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Economic Observations on the Renaissance of Compulsory Licensing

"Is Your Intellectual Property At Risk From The Government?"

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Price and quantity "access restrictions"

- Traditional model: quantity restriction
  - Patent excludes others from making / using / selling
- "Lack of access" = failure to make or use the invention domestically ("failure to work")
  - Quantity supplied = 0
  - Cured by importing / selling (Paris Convention Art. 5), though patent grant does not convey this affirmative right
- Domestic political objective: transfer production know-how and revenue to domestic firm(s)

Price and quantity "access restrictions"

- New model: price restriction
  - "Lack of access" = price is "too high"
  - Quantity supplied > 0
  - Antitrust analogy: when does high price = refusal to deal?

Market prices and international law

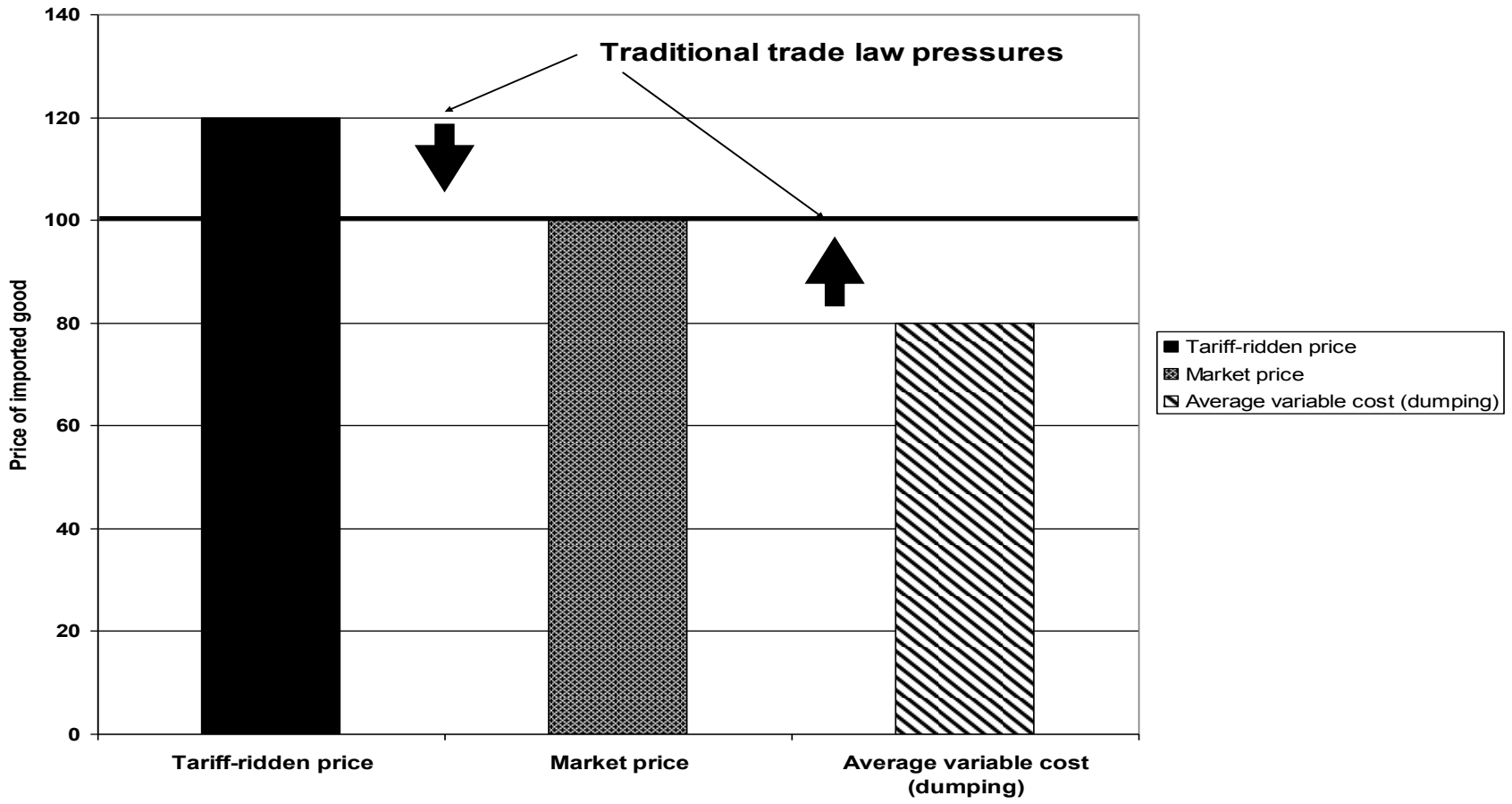
- Traditional model
  - Efficiency objective: reduce market price distortions (tariffs / duties)
  - Political objective: avoid disfavoring domestic firms ("dumping")
    - Importer's production cost benchmarks "the competitive level"

Market prices and international law

- New model
  - The market price itself is "too high"
  - Production cost ≠ benchmark (does not cover R&D)
- Domestic firms cannot compete
  - Doha permits foreign firms to supply domestic mkt
- The new "benchmark"
  - Price offered by the lowest-cost alternative importer "Dumping" might not be a low enough price
    - "Bidding against the pirate"

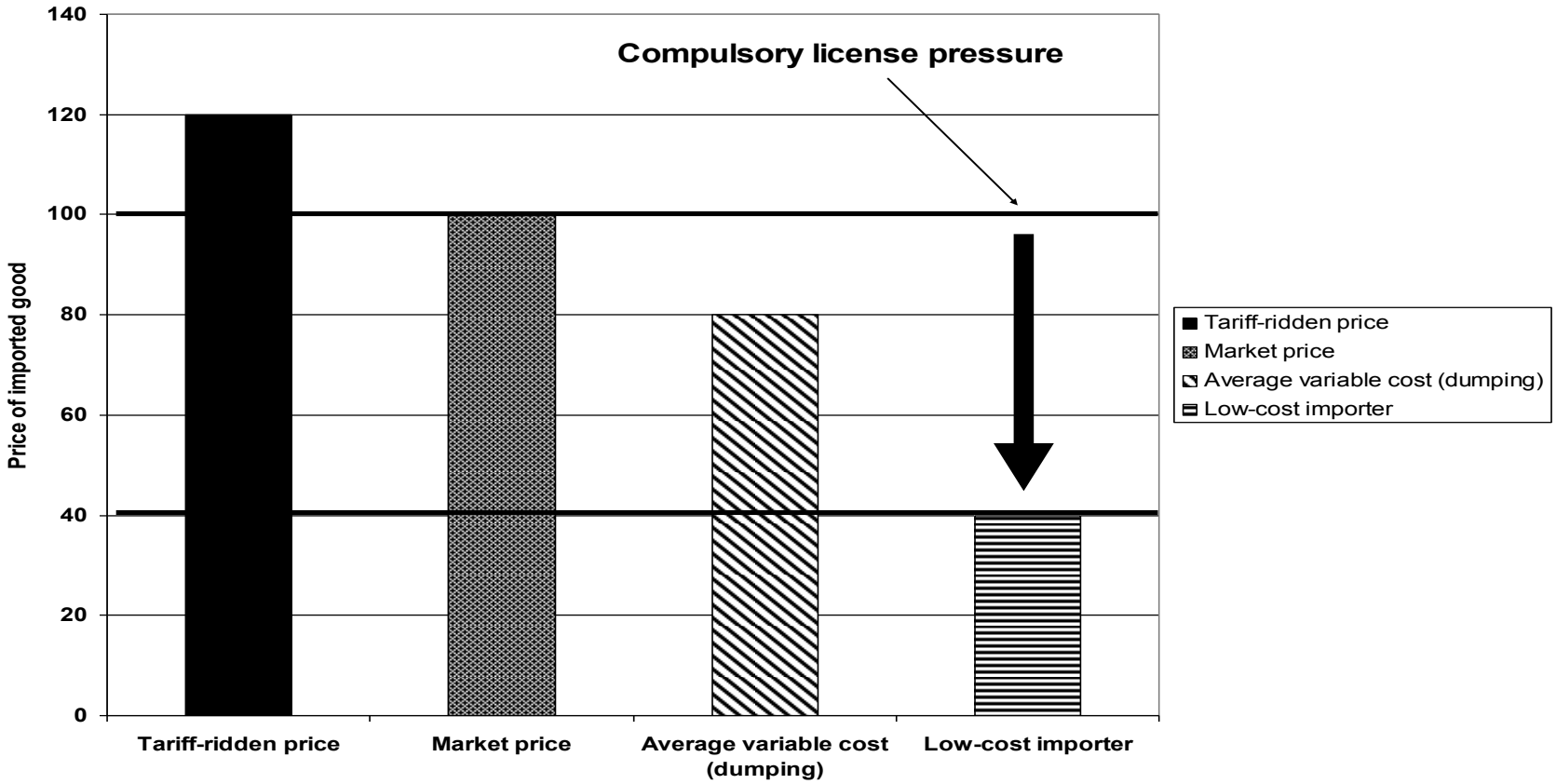
Market prices and international law

Figure 1
Goods and services trade regime



Market prices and international law

Figure 2
Trade regime with intellectual property and compulsory license exception



Changed political dynamics

- Traditional objective
  - Importing government seeks revenue by setting tariff on imported good
  - "High prices" not necessarily bad (for gov't)
- New objective
  - Importing government seeks to minimize expenditure by reducing the price of the imported good
  - When government must pay for the input, it becomes a price-sensitive consumer

Price discrimination

- Traditional model
  - Commodity markets
    + Resale rights
    = Law of one price

- New model
  - Differentiated products
    + No resale (under usual IP laws)
    = Price discrimination (different across jurisdictions)

Solution and problem

- Solution
  - By charging different prices in different markets, a seller can simultaneously
    - recover the cost of its R&D
    - provide "access" to poor consumers at low prices
- Problem
  - "The poor" can't be permitted to resell to "the rich"
  - Seller has reveals to "the rich" a lower price that still earns a profit
    - A new benchmark
    - "MFN" pressure to reduce prices

Incentives
Ex ante vs. *ex post* compulsion

- Traditional incentive problem: *ex post* compulsion
  - Society seeks a windfall (one-time) gain by transferring surplus of inventions that already exist
    - Example: extraordinary public health emergency (HIV / AIDS)
  - Time-inconsistency: the policy to which society committed *ex ante* is not enforced *ex post*
  - Breach of promise to reward past invention ("once burned") reduces future investment ("twice shy")

Two pro bono compulsion scenarios

- *Ex post* compulsion
  - Firm requires 1000 hours this year on unanticipated pro bono project
    - Income is temporarily reduced, but long-run investment is not
- *Ex ante* compulsion
  - Firm requires 1000 pro bono hours every year
    - Income is permanently reduced, as is incentive to invest in clients

Incentives
Ex ante vs. *ex post* compulsion

- New incentive problem: *ex ante* compulsion
  - Build into the patent system the expectation of compulsory licenses
- Case study: USA before the *Bayh-Dole Act*
  - Federal government retained title to federally funded inventions at universities and federal labs
  - Universities / labs could not grant exclusive licenses
    - Unable to provide adequate *ex ante* incentives for development
  - Results
    - *ex ante* compulsion causes inventions to languish in labs
    - few university inventions

What is "adequate remuneration"?

- Example 1
  - Firm spends $100 in period 1, earns $250 in period 2
    - Return = (250 – 100) / 100 = 150% return
    - Much greater than cost of capital (say 25%)
- Example 2
  - Firms A and B each spend $100 in period 1
  - Winner gets patent in period 2 ($250)
    - Return = 0.5 * (250 – 100) / 100 + 0.5 * (– 100 / 100) = 25%
    - Breakeven