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Vertical Effects

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*The views expressed are those of the author and do not necessarily reflect those of DG COMP or the European Commission

Definitions

- Vertical Mergers
  - Involves companies in a supplier-customer relationship.
  - Merging firms operate at different levels of the supply chain
- Conglomerate mergers
  - a merger that is neither purely horizontal nor purely vertical
  - In practice, focus is on companies active in closely related markets
    - goods are complements in demand
    - share the customer pool

General observations

- Non-horizontal mergers raise different concerns than horizontal mergers
  - no loss of direct competition between the merging parties
  - possible complementarity of merging parties
  - Significant efficiencies
- However, merger may change the ability and incentive to compete on the part of the merging company and the competitors in ways that cause harm to consumers:
  - Foreclosure
  - Enhanced risk of collusion

Consumer Welfare
Why? Who? Where? When?

- Consensus: Ex-ante optimal policy is to maximise TW but a bias towards consumers better enforces this standard
  1. information advantages of firms (Besanko & Spulber, 1993)
  2. lobbying advantages of firms (Neven & Roeller, 2000)
  3. encouraging first-best mergers, i.e. those which are optimal from a social welfare viewpoint (Fridolfsson, 2002 and Lyons, 2003)
- Consumers = customers of the firms subject to foreclosure

- What about intermediate buyers not competing with the integrated firm?
- What if the merger allows a supplier to extract rents, with no loss in allocative efficiency (or even efficiency gains)?
  - But what if incentives or ability to innovate is reduced?
- What if the merger allows a buyer to extract rents, but there are losses in efficiency?
- What if due to non-linear pricing welfare loses are felt several levels down in the supply chain?

Vertical mergers

- Advantages of non-integration:
  - External pressure from competition keeps each entity "on their toes"
  - Easier to handle smaller entities
  - Better focus on core activities
- Advantages of integration
  - Easier to align activities and incentives
  - Internalize externalities

Aligned incentives

- M. 3868 DONG/Elsam/E2
  - DONG receives gas in a steady flow
    - but customers mainly need the gas in the winter
    - solution: storage
  - Elsam and E2 use gas to produce electricity
    - But they also use other fuels (coal, oil, wood-pellets and straw)
    - Merger potential: use power plants as virtual storage
    - By using gas in the summer and other fuels in the winter

Besides…there is only one monopoly profit!?

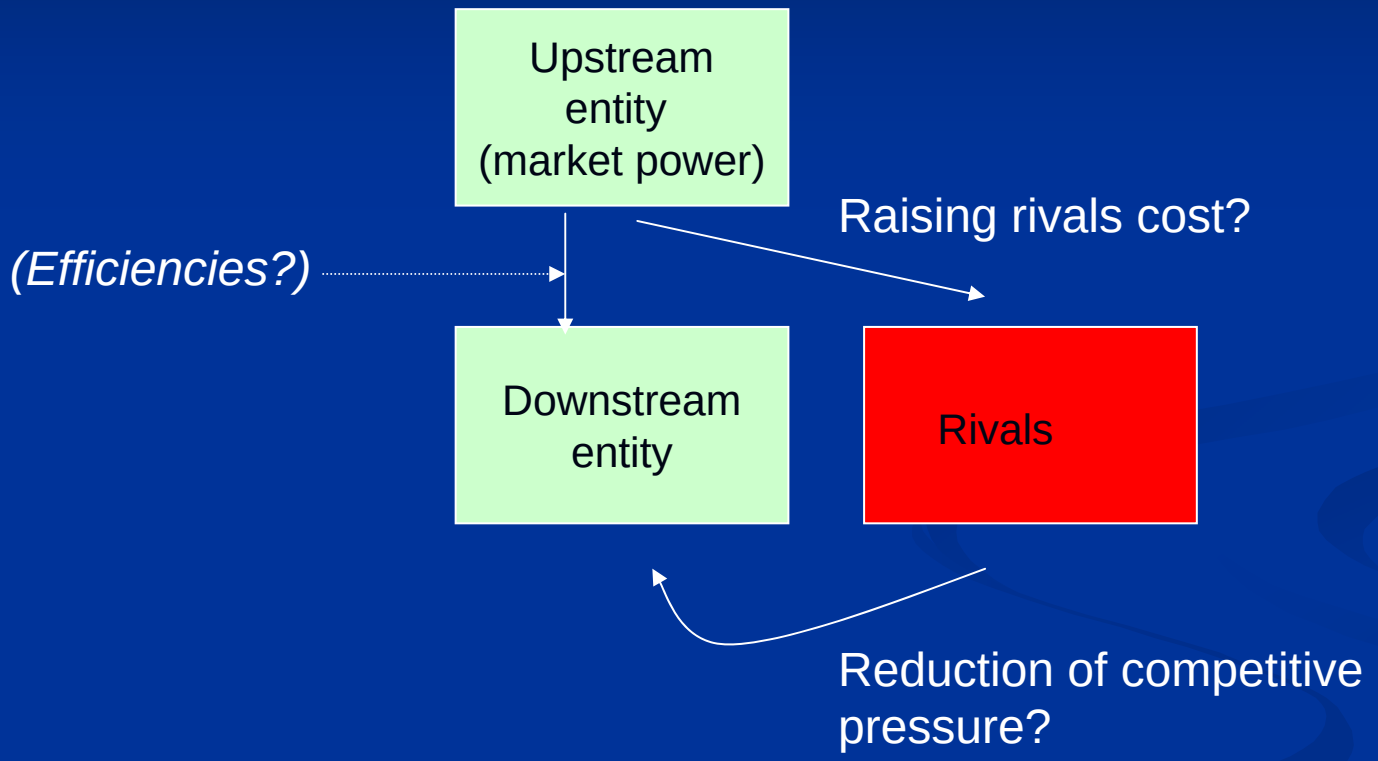
- Except that…
- The upstream monopoly may not be able to extract all the profit when:
  - Buyers are differentiated and it cannot price discriminate
  - It cannot commit to restrict sales at the monopoly level
  - It is subject to price regulation upstream
- In most cases there is some (actual or potential) competition upstream
  - Raising rivals costs allows an integrated firm to make greater profits downstream
  - Entry from one level to the other may be easier
  - Information regarding rivals costs or strategies may be valuable downstream (e.g. electricity pools, bidding markets)

Most common concern: Foreclosure

- Vertical mergers may foreclose competition by
  - raising the costs at which competitors can operate on a downstream market (*raising rivals' cost*); typically associated with input foreclosure
  - and/or lowering the expected revenue streams of upstream competitors (*reducing rivals' revenues*); typically associated with customer foreclosure

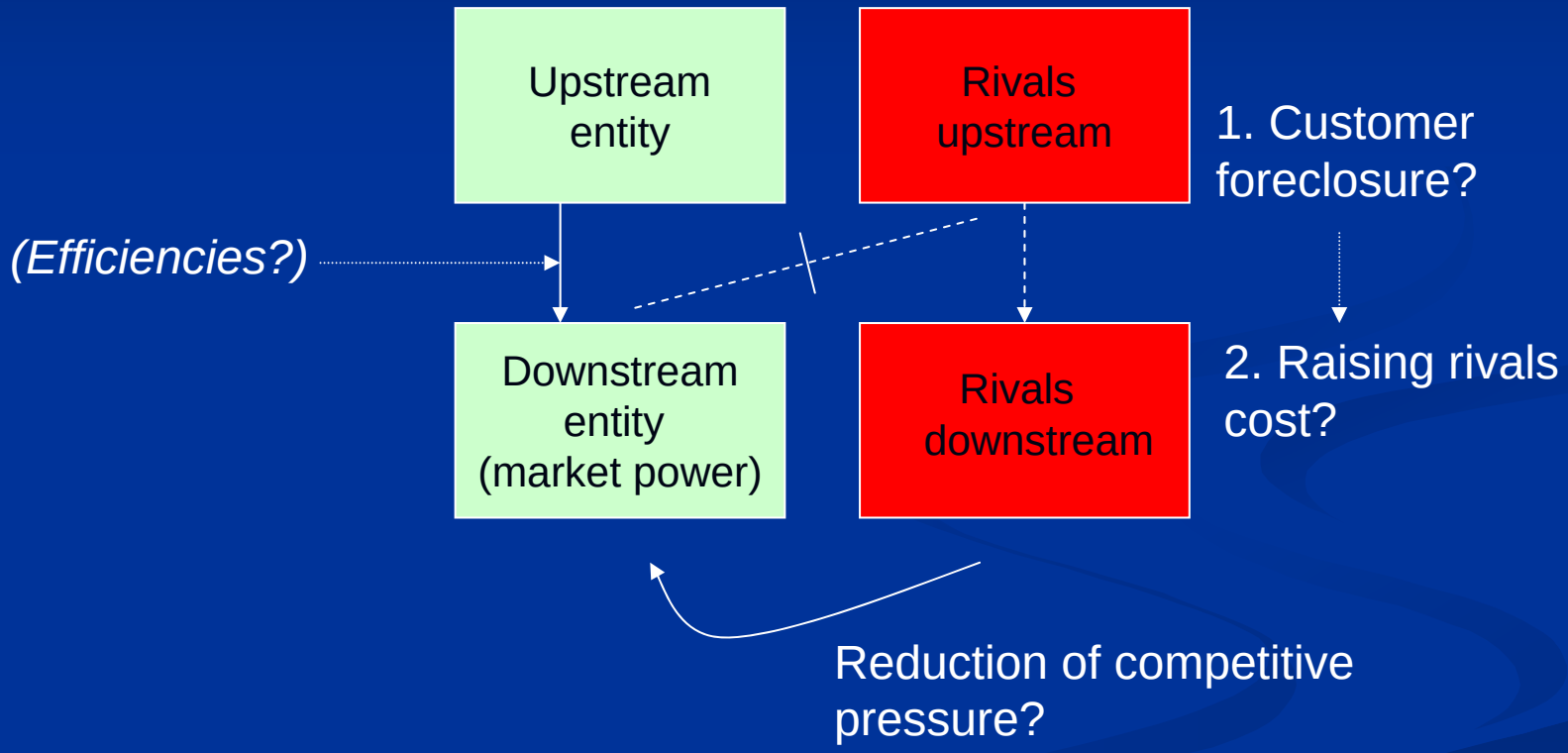
➔ may affect the ability or incentive of competitors to compete, and thereby negatively affect consumers

Input foreclosure



➔ *Net effect on consumers ?*

Customer Foreclosure



➔ *Net effect on consumers ?*

Analytical framework

- Need to examine:

1. Ability to foreclose
   (would prices upstream increase?)
2. Incentive to foreclose
   (would profits of the integrated firm increase?)
3. Likely impact on effective competition (would prices downstream increase?)

- In practice all elements are linked (equilibrium analysis)

Ability to foreclose

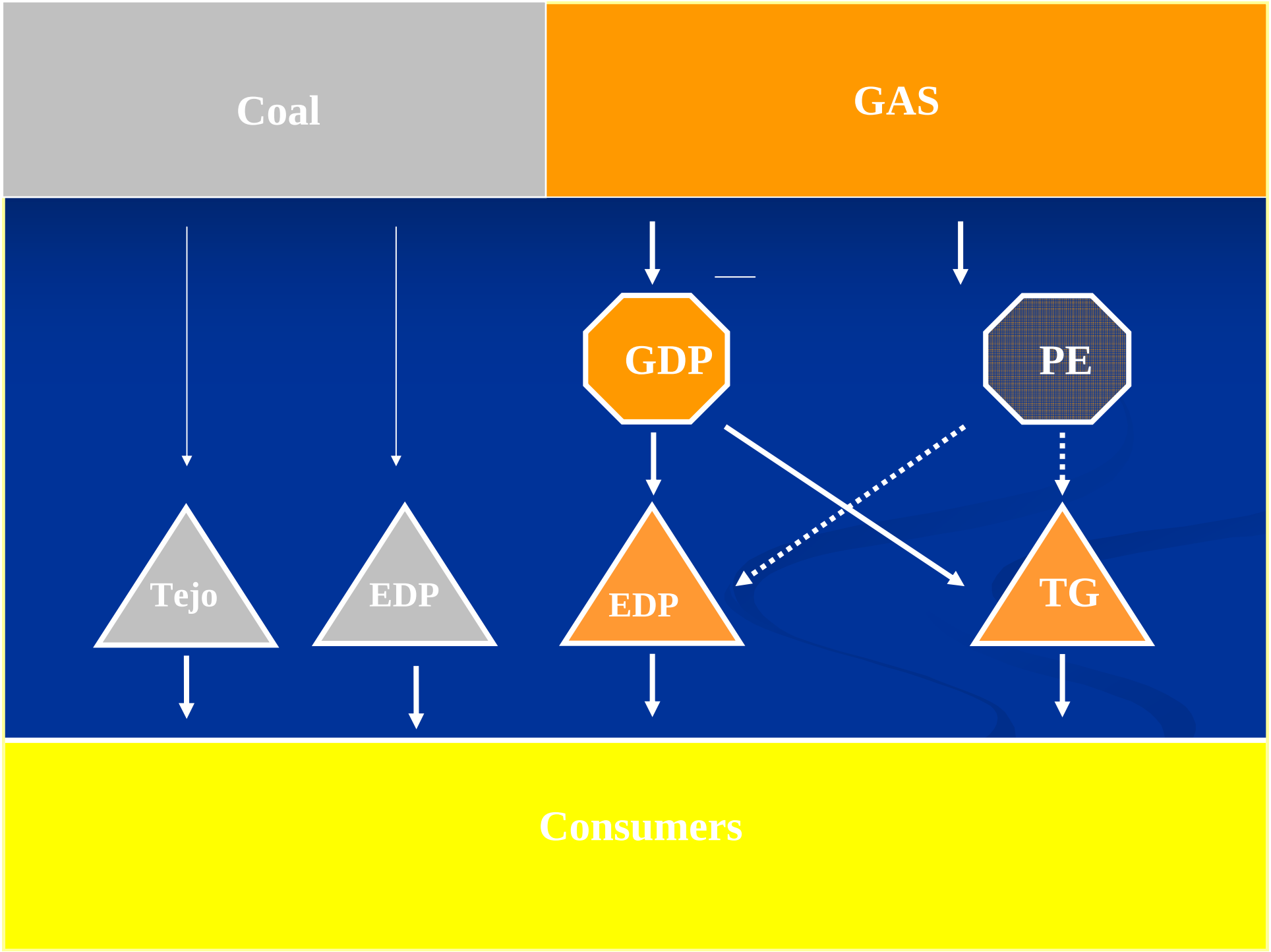
- Necessary conditions:
  - the input must be important (e.g. in cost terms)
  - merged entity must have market power upstream
    - E.g. other upstream rivals are less efficient, offer less preferred alternatives, cannot expand easily
    - Input foreclosure may also expose downstream rivals to independent upstream suppliers with increased market power
- Possible counter-strategies of downstream rivals

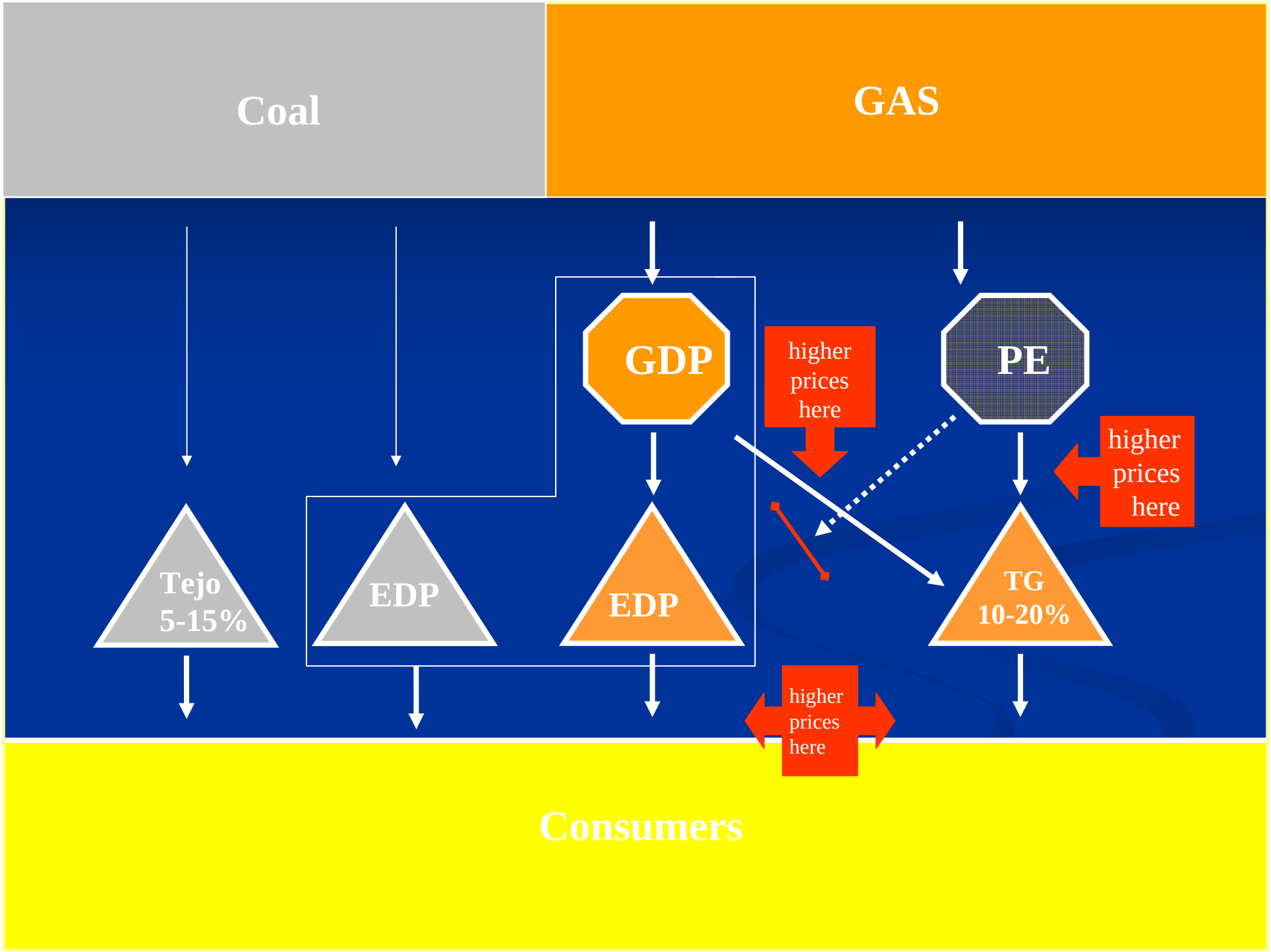
Incentive to foreclose

- Incentive to foreclose depends on the degree to which it is profitable
- Merged entity faces possible trade-off between
  - profit loss due to no longer supplying to downstream rivals and
  - profit gain due to expanding sales downstream and/or being able to raise price in that market
- Incentive to foreclose may be higher in case
  - Profits upstream are low (compared with downstream)
  - Possibility to expand downstream high (e.g. foreclosed rival is a close competitor or will suffer capacity constraints)
  - Merged entity has high market share downstream

Impact on competition

- Merger may raise rivals' costs thereby causing an upward pressure on rivals' prices. This may in turn allow the merged entity to raise price
  - Effect more likely to be significant when proportion of foreclosed rivals is high or foreclosed rivals are close competitors
- Merger may allow merger entity to raise entry barriers
  - In particular if foreclosure necessitates "two-level entry"


Coal
GAS
GDP
PE
Tejo
EDP
EDP
TG
Consumers


Coal
GAS
GDP
PE
higher prices here
higher prices here
Tejo 5-15%
EDP
EDP
TG 10-20%
higher prices here
Consumers

How to deal with countervailing factors?

- Who is the buyer that exercises countervailing power?
- What about countervailing seller power?
- If the merger forecloses entry? Can it also induce entry?
- Efficiencies to be identified and substantiated by the merging parties
  - Incl. possible internalisation of double mark-ups?
  - But what if the merging fears an efficiency offence?
  - Could the efficiency offence be legitimate (in the sense that ultimately consumers are worse off despite the efficiencies)?

Restoring monopoly power

- A non-integrated upstream monopolist has a serious self-discipline (i.e commitment) problem which limits its ability to exploit its monopoly power (analogous to durable good monopolies).
  - It cannot commit to abstain from secretly discounting to any downstream firm, in a form of post-contractual opportunism.
  - Thus the source of this problem is contractual incompleteness (no contracts contingent on profitability measures and no exclusivity)
- Through vertical integration a monopolist acquires a direct stake on downstream profits which allow it to credibly commit not to offer secret discounts to rivals.
- Integration only imperfectly solves this commitment problem because the monopolist cannot commit not to favour its downstream units when independent units exist.

Policy relevance of RMP

- Vertical integration helps the upstream monopolist to circumvent its commitment problem and to (credibly) maintain monopoly prices.
- Empirical validity requires:
  - Non-linear pricing is assumed to exclude gains from eliminating double marginalisation. Is this always realistic?
  - Contract incompleteness
- Weaknesses:
  - Multiple equilibria
  - No explanation of how vertical integration might foreclose an equally efficient competitor. This narrows its scope.
  - Vertical integration is not necessary: Exclusive agreements also circumvent the problem. This has implications for policy.
- Also note that the merger does not restrict competition. It allows the merged entity to commit to a strategy. Should this be challenged provided the monopoly was achieved legitimately?

Conglomerate mergers
Pro-competitive effects

- Conglomerate mergers generally have no negative effects on competition.
- Due to specialization through division of labour it is often more efficient that certain components are marketed together rather than separately.
- More generally bundling or tying can lead to:
  - Cost savings that derive from some form of economy of scope (either on the production or the consumption side (e.g. one-stop-shop).
  - Value enhancements can result from better compatibility and quality assurance of complementary components
  - Internalisation of pricing externalities (the Cournot effect)
- But such efficiencies must be merger specific!

The Cournot effect (internalizing a pricing externality)

- Bundling is more profitable than offering each component separately: lowering the price of one component increases the sale of its own complementary component and not that of rival manufacturers.
- Does not depend on form of demand or cost function
- It does not require for goods to be perfect complements
- Implicit assumption: There are linear prices (reflecting uncertainty about customers' willingness to pay)

Importance of the Cournot Effect

- **Cournot effect is larger (i.e. static incentives to bundle increase)**
  - If system demand is relatively inelastic (but not perfectly)
  - As the ***size of the bundle*** increases (and/or components have similar weights)
  - With higher levels of ***uncertainty about customer valuations***
    It is difficult to measure this kind of uncertainty but it is likely to be non-negligible:
    - No incentive for customers to reveal their willingness to pay during a negotiation
    - Preferences are affected by multiple factors which differ in intensity and relevance in different situations
    - Exogenous and unpredictable events as well as innovation continuously alter such preferences
- However because there are rival firms, there will also be a response to a price cut (in equilibrium). This response may offset the potential gain to the merging firms. (i.e. cross price elasticities matter)

Presumption of innocence

- Not if there is fierce competition in the market for one component.
- Chicago School argument in a nutshell:
  - the monopoly price of good A on its own is m
  - the competitive price of good B is c.
  - If the monopolist were to earn higher profits at price x for a bundle of A and B, then consider the implied monopoly price $m' = x - c$.
  - Since good B is available at c, anyone who buys the bundle is willing to pay an incremental price of $x-c$ for A.
  - Were the monopolist to charge $x-c$ for A alone and eliminate the bundle, its demand and, hence, its profits would be at least as large (as there may be some consumers who do not value good B even at its cost c).

Foreclosure mechanisms of tying/bundling

- Commitment to compete aggressively
- Soften competition by enhancing product differentiation
- Prevent sequential entry into the tied and tying market
- Reduce rivals revenues thereby inducing exit or prevent entry

Conglomerates are more likely to be neutral than Horizontal Mergers…

- But two reasons to be cautious:
  - Conglomerate effects are more difficult to assess than horizontal effects.
  - It also follows that the deterrence effect is lesser than in horizontal mergers*

*(e.g. assume 50% of HM and 10% of CM are anti-competitive. Merging parties expect most anticompetitive HM will be challenged so only 10% of anticompetitive HM are notified. This implies the proportion of notified HM and CG that are anticompetitive is the same (10%)