

Airports as two-sided platforms?

A critical contribution

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Introduction (1)

- Increasing literature and applications “two-sided markets” or “platforms”
- Applied to airports
 - Implications for regulation
- Are airports “two-sided platforms” (TSP)?
 - What are the implications for regulation

Outline

- Two-sided markets
- Application to airports
- Non-aviation revenues
- Discussion and policy implications
- Conclusion

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“Two-sided markets” (1)

- Classic example: dating agency
 - Two groups of consumers
 - Men and women
 - Both yield utility from using the platform
 - Utility also increases with number of users from the other group

“Two-sided markets” (2)

- To function, platform must bring “both parties on board”
- Similar to network externalities
 - telephones
 - Here: indirect usage externalities
- Pricing of paramount importance
 - Particularly if cross-usage externalities are unevenly distributed

“Two-sided markets” (3)

- Further (cited) examples:
 - Advertising platforms
 - eBay
 - Operating systems (Windows)

“Two-sided markets” (4)

- Roche & Tirole (2003) define two-sidedness in such a way that the **volume of transactions** (output) fluctuates if the **price structure** (relative prices between the two groups) changes whereas the **price level** (defined as the total revenues from both sides of the platform) **remains unaffected**. If that does not hold true the market is said to be one-sided.

“Two-sided markets” (5)

- Evans and Schmalensee (2007) point out:

TSP arise where two parties face externalities; not be solved differently (or with lower transaction costs) than through the platform

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Application to airports (1)

- Are airports TSP?
 - Platform for airlines and passengers
 - Passengers gain from destinations, ...; airlines gain from greater “plateau” of passengers
- Case made by Gillen (2009)
 - Related (but not limited) to non-aviation revenues

Application to airports (2)

- Passenger pay no entry fee
 - Bear a passenger fee indirectly
- But: passengers do get sold something
 - Airport does not “bring together”
- No cross-usage externalities
 - Tickets is pre-purchased (e.g. through website)
- Airport is (essential) input for airlines
 - Charges are levied accordingly

Application to airports (3)

- What if airports charges passengers directly
 - E.g. for service of being “handled” through to the aircraft
- Vertical relationship remains unaffected
 - Products are (perfect) complements
 - Decision to buy ticket reflects willingness to “buy airport”

Application to airports (4)

- Therefore: **vertical** externalities
 - No cross-usage externalities
- Similar consequences regarding pricing
 - Airport pricing influences airline pricing and passenger demand
 - Airline product decisions have impact on airport revenues

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Non-Aviation revenues (1)

- Airports also sell non-aviation products
 - Food and beverages, clothing, ...
- Different products, hence no two-sided market
- Airlines seek passengers, not shopping passengers
- Passenger fly, shoppers shop
 - Maybe different for revenue sharing

Non-Aviation revenues (2)

- Complementarity between aviation and non-aviation
 - Possibly largely through income effects
 - Car parking related to aviation product from consumer's point of view
- Starkie (2001) uses complementary “revenue streams” instead of “demand complementarity”

Non-Aviation revenues (3)

- Price reductions in aviation product → increase in demand for non-aviation products
 - Reverse?
- Complementarity has impact on pricing
 - →

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- **Discussion and policy implications**
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Discussion (1)

- Vertical externalities and coordination problems
 - No cross-usage externalities
- Complementary demands for aviation and non-aviation products
- Airports not TSP
- But what are the effects of the above?

Discussion (2)

- Standard model for multi-product firm:
 - Depending on cross-price elasticities and economies in production → optimal prices diverge from single product situation
 - One product boosts demand of another
- If cross-price effects and scope economies are large → Starkie (2001) argument

Discussion (3)

- Due to vertical relationship
 - Double marginalization
 - Vertical externalities
 - → individual decisions (by airlines and/or airports)
might not optimal from integrated point of view
- Implications for policy:
 - Regulation of aviation prices negatively impacts non-aviation prices

Discussion (4)

- Price structure is important, airports might not optimize
- Airports' negotiated contracts might impede downstream competition
- Regulation should assess impact of non-aviation business

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Conclusion (1)

- Airports are not TSP
- Better described by vertical relationship
 - With multi-product profit function
- Have similar (if not identical) effects as two-sided concept
 - Effect of airport's charges feed through to passengers

Conclusion (2)

- Problems such as double marginalization usually “irrelevant” in “normal” industries
 - Here: possible impediments
 - Price regulation, implicit price structure regulation
- With complementary demands
 - Lower price for aviation product
 - But: depend on size and direction of complementary effects

Conclusion (3)

- Concept of two-sided markets does not enrich airport regulation discussion
 - Models to analyze airports are available
 - Effects of vertical relationship and complementary products resemble TSP effects

Thank you very much!

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