HOUSTONKEMP
Economists

Economic regulation

Some examples of how economic regulation is applied in Australia

Dr Luke Wainscoat
University of Sydney
11 March 2020

Overview

1. Introduction to competition policy and economic regulation
2. Airport regulation
3. Railway regulation
4. Electricity networks regulation
5. Access regulation

1. Competition policy and economic regulation

What is it and how does it affect us all?

What is competition policy?

- Improves the **economic welfare** of Australians… **AIM**

- by making **markets work as well as they can**
  - by making markets as competitive as possible, compelling businesses to be more efficient
    - eg prevent monopolies from forming by firms merging
  - by ensuring that markets work for consumers
    - eg consumers understand what they are buying

HOW ACHIEVED

‘policies and laws which ensure that competition in the marketplace is not restricted in a way that is detrimental to society’ Massimo Motta

Several elements to competition policy

Government policies

Eg, ensuring that government policies don’t raise unnecessary barriers to entry

Interaction between government business and private sector

Eg, how the ABC competes with private sector

Competition law

Eg, laws regarding which mergers are allowed to occur

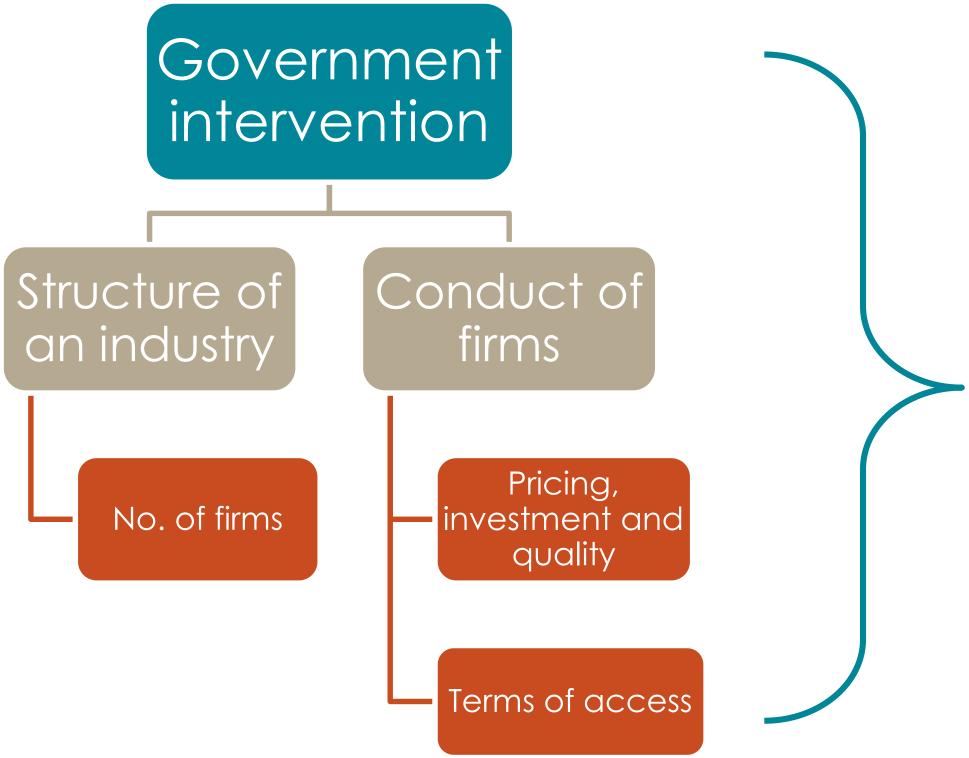
Structural reform and regulation of monopolies

Eg, regulation of electricity networks

Access to third party infrastructure

Eg, accessing railways, ports, airports etc

Economic regulation is govt. intervention in markets

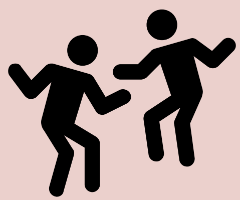
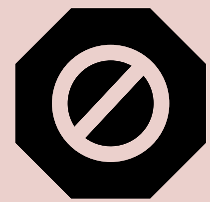
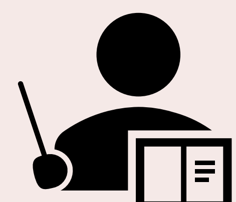


Not usually directly affected by government policies

May be combined with other forms regulation

‘Government-imposed restrictions on firm decisions over price, quantity, and entry and exit’ Viscusi et al

“Do what you want” versus “Do what I tell you”

Ex post competition law	Ex ante economic regulation
• Do what you like – but certain conduct is prohibited 	• Economic regulation sets detailed rules for consistent conduct 
• If law is broken, you are investigated and prosecuted after the fact 	• Regulator sets prices/revenues etc before anything happens 

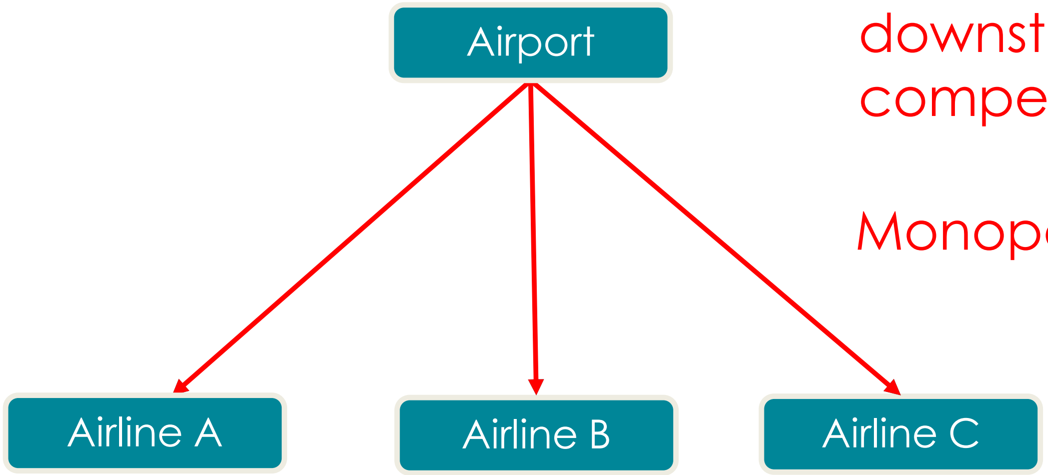
Two problems addressed by ex ante economic regulation

Natural monopoly

Higher prices to downstream competitors

Monopoly prices

Potentially competitive market



When should ex ante regulation be used?

Significant and enduring market power is present

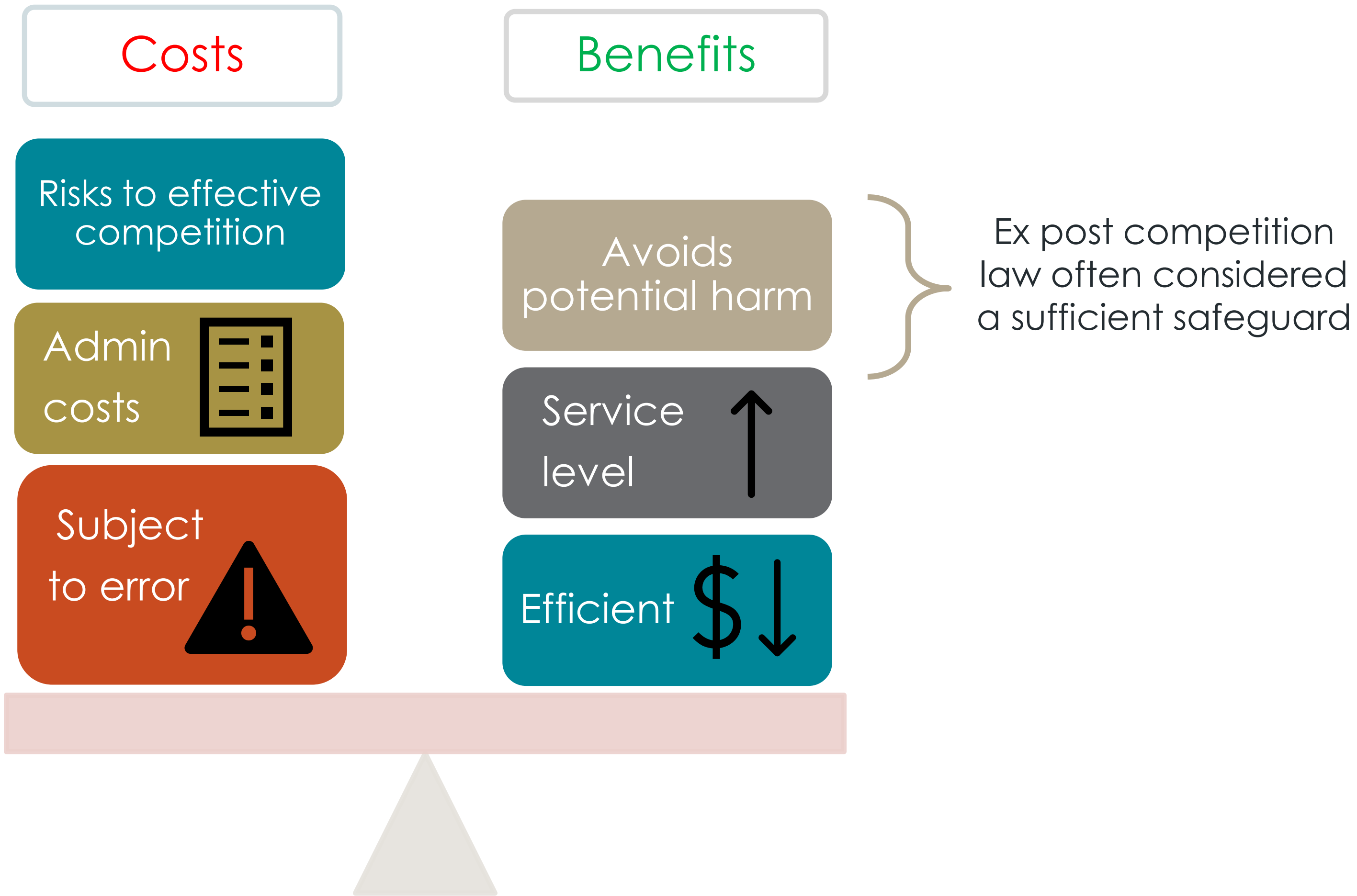
- But not when market power has been acquired through competition

It is very likely that market power will be used to the detriment of consumers

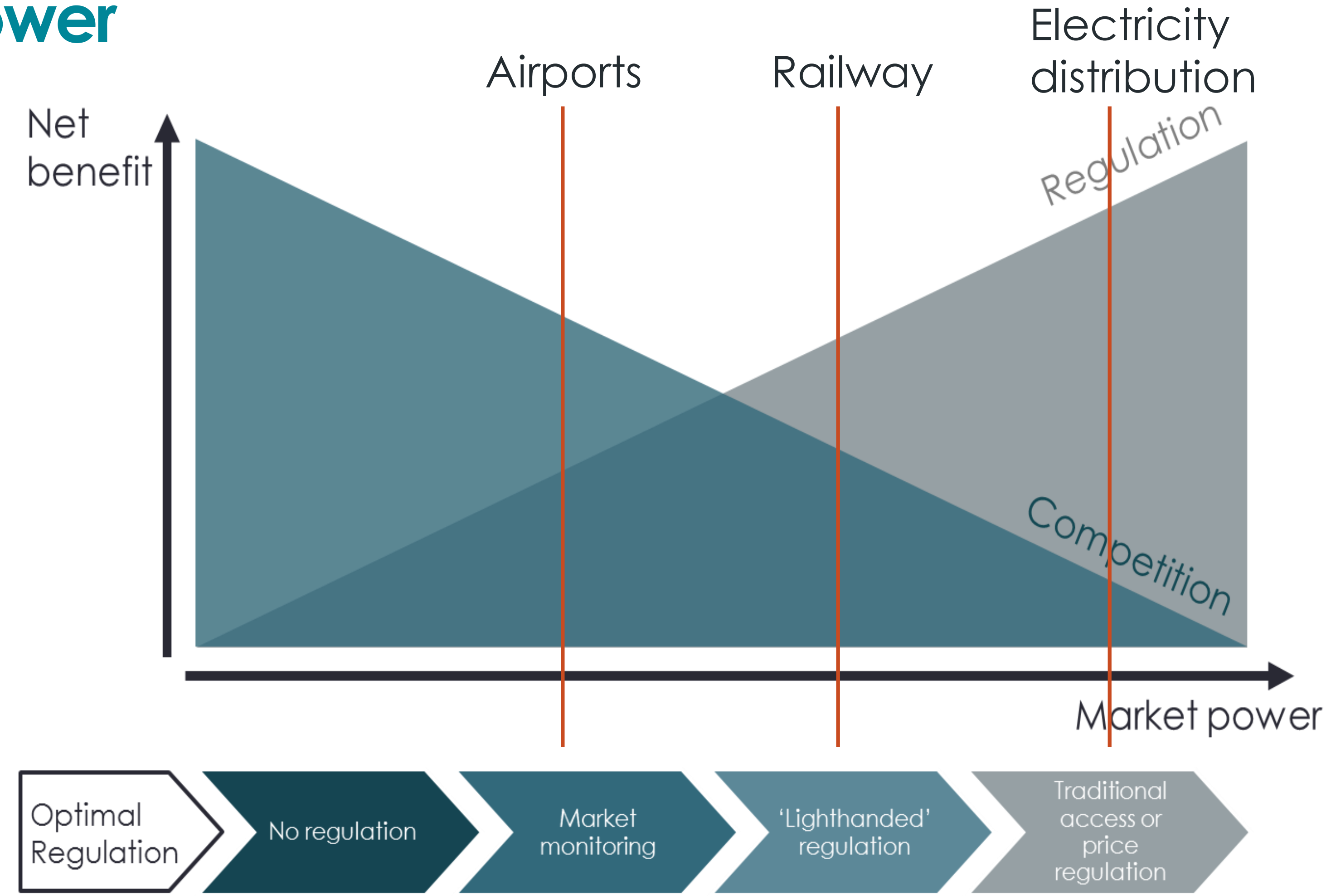
Regulation is feasible

Benefits of regulation > costs relative to having competition law alone

Costs and benefits of ex ante regulation



Lighter regulation better when there is less market power



Alternatives to traditional economic regulation

Government control

- State ownership eg NBN

Light regulation

- Negotiated settlements eg energy regulation
- Monitoring eg airports in Australia

No regulation

- Competition for market eg Port of Singapore
- Contestability
- Competition law

2. Airport regulation

An example of market monitoring regulation

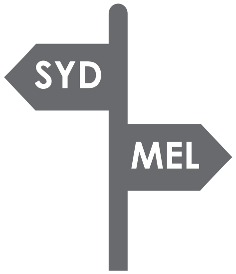
Characteristics of airports

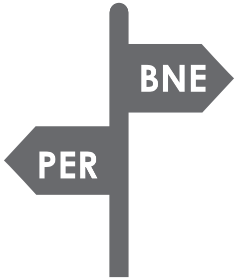
Barriers to entry and market power

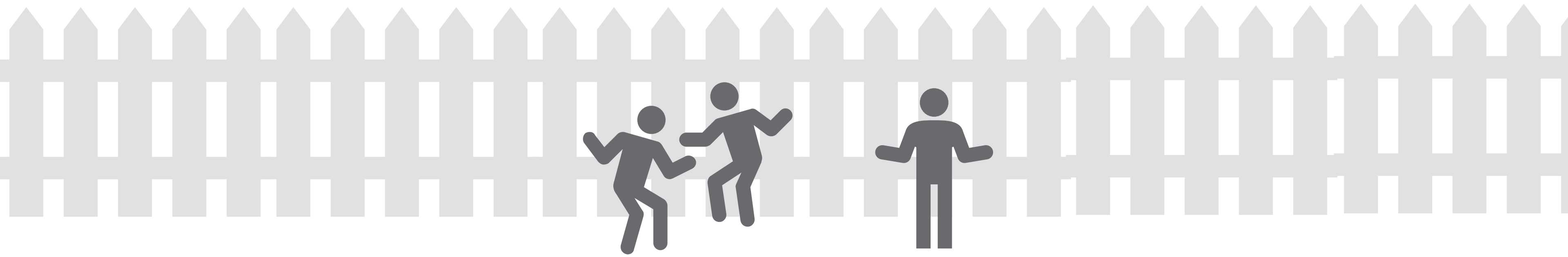
- Barriers to entry are very high – large sunk costs

Limited potential for substitution

- High % of business travelers
- No close alternatives to air travel
- Few alternative airports nearby







Potential effects of market power

Change airlines higher prices

- Harm caused is lower consumption

Reduce quality

Allows costs to increase

BUT

Price and cost increases only affect consumers indirectly and airport charges are only small part of cost of flight

Airlines may price discriminate to reduce or eliminate any effects on consumption

Brief history (1990's to 2012)

1997-98

- Major airports owned by the Federal Airports Corporation
- Airport privatization begins

1999-2001

Prices regulated by the ACCC using CPI-X

2002

PC found that price regulation faced information challenges and

- Discouraged commercial negotiation
- Increased compliance costs
- Sent poor price signals
- Distorted production
- Chilled investment

2003-08

'Light handed' price and service monitoring replaced price regulation

2011-12

Productivity Commission found

- Increase in investment
- No evidence of exercising market power
- Satisfactory quality

Current regime

- ACCC monitors and reports annually on prices and quality of service at Sydney, Melbourne, Perth and Brisbane
- Self-administered monitoring scheme for Canberra, Darwin and Gold Coast
- Government can direct ACCC to undertake a public inquiry if monitoring indicates that further investigation is required – could result in reintroduction of price controls

ACCC unhappy with level of competition between airports fo number of years

2012-13

- Higher margins and low investment

2014-15

"Lack of competitive pressure facilitates high profit margins"

2015-16

- "Quality of service improves as airports collect substantially more money per passenger"

But, no action taken by ACCC.

Productivity Commission's review (2018/2019)

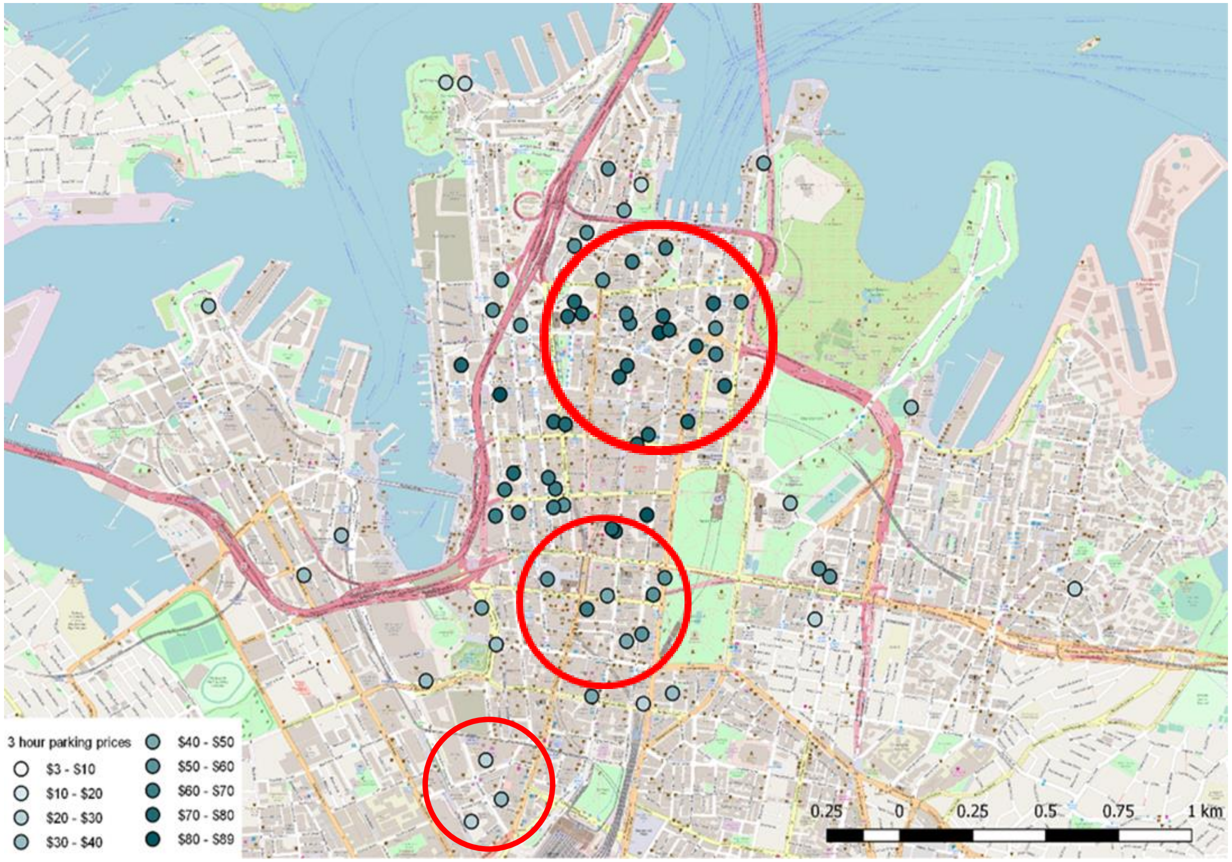
- Productivity Commission released its final inquiry report into airport regulation on October 2019.

- The report examined whether current regulatory arrangements constrain the ability of airports to exercise their market power over passengers and airlines through
  - unduly high charges
  - poor service quality

Airports do not have substantial market power in car parking

- Number of other car parks outside airports
- Many ways of reaching airports that do not involve parking, eg, drop off, train, taxi, bus
  - Paid car parking used by less than 10% of passengers at Sydney airport
- Car parking revenue per passenger has fallen

High prices for car parks can reflect locational rents



Closer to CBD = ↑ $$ because there is a **higher opportunity cost** of providing carparking services.

Prices at airport carparks reflect this and act as **signals to manage demand and reduce congestion.**

Market power has not been exercised

- Car parking
  - ACCC's measure of profits does not take into account
    - the opportunity cost of using the land for a car park
    - the capital cost of the car park
  - We found that 'locational rents' at airports was high
  - Profits were not high when these locational rents were taken into account
- Aerotactical
  - Average rates of return similar to cost of capital over the last ten years
  - None of the four airports set prices or achieved levels of profit that reflect the exercise of any market power

Productivity Commission findings

- Productivity Commission found that
  - current regulation for airports remains fit for purpose
  - airports had not systematically exercised market power
- Monitoring regime tightened so that airports include more detail in cost and revenue reporting to assist in future regulation

3. Railway regulation

Characteristics of rail services

Above rail

- Pay below rail operator
- Transport revenue; freight and passengers
- Potentially competitive

Below rail

- Operate and manage track
- Charge above rail users

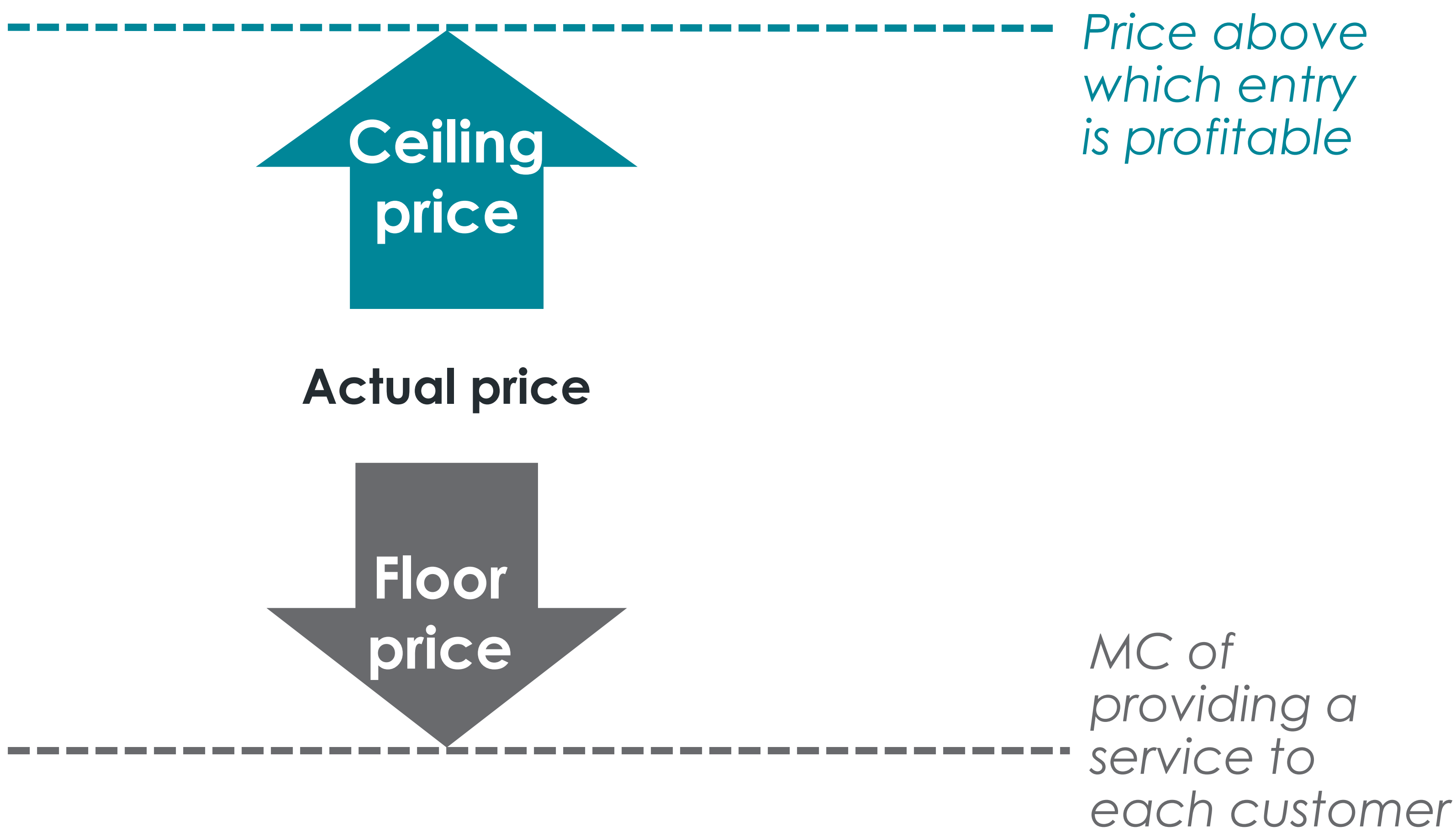
Example – Hunter Valley Coal Network (2017)

- 867 km of regulated network
- $2.2 billion asset value
- $523 million revenue
- 201 million tonnes of coal

Below rail operators have market power in some instances

- Natural monopoly
  - Large fixed costs, very low variable costs – therefore economies of scale
- Some competition from road and sea transport
- Significant market power in some instances
  - High prices
  - Foreclosure of above rail operators if above and below rail are vertically integrated

Price must be between floor and ceiling to allow flexibility whilst constraining market power



Advantages of floor and ceiling approach

Price is never below marginal cost

- Reduced risk of foreclosure

Revenue is never above cost of a new entrant

- Monopoly pricing is prevented

Prices can be negotiated

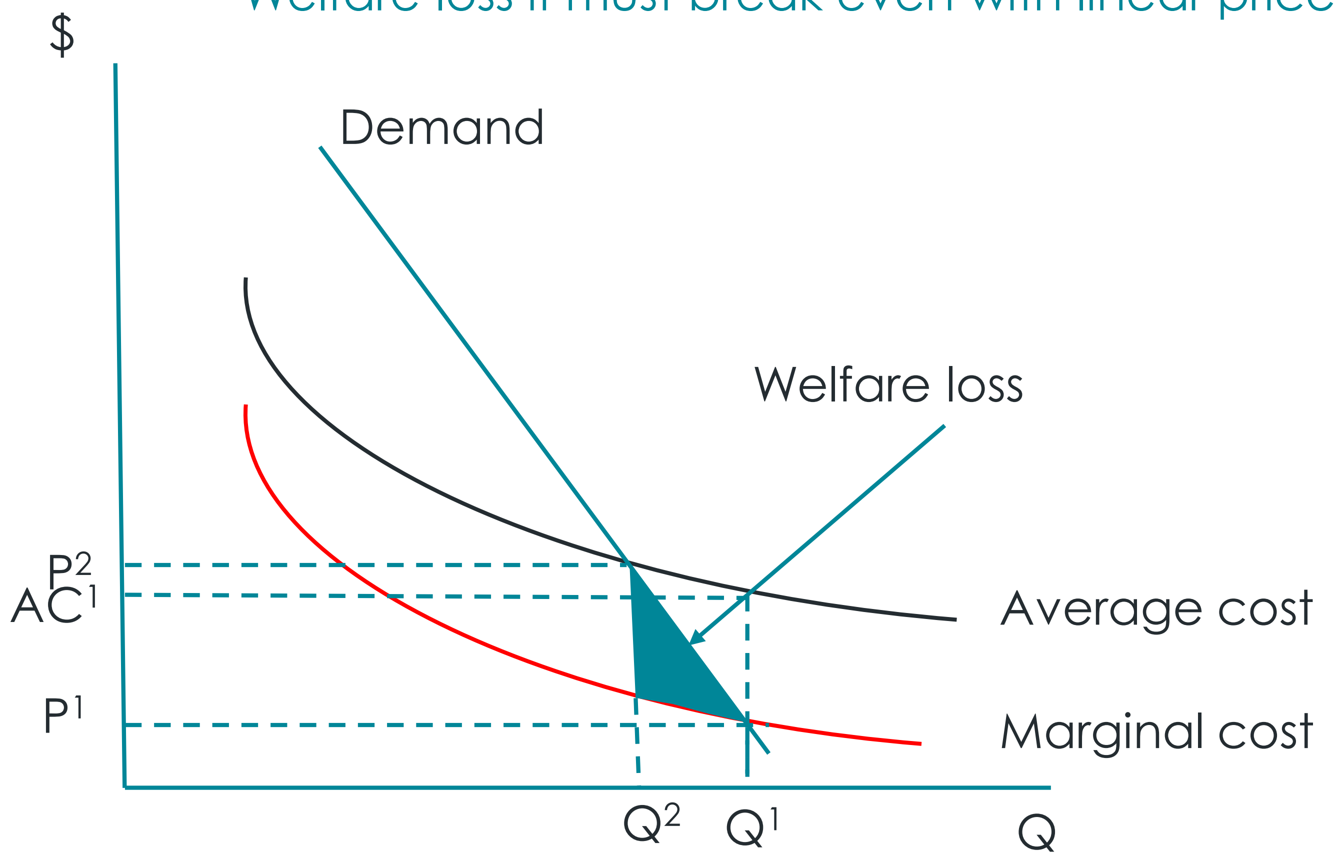
- Reduced admin costs

Prices can fall to competitive level when there is competition from road

Price discrimination is possible

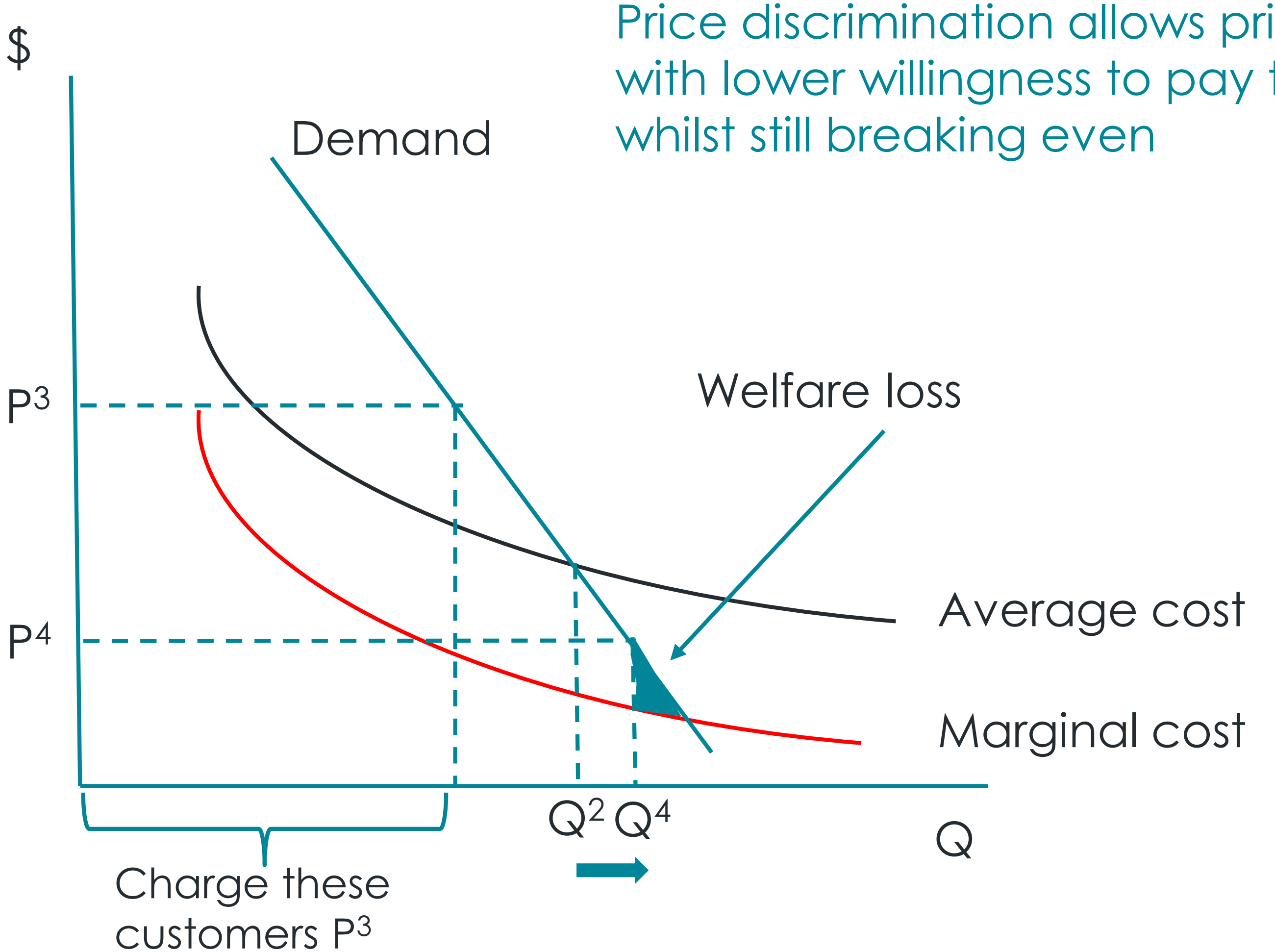
Price discrimination can increase welfare

Welfare loss if must break even with linear price



Price discrimination can increase welfare

Price discrimination allows price to customers with lower willingness to pay to be reduced, whilst still breaking even



Wide variety of methods for valuing assets

Capital cost

- Large portion of below rail costs
- Valuing assets greatly affects allowed revenues

Backward looking estimates

- Depreciated actual cost

Forward looking estimates

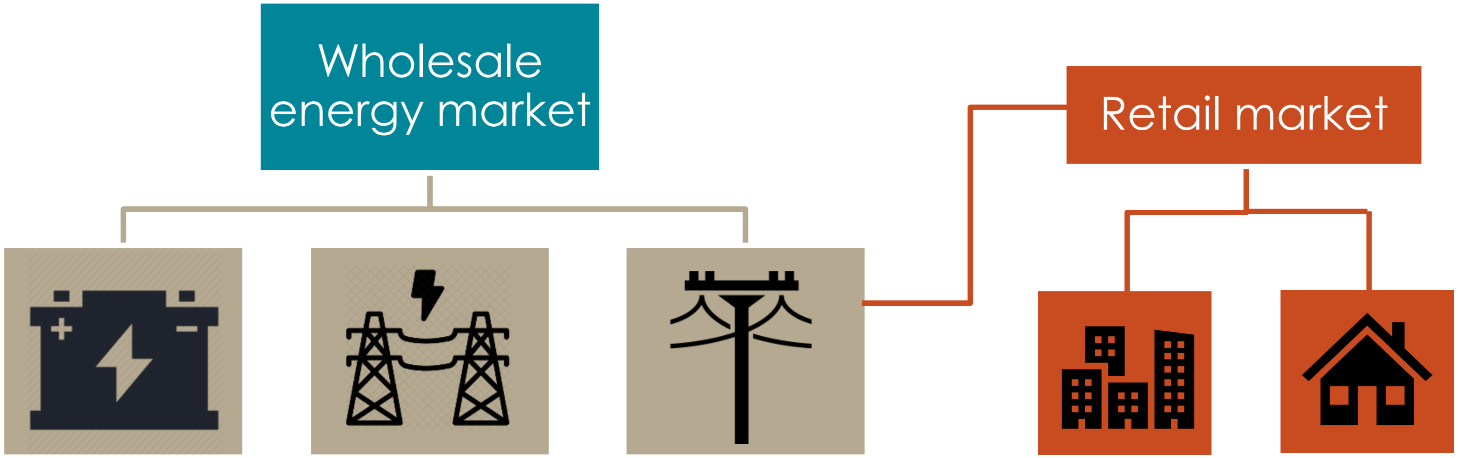
- Gross replacement value
- Depreciated optimised replacement cost

✓ Overall, better from economic POV but costly

4. Electricity distribution

Electricity supply chain

- Electricity generation and retail have been deregulated because competition can be effective in these sectors
- Transmission and distribution are regulated as they are natural monopolies



Characteristics of electricity distribution

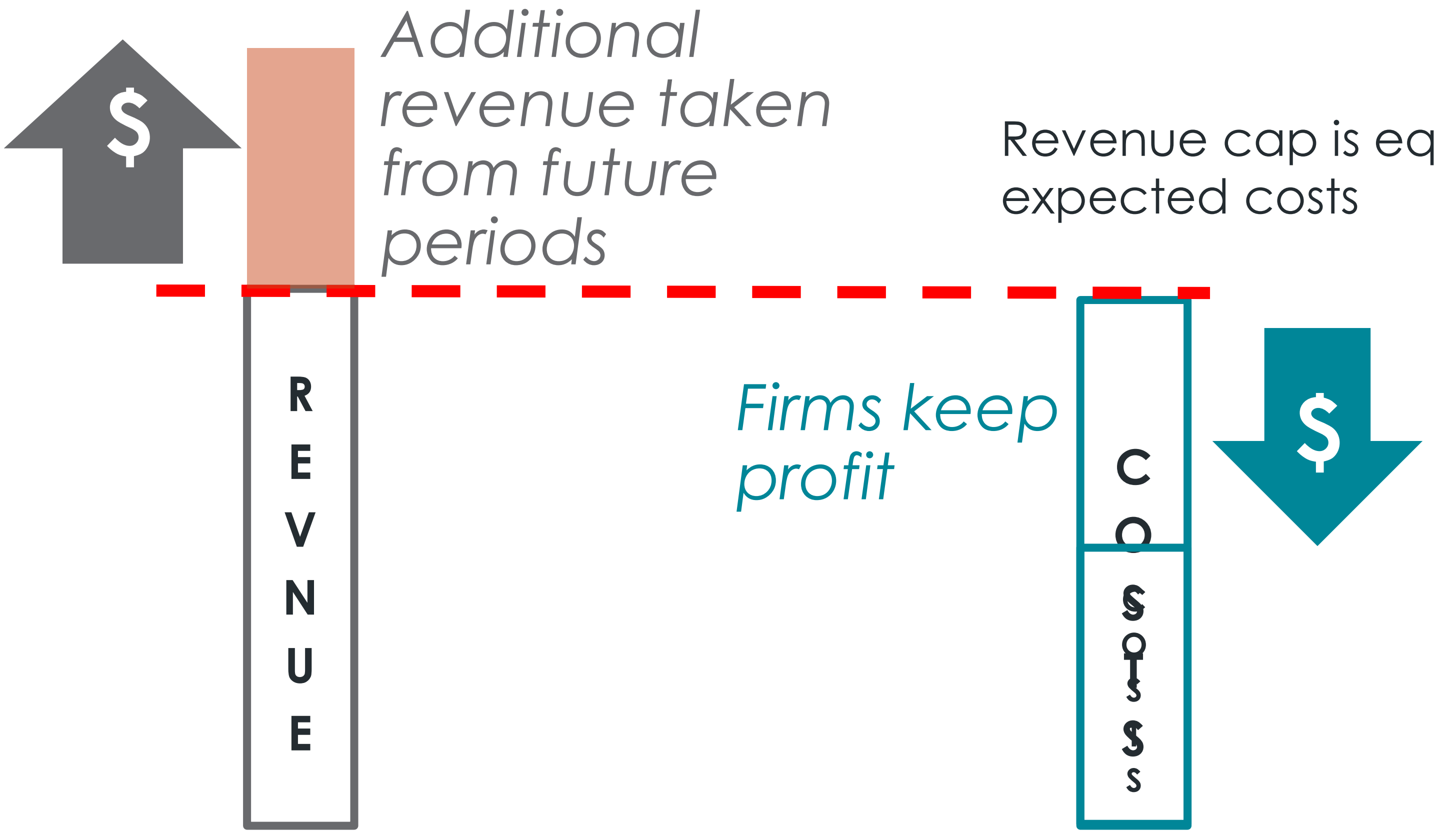
Supply	Demand
Assets incl. poles and wires	Essential to consumers and businesses
Fixed costs	
Marginal costs	
Economies of scale	Critical to economic performance and consumer welfare
Natural monopoly	

What is the problem?

- Electricity distributors are natural monopolies
- Market power not earned through competition
- Essential service
- High willingness to pay
- Low elasticity of demand

Very high risk of market power being used to the detriment of consumers

Revenue cap based on a forward-looking assessment of efficient costs



Change in how distributors benefitted from cost savings

Previous system

- Electricity distributor kept benefits from cost savings but lost them in next regulatory period
- Result – strong (weak) incentive to produce costs at beginning (end) of period

Current system

- Benefits for electricity distributor are now the same no matter when cost savings occur

Some cost increases can be passed on

- Risk to firms that costs go up whilst revenues do not
- Costs that increase due to external standard obligation can be 'passed through'
- Cost increases for major projects that are caused by external factors can be passed through
- **But, some cost risk remains**

Building block model used to determine revenue cap

Operating expenditure

+

Capital costs:

Return on capital (rate of return multiplied by value of capital)

+

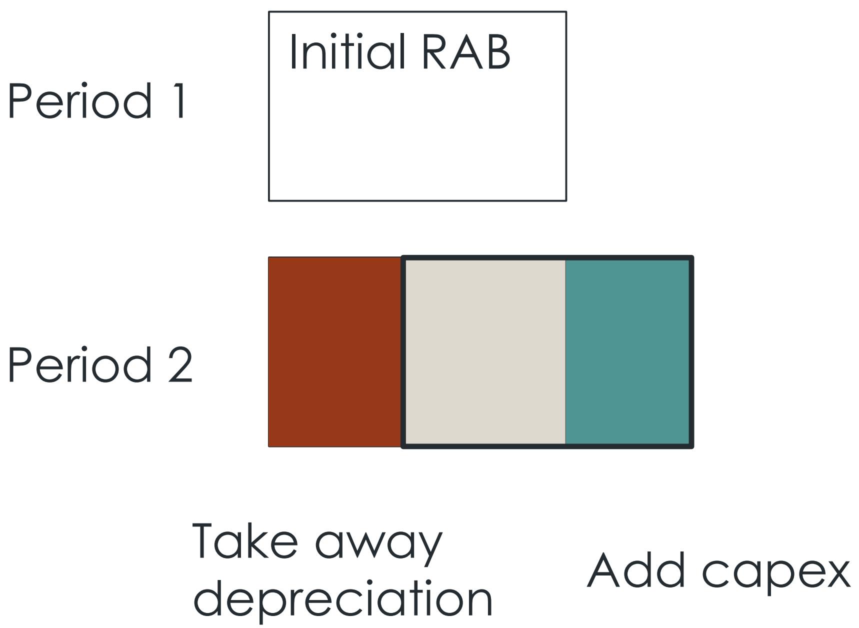
Return of capital (ie, depreciation)

+

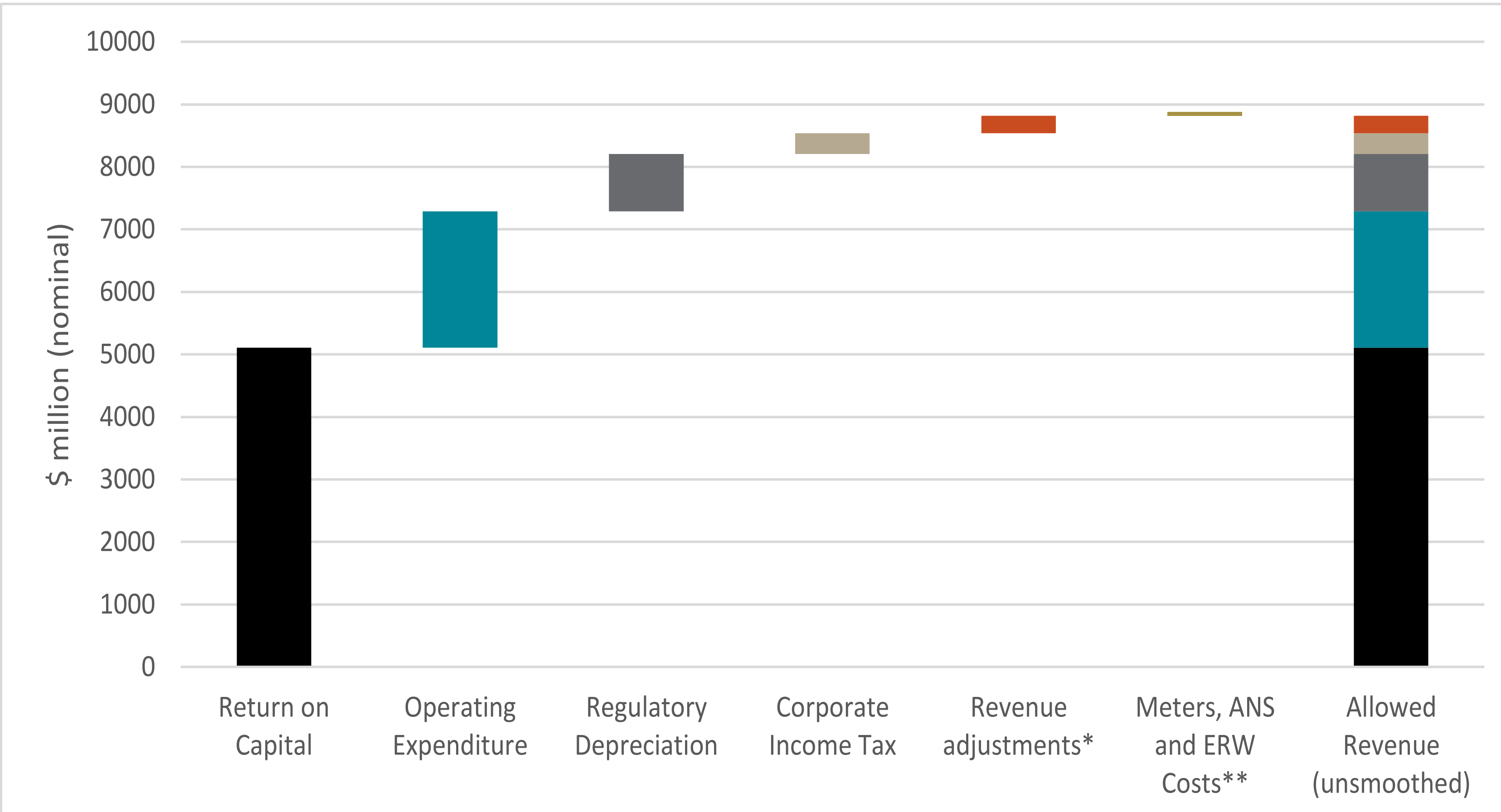
Others, eg, tax

Regulatory asset base (RAB)

- RAB: value of assets
- Lock in, and roll forward approach



Application of the building block model to Ausgrid



Lengthy task for a determination

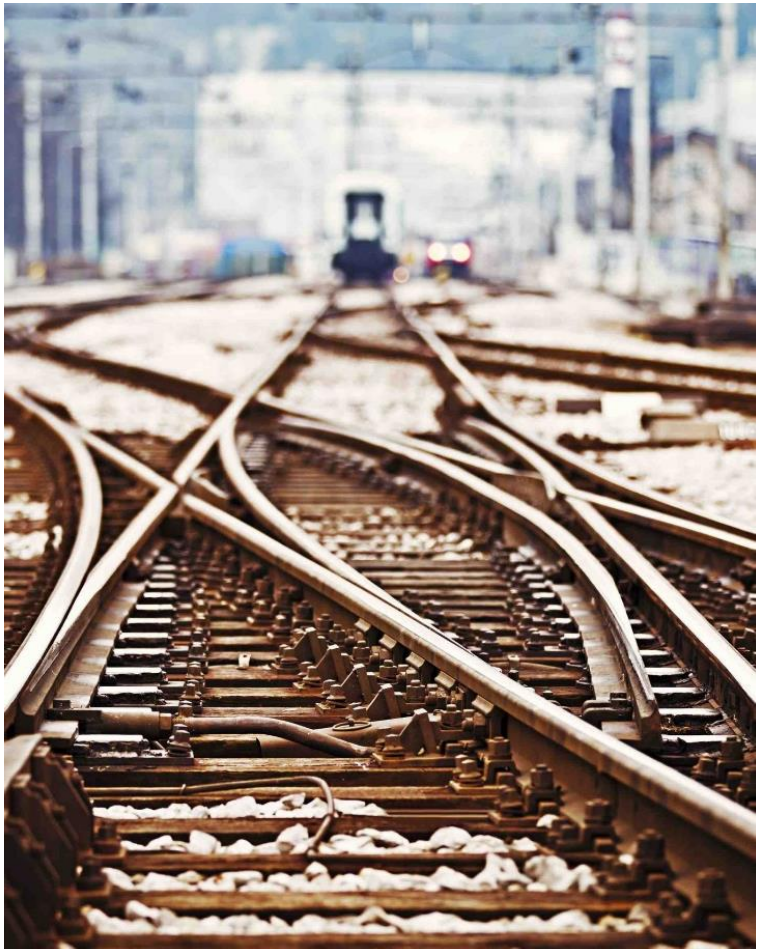
1. AER published 'Framework & Approach paper
2. TNSP gives notification to AER of approach to forecasting expenditure
3. TNSP submits regulatory proposal for the forthcoming control period
4. AER publishes issues paper identifying preliminary issues
5. AER conducts consultation on regulatory proposal and issues paper
6. AER issues draft regulatory decision
7. TNSP submits revised regulatory proposal
8. AER conducts consultation on revised regulatory proposal and draft decision
9. AER issues final regulatory determination
10. AER determination is appealed to the ACT under the limited merits review regime

Approx. 30-month duration

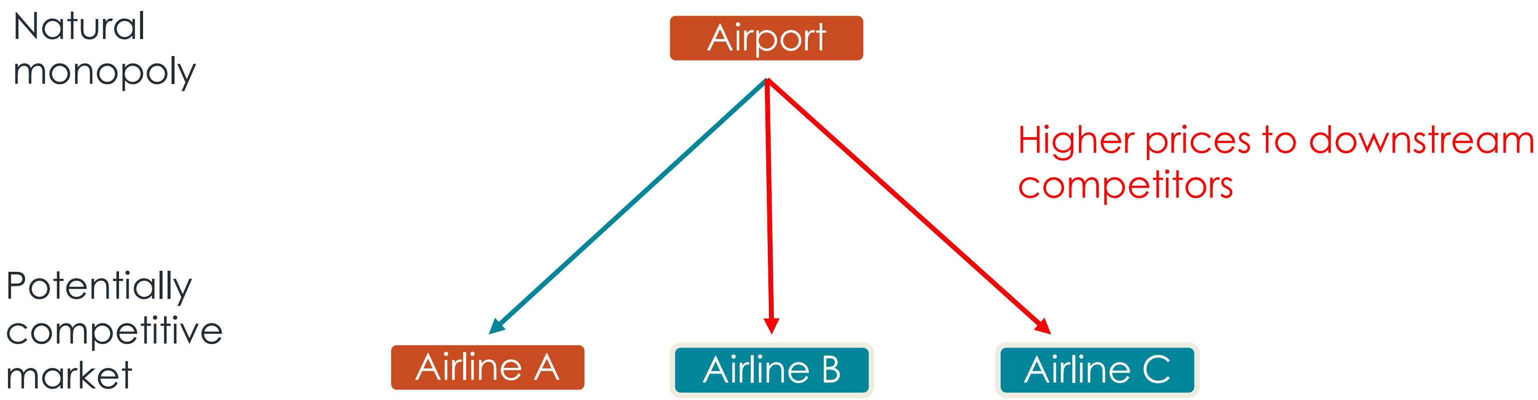
5. Access regime

How firms can access services provided by monopoly infrastructure

Infrastructure services



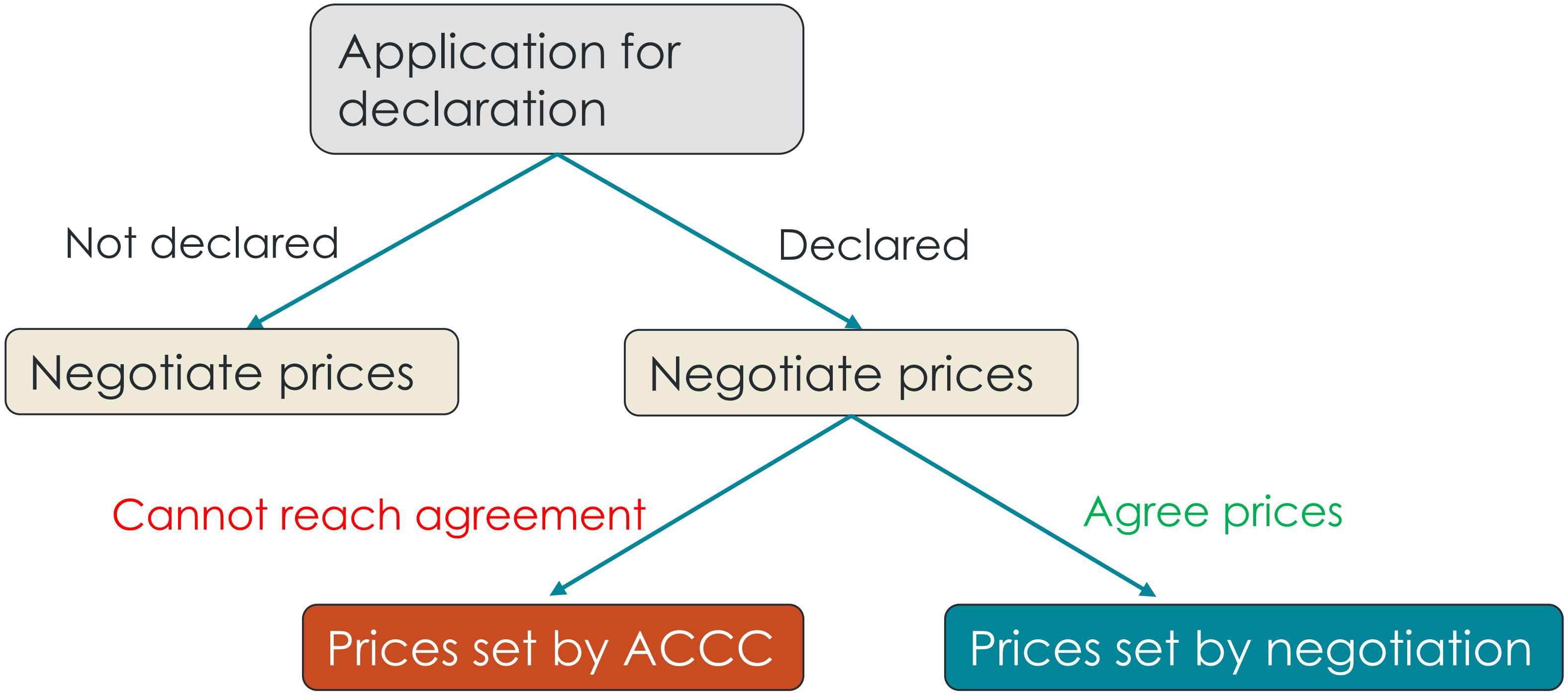
What is the problem?



- Occurs where access to infrastructure services is required to compete in up/downstream markets, eg, airlines need to access airport services to compete

- Challenge is to balance
    - potential reduction in incentive to invest in infrastructure as a result of access regulation with
    - allocative efficiency in dependent markets

What is the access regime?



- Declaration decisions are made by the Minister on recommendation of National Competition Council.
- Decisions can be reviewed by the Australian Competition Tribunal and/or the Courts.

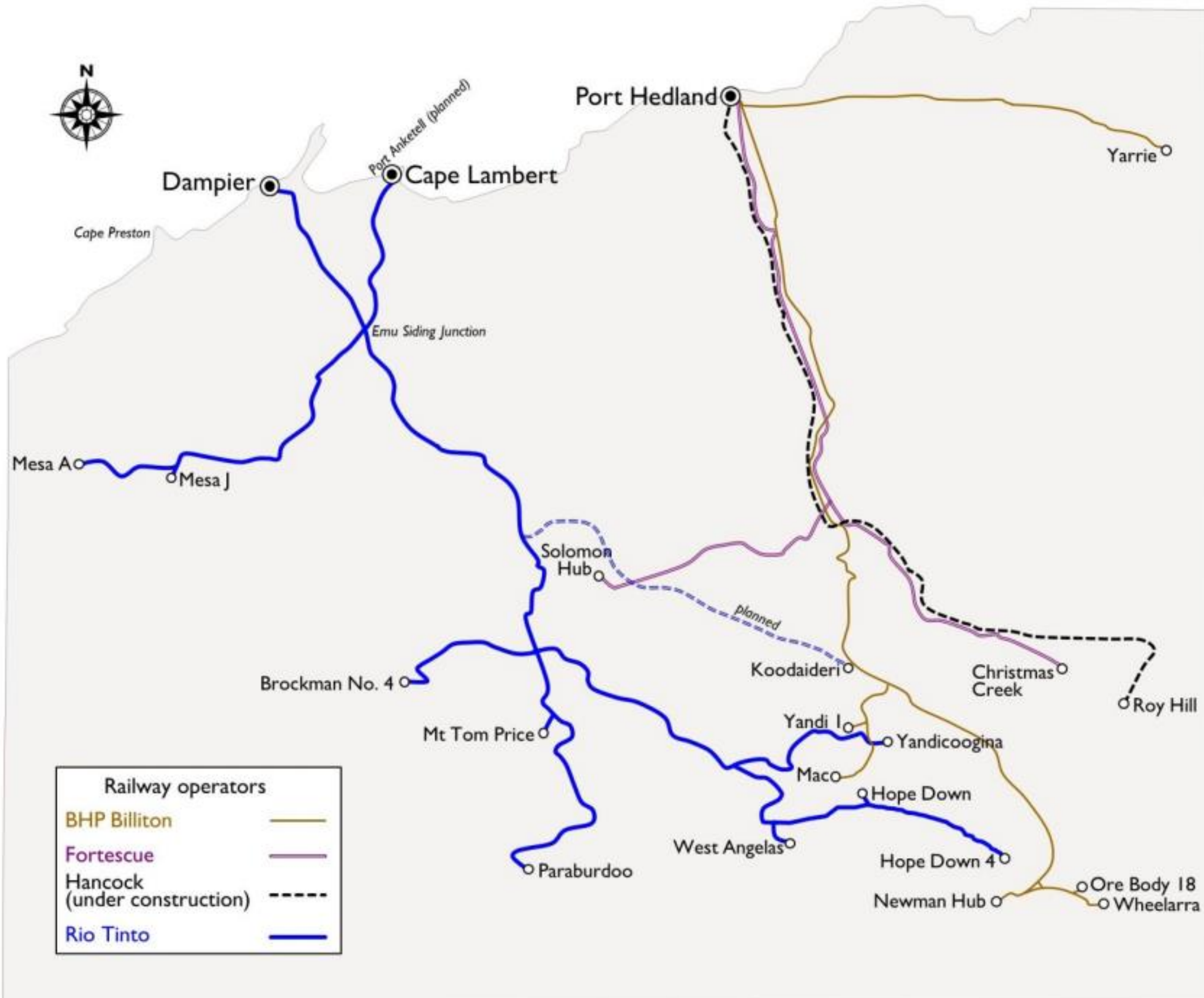
Criteria for declaration

- Access would promote a material increase in competition in at least one dependent market
- Uneconomical for anyone to develop another facility
- Facility is of national significance
- Access is not already available through other regulation
- Access would not be contrary to public interest

Case study: Railways in the Pilbara

- Conflict over access to privately owned railways in Pilbara region
- BHP Billiton and Rio Tinto operated railways to transport iron ore from mines to the ports
  - BHP: Mt Newman and Goldsworthy lines
  - Rio Tinto: Hamersley and Robe lines
- Fortescue Metals Group (FMG), emerging as a major producer, sought access to run its own trains on these lines.

Conflict on the Pilbara railways



BHP: Mt Newman and Goldsworthy lines

Rio Tinto: Hamersley and Robe lines

FGM seeking access to all lines.

Timeline

2004	• FMG applies for declaration of 'below rail' services
2006	• FMG opens its own open-access railway
2008	• Minister declares Hammersley, Goldworth and Robe lines • BHP and Rio Tinto appeal
2010	• Australia Competition Tribunal Decision • Declared Goldsworthy, overturned declaration of Hammersley and Robe • Federal Court upholds Tribunal's decision on Hammersley and overturned on Robe
2012	• High Court Decision • Returns to Tribunal for "review for which Act provided"
2014	• Second Tribunal decision • Hammersley and Robe lines should not be declared

Outcome after ten year process

- Only the Goldsworthy line declared
  - BHP has reported that no third party access, or requests for access, have occurred
- High Court decision led to a Productivity Commission review of the National Access Scheme (2014)
  - Found that the Regime should be retained but scope limited
  - Proposed that the declaration criteria altered to reflect the role of natural monopoly

HOUSTONKEMP
Economists

Contact Us

Sydney
Level 40
161 Castlereagh Street
Sydney NSW 2000

Phone: +61 2 8880 4800

Singapore
12 Marina View
#21-08 Asia Square Tower 2
Singapore 018961

Phone: +65 6653 3420

HoustonKemp.com