

# Airport Competition: Implications for Regulation and Welfare

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# The Issue...

**To what extent can we rely on competition between airports to render regulation unnecessary?**

# Key Message

- **Quite often we can rely on competition**
- **Even sometimes with large airports subject to excess demand**
- **There are still problems with airports with no close competitors, and possible oligopoly cases**
- **And the problems may emerge in the long run when investment is required**



# Agenda

## **Competition and Regulation of Airports**

### **Why Regulation?**

### **Competition and regulation- smaller/medium airports**

### **Competition and regulation – Large busy airports**

### **Investment in less competitive cases**

### **Conclusions**

# Competition and Regulation

# General Idea

- **If airports are competitive, no need for regulation**

# Expectations of Competition

- **Prices are at marginal cost**
- **Costs are at minimum feasible level**
- **Investment is efficient- not too early, or too late**
- **Quality is optimal; not too high, not too low**
  
- **Overall an efficient situation**

# Limitations to Competition

- **Distance- leads to market power**
- **Constraints on competition (regulation)?**
- **Motivations of competitors (public owner's objectives)**
- **Physical and capacity constraints**



# Limitations to Regulation

- **Poor regulatory design**
- **Objectives of regulated firms- profit, size, slackness**
- **Objectives of regulator**
- **Lack of information on part of regulator**
- **Costly**



# Upshot

- **Both competition and regulation can be imperfect**
- **Sometimes, competition is sufficiently strong- regulation unnecessary**
- **Other times, a there is a case for regulation**

# Why Regulation?

# Rationales

- **Increase allocative efficiency- eg keeping prices low, at close to competitive level**
- **Achieving productive efficiency- cannot assume that airports maximise profits**
- **Ensuring that airports invest the right amount , neither too much or little**
- **Ensuring quality is optimal**
- **Protection of sunk assets of airlines (Biggar, Australian Competition and Consumer Commission)**
- **Altering the share of rents- airports, airlines and travellers (not an efficiency objective)**

# The Traditional Case

- **Limit the use of market power**
- **But elasticities are low, and dead weight losses are small**
- **This is not the case when there is rent seeking**
- **Eg when a non profit maximising airport charges high prices and wastes the rents**
- **Links in with the second rationale**

# Competition, Regulation and Smaller Airports

# Small Competitive Airports

- **Suppose free entry**
- **Could use the Dixit Stiglitz model of monopolistic competition**
- **Some scale economies**
- **Firms do not have much market power**
- **Airports cover the area**
- **Entry results in firms being able to just cover cost**
- **Average costs are higher than if scale econs were achieved**
- **A trade off between convenience (lower travel costs) and cost**

# Regulation?

- **Costs may a bit high**
- **But this is the cost of convenience**
- **Overall, a quite, but not perfectly efficient outcome**
- **No case for regulation on basis of market power, or low productive efficiency (Gillen and Assaf on UK airports)**



# Limitations to the Model

- **May not be free entry**
- **Possible cases of strong market power- eg with remote airports**
- **Markets may take a long time to adjust**
- **Eg sunk costs, airports are not likely to be in the optimal location (old military airports)**
- **Excess investment by regional governments (using airports to promote growth); subsidies**
- **Esp with publicly owned airports- eg Germany**

# Is Competition Sufficient?

- **May be some case for regulation of some airports**
- **Small airports tend not to be regulated**
- **If some large airports are regulated, there is a threat of regulation**
- **Implicit or implicit**
- **Scottish airports, Australian airports in the regulation phase (1997-2002)**

# Large Busy Airports: Marginal Cases

# To Regulate or not?

- **Often it is not a clear case**
- **This airport should be regulated, that airport not**
- **There is competitive pressure, but how strong is it?**
- **Quite often airports are regulated for a time, and then formal regulation is dropped**
- **Eg Manchester- enough competition from Liverpool and other airports**
- **Stansted- CAA argued that competition was strong enough for it to be deregulated, but the Govt did not agree**
- **Scottish airports- previously regulated**

# Criteria for Deregulation

- Regulation might be regarded as tentative- to be removed if it is not needed
- If price capped, does the airport price up to the cap? (Manchester did not)
- But not just a matter of pricing- other problems of regulation- eg quality and investment
- Eg deregulated airport may increase prices but increase quality
- But in Stansted's case, users would like to see less investment and quality (esp Ryanair)
- Australian airports after move to light handed regulation easier to invest to raise quality



# Airports with Market Power

# The Classic Case for Regulation?

- **Not necessarily the biggest airports**
- **Airports with no near competitors**
- **Eg Sydney, Melbourne, Frankfurt?**
- **Or airports which business traffic with competition for part of their business- eg Hamburg**
- **And perhaps not much hub competition**
- **These airports have competition for some of their product mix**
- **Eg they compete with smaller airports for LCC traffic, but they have an effective monopoly of business traffic**

# Price Discrimination

- Possible ability to price discriminate
- How serious an efficiency problem is this?
- (The problem with price discrimination is the use of real resources to avoid higher prices)
- More of a problem with airports with access to subsidies?



# Light Handed Regulation

- **Even airports with strong market power might be subject to light handed regulation (eg Sydney, Melbourne)**
- **Idea: lessen the costs of regulation, while providing a check on market power**
- **Not complete deregulation**
- **1 Australian system:**
- **Monitoring with sanctions for poor performance**
- **2 Contracts:**
- **Contracts with arbitration (Littlechild)**
- **Used in rail for mines in Canada**
- **(Mainly a case of carve up of rents, with few efficiency implications?)**



# Large Busy Airports: Can they be Competitive?

# Large Busy Airports

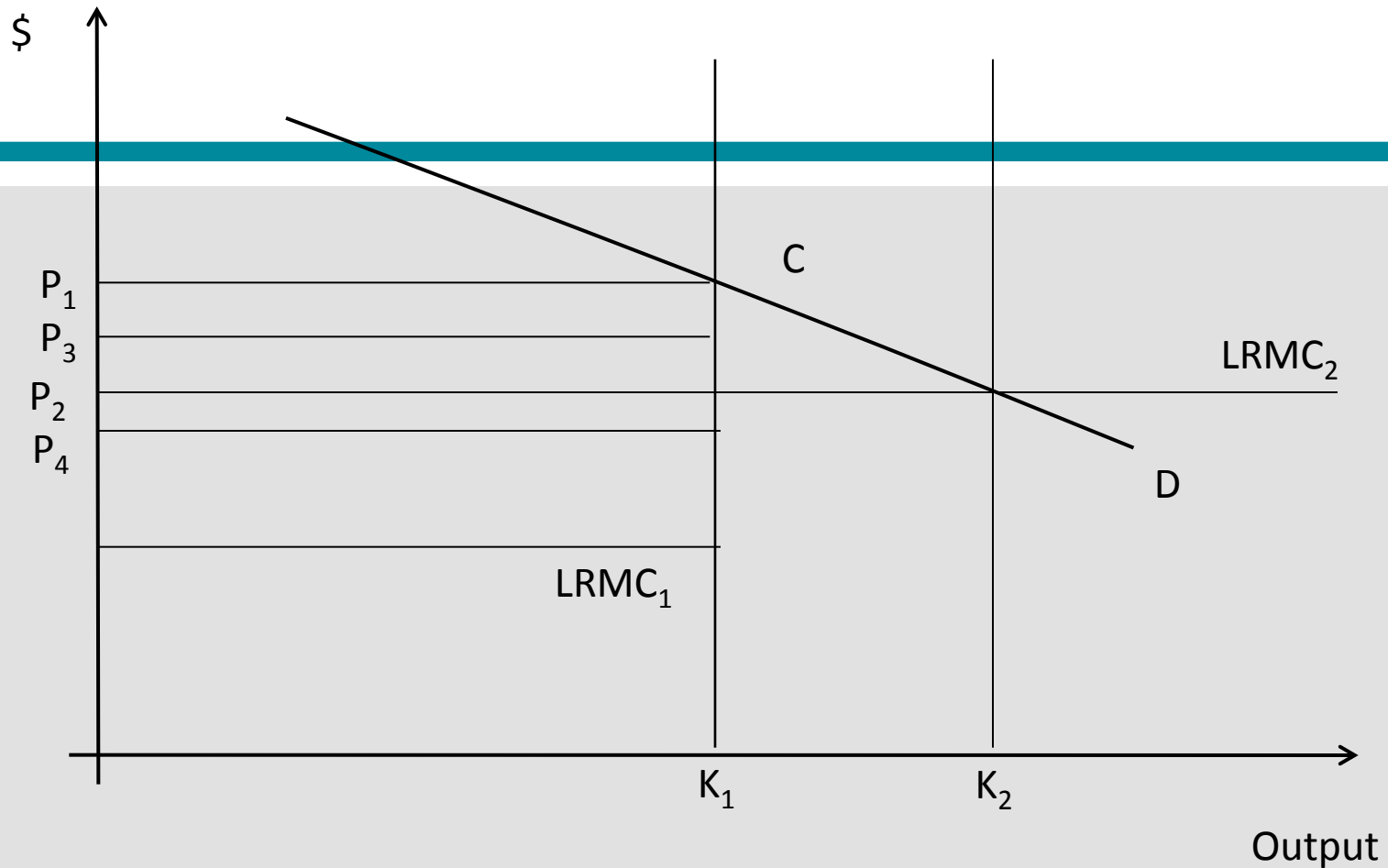
- **Eg Heathrow and Gatwick, Paris. Amsterdam, Madrid before expansion**
- **How strong is competition- it could be quite high**
- **Key feature- excess demand relative to capacity**
- **In US, rationed by delays**
- **In Europe, Japan, Australia: rationed by slots**
- **Think of London; five airports plus fringe**
- **Allocative efficiency achieved by slots**
- **Slot rents are a locational, not monopoly rent**
- **Total price set by market**



# Is Regulation Necessary?

- **Regulator sets some of the total price**
- **Price to airlines could be P1, P2, P3 or P4**
- **Regulator does not contribute to achieving allocative efficiency**
- **Its role is to keep prices to airlines low**
- **Is this a good thing or not?**
- **In this case, competition works well, and is sufficient**





# Downsides of Regulation

- **Price caps can influence quality (as can rate of return regulation)**
- **In the case of price caps, induce airport to provide too low a quality**
- **In this case, regulation has no impact on market power, but has a negative effect on other aspects of efficiency**
- **Is this the case for London?**

# Oligopoly Airports

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- **There may be a small group of competitive airports**
- **How will they behave? Cournot? Bertrand? Joint profit maximisation?**
- **Here there could be a problem of exercise of market power**
- **Eg, there is argued to be exercise of market power in the electricity generation market (also a market with fixed capacity)**
- **How good is regulation at controlling exercise of market power with a small group of competitors?**
- **Would this be London?**



# Oligopoly with Spare Capacity

- **Suppose the small group of airport has spare capacity**
- **Would competition emerge then?**
- **Certainly airports would be able to compete then- an airport can gain market share (and possibly profits) if it cuts prices**
- **However, this situation would not last for a long time- excess capacity is inefficient**

# Investment in Less Competitive Cases

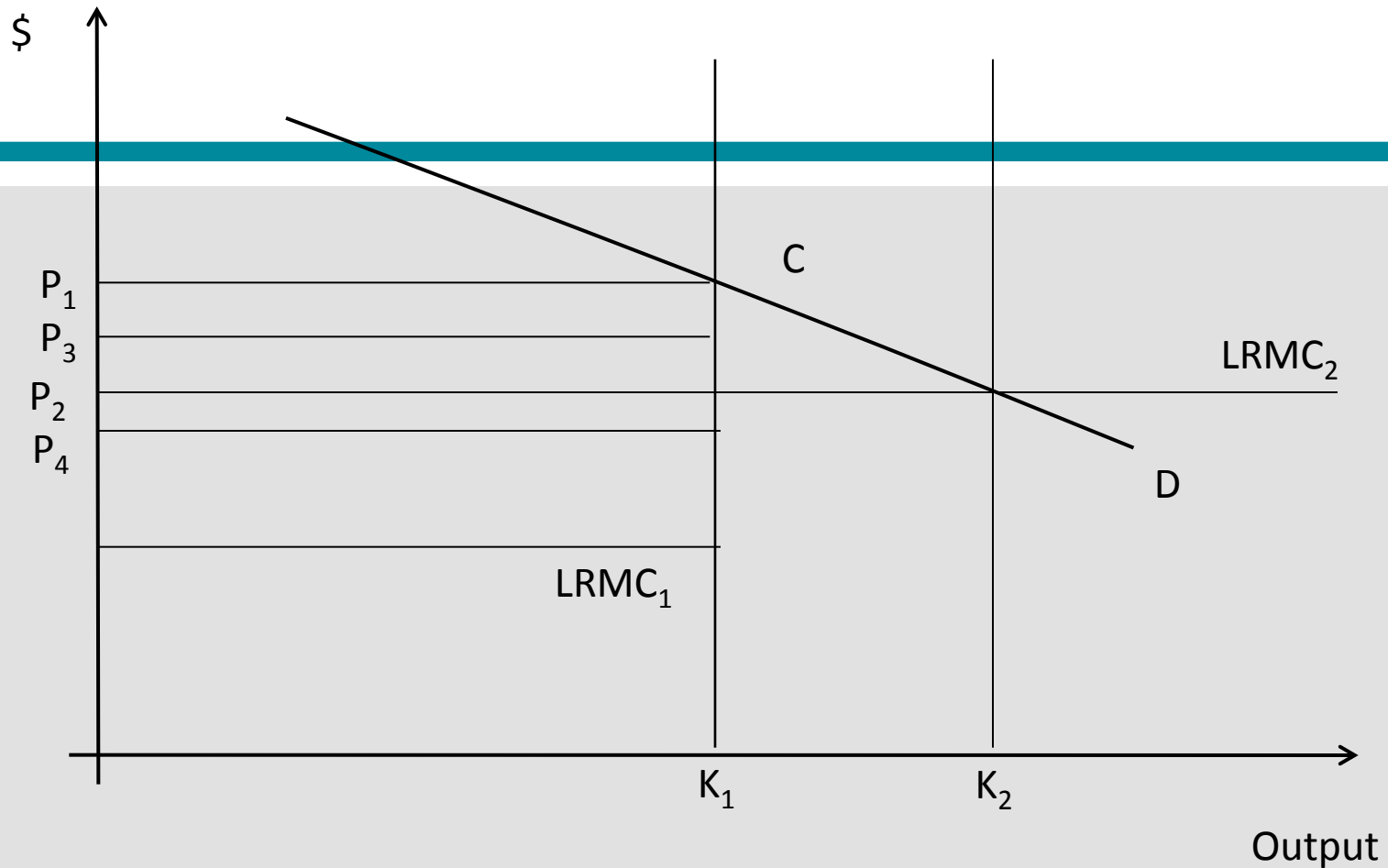
# The Long Run Problem

- **Will the airport face incentives to invest efficiently over the long run?**
- **Leave aside planning, political and site selection problems**
- **Should not be a problem under competition- but regulation?**



# Investment

- **Fig shows the case of additional investment**
- **With D1 investment is worthwhile**
- **Even though LRMC rises from LRMC1 to LRMC2**
- **Efficient to increase capacity from K1 to K2**
- **New price = LRMC2**



# Will the Investment come about?

- **Cases of strong regulation (P2)**
- **Then the airlines gain slot rents**
- **Which are NOT passed on to their passengers**
- **Investment comes about**
  
- **Or deregulation/light handed**
- **Airport gains profits**
- **Airlines gain profits**
- **So both Airlines and airports prefer K1 to K2**
- **But passengers are worse off compared to K2**

# Thus, under LH Regulation

- **Under LH regulation or deregulation, efficiency does not come about**
- **No incentive for airlines and airport to negotiate an efficient solution**
- **In this case, airline and passenger interests are not aligned**
- **Both the airport and the airline will argue “expansion is not needed”**
- **(Under regulation, (Eg LHR) regulator can create incentives for the airport to invest in terminals, not runways)**



# Achieving Efficient Investment

- **Need some mechanism to ensure investment**
- **Difficult to design regulation to achieve both SR goals and LR goals**
- **Periodic (simple) cost benefit analyses to determine whether airport's performance is acceptable?**
- **Let's face it, there will be CBAs done to determine if major capacity investments are needed**



# Conclusions

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- **Regulation an imperfect tool- it has its costs**
- **Very often , competition is sufficiently strong to dispense with regulation, especially with small to medium sized airports**
- **Often there is an issue of whether to regulate or not with larger airports**
- **For large airports wit market power, light handed regulation is an option**
- **With busy congested airports, competition may still be present- which raises the issue of what regulation achieves**

# Conclusions (Cont)

- **Cases of small group oligopoly can give rise to problems**
- **Much discussion of airport efficiency problems (eg allocative efficiency) has focussed on short run problems**
- **But investment/ long run issues may be more difficult to address**

**Gracies!**

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