "vertical cross-market effects" theory

The "vertical cross-market effects" theory developed by the Commission goes as follows. Post-merger, Galileo/Worldspan would have a large share of the travel agent market in several Member States. As a consequence, if an airline has a particular interest in distributing its content in such countries, it would become more dependent on Galileo/Worldspan. Although the airline may be able to sell some of its seats in these countries through other distribution channels, including other GDSs, according to the Commission's theory Galileo/Worldspan would be an unavoidable "gateway" for airlines to reach a substantial part of end-consumers. The merger would improve the bargaining position of the parties vis à vis airlines, leading to higher prices in the upstream market. Moreover, since GDS fees are a marginal cost for airlines (they are paid on a per-transaction basis), higher fees could ultimately be passed on to consumers in terms of higher ticket prices, thus reducing consumer welfare.

The parties showed that the theory of harm set out above was unlikely to materialise. The main reason for this is that airlines have strong bargaining tools that they could use to prevent the merged entity from imposing a price increase. Because the volume of bookings made through a particular GDS is determined by the actions of travel agents (their choice of GDS and the number of bookings they make), airlines cannot respond to a hypothetical increase of GDS fees in the way normally followed by customers to discipline suppliers in a one-sided market, namely reducing the volume purchased. They can, however, exercise leverage by other means.[9] First, airlines can withdraw specific content from the GDS. For example, airlines can make their lowest fares available only though rival GDSs and/or through the airline's website. Second, airlines can impose surcharges on travel agents that book through a particular GDS. If the travel agent absorbs the surcharge it reduces its profits, whereas by passing it on to consumers it risks losing customers to rival travel agents.

By using these bargaining tools, an airline can make that GDS less attractive to travel agents, inducing some of them to switch to rival GDS suppliers. Crucially, if a travel agent switches, the GDS loses not only the bookings on the airline in question, but also the bookings made by the travel agent on all other airlines, which could cause a substantial loss of revenues for the GDS supplier. The effectiveness of these bargaining tools was demonstrated by the fact that a substantial number of airlines had been able to negotiate lower fees with all GDSs. Indeed, the gross margin of Galileo had decreased substantially in recent years.

In order for this competitive mechanism to be effective, it is particularly important that travel agents have the ability to switch to alternative GDS providers post-merger.
In order to prove that this as indeed the case, the parties submitted a detailed analysis of travel agents' switching behaviour. This showed that, every year, in the six countries in question a substantial proportion of travel agents switch GDS supplier thus confirming that switching costs are not so large as to substantially hinder changing GDS supplier. Moreover, the analysis showed that a disproportionate number of the travel agents that switched away from Galileo and Worldspan joined Amadeus (the market leader in the EEA), and that the level of switching taking place between the merging parties was not substantial. Once it was convinced that viable alternatives existed, and that the merger did not eliminate an important constraint, the Commission concluded that the merger was unlikely to result in unilateral price increases as a result of "vertical cross-market effects".

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Airlines can directly reduce the volume of bookings made through a particular GDS by terminating their distribution agreement with that GDS. However, this may not be a viable response to a hypothetical increase of GDS fees, since it could harm the airline more then it harms the GDS supplier.

Does two-sidedness matter?

In many cases establishing that a market is two-sided does not make a substantial difference to the substantive merger assessment. First, even though many markets have two-sided features, these are not necessarily the predominant aspect of the market. For example, the possible two-sided aspects of supermarkets do not preclude supermarket mergers from being analysed under the traditional one-sided markets framework, as indeed has often been done by both economics scholars and antitrust practitioners.[10]

Second, the competitive concerns raised by mergers in one-sided markets generally also apply in two-sided markets. For example, many of the competitive concerns raised by the Commission in the Travelport / Worldspan case were essentially unrelated to the two-sided aspects of the market.

Third, many of the concepts and tools applied in the analysis of mergers in one-sided markets continue to play a key role in markets with two-sided features. The Travelport/ Worldspan merger shows that evidence on closeness of competition and switching behaviour can be just as useful in two-sided markets as it is in one-sided ones.

Nonetheless, the Travelport / Worlspan case illustrates that mergers in two-sided markets can raise specific competitive concerns, namely the "vertical cross-market effect" described by the Commission.[11] It also illustrates the importance of taking into account the indirect constraints that may exist because of the interaction between the two sides of the market. In the Travelport / Worlspan case, for example, we have seen that even though airlines were unable to "switch" to a different GDS supplier (since they supply all GDSs), they could nonetheless put pressure on each GDS supplier by undertaking actions that induce travel agents to switch GDS (by withdrawing selective content and imposing surcharges).

Conclusions

Consumer interests are best protected if merger assessment is based on an accurate understanding of the way each market operates, rather than on the application of form-based rules that may not reflect the reality of the industry. In this respect, recognising the possible two-sided aspects of a market can be useful to understand the way competition operates. If correctly applied, the economic theory of two-sided markets can help to develop a coherent theory of harm and also to assess this theory against the facts of the case.

However, the analysis of two-sided markets shares many features with that of one-sided markets and often the two-sided aspects of the case may be of secondary importance. Moreover, and perhaps more importantly, all markets have specific characteristics that ought to be taken into account for the purpose of the competitive assessment. This holds as well as for other market characteristics such as network effects, economies of scale, switching costs, and many other aspects that are considered on a case-by-case basis. The recognition of these specific market characteristics (including two-sided aspects) ought to be used to assess mergers in a way that reflects more accurately the market reality rather then to develop a wider and more detailed set of form-based rules.

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In general, two-sided aspects tend to be more important in markets where indirect network externalities between the two sides of the market are substantial. An indication that such network externalities are important, and therefore two-sided aspects of the market have to be taken into account, may be provided by the existence of a "skewed" price structure, where customers on one side bear most or all the cost and those on the other side pay little or are even subsidised (for example, this is the case of GDSs, credit cards and free newspapers).

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It is also worth noting that in two-sided markets it is particularly likely that gains made by a platform supplier on one side of the market are at least partly passed on to customers on the other side of the market (for example, travel agents receive a net payment per booking from the GDS supplier). This means that a price increase on one side of the market does not necessarily harm economic efficiency or consumer welfare since it might only result in a transfer from customers on one side of the market to customers on the other side.