



Market Definition of Digital Platforms: Response to the Impact of Two-Sided Platforms and Zero-Pricing

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Market Definition

- **Not only for assessing market power, it could also:**
 - Identify market participants
 - Analyze competitive harms and gains
 - Avoid regulatory disparity in regulated industries
- **Not necessary if anti-competitive harm is proved**
- **Approaches to Defining Markets**
 - Demand substitutability
 - Hypothetical monopolist (HM) test



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Challenges from Digital Platforms

- **Frequently: two-sided platforms with zero-pricing on one side**
 - One relevant market or two? How to administer SSNIP?
- **Ohio v. American Express (Amex case) from SCOTUS as an example**
 - A 5-4 decision in 2018. Justices quarreled about market definition of credit-card networks.



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Two-Sided Platforms

- **Definition: Not fully Settled**
- **Common Features:**
 - Joint production of products for two groups of customers
 - Indirect network effect across the two groups
 - The value of the platform for one group of customers depends on the number of the other group of customers.
 - Not necessarily two-way, one-way is sufficient
 - Non-neutrality of price structure (not necessarily)



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• Importance of two-sided analysis

- Indirect network effect is different from traditional upstream-downstream relationship.
- The platform may be facing more than one markets with different scopes, such as online search and online ad.
- The real price of the platform—the combination of prices on the two sides.
- Competitive harms to one side would be transmitted to the other side



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Classification of Two-Sided Platforms

1. Transaction platforms

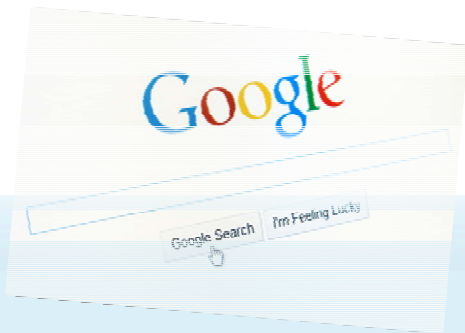
- Observable transactions through the platform
 - Platforms facilitate the transaction between the two sides.
- Two-way indirect network effects
- Example: Credit-card networks.



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2. Non-transaction platforms

- Providing **separate products** to different sides of the platform.
- Usually no transaction made across the platform
- Only one-way indirect network effects



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Number of Relevant Markets

- **Transaction platforms**

- The services provided to the two sides could not work independently without the other.
- They have to be consumed in a fixed 1 to 1 ratio, i.e., perfect complements that usually consumed together, which makes them integral parts of **a single product**.
- One market for the whole platform.



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Debate Arises with . . .

• Non-transaction platforms

- Ad and other online services are not integral parts of a single products.
- Online advertising and other services may be supplied separately by different firms.
 - European Comm'n, Telia/Telenor/Schibsted merger, 1998



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• Newman (2014) and Sun & Zhong (2015):

- Only one relevant market.
 - E.g., “online search advertising” for Google Search
- Major Reason: Only the side making earnings is where the platform’s concern is located, and where actual transaction and competition occurs. The user side is just to collect user’s attention or data to produce ad service.
- Minor reason: Zero-price services are not a product.
 - E.g., Knderstart.com v. Google (N.D. Cal. 2007)



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• Luchetta (2013) and Li (2015):

- Two relevant markets for the non-transaction platform
- The two markets are in a vertical relationship. The platform is like a retailer, collects user's attention or data at the upstream side, and resells to advertisers or uses them to produce services at the downstream side.



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• My point of view:

- Product competition is distinct from financial competition
 - Everyone's money is the same. When competing with money, there is no need to define a **product** market.
 - But in product competition, the rivalry is limited to analogous products with similar features. Market definition is therefore meaningful.
- One market for each of the two sides of the platform



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Zero-Pricing Service Still a Product

- **Zero-pricing serviced is still provided through a transaction**
 - In exchange of user's attention and personal data.



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The HM Test and Zero-Pricing

- **Transaction platforms:**

- Single product (market) for both sides. The combination of prices on both sides is the real price of the service.
- Use existing price structure, SSNIP on both sides
 - Only one party pays: **simply add 5-10% to that side**
- **Allow platform to adjust price structure** to maximizing profits under SSNIP
- Use the new prices of the two sides to test profitability of SSNIP



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• Non-Transaction platforms:

- Problem: How HM test works with zero-pricing?
- **Possibility 1: Test SSNIP on closest products**
 - Drawback: Market definition/HM test are sometimes not symmetric.



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The HM Test and Zero-Pricing

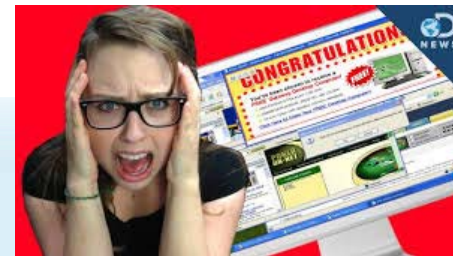
- **Possibility 2: SSNDQ (decrease in quality)**
- Problems:
 - Which aspect of quality users value the most, like price?
 - What kind and extent of change in that aspect amounts to 5-10% decrease?
 - 5-10% decrease in quality may not so easy for users to discern
 - Price represents an overall evaluation of the product, not just on one aspect of it.



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The HM Test and Zero-Pricing

- **Solution 1: Use decrease in indirect network effects**
 - Filistrucchi (2018) and Newman (2014)
 - A significant aspect of the zero-price services for users
 - May be assessed by increase of advertisements
 - Problem:
 - Increase of ads does not necessarily create negative value for users.
 - It may not carry as much weight for users as price does with respect to their decision to stay or not.



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The HM Test and Zero-Pricing

- **Solution 2: SSNDQ as Decrease in Quantity**
 - Output Quantity is the flip side of price
 - Quantity of consumption represents customer's overall evaluation of that product.
 - Could be measured by band width, connecting speed, or other access capacities.
 - Connecting speed is one of user's biggest concerns. Congestion could be easily recognized.



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Thanks for your attention!



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