

# EXPERT LEVEL TRAINING ON TELECOM NETWORK COST MODELLING FOR THE HIPSSA REGIONS

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# Session 2: Understanding the place of cost accounting and cost modelling in the regulatory process



# Agenda

What are the aims and objectives for:



# The general aims and objectives of regulation



# Why regulate?



Regulation is designed to protect the long-term interests of consumers where the market is unlikely to be able to do so.

Regulation has always been needed but its nature has changed over time

Regulation of Monopoly

Regulation of Competition



## Why was monopoly found wanting? (1)

- High control and transaction costs
- Tried to do things government is not good at doing – operational
- Inefficiency
- Conflicting public sector and budget priorities, leading to under-capitalisation
- Risk aversion v. risk management
- Political interference v. business values



## Why was monopoly found wanting? (2)

- Monopolies tend to:
  - Restrict output
  - Increase prices
  - Internalise surplus (to shareholders or other stakeholders)
  - Have weakened incentives to deliver required services
- With growing and diversified demand, monopoly could not deliver





## Liberalisation and de-regulation

- Liberalisation is the opening of markets to new competitors
- De-regulation is the removal of regulation, but:
  - Initial liberalisation accompanied by more (transitional) regulation
  - What was implicit needs to be explicit
  - New field of regulation is the area competitive safeguards – that is, fair competition
  - Competition is not effective in all areas of the telecommunications market



# The balance between competition and regulation

## Competition

- When competition is effective and sustainable
- Tests
  - Competitors are established
  - Limited barriers to entry and exit
  - Market relatively mature
  - No collusion

## Regulation

- When there are bottlenecks in the market,
- When an operator has substantial power in the market
- Summary: when there is likely market failure, underlined by the existence of significant market power in one or more participants



## Changes in regulation with liberalisation

- Still concerned with long term interests of end users
- Regulation of competition and competitive protections to ensure that new entrants are not squeezed out of the market by the incumbent
- New entrants must have access at reasonable (cost reflective) prices to bottleneck services and facilities which cannot be duplicated or which it is uneconomic to duplicate.



# The regulation of markets

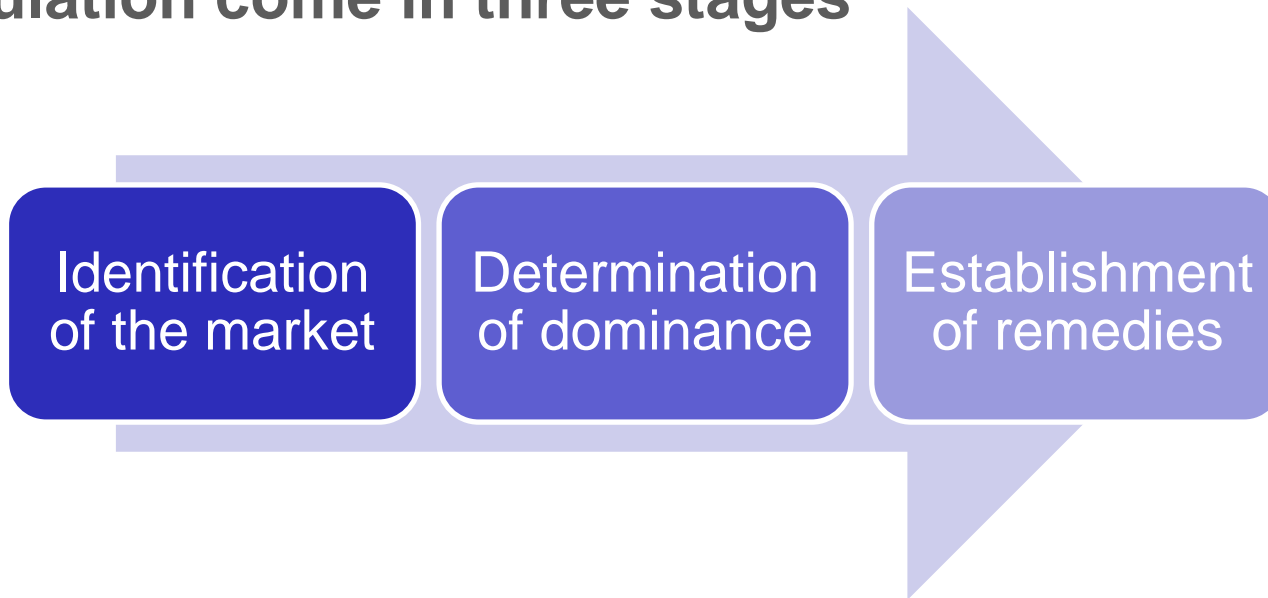


# Where to regulate?



Regulation should be restricted to markets where there is a reasonable expectation of market failure.

Regulation come in three stages

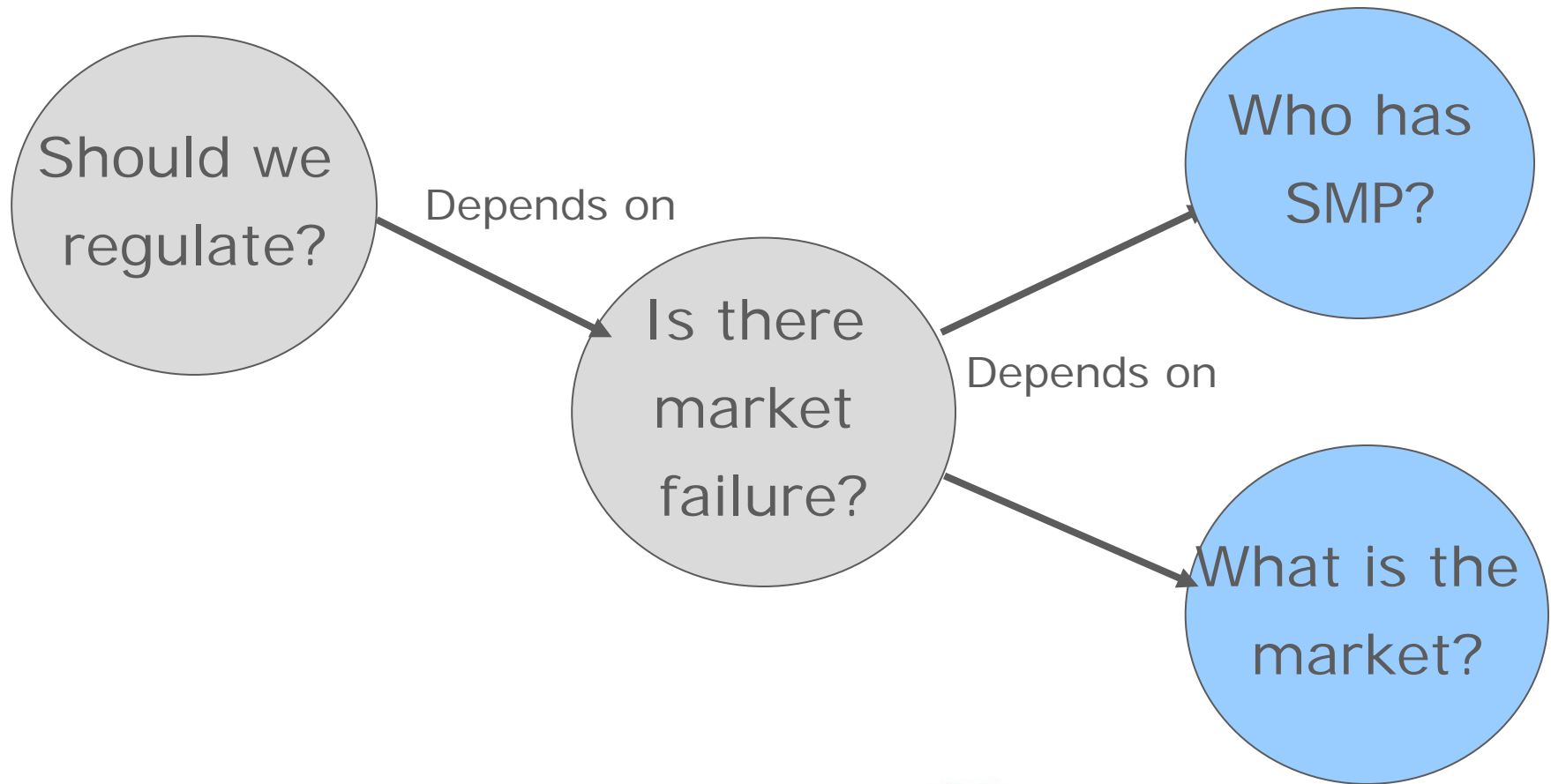


## Why is it important to identify markets?

- Effectively competitive markets should not be regulated. Competition ensures appropriate social and economic outcomes
- Regulation should be reserved for where there is market failure
- Cannot determine where a market has failed without defining the relevant market
- The existence of dominance (Significant Market Power) is associated with market failure. Cannot determine whether there is SMP in a market without defining the relevant market.



# The proper sequence of regulation





# Adopting general competition principles

- There is no special way to define markets in telecommunications.
- The approaches of competition law relevant to the economy as a whole need to be applied.
- Note, however, that because of common network platforms and systems many service markets in telecommunications may be inter-related.
- This adds a level of complexity to the analysis, but does not mean that a different approach altogether is required.



# The limits of substitution

- Markets are arenas in which the providers of goods and services seek to exchange with customers. They may compete with others for the customers' choice in the course of doing so.
- Markets are defined in terms of the limits in which substitution occurs – and that is substitution in terms of supply and demand.
  - If a customer may move from one supplier to another, the suppliers are in the same market.
  - If a customer may move from one service to another, those services are in the same market.
- Markets are therefore typically defined in terms of both geography and product (goods and services)

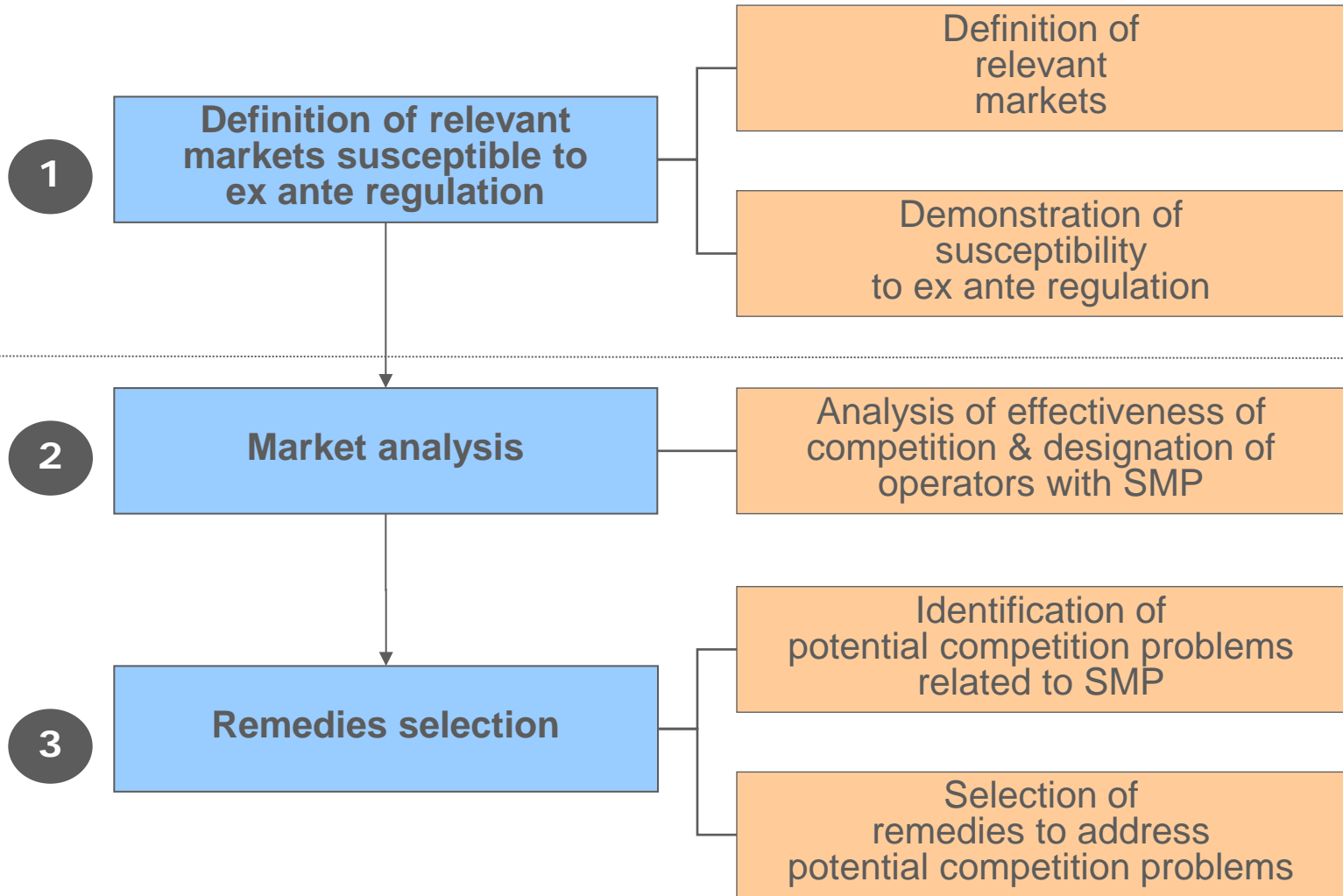


# The hypothetical monopolist test

- The standard approach to defining the extent of a market (e.g. EC and US DoJ and FTC)
- Start with the narrowest possible definition of a market (e.g. call termination on a single network)
- Assume that a hypothetical monopolist in that market imposes a small but significant non-transitory increase in price (“SSNIP”)
- Ask whether consumers are likely to respond by considering alternative products from other entities.
- If yes, the market definition must be extended to include that potentially substitute product.



# General Approach

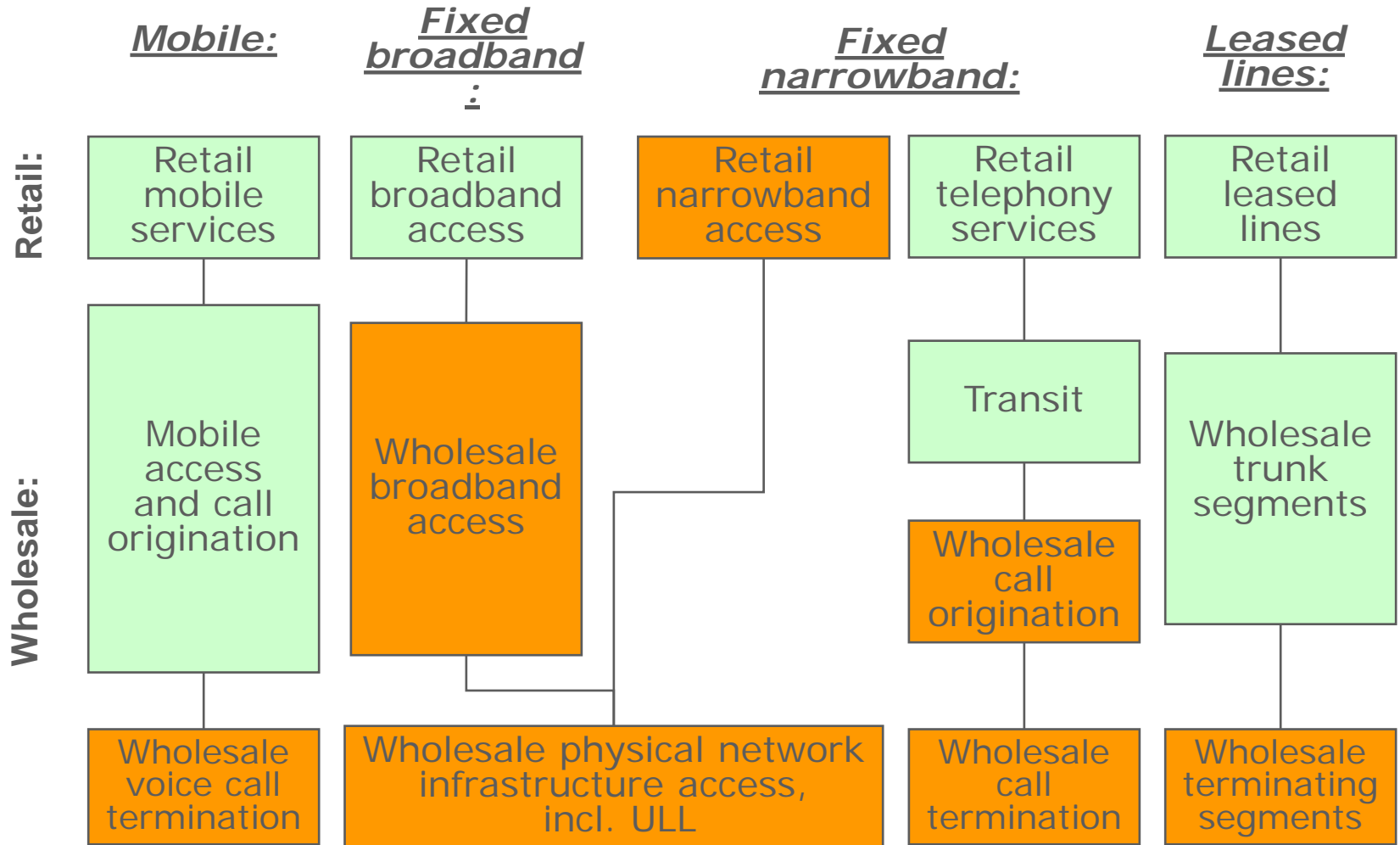


# Different approaches to retail and wholesale markets

- Markets should only be regulated, if
  - there are substantial and persistent entry barriers
  - insufficient or ineffective competition
  - competition law not effective
- These cumulative criteria may be fulfilled on both retail and wholesale markets, but ....
- Regulation in upstream wholesale markets may create competition in downstream end-user markets
  - E.g. access to towers and easements might enable competition in mobile services in an area



# 2007 European Commission Recommendation



Relevant markets **susceptible** to ex ante regulation listed in Recommendation



# The regulation of prices



# How do enterprises set prices?





# Prices are affected by many factors not all of which are under the enterprise's control



## Internal pricing factors

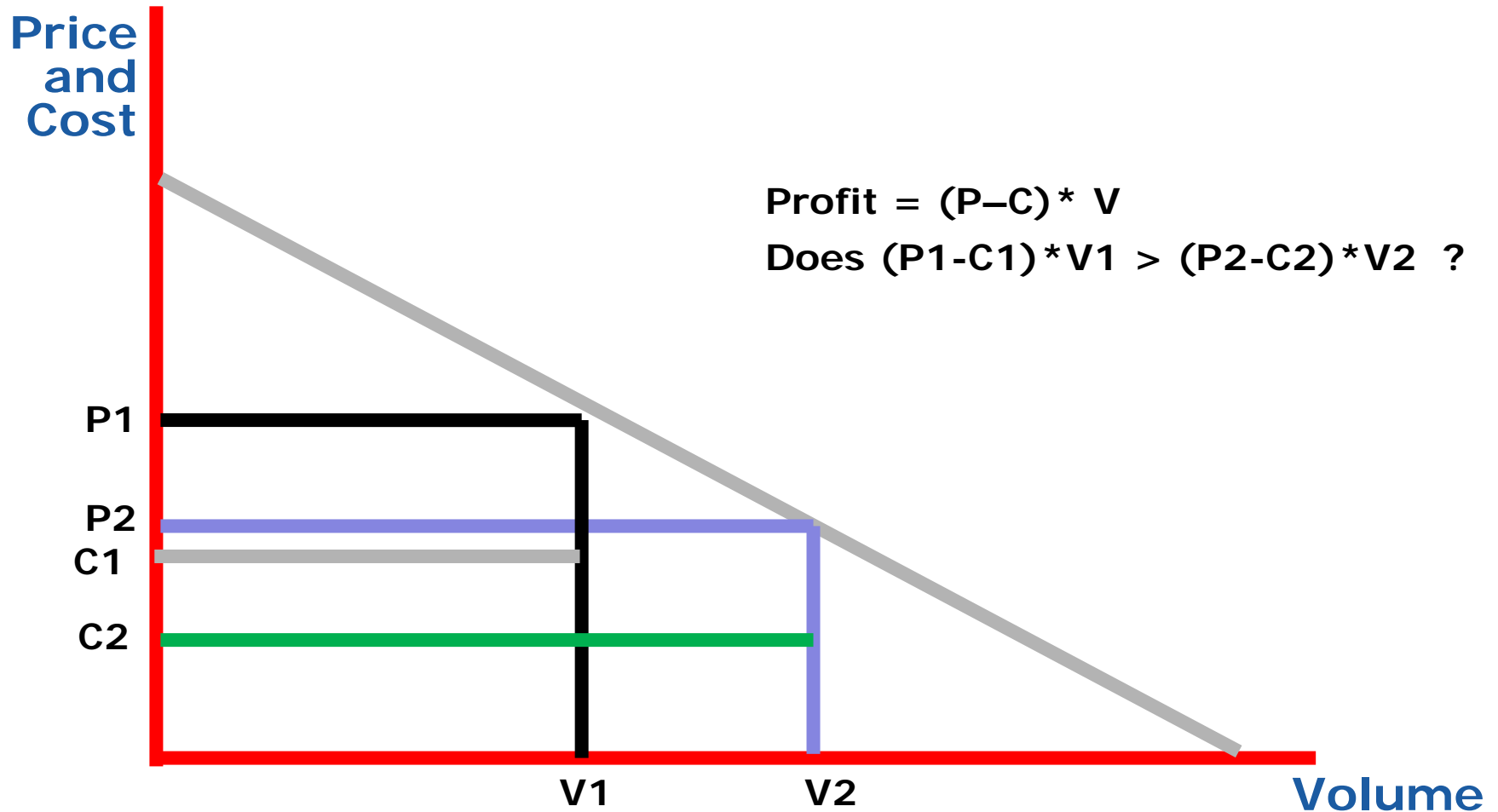
- Overhead and set up costs
- Material costs
- Production costs
- Distribution costs
- Equipment replacement
- Marketing and sales
- Profit requirement



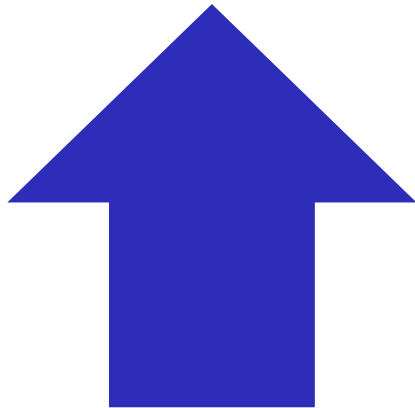
## External pricing factors

- Demand elasticity
- Competitors
- Economic cycle and demand strength
- Opportunities to charge above cost
- Price discrimination
- Risks

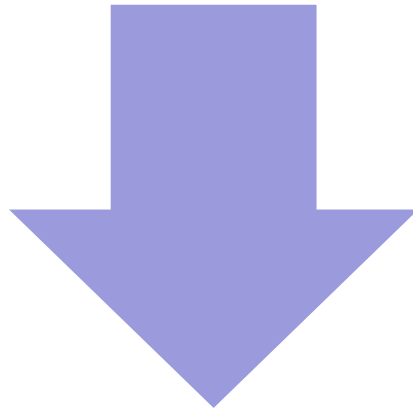
# Prices are designed for profit maximisation



# Regulators have different pricing goals (1)



Social pricing may be in order (e.g. affordability, universality)



But costs and profits need also to be taken into account (e.g. regulated rate of return)



## Regulators have different pricing goals (2)

- **Efficiency of investment:**

This implies that opportunity costs are taken into consideration, i.e. investment costs and usual rates of return on capital employed.

- **Efficiency of resource use:**

The price for an additional unit must not be lower than the marginal costs (i.e. costs for an additional unit).

- **Efficiency of market entry:**

The entry of efficient firms should be encouraged and the entry of inefficient firms should be prevented.

- **Practicability:**

It must be possible to apply the system to determine conditions for interconnection in practice. Data has to be available, transparent and reproducible.



# Recommendations for price controls – if you are a regulator

- Concentrate on wholesale price controls as far as possible
- Avoid price controls if you can – don't regulate if the market is competitive
- Not all prices need detailed costing (e.g. retail-minus pricing may be appropriate, e.g. wholesale leased lines)
- Recognise that operators have to be able to cover their costs plus a reasonable return on capital employed (profit) otherwise the arrangements are not sustainable
- Recognise that the deployment of new technologies requires access to new resources/funds to undertake the relevant investment, and the risks involved need to be taken into account when prices are set.
- Goal: find a “simulated” market price – in other words try to mimic the prices that a competitive market would produce



# Cost-based price regulation



# When should prices be cost-based?



# Competition remedies

- The commonly-used remedies for wholesale markets can be broadly categorised as:
  - access obligations (including interconnection and unbundling)
  - transparency obligations
  - non-discrimination obligations
  - separation (including accounting and other reporting requirements)
  - price controls and cost accounting
- Some further retail remedies may also be applied if wholesale remedies on their own are insufficient:
  - They include price caps and price controls to prevent predatory pricing, price discrimination and unreasonable bundling





# Principles to guide the selection of remedies

Remedies “*shall be based on the nature of the problem identified, proportionate and justified in light of the objectives laid down*”

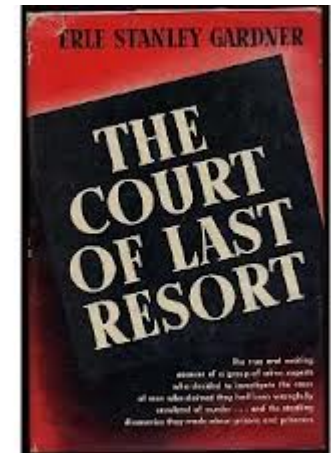
Article 8(4) of the EC Access Directive

- **Appropriate** — the choice of remedy should be based on the nature of the identified problem
- **Reasonable** — the remedy should be explained and justified through the publication of a reasoned decision
- **Proportionate** — the least burdensome remedy (or combination of remedies) should be applied



# When to regulate for cost-based prices

- The imposition of cost-based prices should be seen as the remedy of last resort
- The remedy is appropriate to resolves cases of:
  - Cross-subsidisation
  - Predatory pricing
  - Excessive costs
  - Price discrimination
- Cost models should only be constructed if there is a reasonable chance they will be needed to resolve such problems



# Cost accounting and accounting separation

- Can be used to ensure:
  - there is an appropriate allocation of costs between the SMP operator's wholesale and retail divisions
  - the cost of wholesale inputs are based on relevant production costs
  - a vertically integrated operator is not engaging in an unfair cross-subsidisation or a price squeeze.
- Often also used to support the administration of price controls and cost accounting obligations



## Cost-based prices (and cost models)

- Can be used to address the risk of excessive pricing or price squeezes occurring within a particular market
- Such remedies can range from weaker obligations (e.g. an obligation that prices are “reasonable”) to strong obligations (e.g. an obligation that prices are cost oriented or cost based)
- Cost based or cost-oriented price controls typically require some form of cost model to be built and for service costs to be estimated (although international benchmarking is also sometimes applied as an interim or alternative measure)



## When selecting remedies, ask yourself...

- What is the competition problem that is anticipated?
  - What is the nature of that problem? (e.g. is it at the wholesale or the retail level? Is it a pricing issue or an access issue?)
- Which broad category of remedy might address the problem?
  - Within that category, which specific remedies might address the problem?
  - Can the onerousness of this remedy be reduced without detracting from its effectiveness?
- Would that specific remedy in itself be sufficient to address the problem?
  - If not, what additional remedies are necessary?
  - Can the onerousness of this combination of remedies be reduced without detracting from its effectiveness?

