Health Insurance Monopoly: Market Definition

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April 23, 2003

The Marshfield Clinic Decision

"The record shows, what is anyway well known, that individuals, and their employers … regard HMOs as competitive not only with each other but with the various forms of fee-for-service provider, including 'preferred provider' plans…."

– Richard Posner, Chief Judge of the U.S. Court of Appeals,7th Circuit, 65 F.3d 1406

Posner's Analysis of HMOs

- HMOs are "relative upstarts" in the market for physician services
- Despite saying that HMOs and FFS are demand substitutes, Posner continues:
  - Many people don't like HMOs because they restrict the patient's choice of doctors and people fear they will skimp on services
  - HMOs compensate for these perceived drawbacks by charging a lower price than FFS

Posner's Definition of a Market

- Even if HMOs and FFS were ***completely different*** from the consumer's standpoint, they would still be in the same market because the suppliers (physicians who provide a broad array of services) can easily convert from producing FFS to HMO

- That is, the definition of a market depends on supply as well as demand substitution

Contrast to the Horizontal Merger Guidelines

- "Market definition focuses solely on demand substitution factors - i.e., possible consumer responses"
- Supply substitution is used to identify firms that participate in the relevant market and the analysis of entry
  - USDOJ and FTC, Horizontal Merger Guidelines, revised April 8, 1997

Outline of My Presentation

- I will use the Guidelines approach because Judge Posner's economic analysis is flawed
- HMOs are a separate product market if a hypothetical monopolist could impose a small but significant and non-transitory increase in price
- I will argue that the evidence shows there are different health insurance products
- Discuss 4 extensions

The Conventional Wisdom (or if it isn't, it should be)

There are distinct product markets for different types of health insurance plans, characterized by enrollees' ability to "choose their own doctor," including the ability to see specialist physicians without a referral and to use any hospital recommended by a physician

Judge Posner was Right (about one thing)

- People don't like managed care plans and are willing to pay to avoid them
- Dowd, Feldman, Maciejewski and Pauly (2001) found that willingness to pay for a fee-for-service (FFS) health plan in 1994 was:

  $34.64/month versus PPO

  $86.99/month versus HMO

  $103.45/month versus POS

Health Plan Choice I

- Short and Taylor (1989) estimated two models of health plan choice: between 2 FFS plans, and HMO versus FFS
- The price elasticity of enrolling in an HMO versus FFS was less than half the price elasticity between the two FFS plans
  - a $100 annual increase in the marginal net price would reduce the market share of the more-expensive FFS plan by 5.4 percentage points, but the same increase in the HMO premium would reduce its market share by 2.2 percentage points.

Health Plan Choice II

- Feldman, Finch, Dowd, and Cassou (1989) estimated a nested logit model of health plan choice for single employees and families from 17 Minneapolis firms
  - nests were distinguished by freedom to choose your own doctor
  - choice within nests was sensitive to out-of-pocket premiums, choice across nests was much less premium-sensitive
  - if all plans in a nest with 50% enrollment raised premiums by $10, their share would fall by .04

Important Points

- Most health insurance is subsidized (often heavily) by employers or Medicare
- Consumers use out-of-pocket premiums to assess health plan choice
- Health plans use the total premium elasticity to maximize profits
- These observations suggest that:

  (1) $\eta_{\textbf{total}} > \eta_{\textbf{out-of-pocket}}$

  (2) the premium subsidy formula matters

An Actual HMO Merger

- Feldman (1994) estimated the effect of a 1992 HMO merger on premiums in 6 large Minneapolis firms
  - Used Feldman et al's (1989) demand model and Bertrand oligopoly pricing
  - Both HMOs were in the "restrictive" nest
  - In one firm where the 2 plans had 100% of the nest, simulated premiums rose by 18.9% and 19.1%
  - Clearly meets the test of a "significant" increase
- Raises key question: will the firm drop the merged plan?

Hypothetical HMO Merger

- Town (2001) estimated differentiated-products demand system for HMOs in the California HIPC, a state-sponsored purchasing pool for small employers
- Town choose 6 hypothetical HMO combinations to generate post-merger market structures
- 2 mergers generated predicted price changes > 5%, although none of the mergers monopolized the market
- Raises the possibility of differentiated products within the HMO “nest”

Medicare Health Plans

- Atherly, Dowd, and Feldman (2002) found evidence of distinct products for Medicare health plans
  - They estimated a nested logit model with Fee-for-Service and M+C nests and M+C branches
  - Out-of-pocket premium elasticity for M+C nest = -.03 and $\eta_{\mathbf{total}}$ = -2.74
- Buchmueller (2000) found FFS $\eta_{\mathbf{out\text{-}of\text{-}pocket}}$ = -.16 for retirees of a multi-site employer

Extension #1: Firm's Demand for Health Plans

- If firms were perfect agents for individual workers, the firm's menu of health plans would be the same as the workers' choices
- Because of transactions costs, firms are not perfect agents for individual workers, so:

  (1) $\eta = \eta_{\mathbf{firm}} + \eta_{\mathbf{worker}}$

  (2) worker-level premium elasticities provide an upper bound on health plans' market power

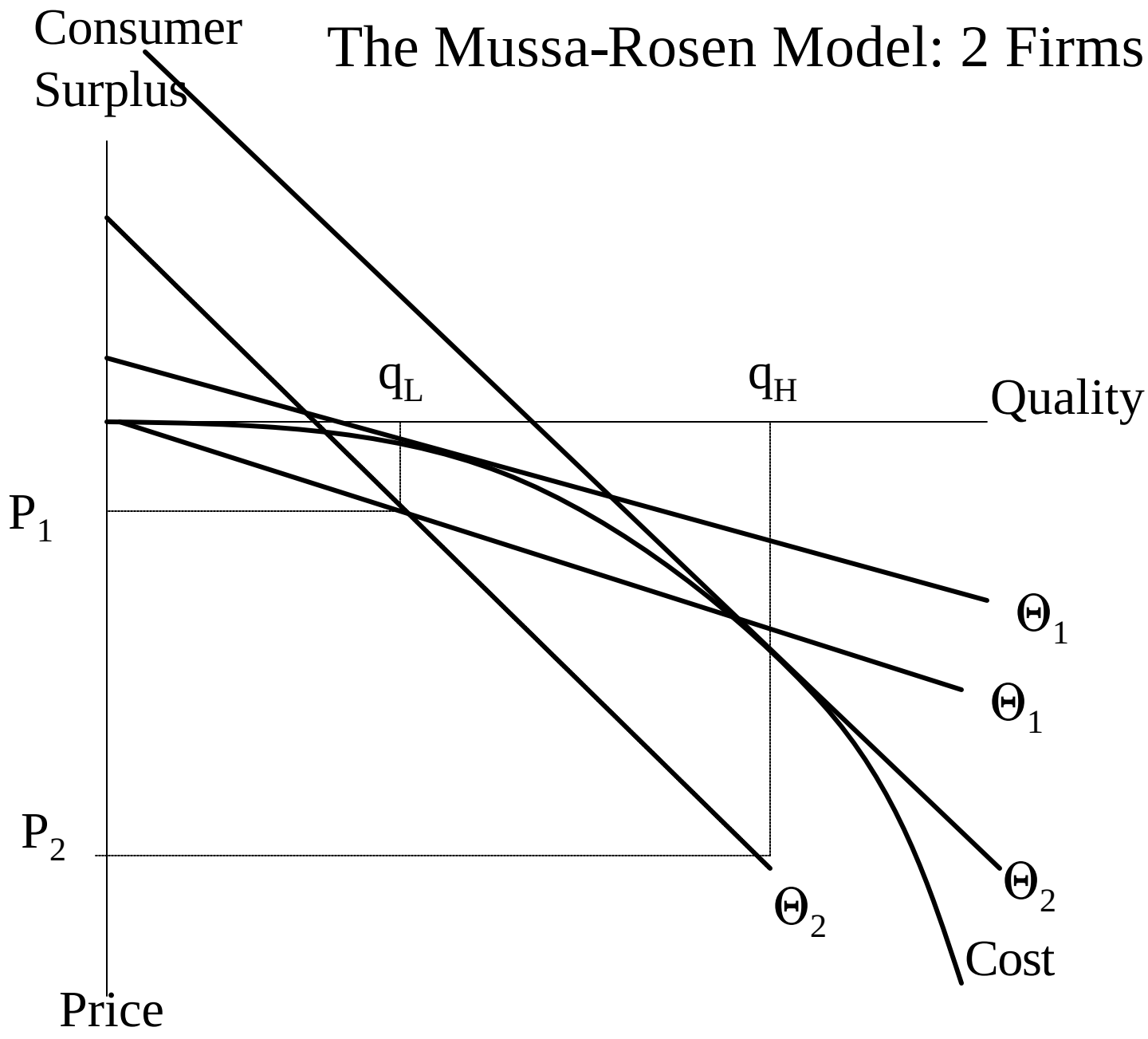
Estimating η_{firm}

- Empirical Problems:
  - What is the choice set?
  - What are the relevant prices? (list prices won't work for health insurance)
- Morrisey and Jensen (1997) estimated small firms' demand for all types of managed care plans versus FFS and found $\eta_{\mathbf{firm}} \approx -1.9$

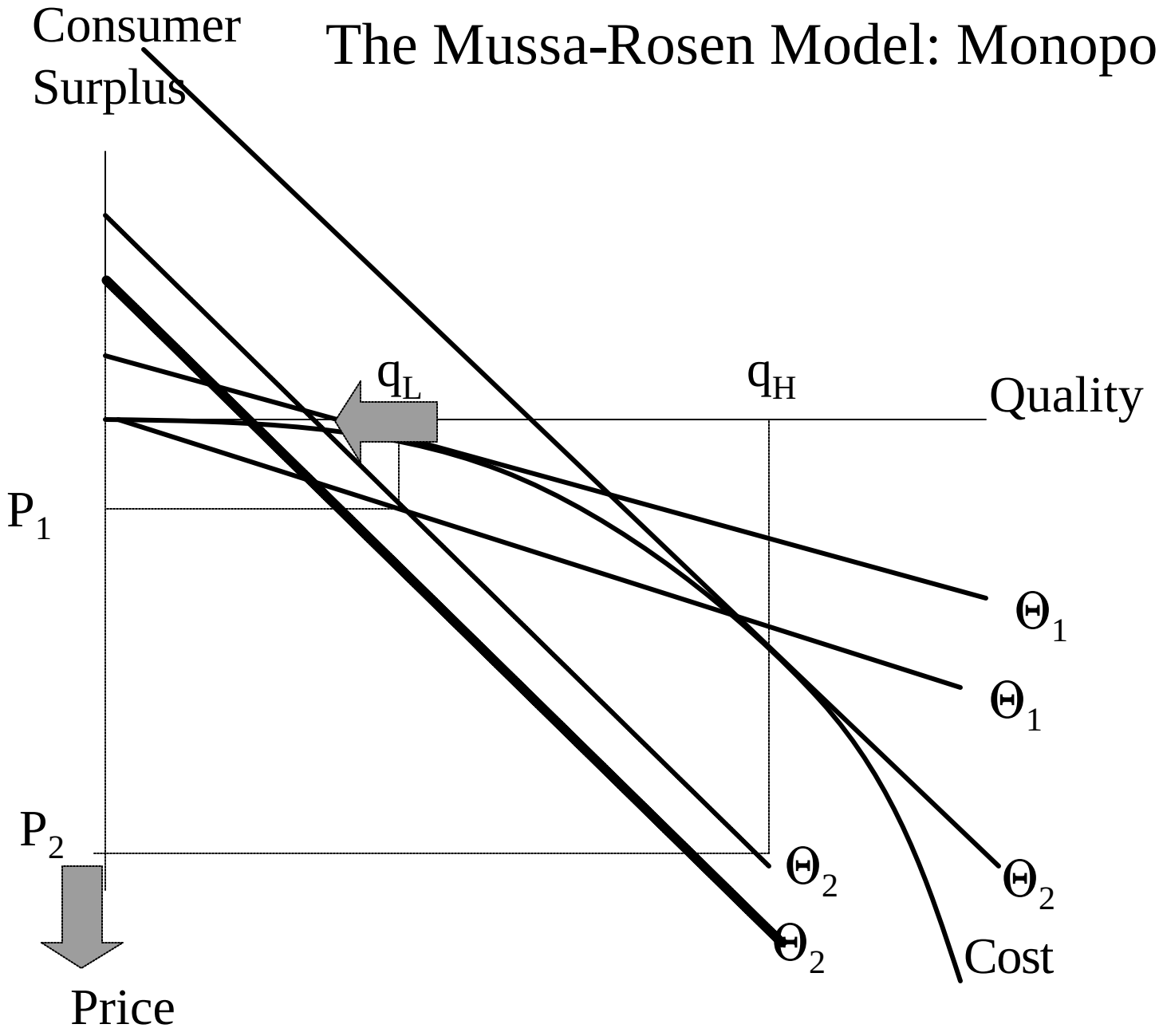
Extension #2: Differentiated Products and Quality Change

- Guidelines test for market power is incomplete for a differentiated-products (DP) monopolist because it only considers changes in price
- Assume consumers have different preferences for product quality ($\Theta_1 < \Theta_2$)
- Mussa and Rosen (1978) showed that it always pays the DP monopolist to reduce quality sold to Θ_1 types so it can raise price for Θ_2 types

The Mussa-Rosen Model: 2 Firms



The Mussa-Rosen Model: Monopoly



Effects of DP Monopoly

- DP Monopolist cuts price and quality for Θ_1
  - if not many customers want low quality, the DP monopolist may drop that brand altogether
- DP Monopolist raises price of q_H for Θ_2 types
  - consumer surplus falls
- The traditional Guidelines test of an "increase in price" is incomplete for DP Monopolist
  - Changes in quality are also important
  - The "increase in price" must be quality-adjusted

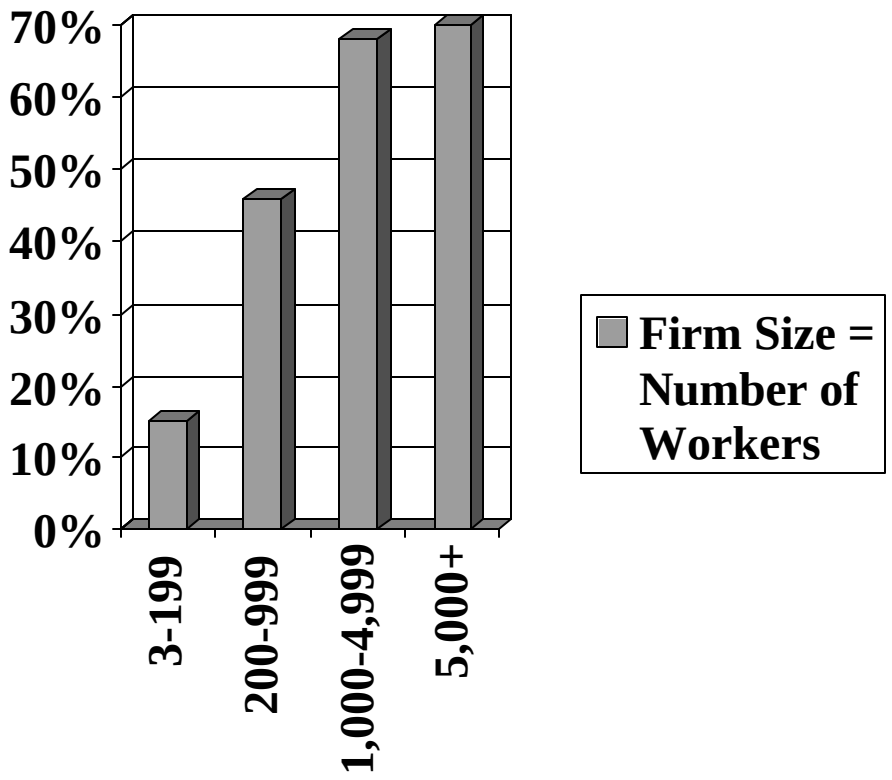
Extension #3: Macroeconomic Conditions and Market Definition

- "Soft" empirical evidence indicates that the price elasticity of demand for HMOs depends on macro-economic conditions
  - Workers are willing to pay high price of FFS insurance during good times (η is smaller)
- Implications
  - Empirical product markets may depend on the stage of the business cycle
  - Should the Guidelines recognize this type of product market expansion and contraction?

Extension #4: Self-Insurance

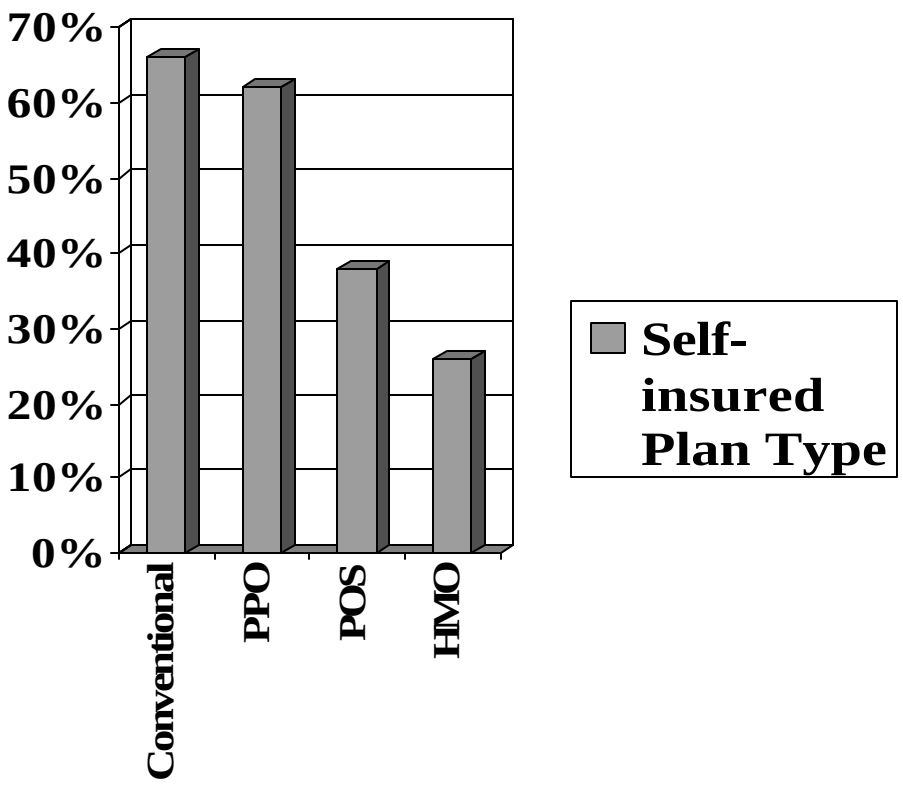
- A self-insured firm bears risk and escapes many (but not all) state insurance mandates
  - About 1/2 of covered employees are in SI plans
- Guidelines test implies that SI should be treated like any other potential product market
  - Market definition may depend on firm size
- Supply-side substitution is important
  - I think it is large for Conventional and PPO plans, smaller for HMOs and POS plans

Self-Insurance By Firm Size



- The percentage of workers covered by self-insured health plans is highly related to firm size
- Source: Kaiser Family Foundation, 2002 Annual Survey

Self-Insurance By Plan Type



- Workers are more likely to be covered by self-insured Conventional and PPO plans versus self-insured HMOs and POS plans
- Source: Kaiser Family Foundation, 2002 Annual Survey

Conclusions

- There are separate product markets for health plans
- Several issues need more investigation:
  - Firm's demand for heath plans
  - The effect of mergers on quality
  - Macro-economic conditions may define products
  - Is self-insurance a product?
- Supply-side substitution is important in assessing the effects of health plan mergers