

Airport Capacity for Sydney

**Peter Forsyth,
Monash University**

**Expanding Airport Capacity in Large Urban
Areas**

International Transport Forum/OECD

21-22 Feb 2013

The Issue...

As with other cities, Sydney has a problem of ensuring adequate airport capacity

How well has this issue been handled in the past?

How well might it be handled in the future?

Which Issues are Common With Other Cities?

- **Clash between economic and environmental aspects**
- **New sites for airports are distant**
- **In some cases, Institutions (eg, Like London's)**
- **Slots used to ration excess demand**
- **Privatised, like some other airports (eg London's)**
- **Hub issues, connectivity issues**
- **Externalities such as noise and emissions**
- **Will be affected by a possible HST**
- **How to evaluate inbound tourism?**

In What Ways is Sydney Different?

- **Light handed regulation- more scope for pricing options**
- **Good evaluation so far?**
- **Evaluation using two techniques - CBA and Computable General Equilibrium (CGE) models**
- **Special issues with regional flights**
- **High foreign ownership of airport and airlines poses the question of whose costs and benefits?**

Agenda

History and Background

Location, Hubbing, Connectivity and Competition

Rationing Excess Demand

Evaluation of the Options

Externalities

Conclusions: Is Sydney a Disaster?

Background

Facts 1

- **Kingsford Smith (KSA) the only RPT airport for Sydney**
- **Canberra 290 km away (London-Manchester), Newcastle**
- **8 km from CBD**
- **Coastal site- little room for expansion**
- **Access: car and taxi; expensive railway; bus discontinued (too competitive)**
- **High use of air in Australia**
- **Sydney to Melbourne 800 km**
- **11hrs by car, slow train**
- **Ongoing study for HST**

Facts 2

- **Bankstown airport**
- **GA only; could handle small aircraft- eg Dash 8s**
- **Close to CBD but not convenient**
- **Richmond Airport**
- **On NW fringe of Sydney**
- **Air Force base, long runway**
- **Regional flights**
- **“Ring Fenced”**
- **Affects slots, prices**

Institutions 1

- **Airport arrangements quite similar to UK**
- **BAA/FAC; privatisation; price cap regulation**
- **Sydney privatised in 2002 (Macquarie Bank)**
- **Difference: Light Handed Regulation from 2002**
- **Monitoring with periodic reviews**
- **Airports have pricing freedom**
- **Sydney the most expensive and productive in Australia**
- **Price capped for regional services**

Institutions 2

- **ATC- Airservices Australia, corporatised**
- **And a Slot Coordinator**
- **Rail link provider (private)**
- **SACL the owner of KSA**
- **Has rights to build second Sydney Airport (SSA)**
- **Federal / State interface**
- **Federal govt controls airports, State govt the surface access (Roads, rail, Taxis)**
- **Australian Competition and Consumer Commission (ACCC) – monitoring etc**

A Second Airport?

- **Major study (MANS) in late 1970s/1980s**
- **Similar to Roskill**
- **Looked at several sites on the urban fringe**
- **Preference for Badgery's Creek- 45km from CBD**
- **A Third Runway for KSA (Parallel)**
- **Two options:**
- **Early start to SSA or Third Runway**
- **Third Runway opened in 1995**
- **Pressure of demand led to further study**
- **Joint Study 2012- make the best of capacity increases, then then build SSA –but where? Wilton 65km? Canberra? Perth?**



Growth of Demand

- **Sydney close to capacity sometimes– some hours full**
- **Capacity 80 aircraft per hour (policy not technical)**
- **But problems of storms and wind**
- **Capacity could be increased to 85-87**
- **Noise sharing affected**
- **But regional flights have a fixed minimum allocation**
- **Bankstown and Richmond could be used a little**
- **A HST would take some pressure off demand**

Location, Hubs, Connectivity and Competition



Sydney as a Hub

- **Sydney the end of the line- not a big hub role**
- **Connect international with interstate – eg to Adelaide**
- **Connect international and domestic with regional- eg, to Wagga Wagga**
- **Hub questions:**
- **Make use of smaller airports or build SSA soon?**
- **Invest to maximise KSA capacity or build SSA soon?**
- **Joint Study makes judgement to max KSA use**
- **These questions are about how valuable is the hub role of KSA**



Handling Hubs and Connectivity

- **Different though related**
- **Is there an externality or not?**
- **If no externality, efficient pricing should be enough- the efficient level of hubs /connectivity will come about**
- **But if there are externalities, policy will need to foster them**
- **An externality with connectivity is plausible**
- **And it will be important to evaluate how big these externalities are (not easy, but there are some suggestions, such an analogy with telecoms)**
- **Value of externality will affect where to build and when to build**



Competition

- **KSA does not face much competition at present**
- **Some hub competition from Melbourne, Brisbane**
- **Bankstown and Richmond could provide a little competition if allowed**
- **In the LR the SSA could provide competition**
- **But the owners of KSA (Macquarie Bank) have the right to build the SSA**
- **Could they be bought out (like owners of hen licences in NSW)?**
- **Possible clash- what if the owners do not want to invest in the SSA but the govt wants them to? (see below on this)**



Rationing Demand

Rationing Excess Demand

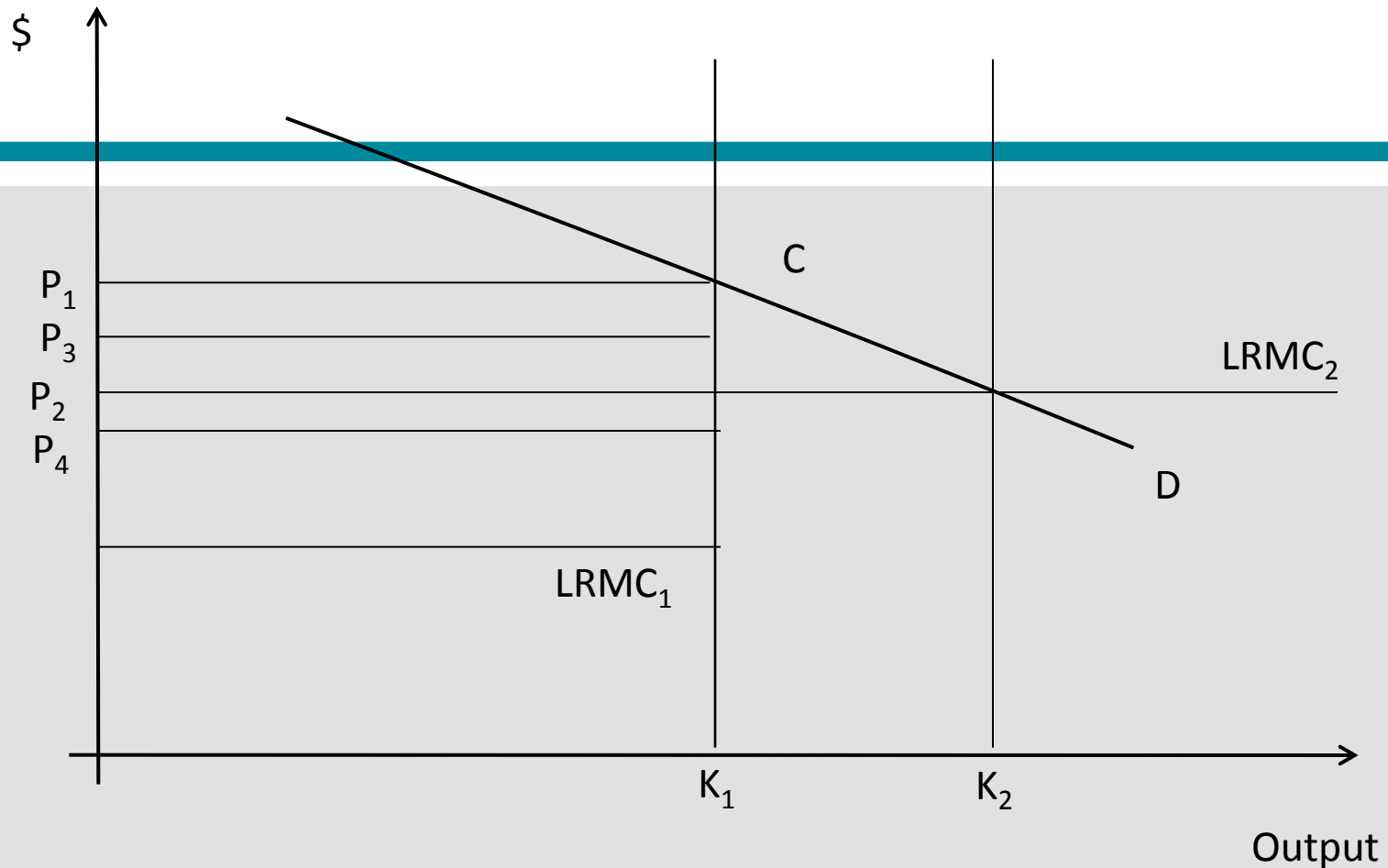
- **A little excess demand at the moment**
- **(Do we need to have a new airport as soon as delays appear?)**
- **Capacity can grow at KSA and Bankstown and Richmond can enter the market**
- **Demand can be rationed by: (a) delays (US);(b) slots; (c) pricing**
- **KSA has the beginnings of a slot system**
- **Currently, administrative allocation (not efficient)**
- **Auctions good, but unlikely**
- **But a market could be established- trading could be quite efficient**
- **The ACCC has become interested in slot systems (ships etc)**

Options for Rationing

- **Slot trading can be efficient- will there be trading?**
- **Will non regional airlines be able to buy regional slots?**
- **With light handed regulation, Sydney will have the ability to ration by prices**
- **Unlike most airports**
- **But price *structure* is possibly very important**
- **Excess demand would be reduced if weight based charges were replaced by uniform charges**
- **Sydney has experience in the past- minimum charge until the third runway**
- **To what extent will pricing be allowed?**

Timing

- **Can use slots or prices to delay the need for additional capacity, thereby saving money**
- **But will the private airlines and airport build capacity when it is efficient to do so?**
- **If both airlines and airport share the slot rents/profits, both will have an incentive to delay investments**
- **How will airlines respond if they realise that a shortage of capacity means they enjoy high slot rents?**
- **“The extra capacity is not needed yet”**
- **Heathrow?**



Will the Investment come about?

- **Cases of strong regulation (P2)**
- **Then the airlines gain slot rents, and the airport does not**
- **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, and overall welfare, are worse off compared to K2**

Evaluation of the Options

The Parallel Universe of Two Evaluations

- **By and large, the Joint Study is a good one**
- **The Joint Study provides TWO evaluations of the needed for a SSA**
- **A CBA evaluation of the benefits of doing the SSA**
- **A CGE (Computable General Equilibrium) study of the costs of NOT building the SSA**
- **And they are not integrated**
- **Has happened before- Eddington Report on Melbourne transport**
- **Are they the same or different or what?**
- **Seems like a scene from “Red Dwarf”**

CBA vs CGE

- **There are differences but they are looking at the same question**
- **To get a better overall evaluation, we can take advantages of the two**
- **There are several limitations of CBA**
- **There are several limitations of CGE**
- **They are complementary**

CBA and CGE

- **CGE constrained by the model (and thus the detail), but CBA can include all benefits and costs**
- **CGE has difficulties in location specific issues like noise**
- **CGE can handle externalities like emissions better than CBA**
- **CBA has difficulties in handling macro effects and general equilibrium effects**
- **CBA does not do distributional issues well**

Advantages in Using Both in Evaluating Airports

- **Checking consistency: CBA assumes full employment, but the CGE study argues that additional jobs have a value**
- **CBA has trouble measuring the benefits of inbound tourism (and costs of outbound)- a big issue for evaluating international airports**
- **Easy to do using CGE (Australian, UK studies)**
- **Measuring GG emissions- CBA measures in the Joint Study is too partial**
- **Easy to fix using a CGE model which has a “Green” component**



Improving Evaluation

- **Joint Study is novel in that it uses both CBA and CGE models**
- **But does not take the next step and integrating them**
- **Doing this would improve evaluation of airports**
- **Difficult to do perfectly, but easy to improve on current evaluations**

Externalities



Externalities

- **Sydney airport has the usual externalities**
- **Noise: several options to lessen noise, and some of these have implications for operations and capacity**
- **Emissions: Australia has an ETS which covers domestic but not international flights**

Conclusions

Conclusions- Sydney Airport is *not* a Disaster

- **Australia has its share of infrastructure disasters**
- **Sydney Airport is not one of them**
- **Investment timely, processes democratic, assessment scientific, capacity rationed fairly efficiently**
- **What will happen in the future?**
- **The processes for good decisionmaking are understood- sound evaluation, efficient rationing of capacity and understanding about vested interests**
- **But there is no guarantee that things will go well: wrong locations, no competition, poor capacity rationing, excessive investment and undemocratic processes are all possible**



Thank You!

peter.forsyth@monash.edu

<http://users.monash.edu.au/~pforsyth/index.html>