Defining Relevant Markets in Evolving Industries:

What's the value of the future?

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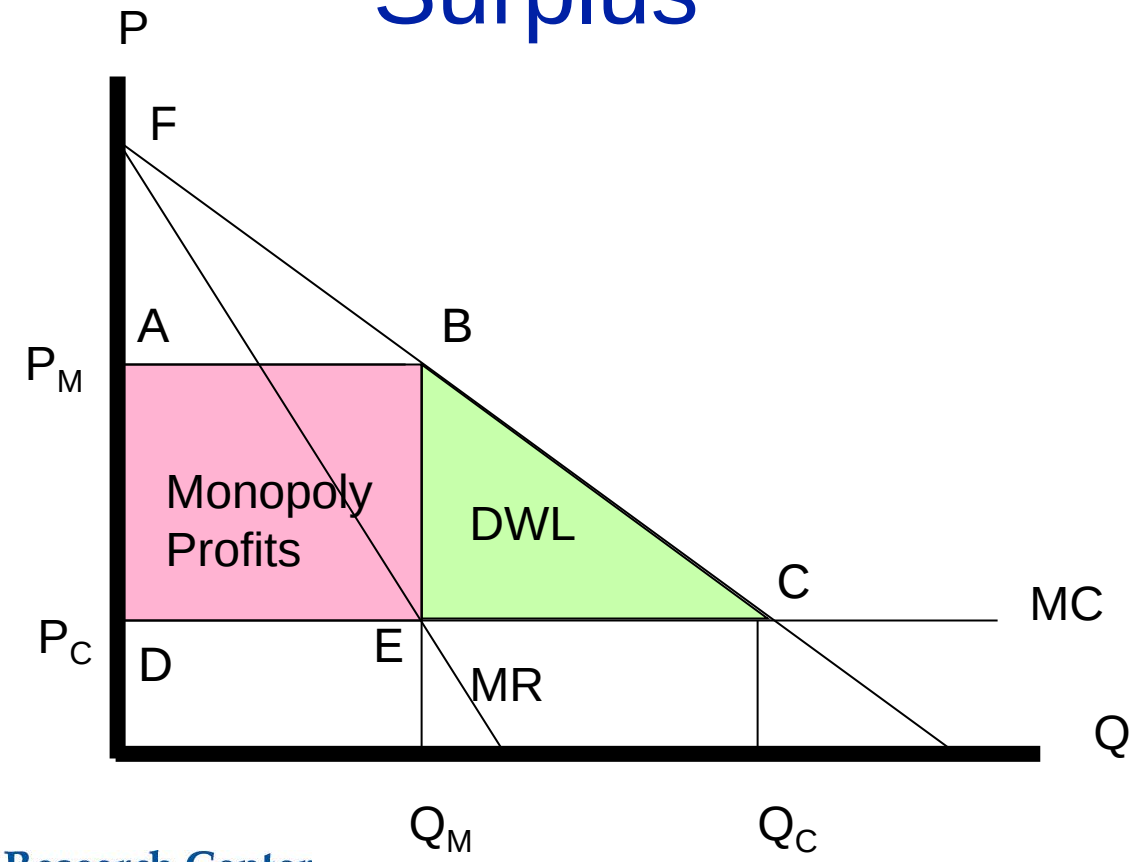
Basic Challenge 1

- **Traditional analyses are static**
  - Ignore duration of market structure
  - Changes from…
    - Technologies
    - Customers
- **Future changes are unknown**

Recall: Consumers' and Producers' Surplus



But what if…

- **Market power**
  - Made tech adoption more economical?
  - Made creative destruction more profitable?
- **Competition oversight has costs?**

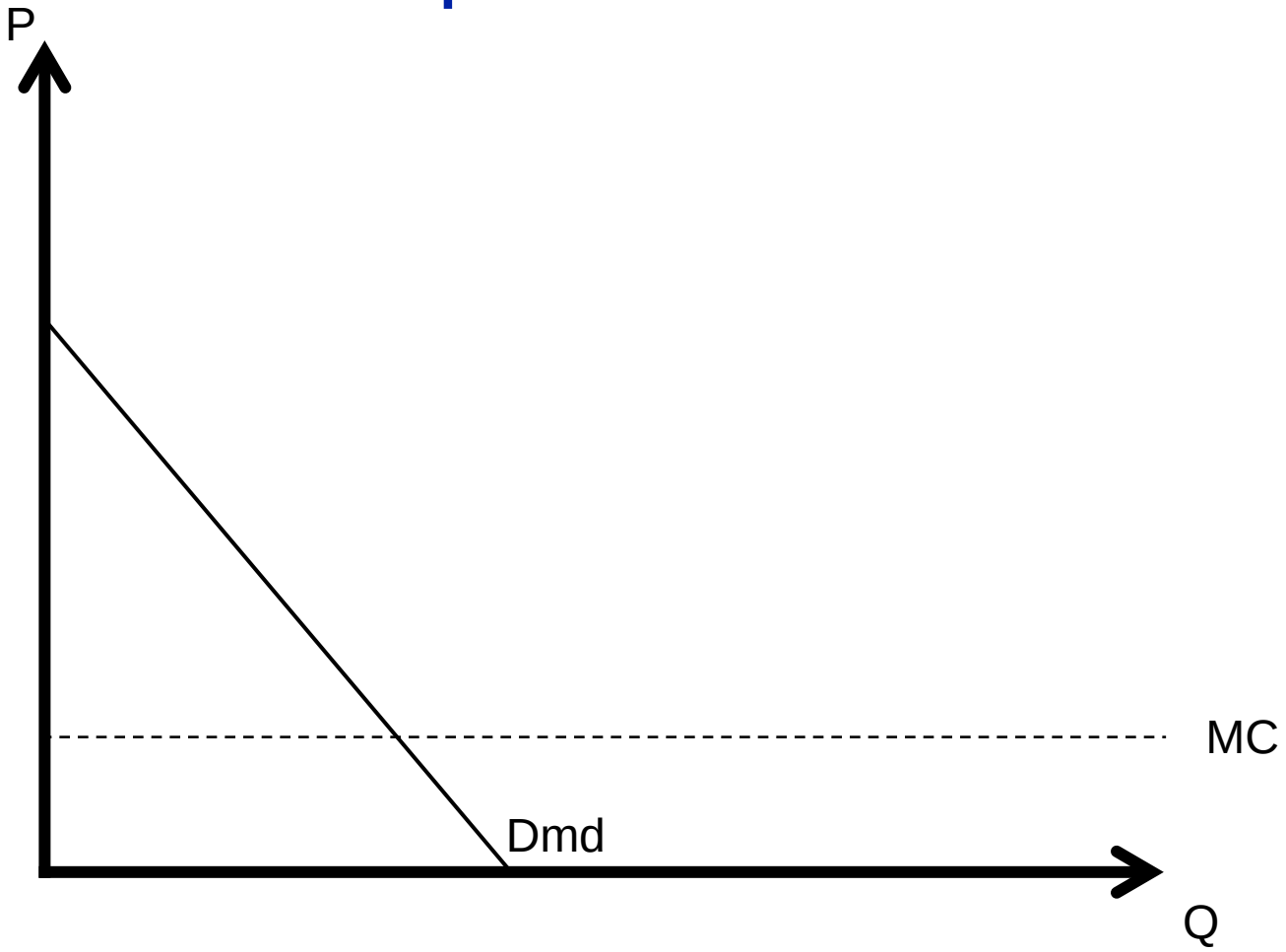
Dynamic Surplus

- **Sum of consumers' and producers' surpluses over generations of products**
  - Migrating: Customer or producer substitutes old for new
  - Supplementing: Customer or producer continue with old and add new
  - Mixed: Customer or producer decreases old and adds new

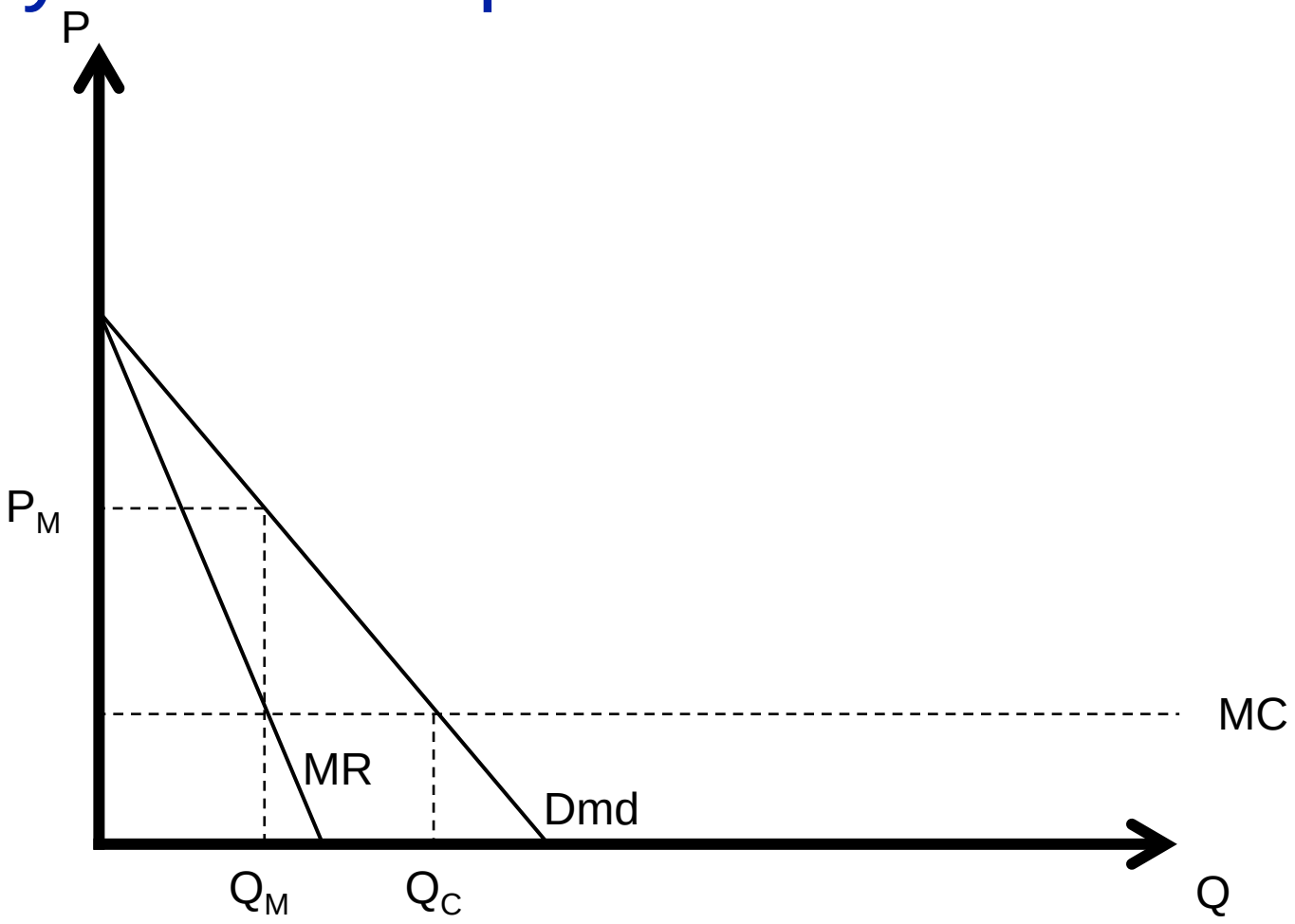
Dynamic Surplus

- **Sum of consumers' and producers' surpluses over generations of products**
  - When customers migrate, they give up old NCS and gain new NCS
    - Migrate only if better off if given choice
  - When producers migrate, they give up old profits

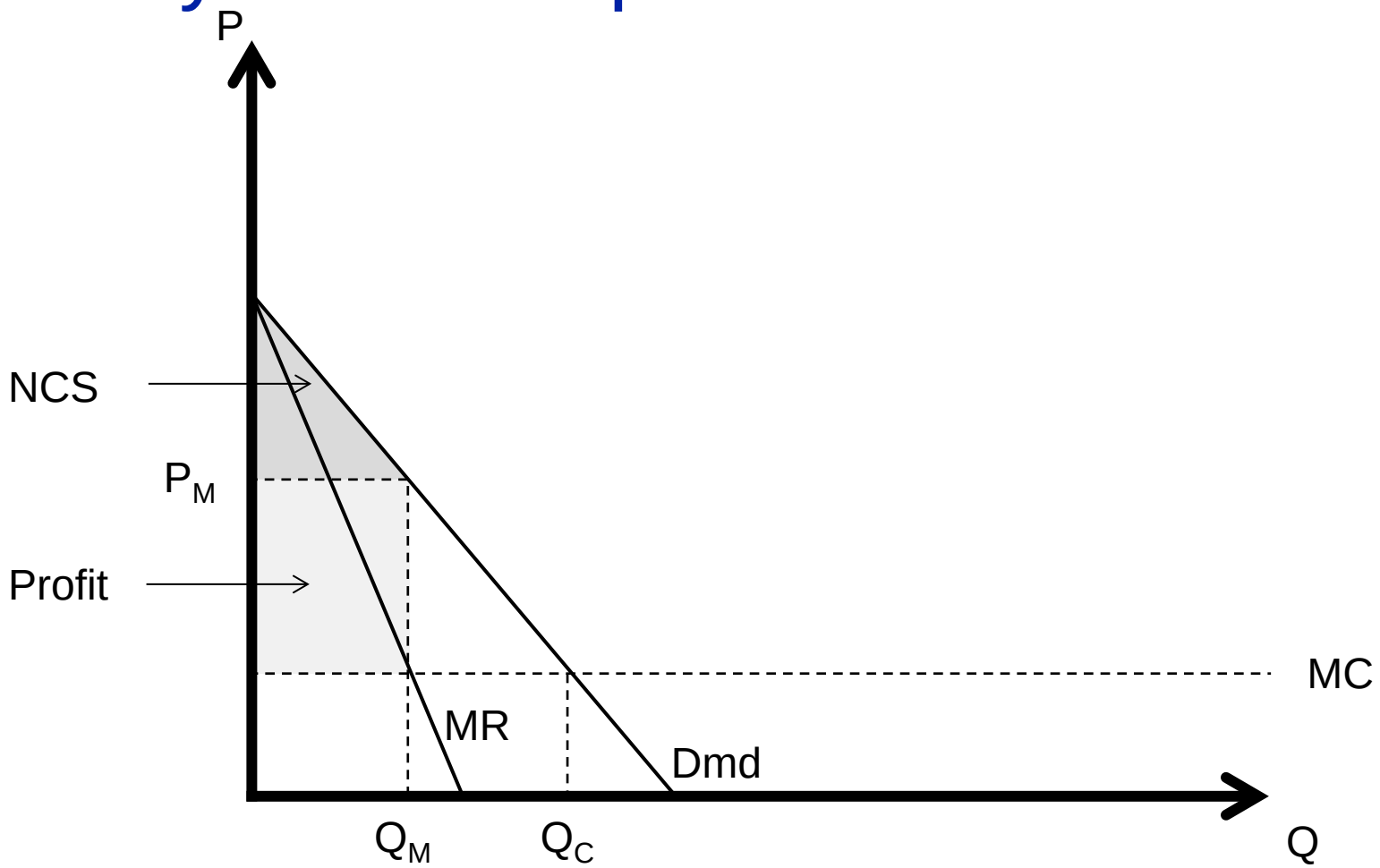
Dynamic Surplus: Base Case



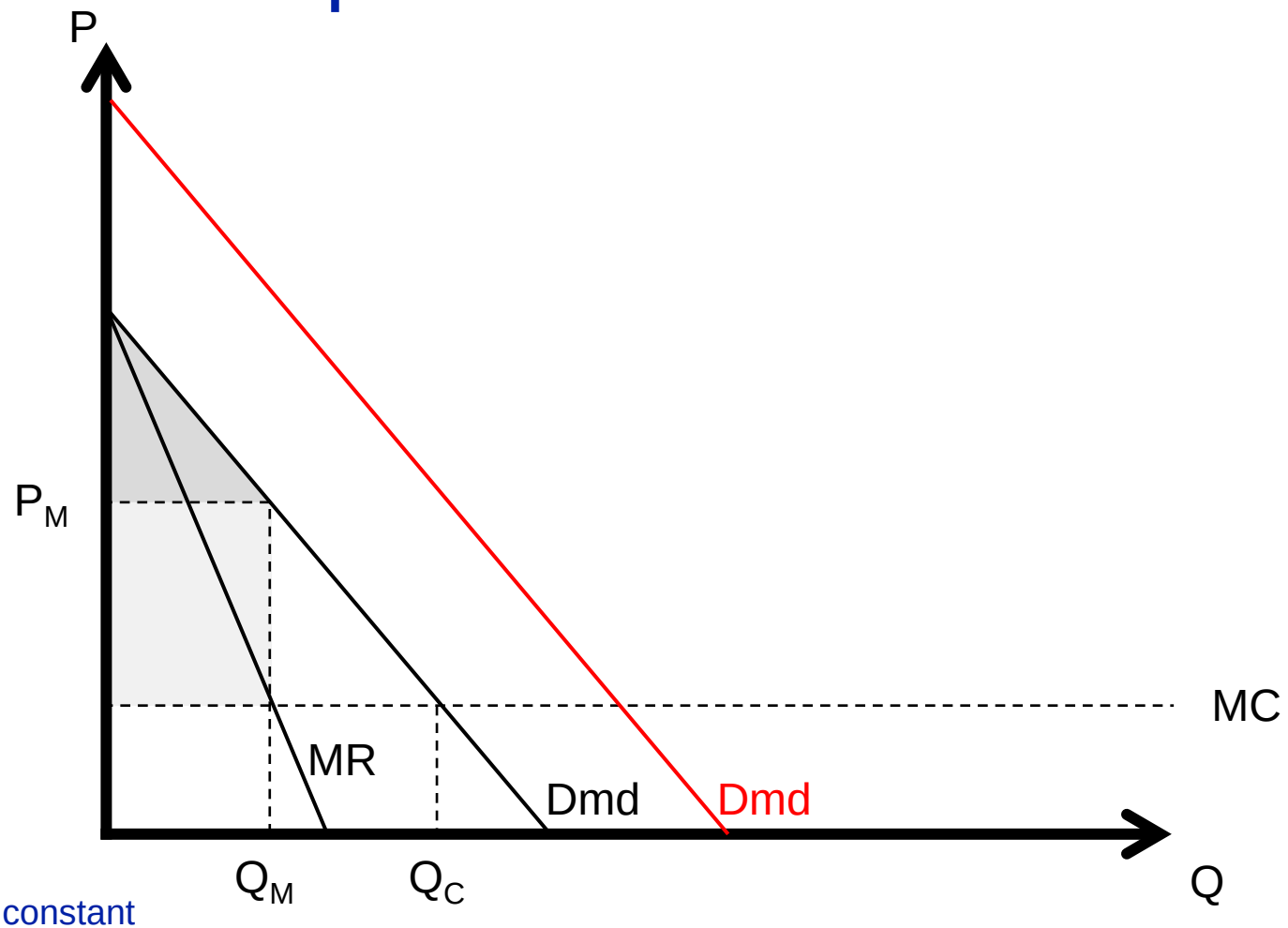
Dynamic Surplus: Base Case



Dynamic Surplus: Base Case

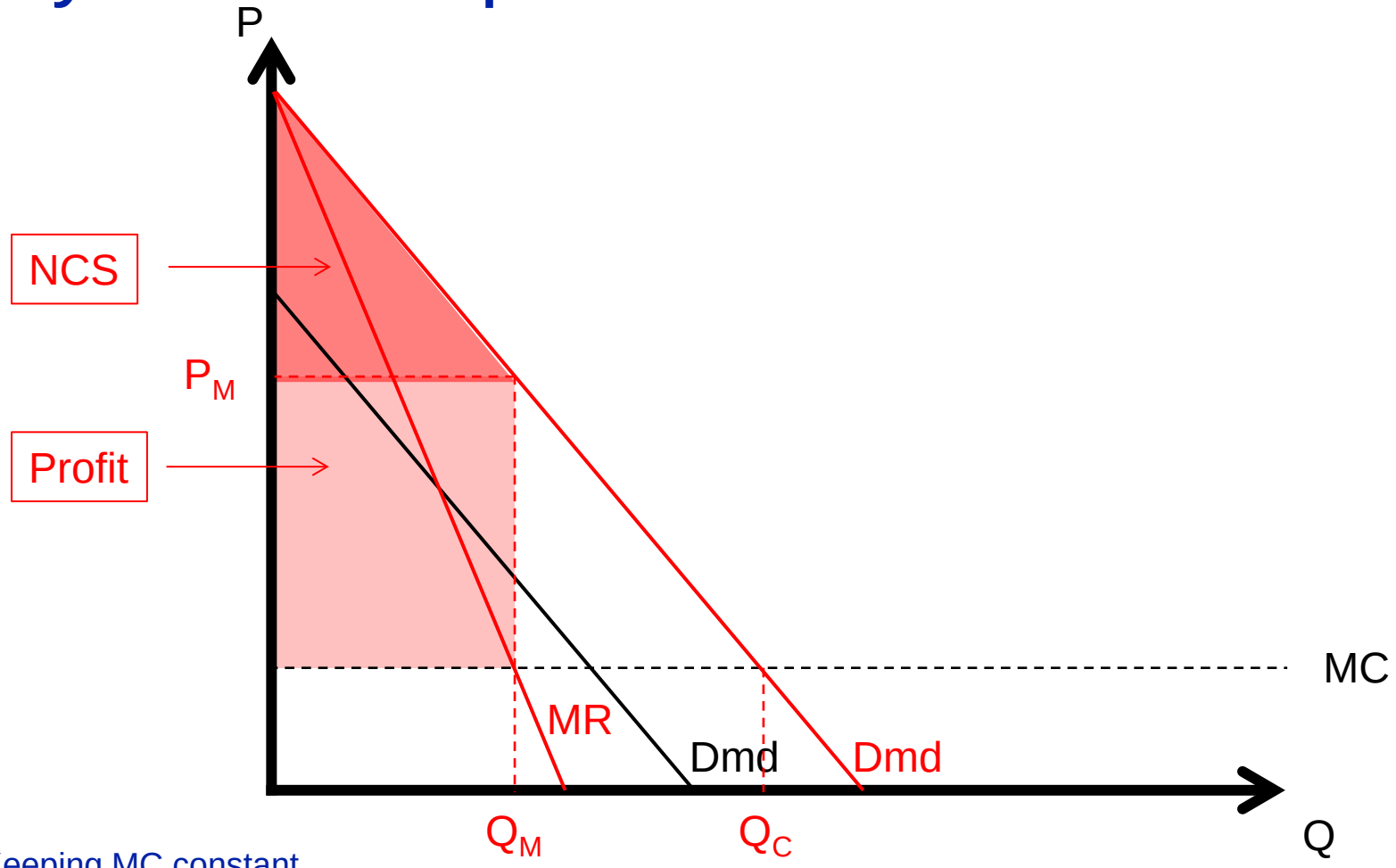


Dynamic Surplus: Product Innovation



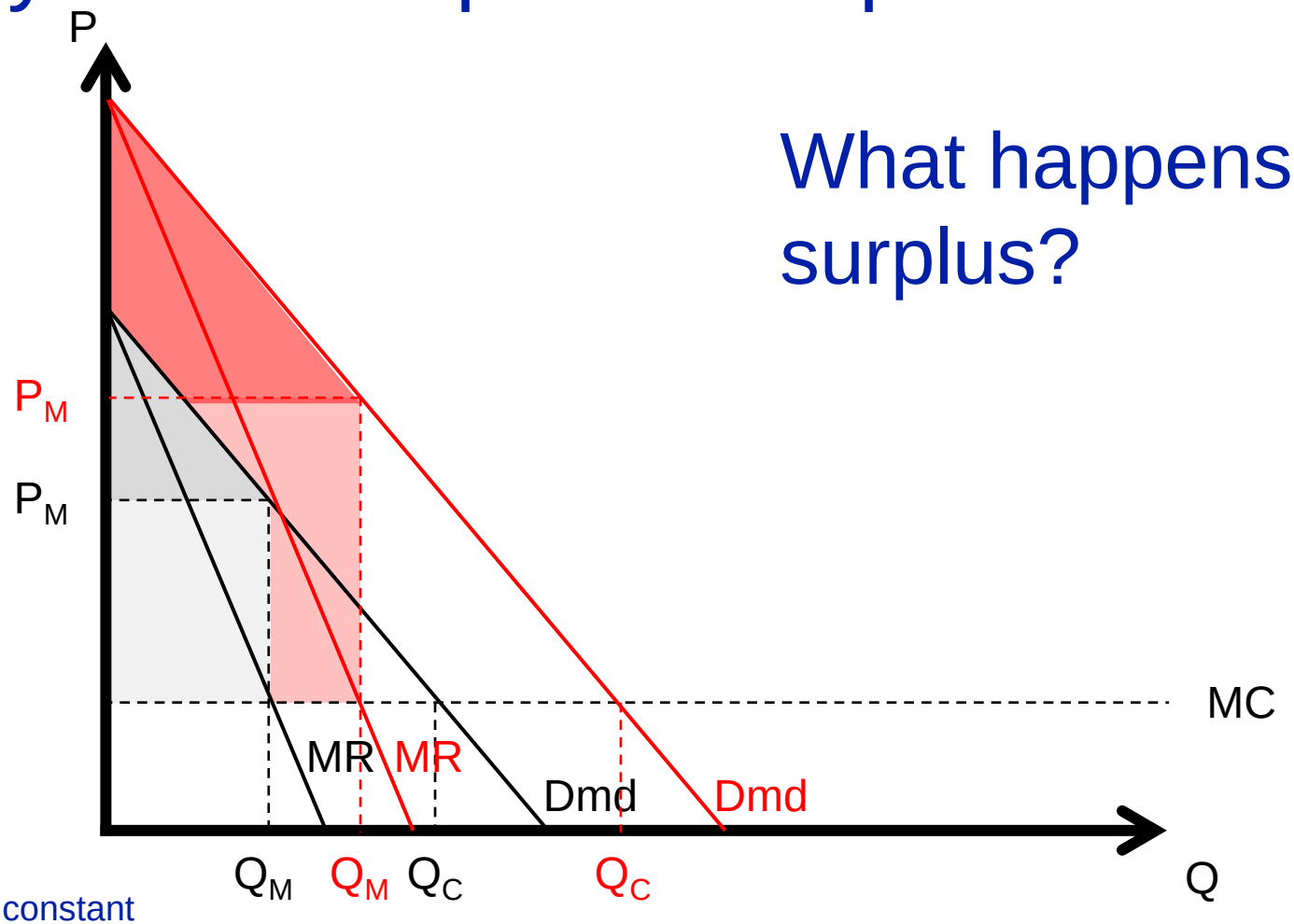
Note: Keeping MC constant

Dynamic Surplus: Product Innovation



Note: Keeping MC constant

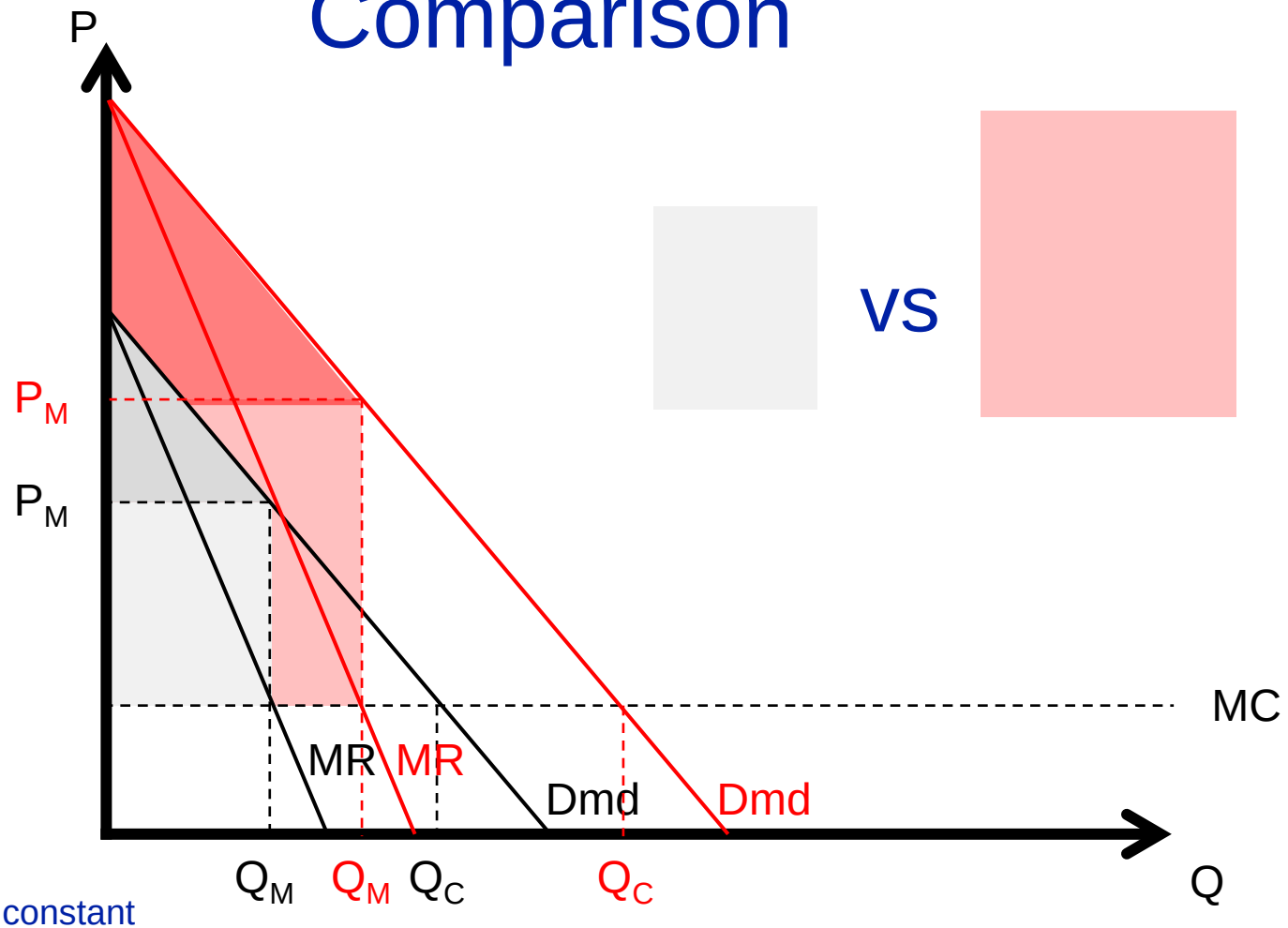
Dynamic Surplus: Comparison



What happens to surplus?

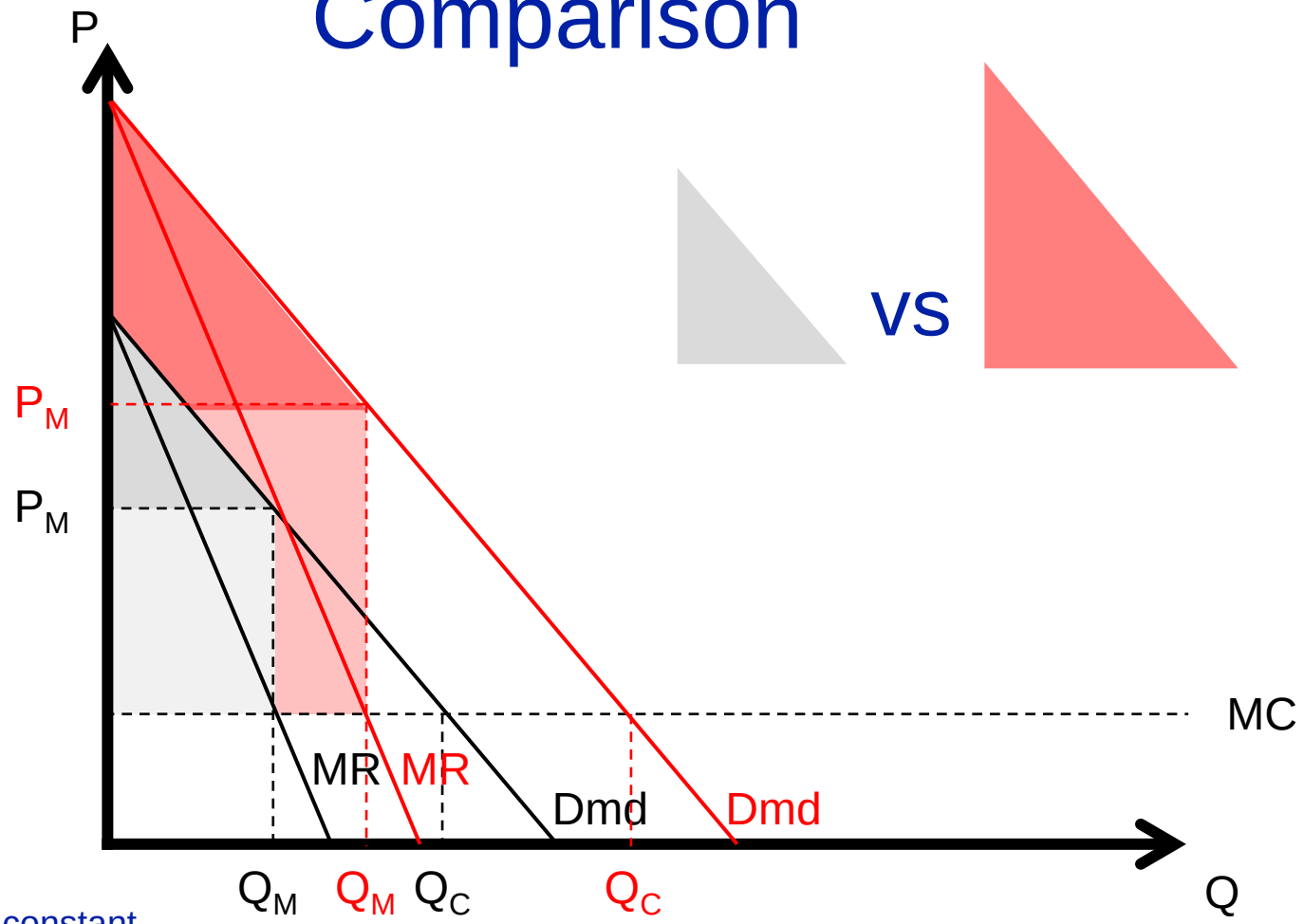
Note: Keeping MC constant

Dynamic Surplus: Producer Comparison



Note: Keeping MC constant

Dynamic Surplus: Consumer Comparison



Note: Keeping MC constant

What's true about Dynamic Surplus?

- **Operators give up (some) old profit for new**
  - Always improves profit unless fixed costs of innovation too high
- **Customers give up (some) old NCS for new NCS**
  - Always improves unless MCs are much higher

What are the tradeoffs?

- **More competition decreases profit gain**
  - Decreases probability of innovation
- **More competition increases NCS**
  - And increases customer gain
- **Value of innovation vs value of static competition**

Basic Challenge 2

- **Traditional analyses and decisions take time**
  - Change already occurring
    - Makes enforcement moot?
    - Makes enforcement counter productive?

Basic Challenge 3

- **Two sided markets with market concentration**
  - Forward compatibility
    - Decreases exercise of market power in current market
  - Cross market interoperability
    - Decreases exercise of market power in both markets
    - Increases quality of interconnectivity

Contact

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