

Productivity in Australian Airports Before and After Privatisation

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GARS Workshop Wien
November 2005

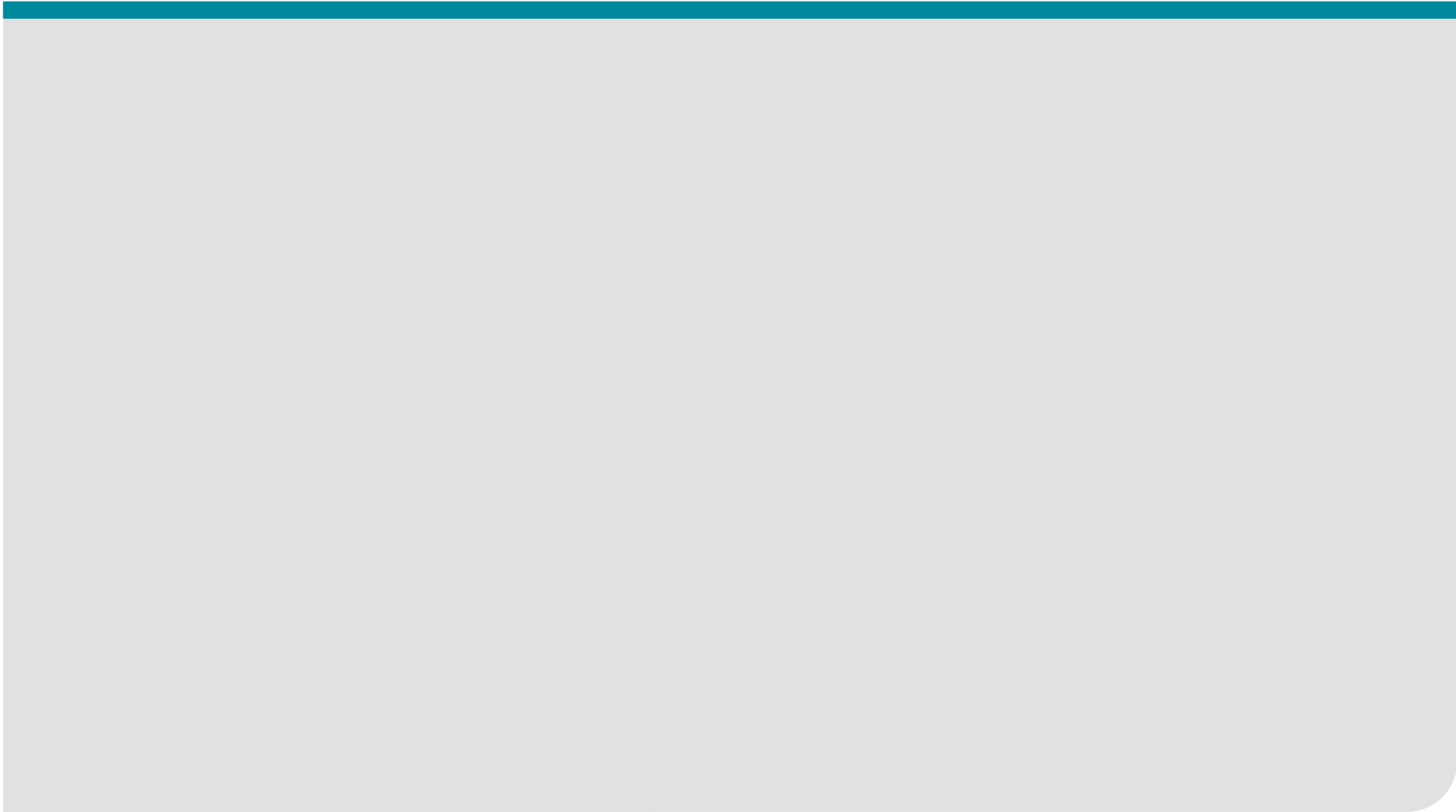
Objectives

- **Explore productivity change in Australian airports over time**
- **Examine patterns of productivity growth, prices and productivity**
- **Compare productivity between Australian airports, and between Australian and overseas airports (later)**
- **Will produce some preliminary results**

Outline

- **Background on privatisation and regulation of Australian airports**
- **Approach**
- **Data**
- **Results and Interpretation**
- **Problem areas**
- **Conclusions**

Background



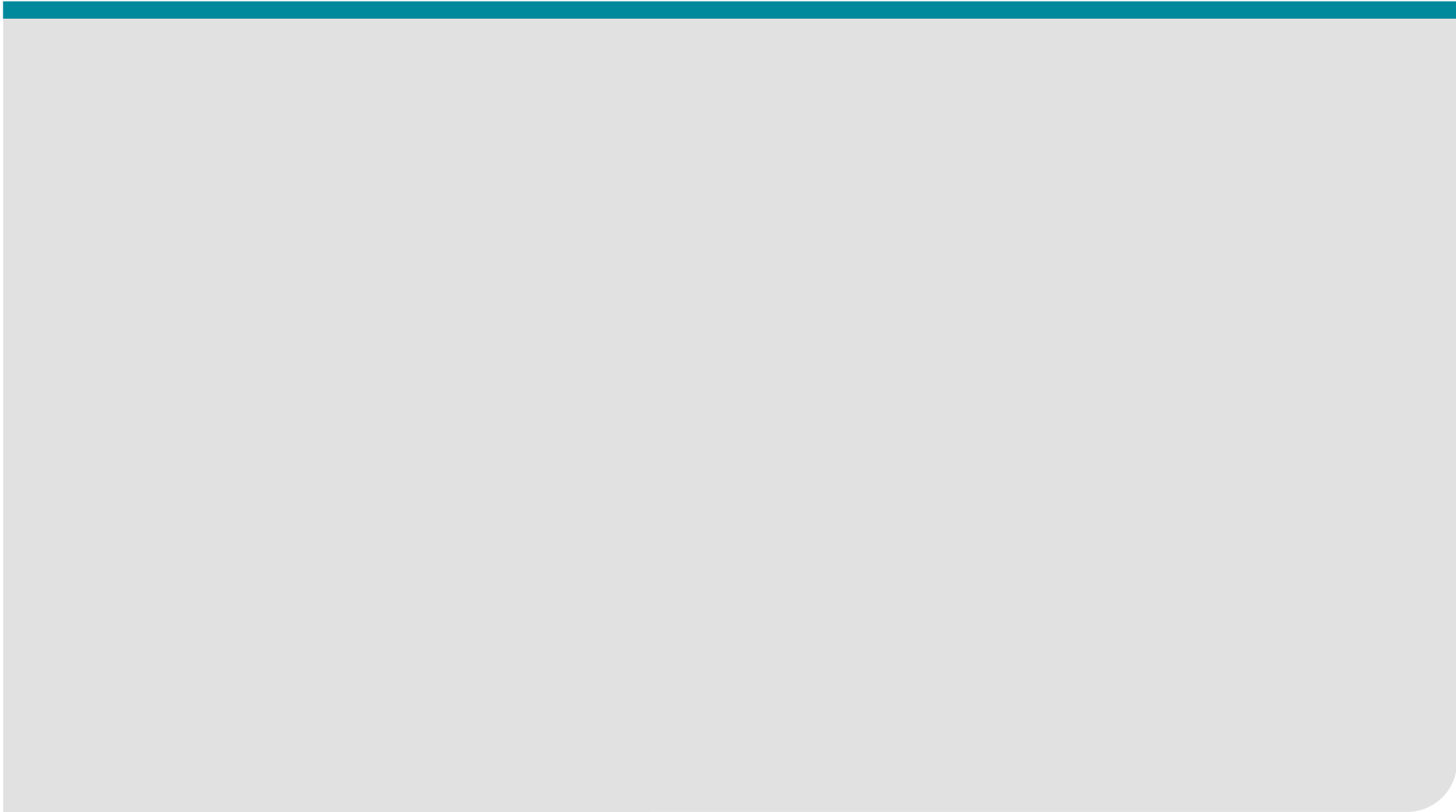
Background

- **Concerned with major city airports (Sydney, Brisbane, Melbourne, Perth etc) plus smaller airports**
- **All publicly owned prior to 1996-97 (Cairns locally owned)**
- **Privatisation of Melbourne (2nd) Brisbane (3rd) and Perth (4th) in 1996-97**
- **Smaller airports privatised in 1997-98**
- **Airports subjected to five year price cap**
- **X= 4 (approx)**
- **Dual till**

Developments post 2001

- **Revenue crisis in 2001- Ansett collapse, 9/11**
- **Price caps relaxed (major airports) or suspended**
- **Demand collapse- now more or less recovered**
- **Sydney airport privatised in 2002**
- **Large increase in aeronautical charges prior to privatisation**
- **Review of regulation in 2001-02: recommended monitoring**
- **Charges deregulated in 2002- monitoring imposed**
- **Will be a review after five years- the review could recommend re-regulation if performance not satisfactory**
- **No guidance given as to satisfactory performance**

Approach



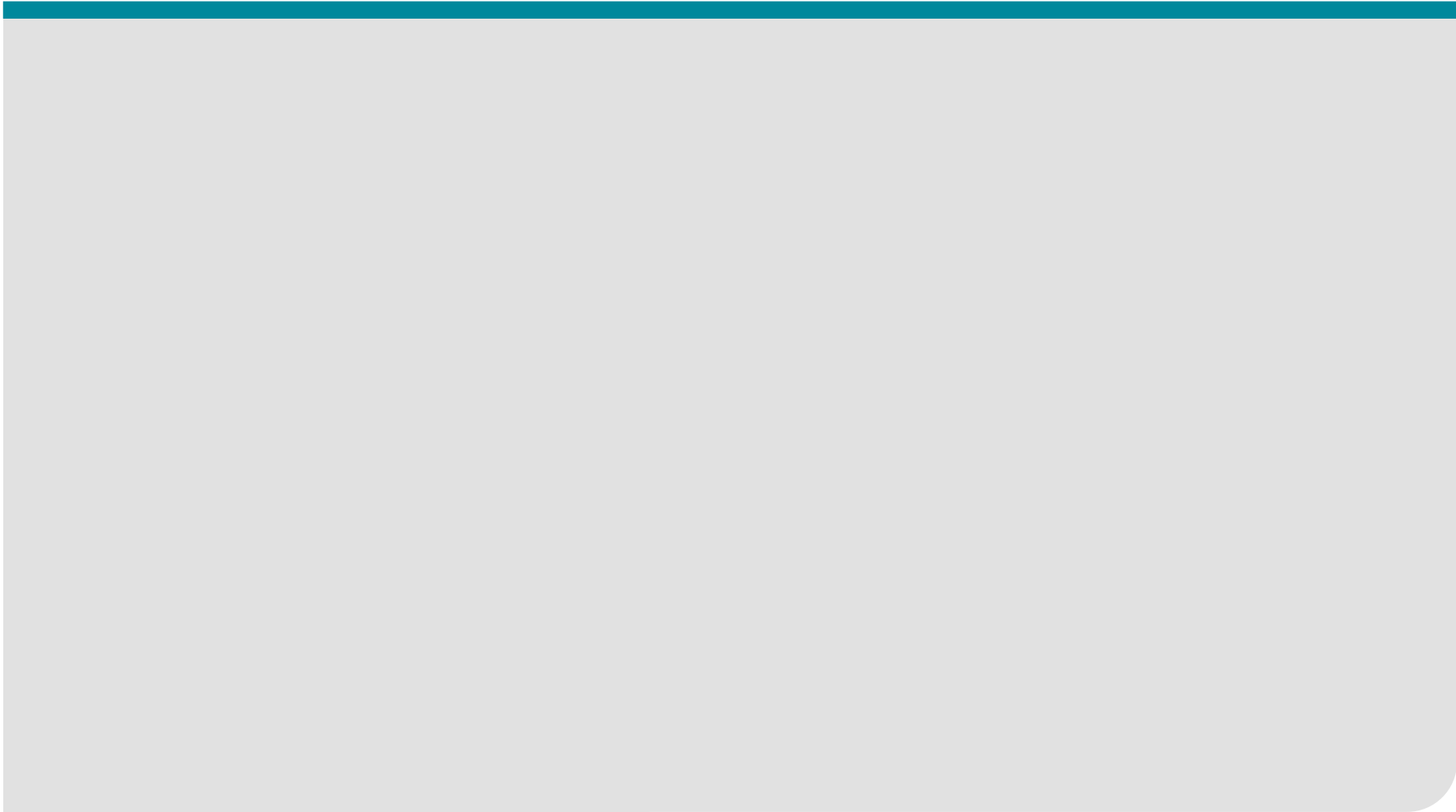
Approach

- **Measure TFP using Tornqvist index**
- **Input Index X**
- **Output Index Y**
- **Unit Cost Index- $\text{Total Cost}/Y$**
- **Unit revenue Index- $\text{Total Revenue}/Y$**
- **Profitability Indicator- $\text{Total Revenue} / \text{Total Cost}$**

Relationships

- **Explore relationship between productivity, prices and profitability**
- **Output prices: depend on input prices, productivity and profitability**
- **Productivity growth: apply to reduce prices (relative to input prices) or to increase profits**

Data



Data

- **Consider two airports –Sydney and Brisbane (more later)**
- **Period 1992-93 to 2003-04**
- **Exclude security costs from costs and revenues**

Periods

- **1992-93 to 1996-97:pre privatisation**
- **1996-97 to 2001-02: Privatisation and regulation, Brisbane; pre privatisation, Sydney**
- **2001-2 to 2003-04: Post privatisation, Brisbane; monitoring, Sydney and Brisbane**

Outputs

- **Passengers; non aeronautical revenue**
- **NA revenue deflated by GDP deflator**
- **Could also incorporate aircraft movements- would lower productivity growth**
- **NA revenues could possibly have increased faster than the GDP deflator- method would then overstate productivity growth**

Inputs

- **Labour (staff numbers); Other expenditure; depreciation**
- **Other expenditure and depreciation: deflated by GDP deflator**
- **Capital price deflator? –falling in Australia over period**
- **Depreciation an incomplete indicator of capital input**

Results

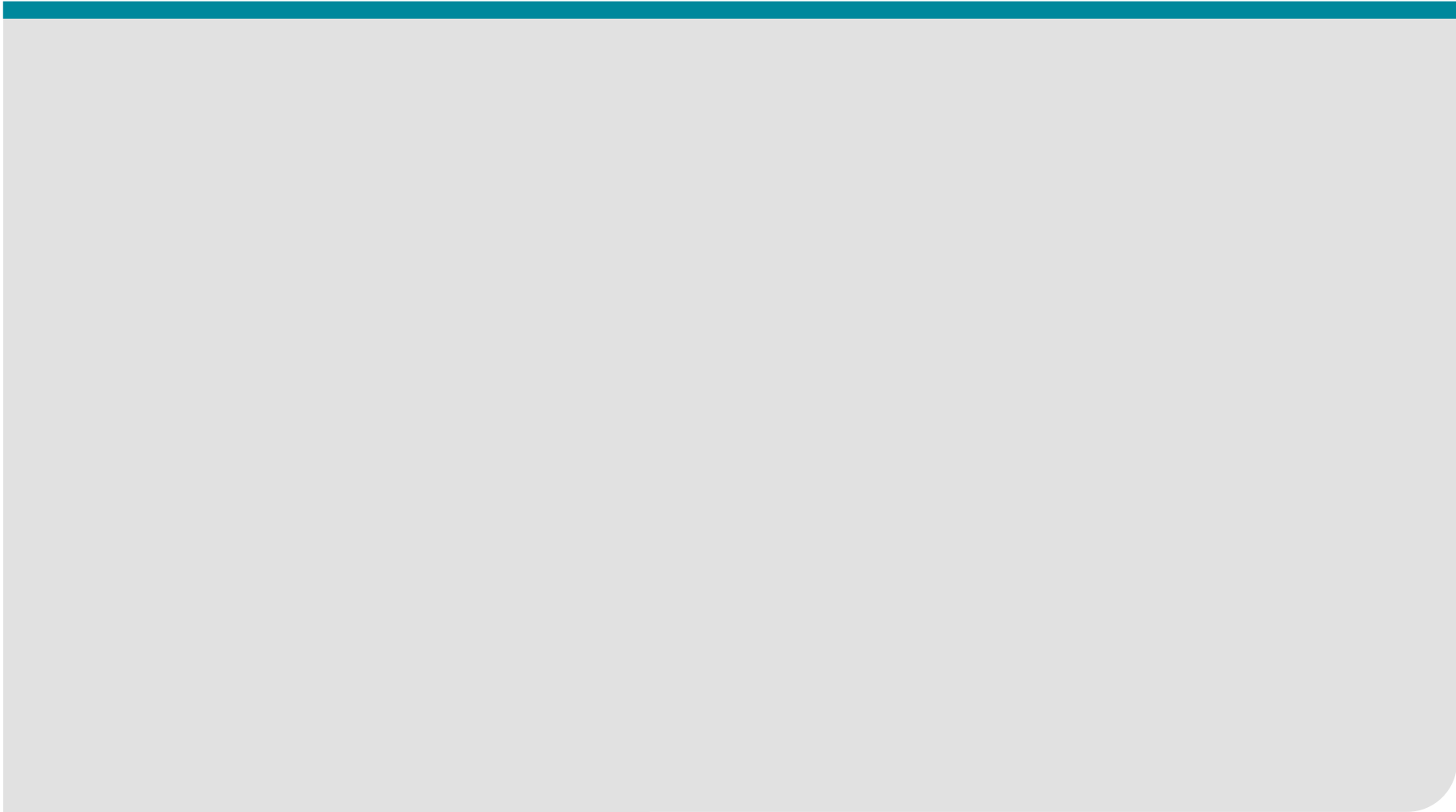


Table 1
Productivity- Sydney

	Input Index	Output Index	Productivity Index
1992-93	100.0	100.0	100.0
1996-97	134.8	138.4	102.6
2001-02	180.1	174.7	96.9
2003-04	167.3	193.0	109.0

Table 2
Productivity-Brisbane

	Input Index	Output Index	Product ivity Index
1992-93	100.0	100.0	100.0
1996-97	194.4	154.4	79.4
2001-02	210.7	199.0	94.5
2003-04	243.8	222.3	87.5

Comments- Sydney

- **TFP growth modest over period**
- **Considerable growth post privatisation**
- **Olympics expenditure- possible factor explaining pre privatisation productivity slump**
- **2001-02 a weak period for demand**

Comments Brisbane

- **TFP growth negative**
- **Potential explanation – new capital inputs**
- **Substantial investments- e.g. new international terminal**
- **Strong TFP growth in the post privatisation, price capped period**
- **Recent productivity fall?**

Table 3
Unit Costs and Revenues- Sydney

	Unit Cost	Unit revenues	Ratio
1992-93	100.0	100.0	100.0
1996-97	108.8	108.1	99.3
2001-02	139.3	154.0	110.6
2003-04	127.3	163.6	128.5

Table 3
Unit Costs and Revenues- Sydney

	Unit Cost	Unit revenues	Ratio
1992-93	100.0	100.0	100.0
1996-97	108.8	108.1	99.3
2001-02	139.3	154.0	110.6
2003-04	127.3	163.6	128.5

Comments 2-Sydney

- **Unit Revenues growing faster than unit costs since 1996-97**
- **Unit costs falling recently- reflecting productivity growth**
- **Aeronautical price increases a policy decision pre privatisation**
- **A profit oriented response post privatisation**
- **Non Aeronautical price increases could also exceed GDP deflator increases**

Table 4
Unit Costs and Revenues- Brisbane

	Unit Cost	Unit revenues	Ratio
1992-93	100.0	100.0	100.0
1996-97	140.6	104.9	74.6
2001-02	110.9	107.0	96.5
2003-04	123.2	125.3	101.7

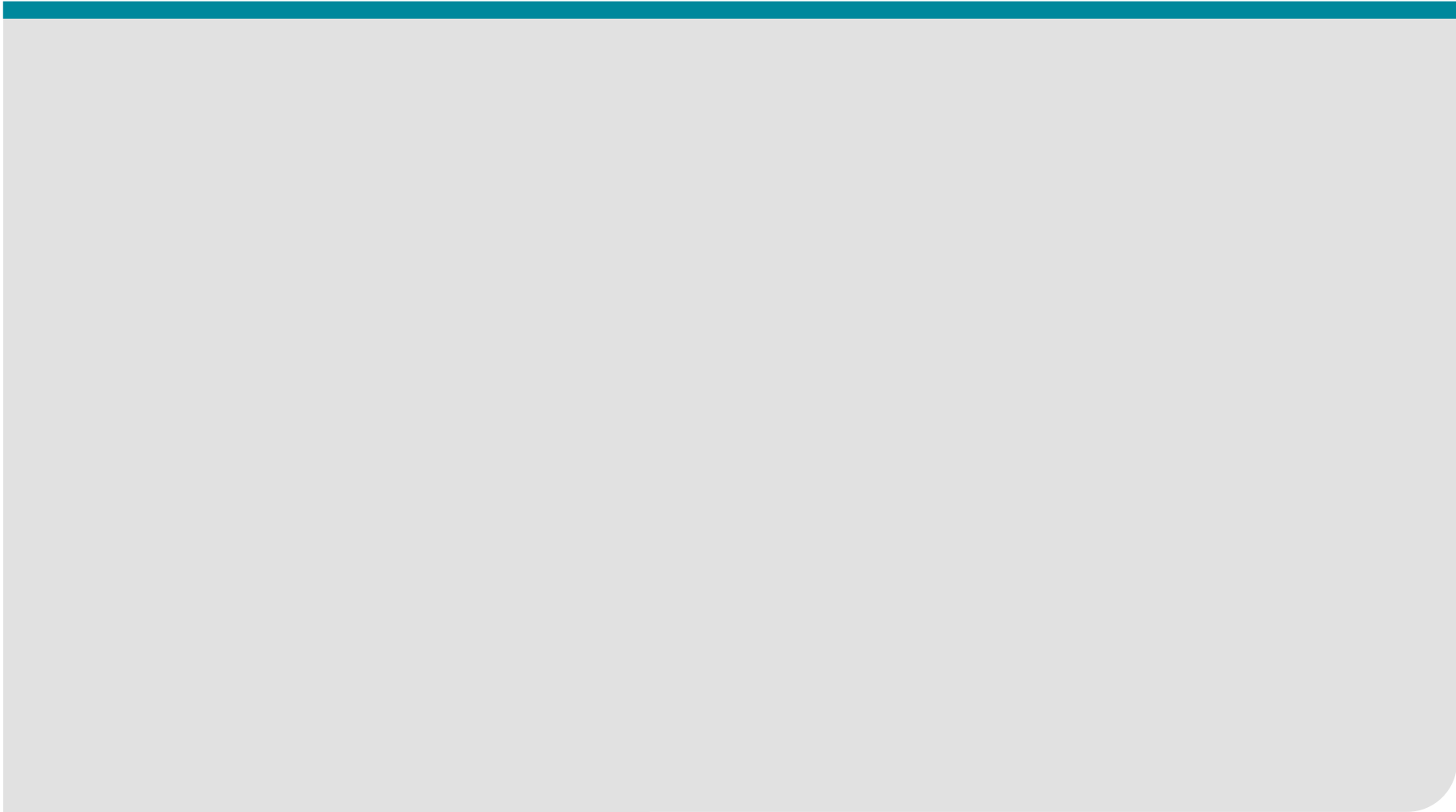
Table 6
Aeronautical Unit revenues- Brisbane

	GDP Deflator	Aeronautical Unit Revenues Index
1992-93	100.0	100.0
1996-97	106.6	110.6
2001-02	119.3	86.0
2003-04	125.5	135.9

Comments 2-Brisbane

- **Prices not increasing so rapidly as Sydney**
- **Except in most recent- post regulation-period**
- **Earlier fall in profitability only now being made up**
- **Non Aero- parking charges increasing quite rapidly**

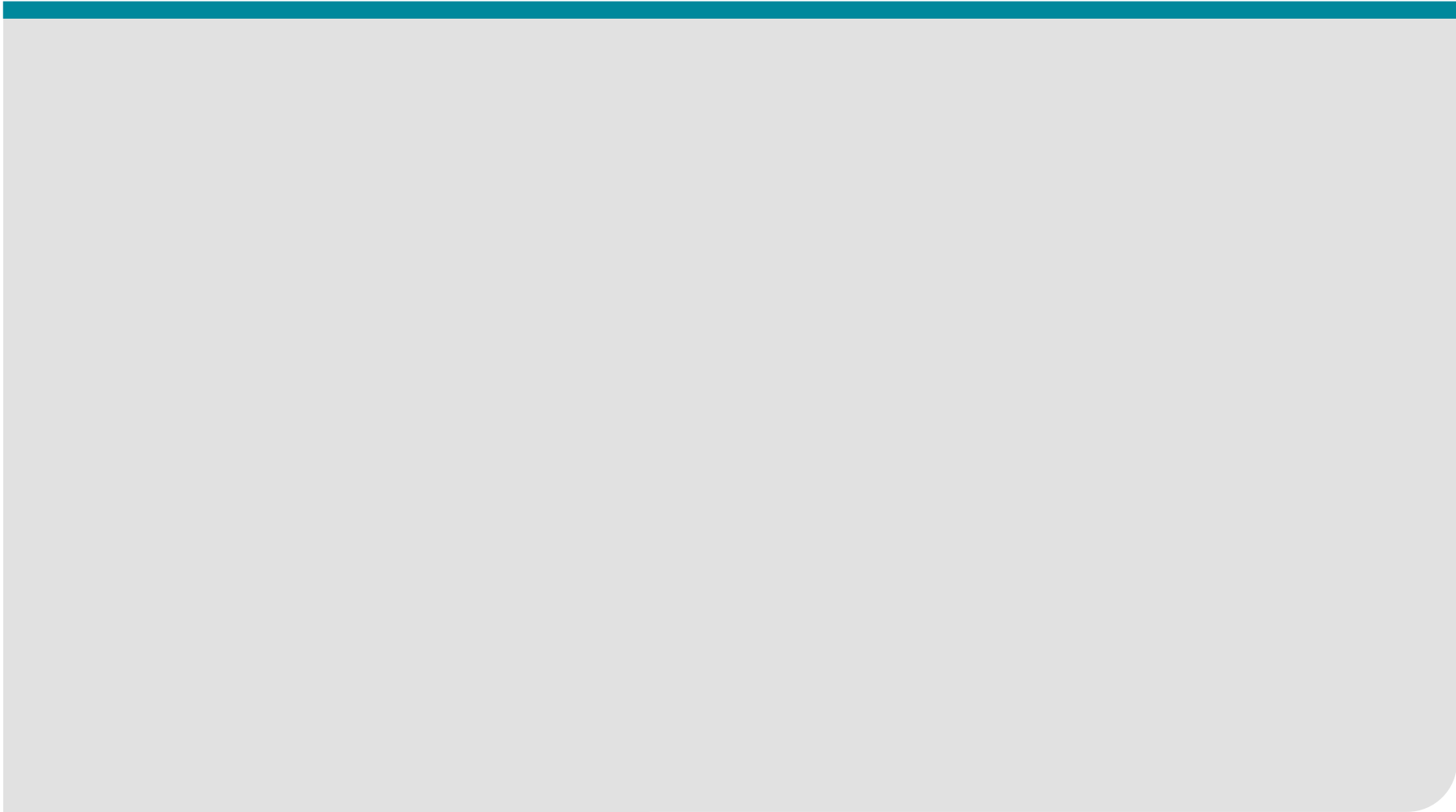
Problem Areas



Problems Areas

- **Defining output- pax, mvits, freight**
- **Domestic and international pax**
- **Changing range of outputs- airports now operate more terminals (post 2001)**
- **Measuring non aeronautical prices and outputs difficult**
- **Capital input a problem- asset revaluations may be a problem**
- **Develop a real capital input measure using perpetual inventory method (data intensive)**
- **Are the capital costs of Sydney much higher than elsewhere?**

Conclusions



Initial Conclusions

- **Productivity growth modest over the extended period**
- **Evidence of productivity spurts after privatisation**
- **Regulation resulted in productivity growth being partly passed on to users for Brisbane**
- **Airports have increased prices when given the freedom**

Thank You