

An introduction to the EU Agro-Food Supply Chain

- Major trends and challenges
- The EU policy priorities and
- The underlying economic intuitions of such priorities

Importance of the EU Agro-Food Supply Chain

- Significant contribution to the EU economy
- Important cultural and societal role in the EU (rural communities, food security and traditions)

- Gross value added: 6% of EU total (2011)
- Employment: 24 million (11% of all EU employment) (2011)
- Exports: 120 billion, trade surplus of 18.6 billion (2013)

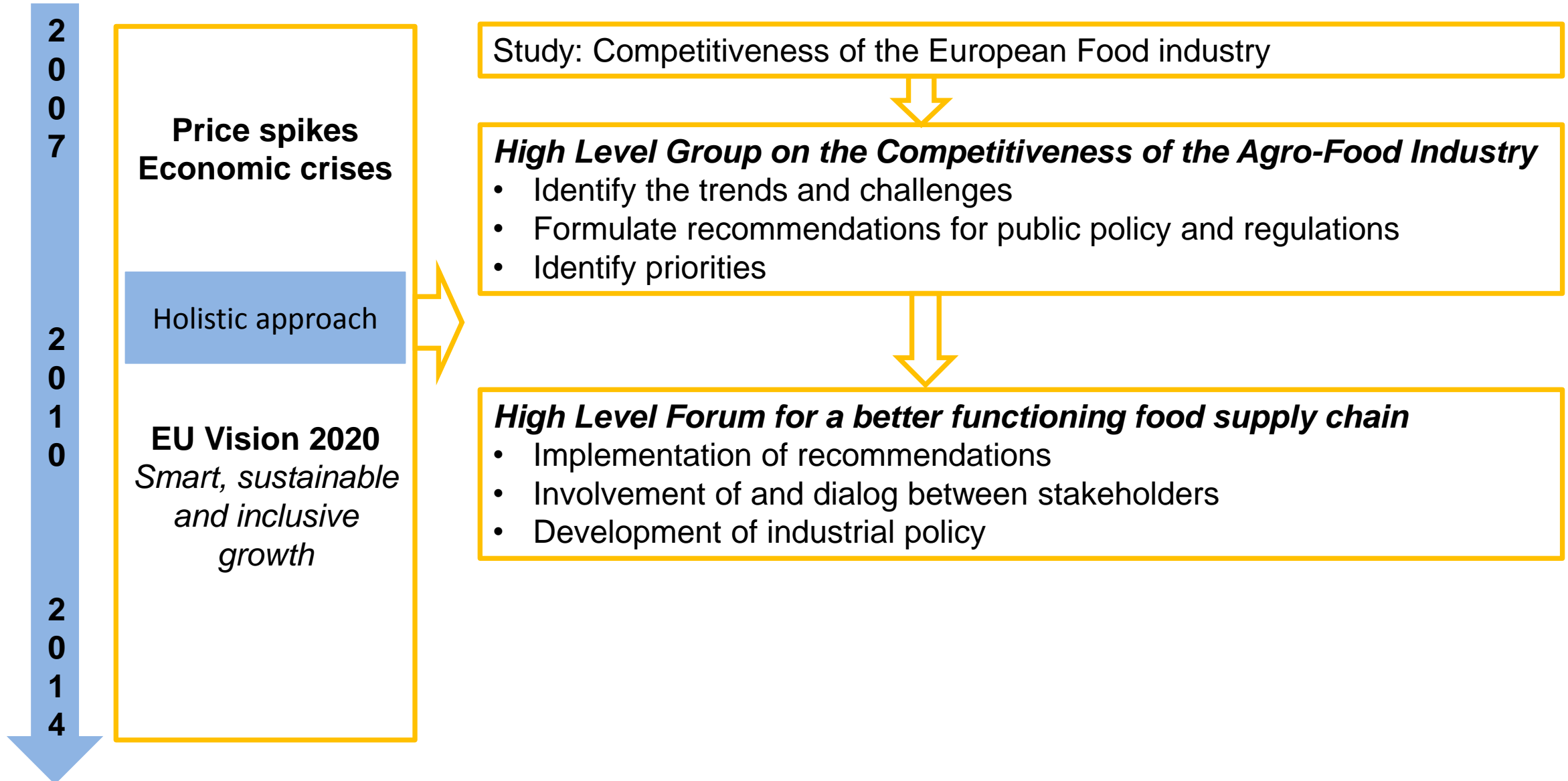
Underperformance: Investigation by the EU Commission



Main finding: The competitiveness of the European food industry is weaker compared to the US and Canadian food industries and similar to the Australian industry

Source: http://ec.europa.eu/enterprise/sectors/food/files/competitiveness/competitiveness_study_en.pdf

Underperformance: actions by the EU Commission



Trends (& Challenges)

The agro-food sector has changed significantly over the last decades...

1. Globalization
2. Structural change
3. Changes in consumer preferences
4. Environmental awareness
5. New biotechnologies
6. New information and communication technologies (ICT)
7. Demographic change

(1) Globalization and trade patterns

Trend: The agro-food supply chain is becoming increasingly global

- Decreasing transportation and transaction costs
- Trade liberalization

Challenges:

- Share of EU food export is decreasing
- Persistence of internal barrier

(2) Structural Change

Trend: The agro-food sector is undergoing important structural changes, particularly in the primary and in the retail sector.

Primary sector:

- Reduction in farm number
- Gradual development of farms to small companies managing larger operations

Retail sector:

- Concentration is increasing via growth or acquisitions
- Organization of retailers in buying groups (e.g., CORE)

Challenges:

- Bargaining power imbalances
- Market power

(3) Evolving consumer preferences and needs

Consumers are the **main driver** of the development of the agro-food supply chain.

Consumers demand is becoming more sophisticated:

- Affordable prices
- High-quality, diversified, and healthy food products
- Sustainable and ethical production systems

(4) Environmental awareness

The agro-food supply chain contributes significantly to the environmental impact and greenhouse gas emissions.

- Agriculture contributes to 9% of the total EU greenhouse gas emissions ⁽¹⁾
- 70-80% of deforestation is driven by conversion of forests into arable land ⁽²⁾

Source: (1) http://ec.europa.eu/agriculture/climate-change/index_en.htm

(2) http://ec.europa.eu/clima/policies/forests/index_en.htm

(3)-(4): Expanding regulations

Trend: Changes in consumer preferences and in environmental awareness resulted in additional and more stringent EU regulations aiming at:

- Preserving the environment
- Ensuring food safety
- Fighting obesity (and diet-related diseases)
- Improving animal welfare

Challenge: Stakeholders indicate that additional regulations have increased administrative burden

(5)-(6) Biotechnologies and ICT

Trend: The possibilities of biotechnologies and ICT are growing.

These developments have the potential to:

- Reduce the environmental impact
- Improve consumers' health
- Enhance productivity

Challenges:

- Requires investment in infrastructure
- Resistance to adoption

(7) Demographic & labor supply change

Trend: European population is ageing: 27% of EU population > 65 by 2050 ⁽¹⁾

Challenge: Lack of skilled personnel & young people are more attracted by new industries: average age of EU farmers is 55 ⁽²⁾

Opportunity: for young people with an interest and a good education in the agro-food supply chain

The EU supports initiatives to address this challenge.
This course “**Mobilizing Agro-food expertise**” is one of them.

Source: (1) http://ec.europa.eu/eurostat/statistics-explained/index.php/Population_structure_and_ageing

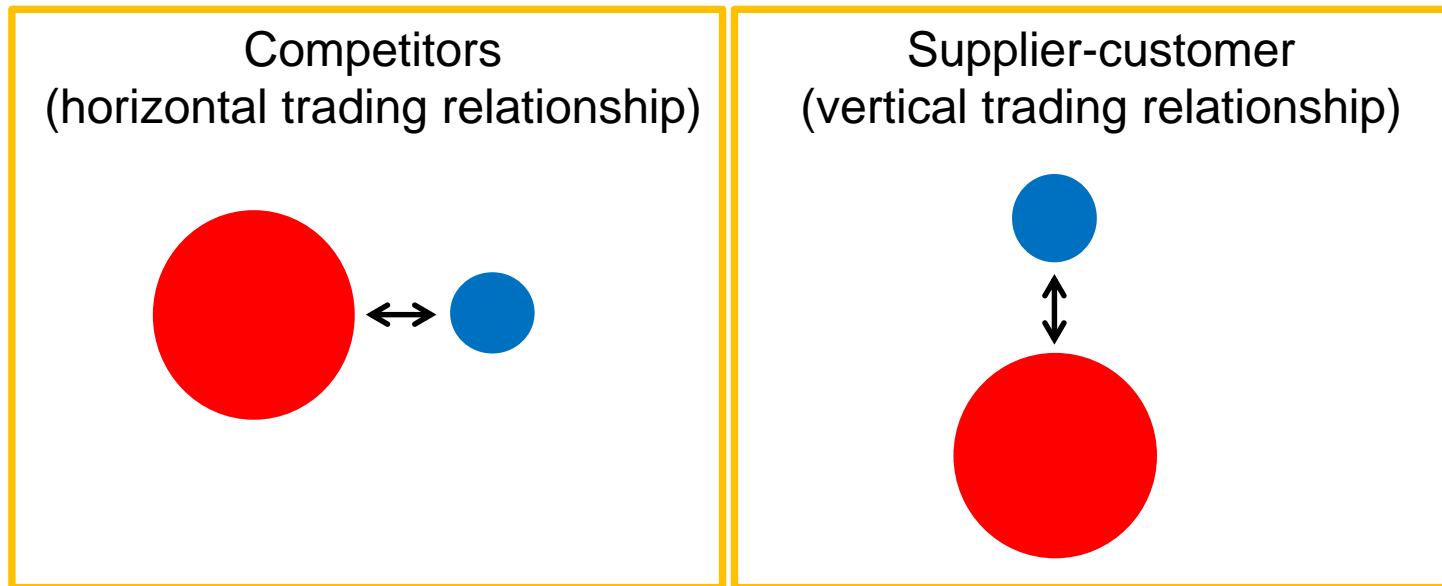
(2) http://ec.europa.eu/agriculture/statistics/rural-development/2013/full-text_en.pdf

EU priorities for the agro-food supply chain

1. Promote sustainable relationships
2. Increase price transparency
3. Foster market integration

Promote sustainable relationships

The agro-food supply chain is heterogeneous with regard to the size and market shares of its actors.



Heterogeneity gives rise to two orders of problems:



1. **Bargaining power imbalances**
2. **Market-power**

Bargaining power imbalances

Definition: *Bargaining power imbalances are situations in which larger actors impose contractual conditions to their advantage on smaller trading partners.*

Bargaining power imbalances are likely to be observed when:

- Farmers or cooperatives deal with larger buyers
- Small processors (SME) deal with large retailers
- Large producers of must-carry brands deal with retailers

Concern:

Bargaining power imbalances result in *unfair business practices*.

Unfair trading practices

Definition: *Unfair trading practices are practices unilaterally imposed by one trading partner that grossly deviate from good commercial conduct and are contrary to good faith and fair dealing. (*)*

Examples:

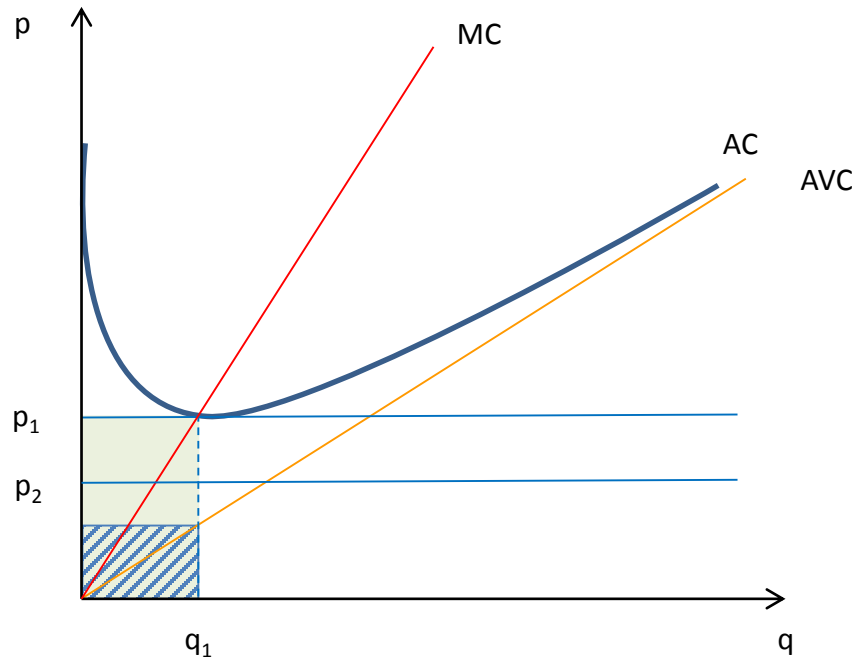
- **Unilateral actions:** Non-contractual retroactive unilateral changes in e.g., prices, payments terms
- **Listing fees:** Imposition of upfront payments that are disproportionate to the risk incurred in stocking a new product

(*) **Source:** *The Supply Chain Initiative at <http://www.supplychaininitiative.eu>*

Consequences of unfair trading practices

Consequences are difficult to measure, likely negative effects on:

- Investment incentives
- Profitability fall below “normal” profits



Responses to unfair trading practices

- Difficult to regulate: (a) line between fair and unfair is often blurred; (b) not reported
- Voluntary initiative on B2B relationship: *The Supply Chain Initiative*

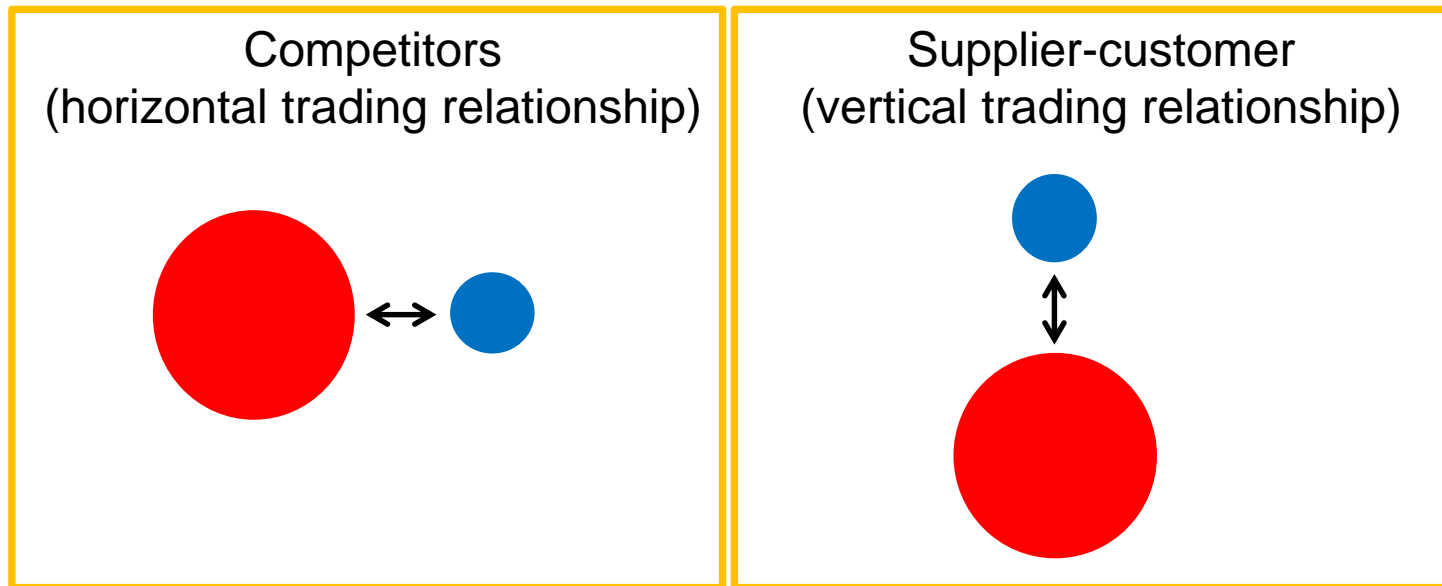


- Developed Principles of Good Practice
- Voluntary framework providing dispute resolution options

See: *The Supply Chain Initiative* at <http://www.supplychaininitiative.eu>

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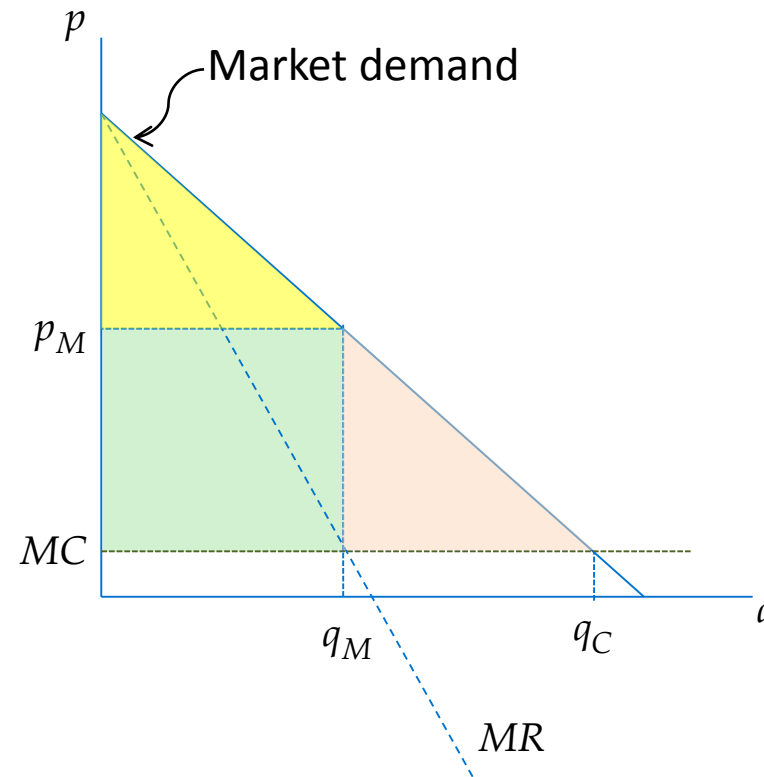
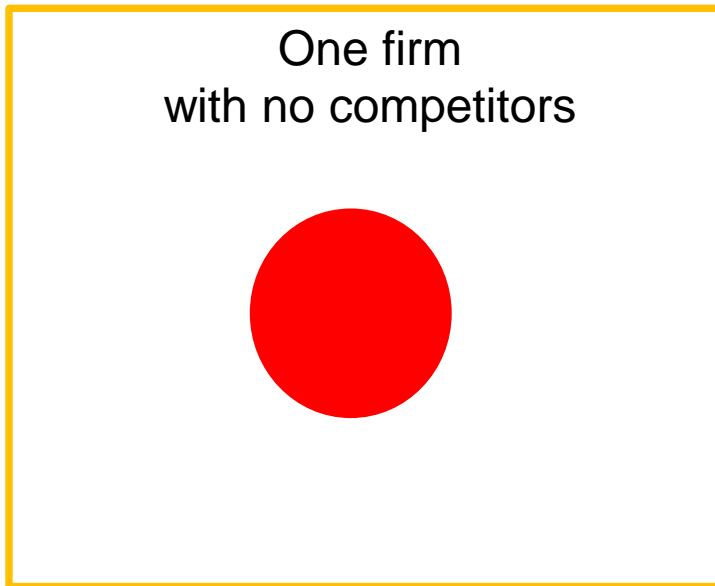
Market power

Definition: *Market power is the ability of a firm to affect the price in the market ($p > MC$)*

Main consequences of market power

- The main effect of exerting market power is a loss in welfare
- With market power too little is exchanged in the market

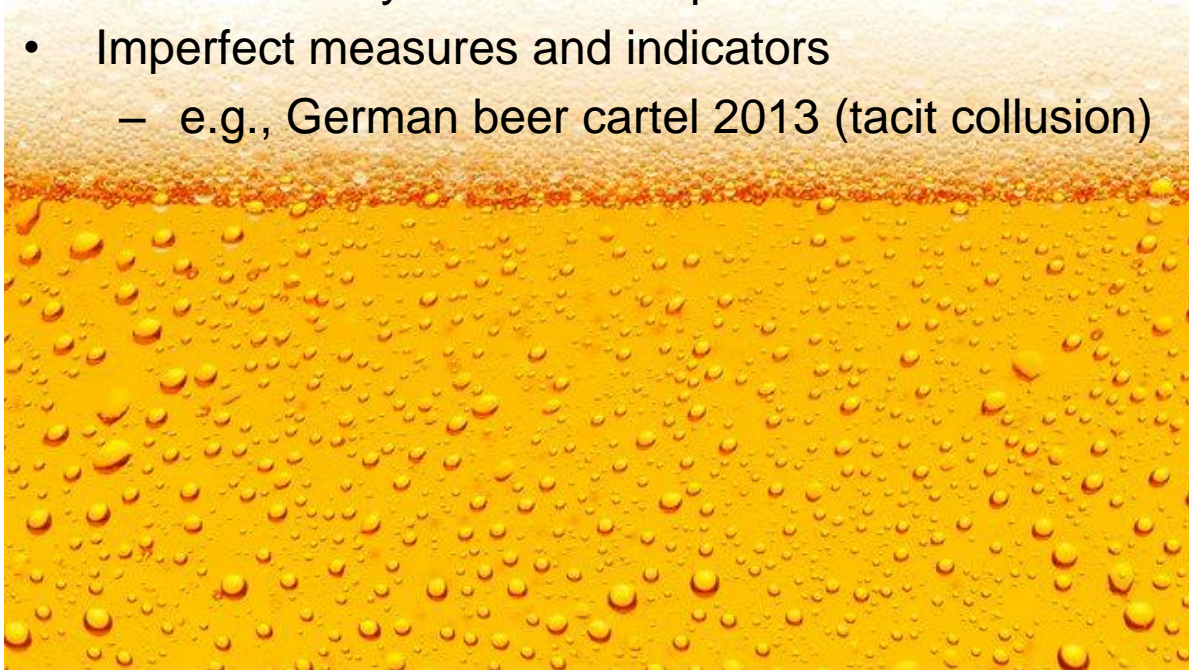
Monopoly



Detecting market power

It is not easy for competition authorities to detect market power

- Limited availability of information on firm costs
- No clear market definition
 - Local markets, national markets etc
 - Availability of substitute products
- Imperfect measures and indicators
 - e.g., German beer cartel 2013 (tacit collusion)



Firm coordination

Firm coordination can lead to efficiency gains

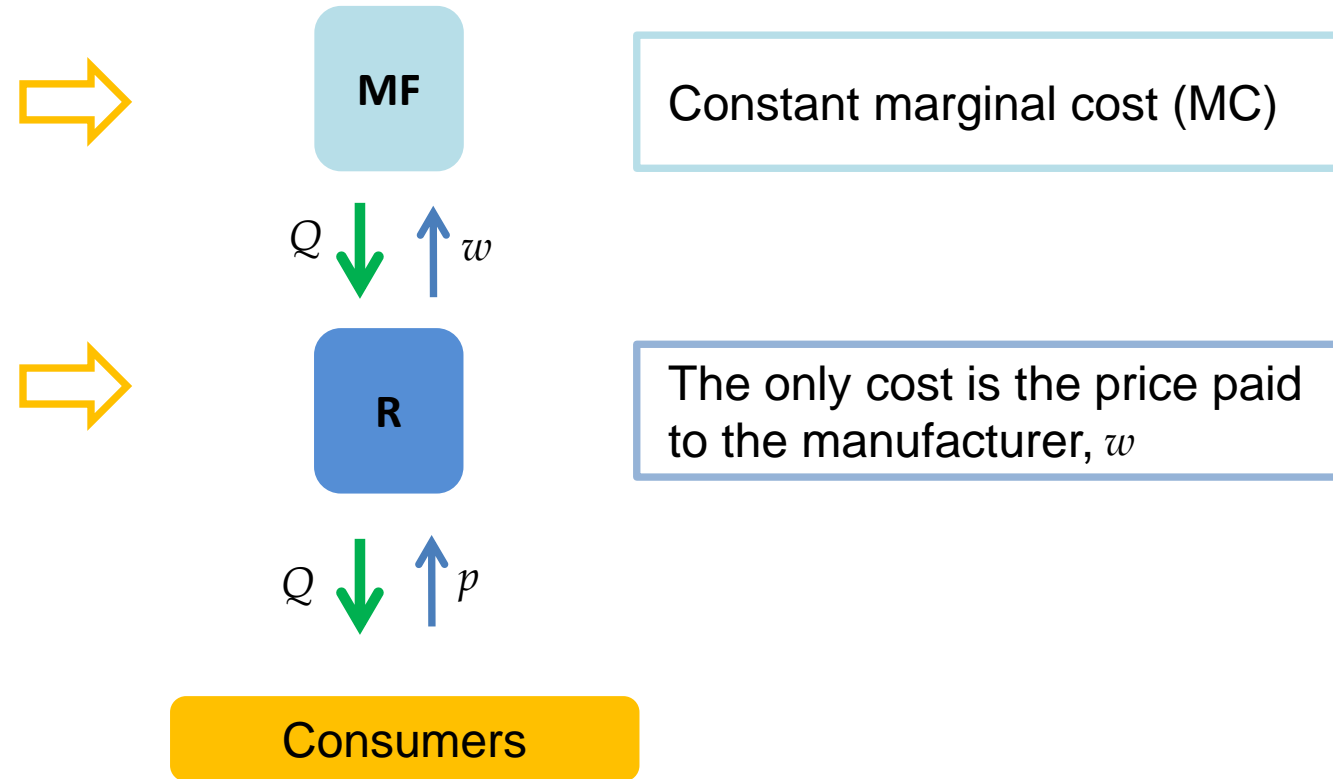
- Resource pooling or cost sharing

Example: **buying alliances** among retailers

- To strengthen negotiation position with must-carry brands
- To pool the purchase volume of their SME retail members
- To share sales know-how
- To reduce costs through jointly-run negotiations
- To achieve economies of scale in private label production

It is not always clear whether the efficiency gains outweigh the potential anti-competitive effects

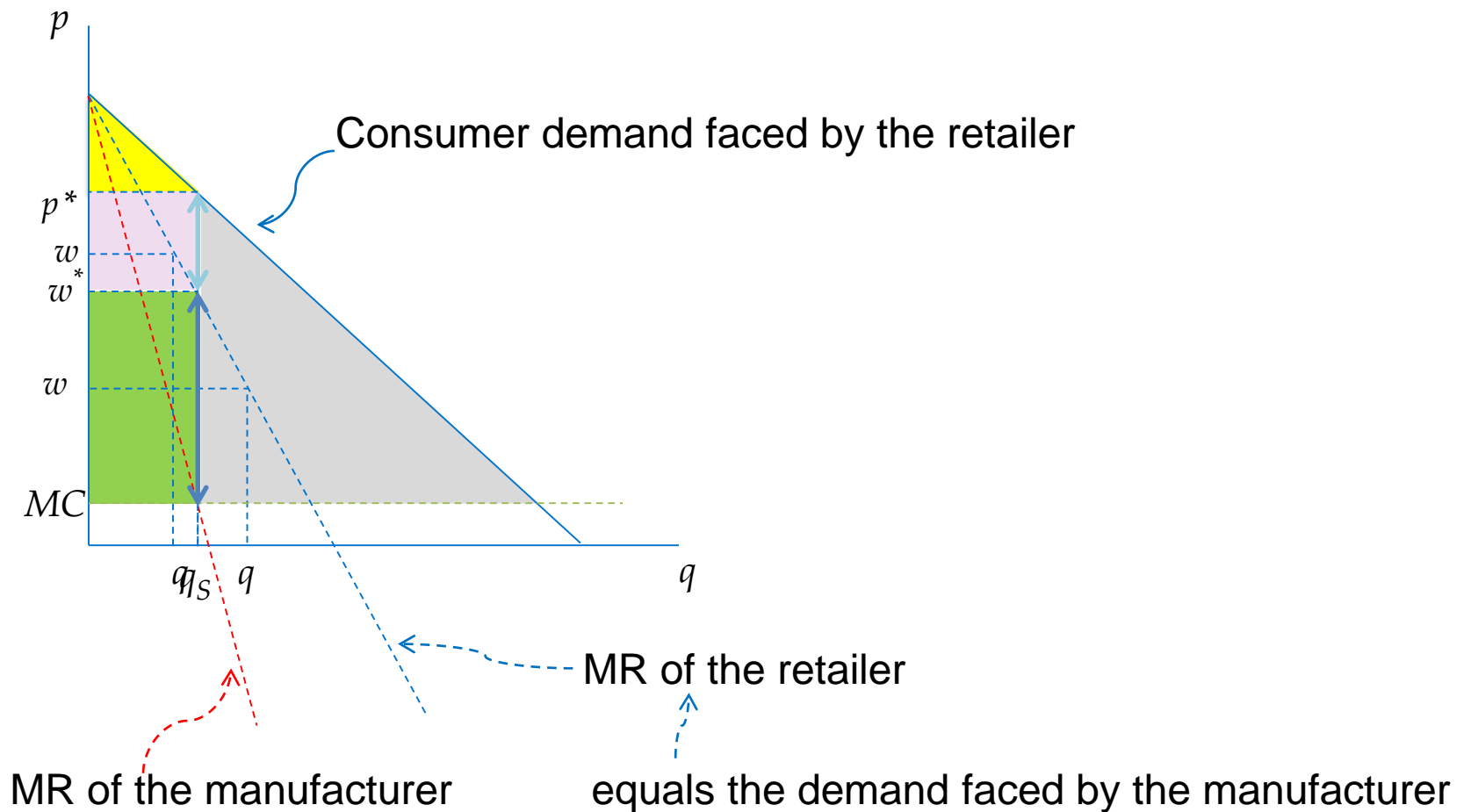
Vertical relations



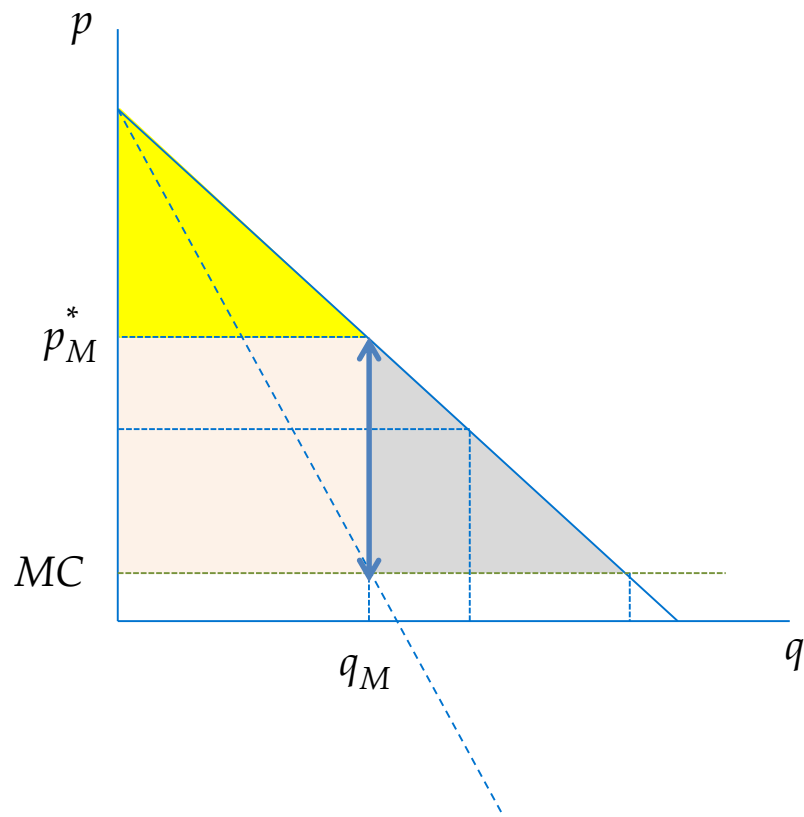
Coordination between vertically-related firms solve the **double marginalization problem**

- Only one mark-up is charged
- Consumer prices are lower and firm profits are higher → welfare is higher

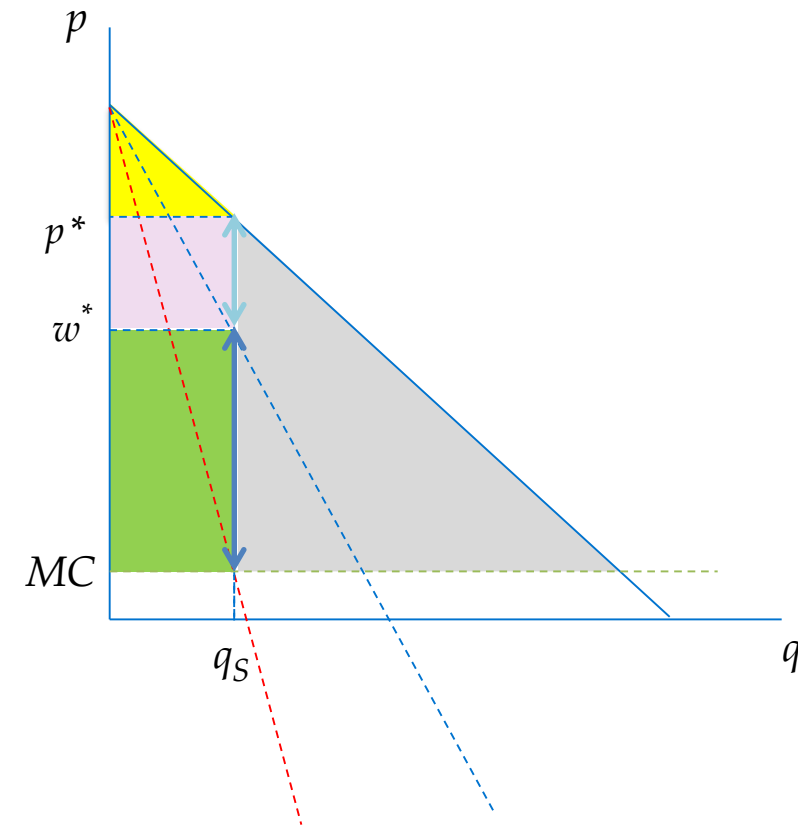
Double marginalization problem



Coordination:
 Manufacturer and retailer act as ONE monopoly



Without coordination:
 There are TWO monopolies



EU priorities for the agro-food sector

Three critical areas relevant to the whole agro-food sector have been identified:

1. Promote sustainable relationships

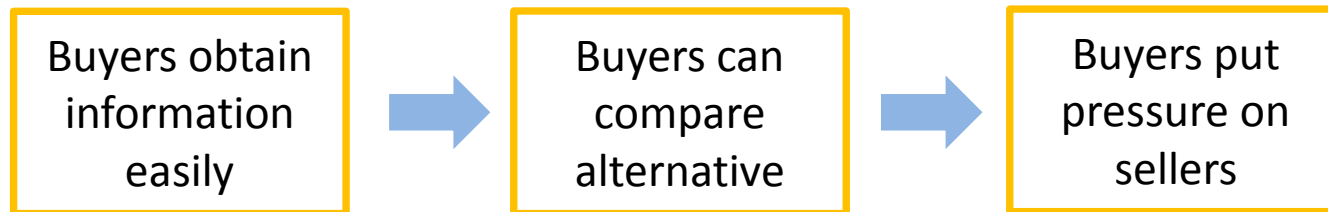
2. Increase price transparency

3. Foster market integration

The effect of price transparency along the chain

The majority of studies show that price transparency tends to increase the level of competition, to lower prices, and ultimately to increase welfare.

The likely mechanism: When prices are transparent...



Possible tools to increase transparency:

- New regulations for agricultural commodity derivatives markets
- Price monitoring tools
- Web-based food retail price comparison services

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Market fragmentation

Although the EU has ONE internal market, there is still market fragmentation due to:

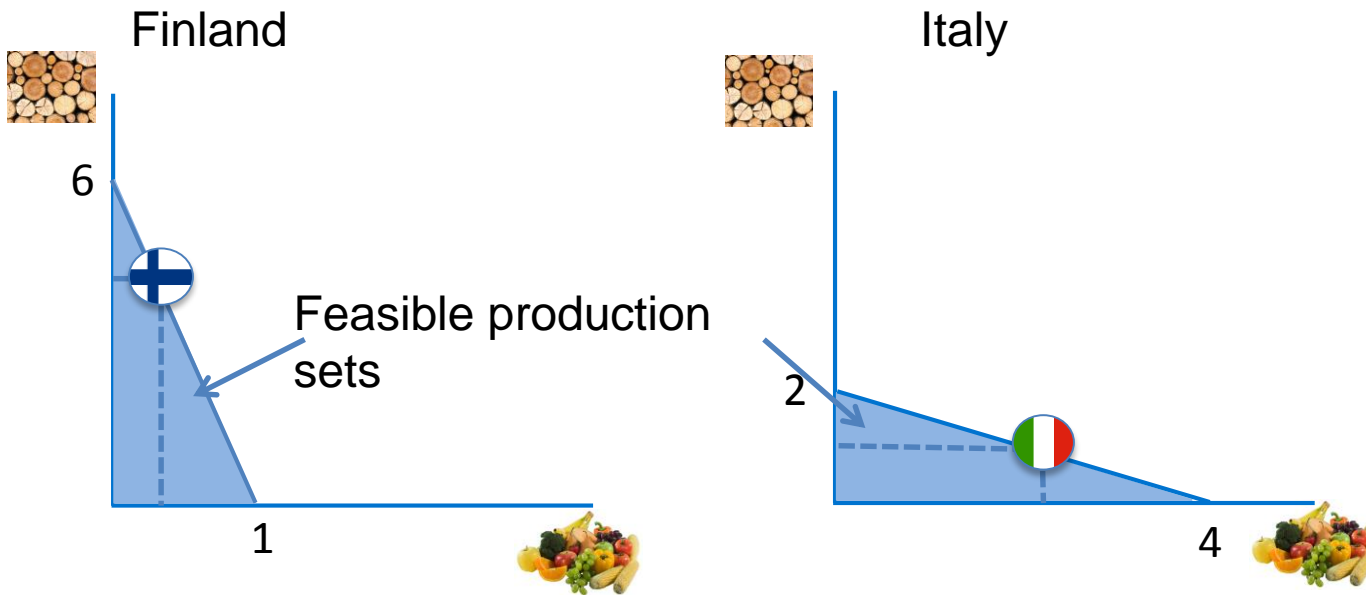
- **Regulatory framework**
 - Lack of harmonization of food safety standards
- **Business practices**
 - Constraints on territorial supply

Barriers to trade limit the ability to fully take advantage of the **gains from trade**

Gains from trade: Intuition (i)

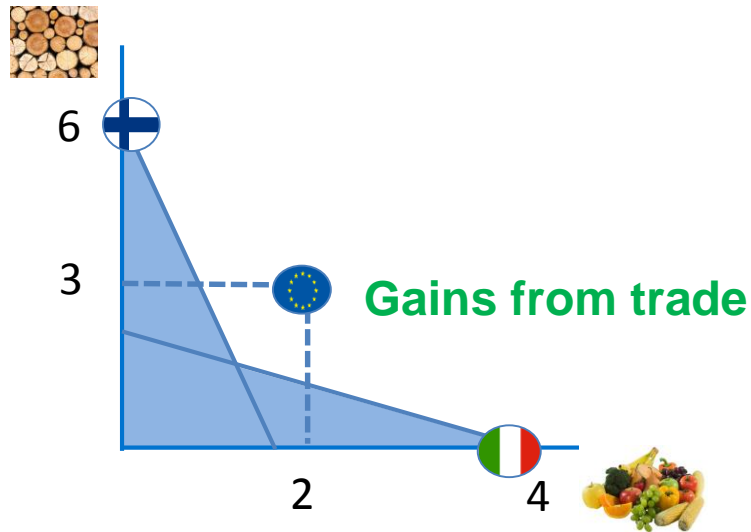
The **gains from trade** are the net benefits from voluntary exchange.

Consider two countries in autarky (no international trade)



Gains from trade: Intuition (ii)


Both countries are better off if they specialize and trade: they can reach a point outside their production possibility set (gains from trade).



Territorial supply constraints

Consider a multi-national supplier and its retailers:

- A retailer wants to order from a subsidiary of the supplier located abroad because it is cheaper
- The foreign subsidiary refers the retailer to the domestic subsidiary, which charges a higher price

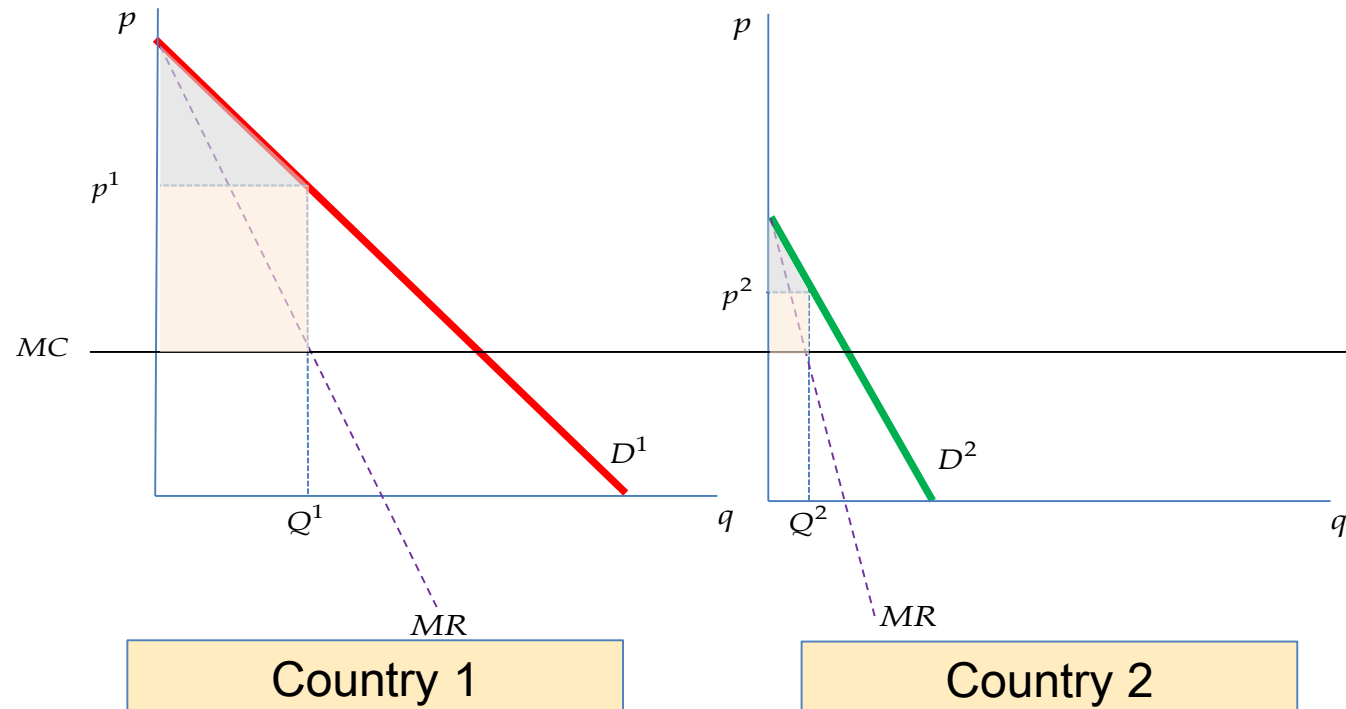
 Price discrimination by market segmentation
(third degree price discrimination)

Third degree price discrimination: example

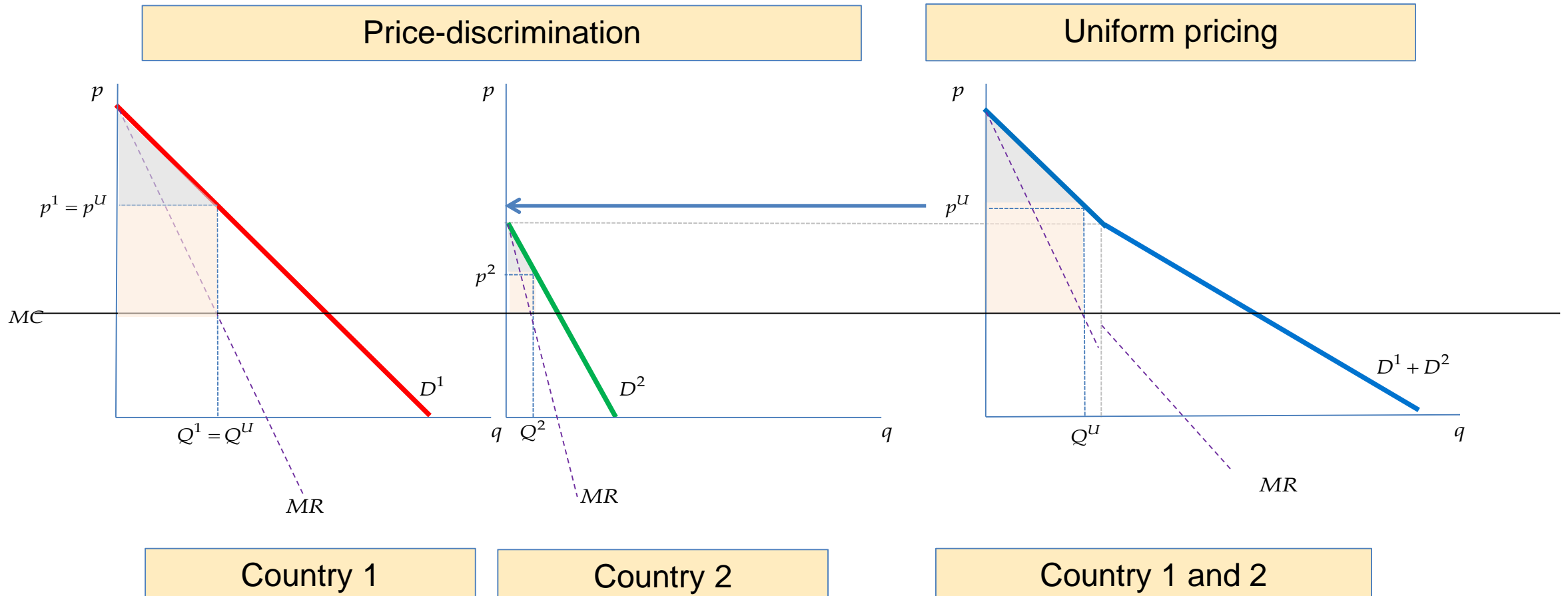
What is the effect of third degree price discrimination on welfare?

- Theory tells us that the welfare effect is ambiguous
- The example shows a case in which third degree price discrimination increases welfare

Monopolist with a constant marginal cost



Welfare gains with price discrimination: example



Price discrimination increases welfare when under uniform pricing a country is no longer supplied.

Conclusions

- The Agro-food supply chain has been under investigation
- The High Level Group has identified trends and challenges and priorities for action
- Priorities concern:
 - relationships among stakeholders
 - price transparency and
 - market integration
- The High Level Forum has developed policy and measures to address the priorities

References

- **(HLF Report 2014)** High Level Forum for a Better Functioning Food Supply Chain, Report 2014. Ref.Ares (2014)3414151-15/10/2014
- **(HLG 007 2009)** Report on the Competitiveness of the European Agro-Food Industry, 17 March, 2009, European Commission Enterprise and Industry Directorate General Food Industry Unit, HLG 007 - http://ec.europa.eu/enterprise/sectors/food/files/high_level_group_2008/documents_hlg/final_report_hlg_17_03_09_en.pdf
- **(COM(2009) 591)** A better functioning food supply chain in Europe, Brussels, 28.10.2009, COM(2009) 591 final - http://ec.europa.eu/economy_finance/publications/publication16061_en.pdf
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