

# **Sectoral approaches and competitiveness concerns**

*Session 1*

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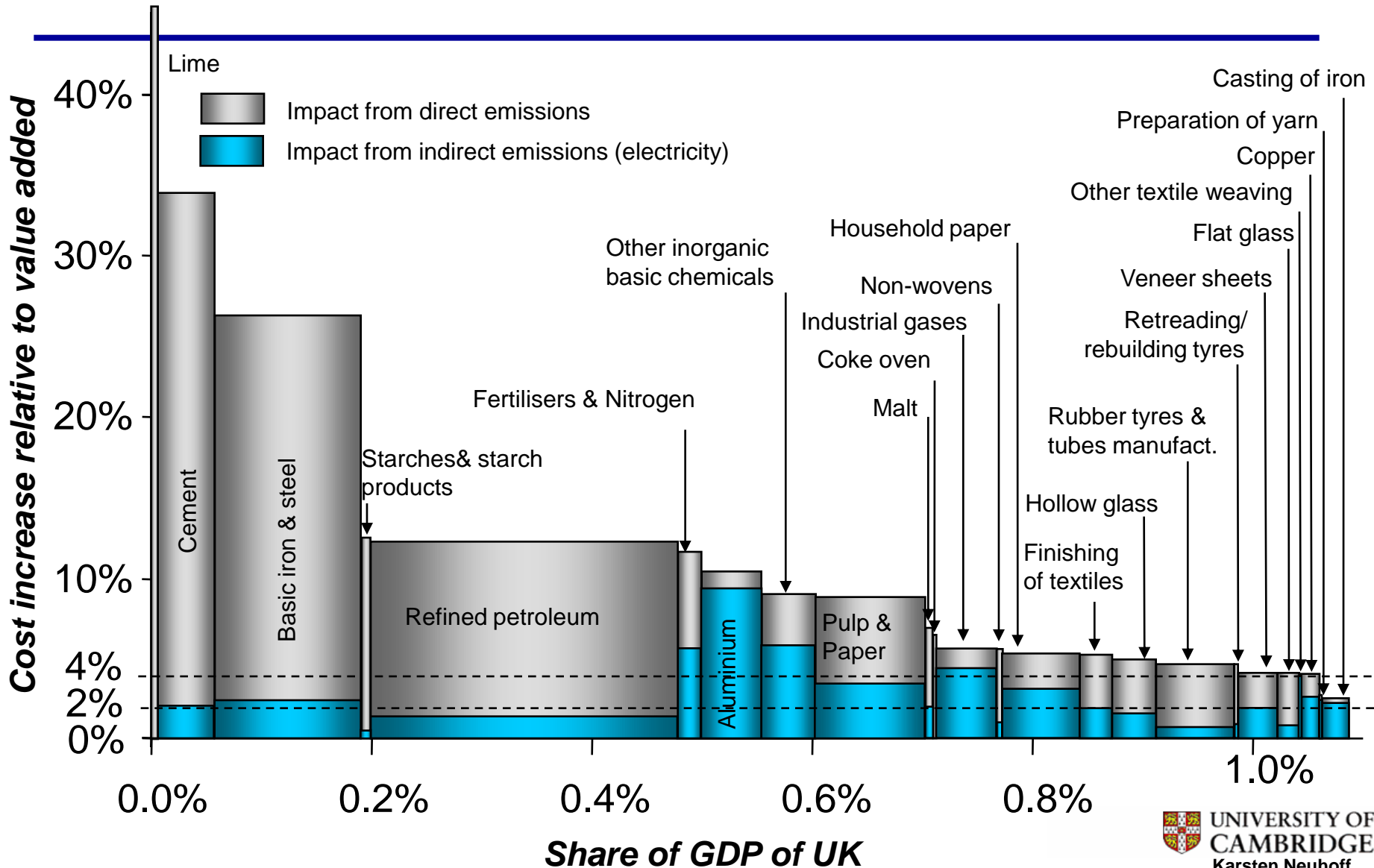
[www.electricitypolicy.org.uk/tsec/2](http://www.electricitypolicy.org.uk/tsec/2)

# Sectoral approaches and competitiveness concerns

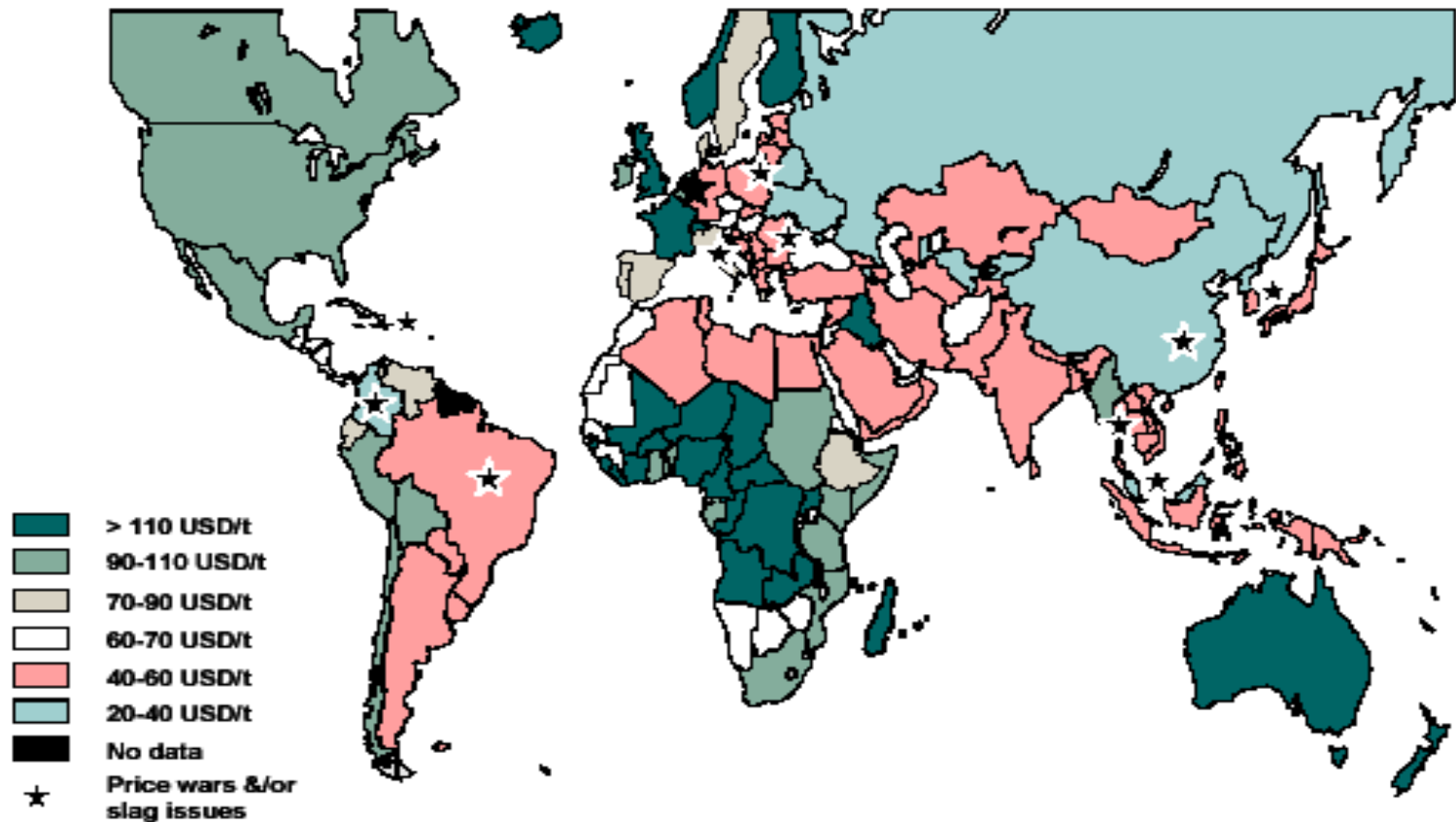
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- Empirics of leakage concerns
  - Which basic commodities are possibly affected
  - Case study cement / steel
- The main approaches to address leakage concerns
- Options for government-led sectoral agreements

# Commodities with significant carbon cost

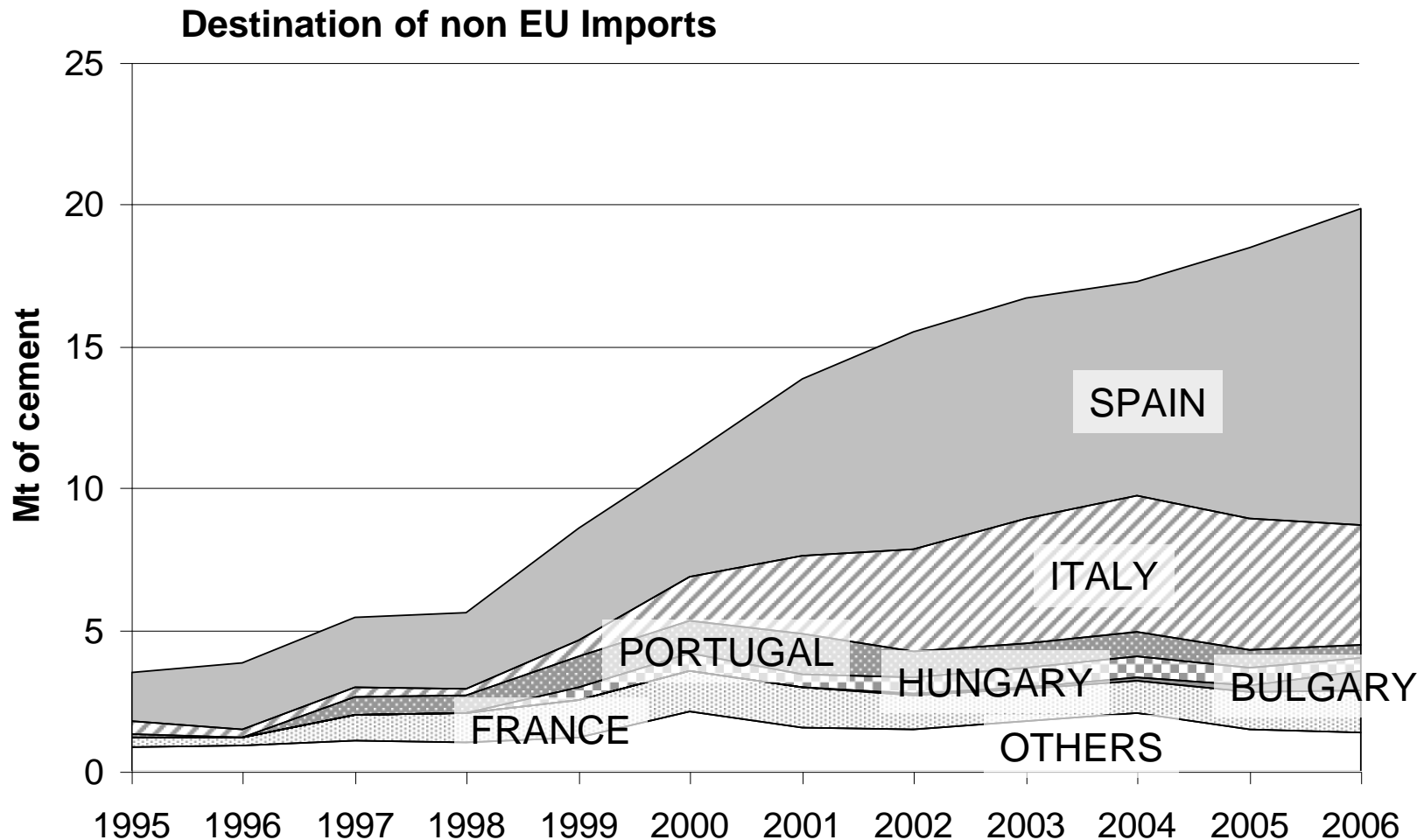


# Regional cement markets show large price differences



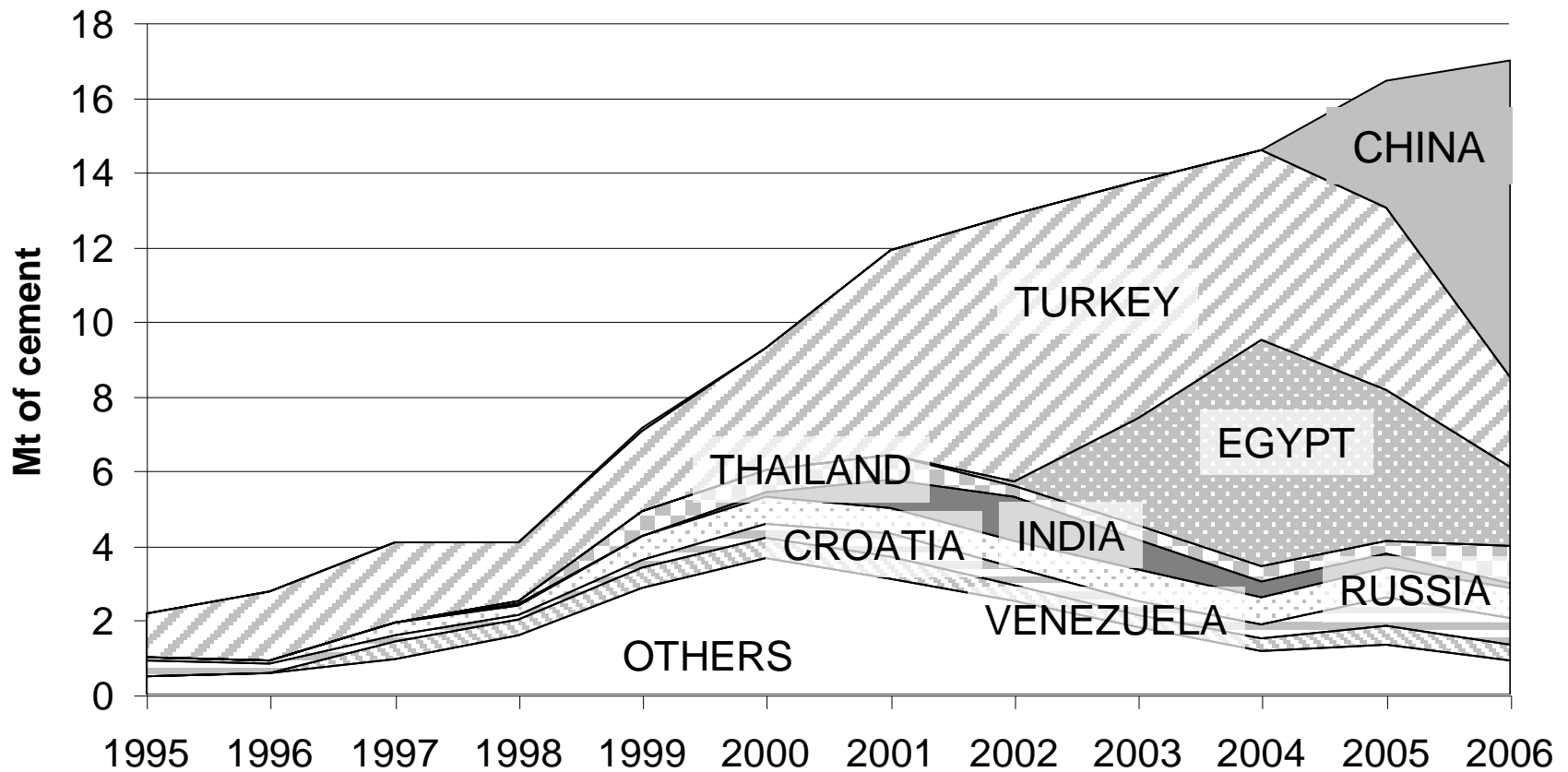
Source: Exane BNP Paribas estimates

# Historic cement imports reflected capacity shortage

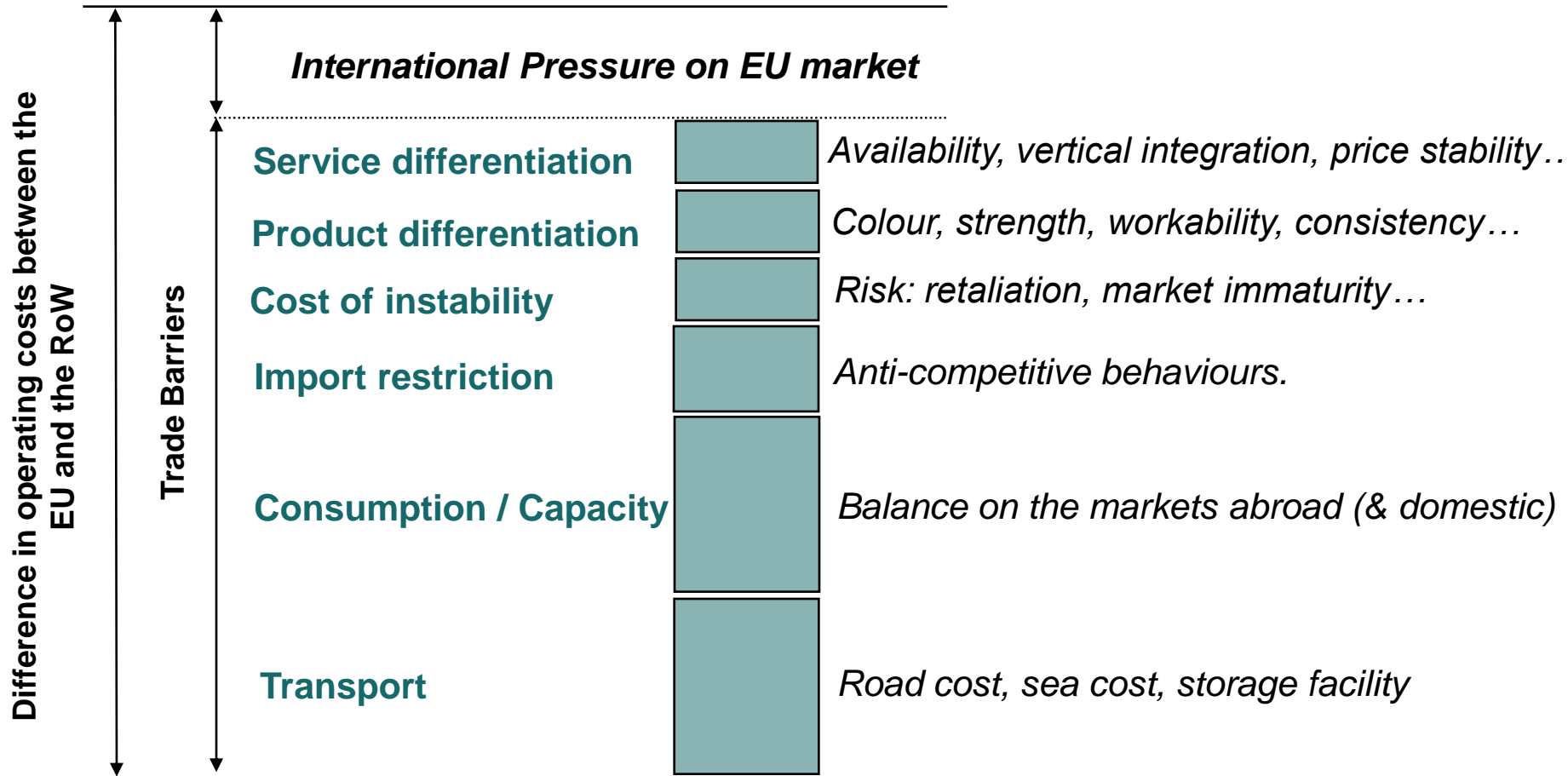


# And resulted from excess production capacity

## Origin of non EU Imports

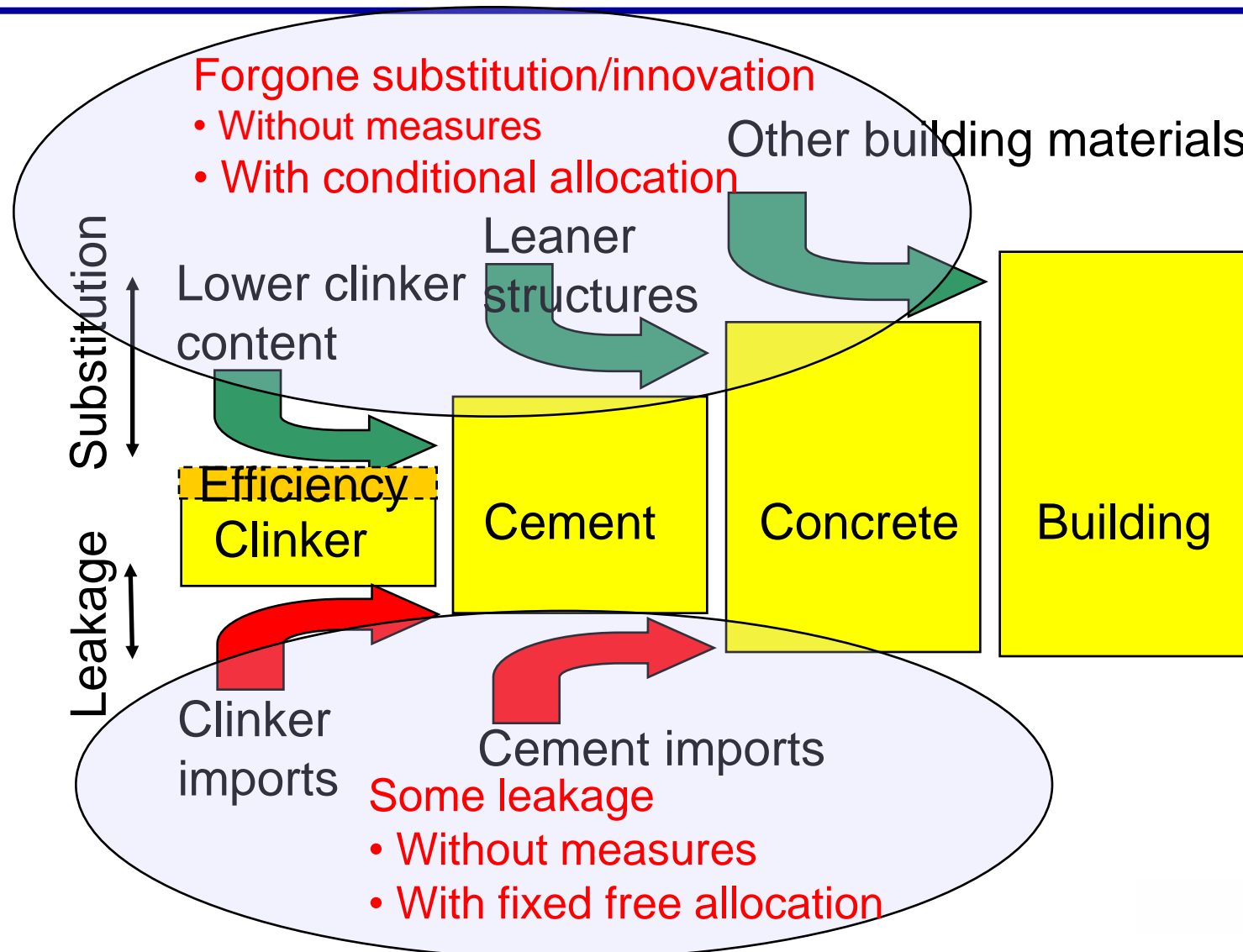


# ... existing trade barriers limit leakage impact

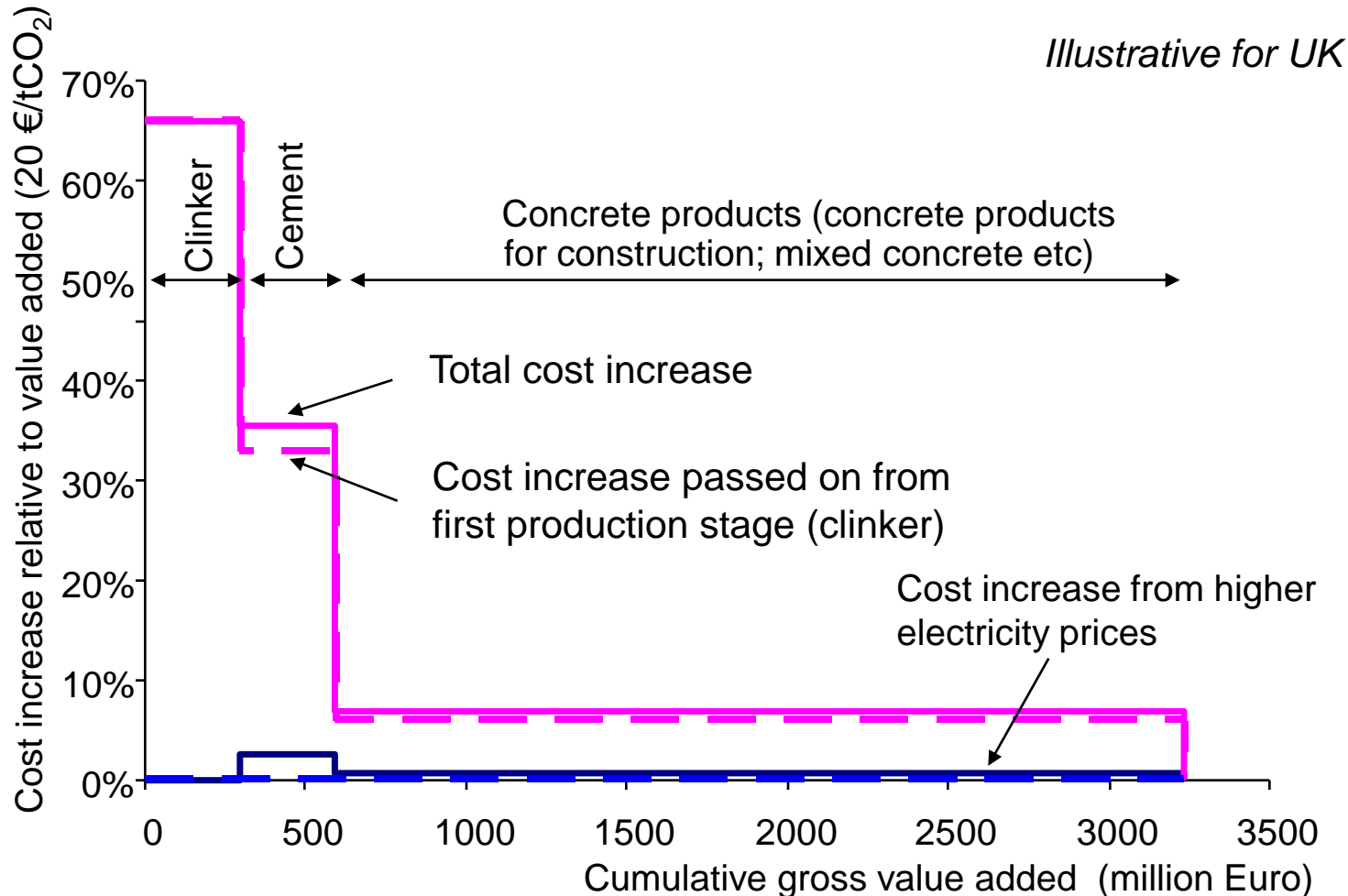


NB: Barriers are lower for EU transnational firms

# Carbon price differentials – trade off between direct leakage and forgone substitution effect

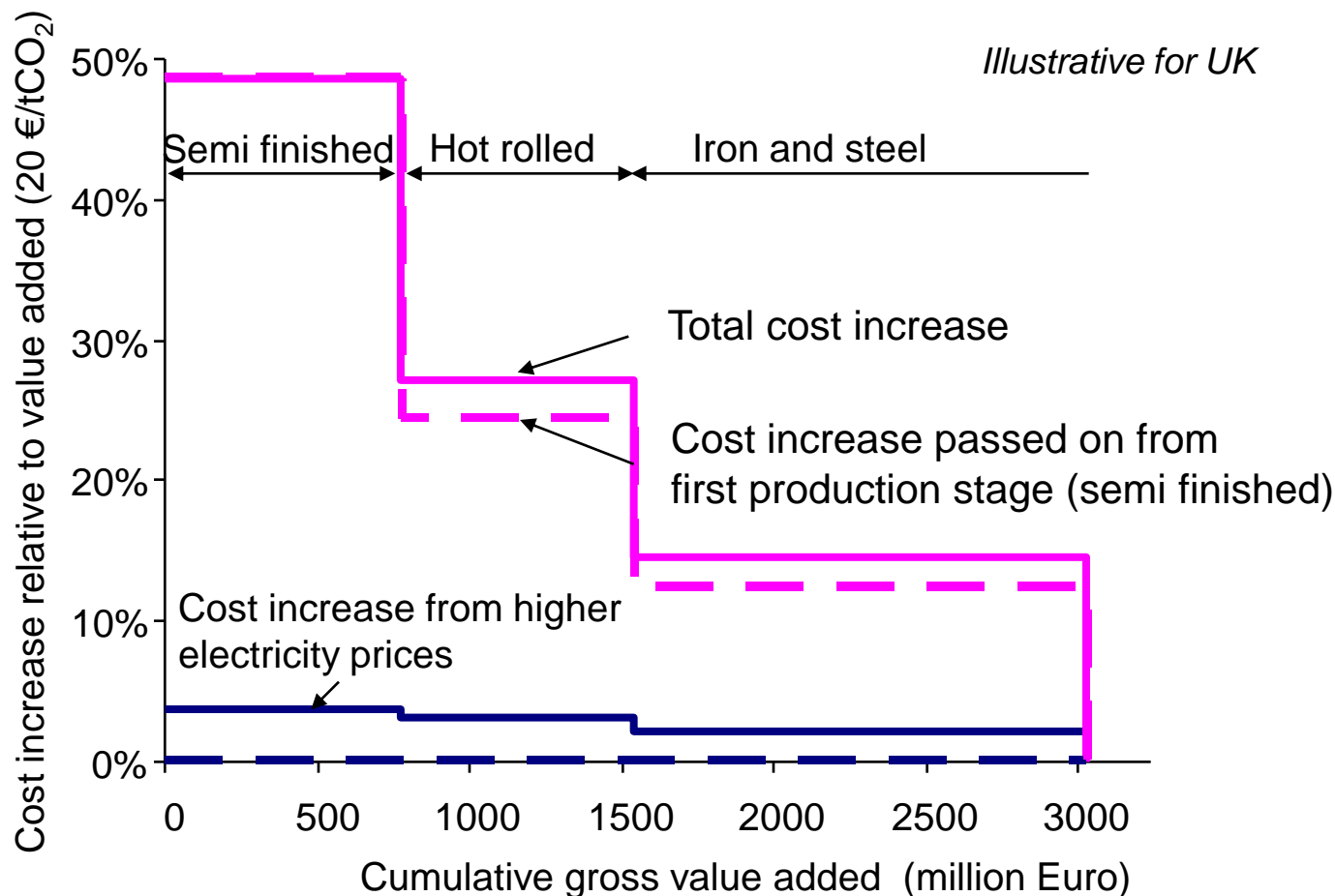


# The example of the cement sector



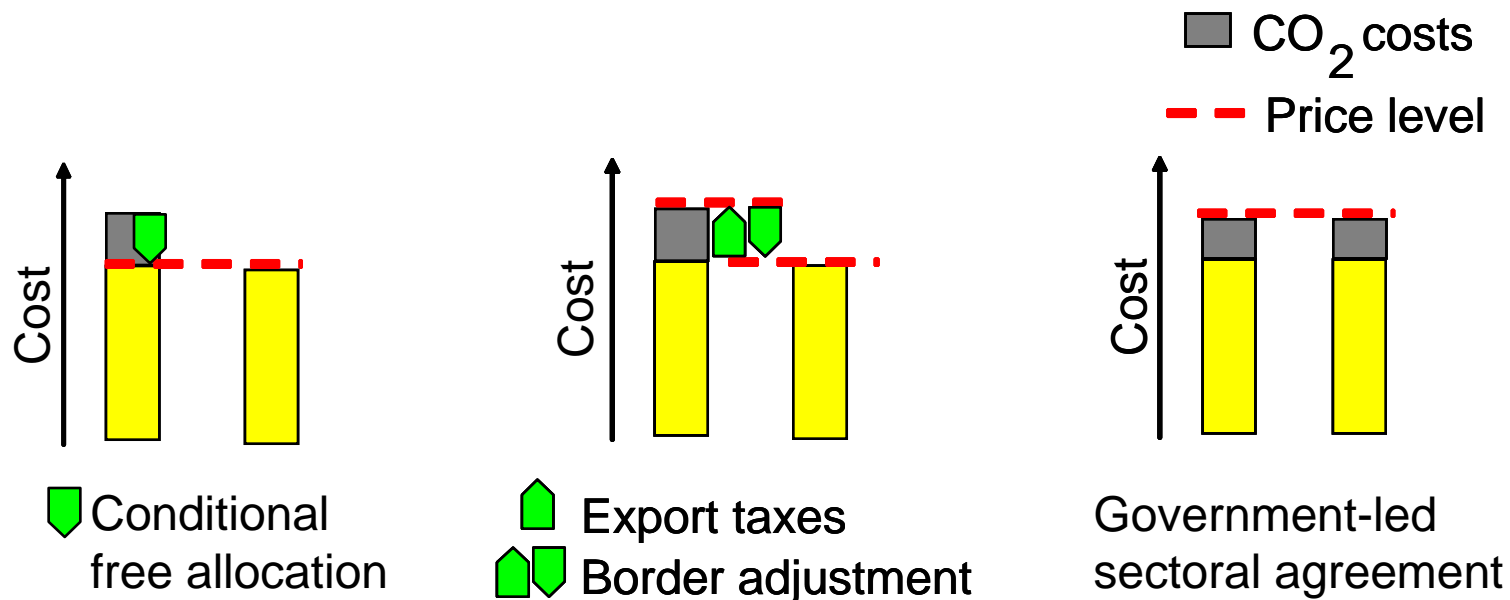
Most leakage concerns from clinker – easily transportable

# The example of the steel sector



- Most exposure from BOF (and possible coke oven)
- Steel can be transported at semi-finished stage

# Three approaches address leakage for exposed sectors



## *Initial evaluation*

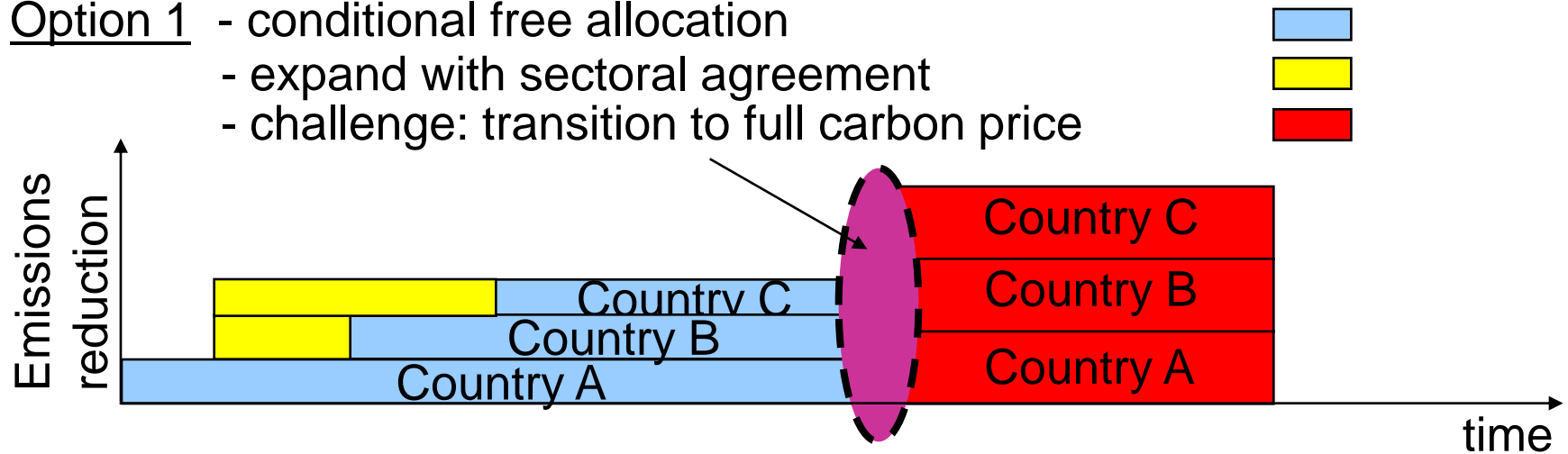
- Little substitution to low carbon products/services
- Distorts investment
- Bureaucratic constraints for innovation
- Risk of lock-in
- Has to be aligned with international climate engagement
- Requires at least informal international cooperation
- Requires strong policies of developing countries
- Risk of low common denominator

Sectoral agreements based on benchmarks address a non-existing leakage problem – leakage is only of concern with fixed free allocation/auctioning

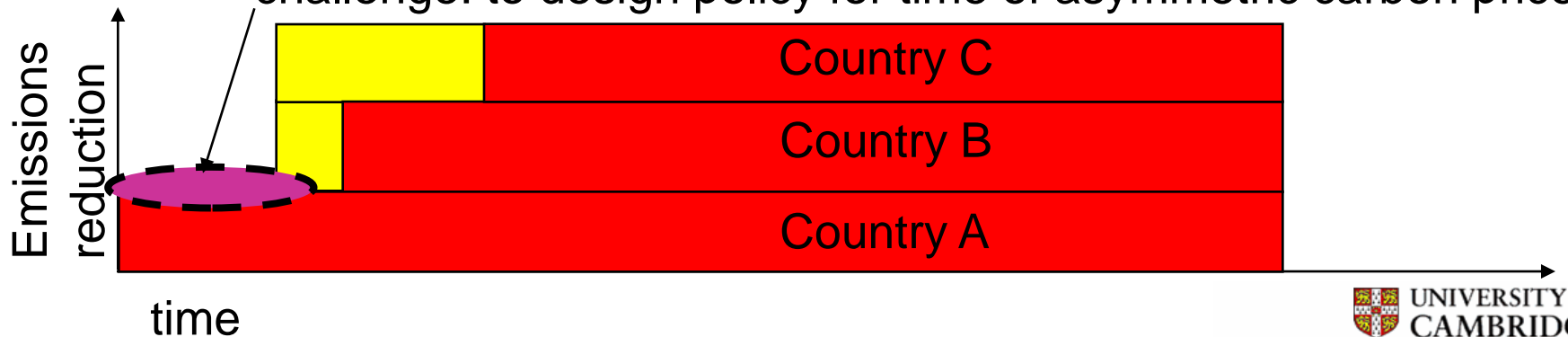
Result \ Approach	Overcome inertia	Innovation/ efficiency improvement	Substitution to low-carbon commodities	Concern about leakage
Sharing best practice	X			
ET with conditional free allocation	X	Some, but distorted incentives		
ET with fixed free allocation or auctioning	X	X	X	X

# Possible evolution of carbon pricing policies

- Option 1 - conditional free allocation  
- expand with sectoral agreement  
- challenge: transition to full carbon price



- Option 2 - start with full carbon price  
- possibly accelerated with internat. agreement  
- challenge: to design policy for time of asymmetric carbon price



# Components of a government-led agreement

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- Commitment to impose full carbon price
  - Requires carbon tax or cap and trade with full auctioning
  - Has to be credible for periods of excess capacity
- At what carbon price
  - Option 1: Defined with sectoral trading
    - Uncertain innovative success and substitution with other goods
    - Creates price and investment uncertainty
  - Option 2: Internationally agreed on carbon price (e.g tax)
    - Uncertainty about trigger price for innovative tech
    - Will it be sufficient to deliver overall target?
  - Option 3: Agree on minimum price level
    - Retains commodities in domestic schemes
    - Will negotiated price be high enough to address leakage?
- What incentives are offered for participation?
- How to address leakage to third countries?

# Sectoral approaches and competitiveness concerns

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- ET with conditional free allocation (benchmarks)
  - undermines substitution effect / reduces innovation
  - but creates no leakage concern
  - > no economic need to link benchmark trading schemes
  - > no incentive for EU/US producers to participate (other than escape)
- Leakage potential issue with auctioning/fixed free allocation
  - only with expectation of enduring asymmetry for a few commodities
  - sectoral agreements help by accelerating international cooperation
- Government-led sectoral agreement on full carbon price
  - addresses leakage, could be easier than global carbon price
  - complemented with BTA to address leakage with third countries
  - Would agreements be defined in terms of prices, quantities or floors?