

Pricing Analytics

Session 3

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Abhinav Uppal

Assistant Professor of Marketing

Indian School of Business

abhinav_uppal@isb.edu

+91 172-459-1706

Session Overview

- Review of Last Class
- Product Line Pricing
- Cambridge Software Case
- Pricing for Software Platforms
- Dynamic Pricing

Product Line Pricing

Cambridge Software Case

Product Lines

- iPhone 11, iPhone 11 Pro, iPhone 11 Max
- Windows 10 Home, Windows 10 Pro, Windows 10 Enterprise, Windows 10 Education
- Oyo Rooms, Oyo Premium, Oyo Flagship, Oyo Townhouse
- MasterCard : Silver, Gold, Platinum
- Dropbox: Basic, Plus, Professional, Business

Why A Product Line?

Types of Product Lines

- Type 1
 - Vanilla, Strawberry, Chocolate
 - Coke Classic, Diet Coke, Coke Zero
- Type 2
 - BMW 7, BMW 5, BMW 3
 - Dropbox Pro, Dropbox Free

Product Lines as a means for Price Discrimination

- Temporal Price Discrimination
- Contemporaneous Price Discrimination

Cambridge Software

- Product Line
 - Design
 - Pricing
- How many different versions of “Modeler” to offer?
- How to price each version?

Assumptions

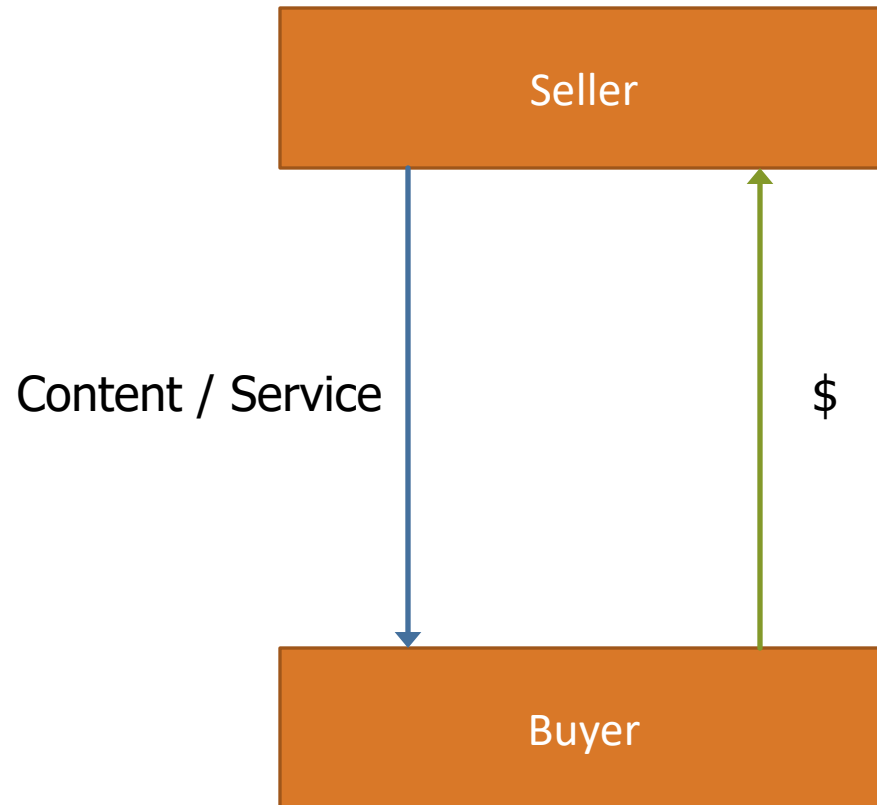
- All customers within each segment are homogeneous (if one buys – then all buy).
- No adoption delay (all consumers adopt simultaneously, if they do).
- The Willingness to Pay (WTP) summarizes preferences completely. If price is lower than WTP, then consumer buys.
- If two products are priced below WTP, then we shall assume that the consumer buys the one that gives the highest “Consumer Surplus” defined as $[WTP - \text{Price}]$.
- We shall assume that if you offer more than one product, then all consumers have access to it (i.e. you can not say that R&D Labs will not be able to buy the Student Version – they can). Think of it as products listed in a catalogue and any one can order the one they want.

Summary Comments

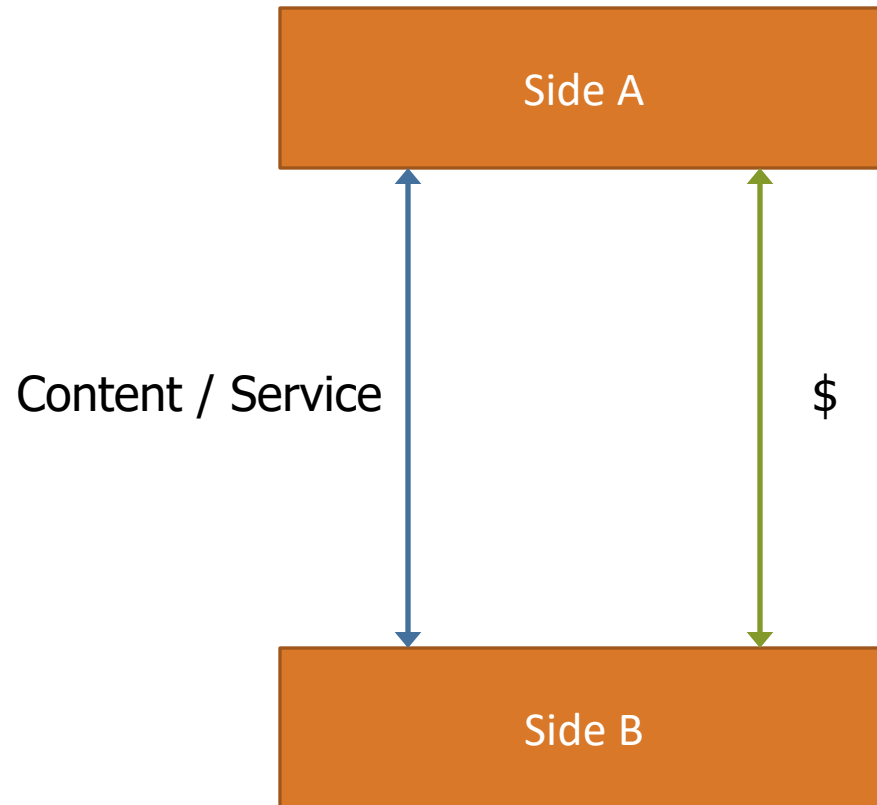
- Building Transparent Models: Allows us to answer many “what-if” questions as opposed to just saying “what is optimal”
 - Quantifying the profit impact of going for sub-optimal solutions for strategic reasons
 - Offering a broader product line to ensure broader coverage
 - Preventing or limiting competitive entry
 - Using price to direct consumers vs. sealing segments
- Data and analysis needed for product line pricing

Pricing for Software Platforms

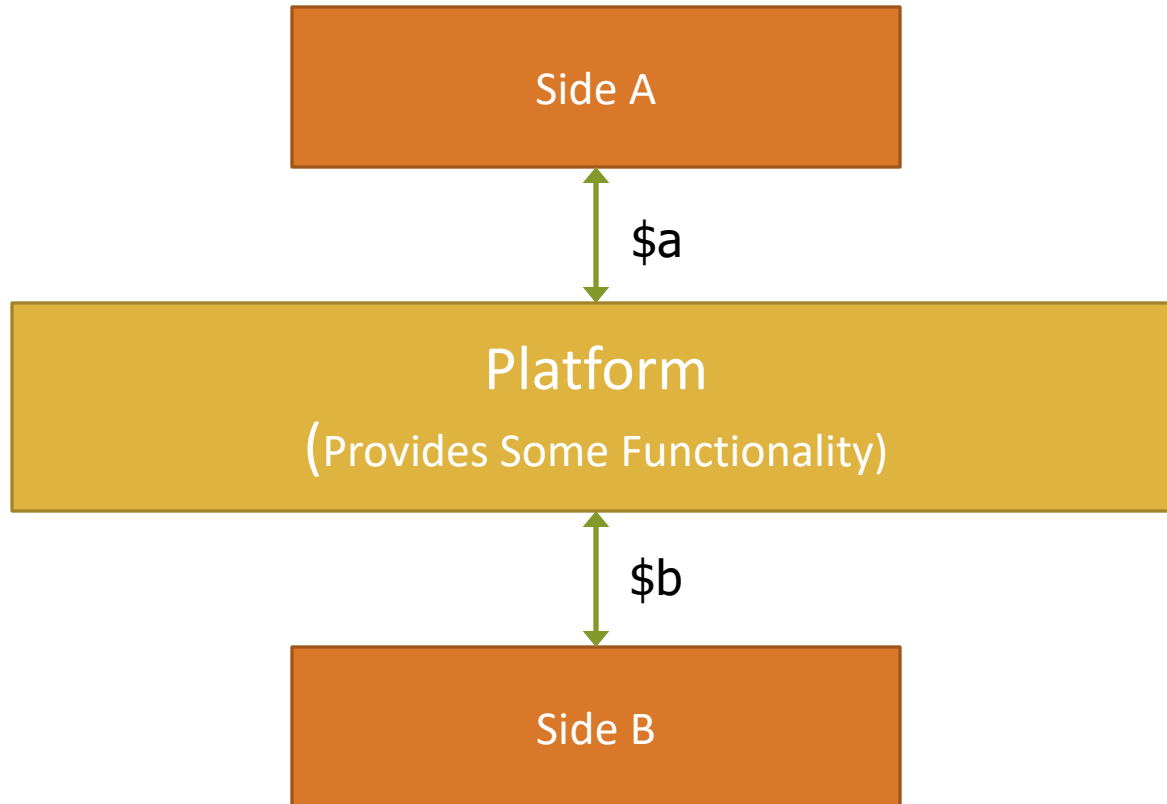
Traditional Markets



Traditional Markets



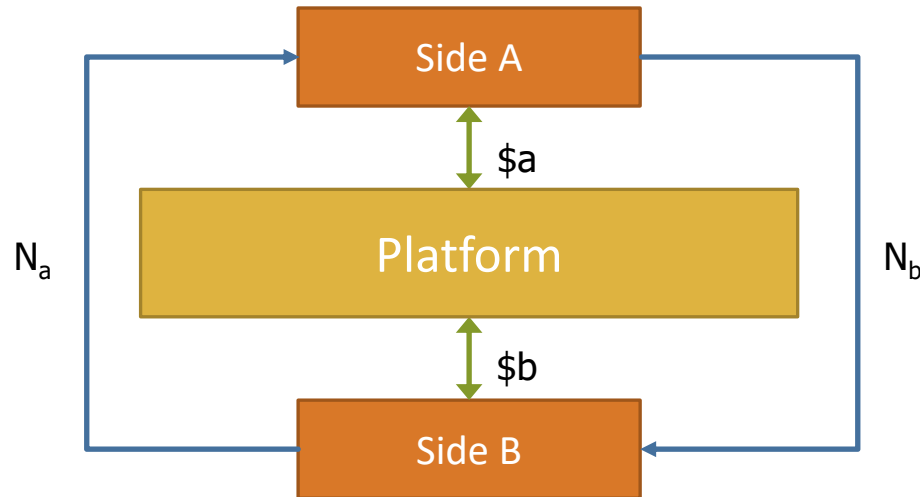
Two-sided Platforms



Two-sided Platforms

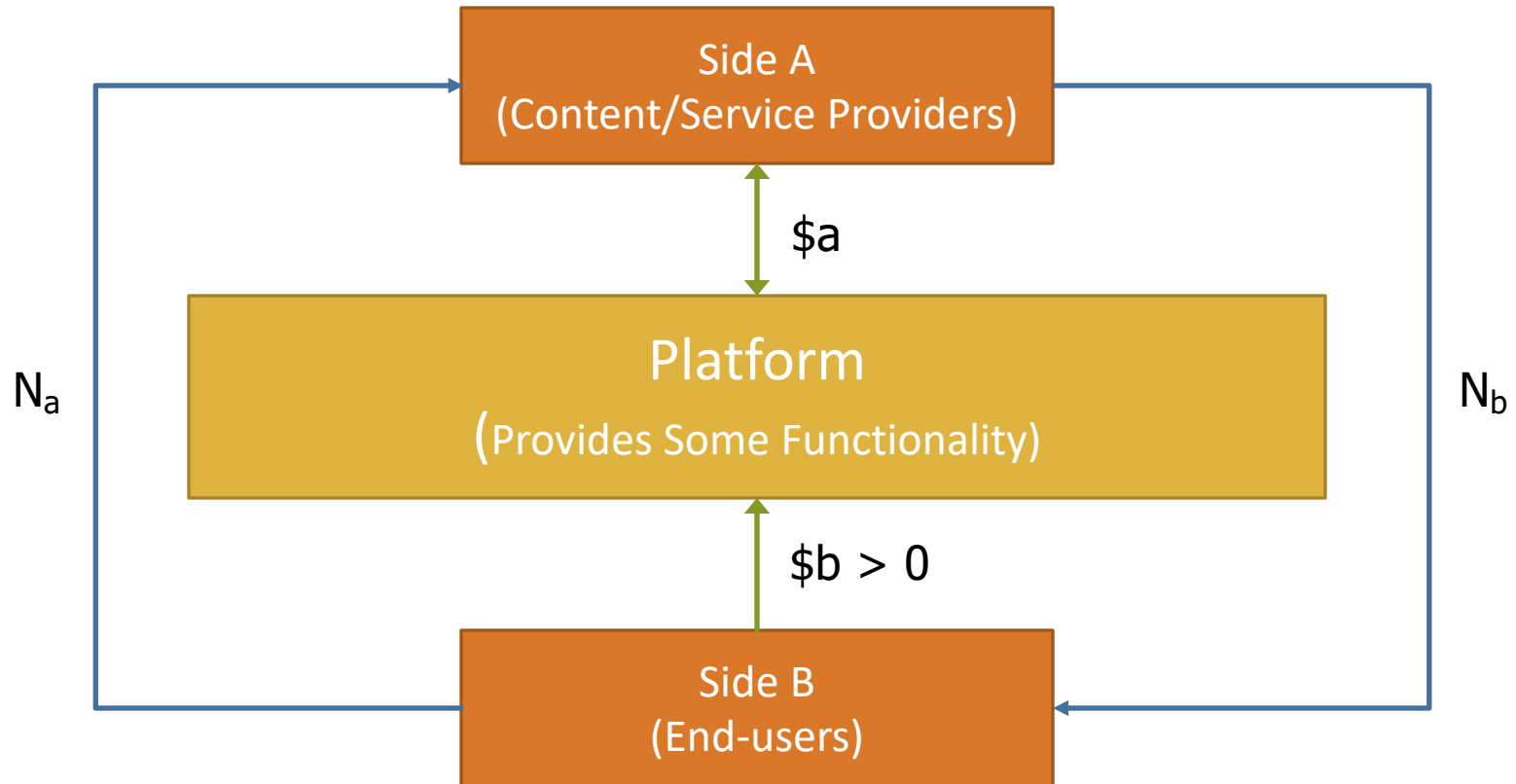
Platform	Side A	Side B	Functionality
Uber	Drivers	Riders	Discoverability
Visa	Payer	Payee	Money Transfer
NYT	Readers	Advertisers	Ad friendly Content
Google	Searchers	Advertisers	Search Results
Adobe Acrobat	Readers	Creators	PDF Tools
Internet	Content Providers	Consumers	Connectivity

Pricing in Two-sided Platforms

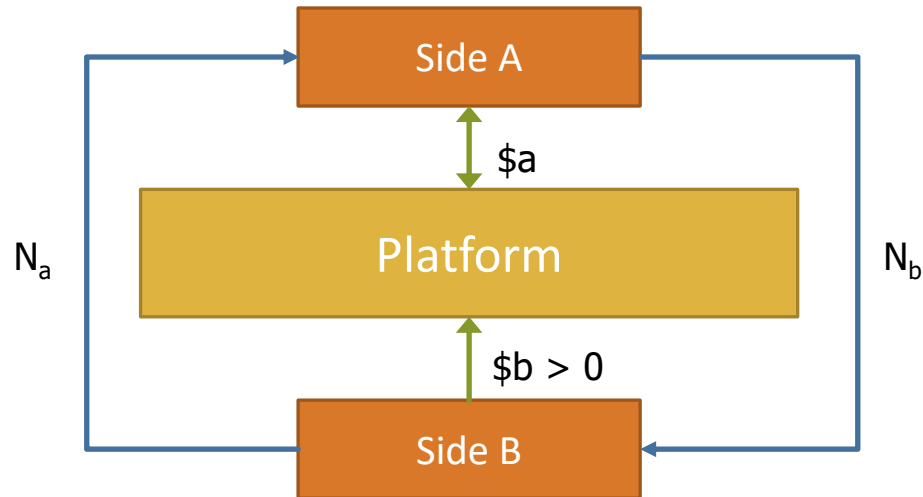


- Factors in pricing
 - Which group is more price sensitive?
 - Which group values the other group more? ($N_a > N_b$)

Two-sided Platforms

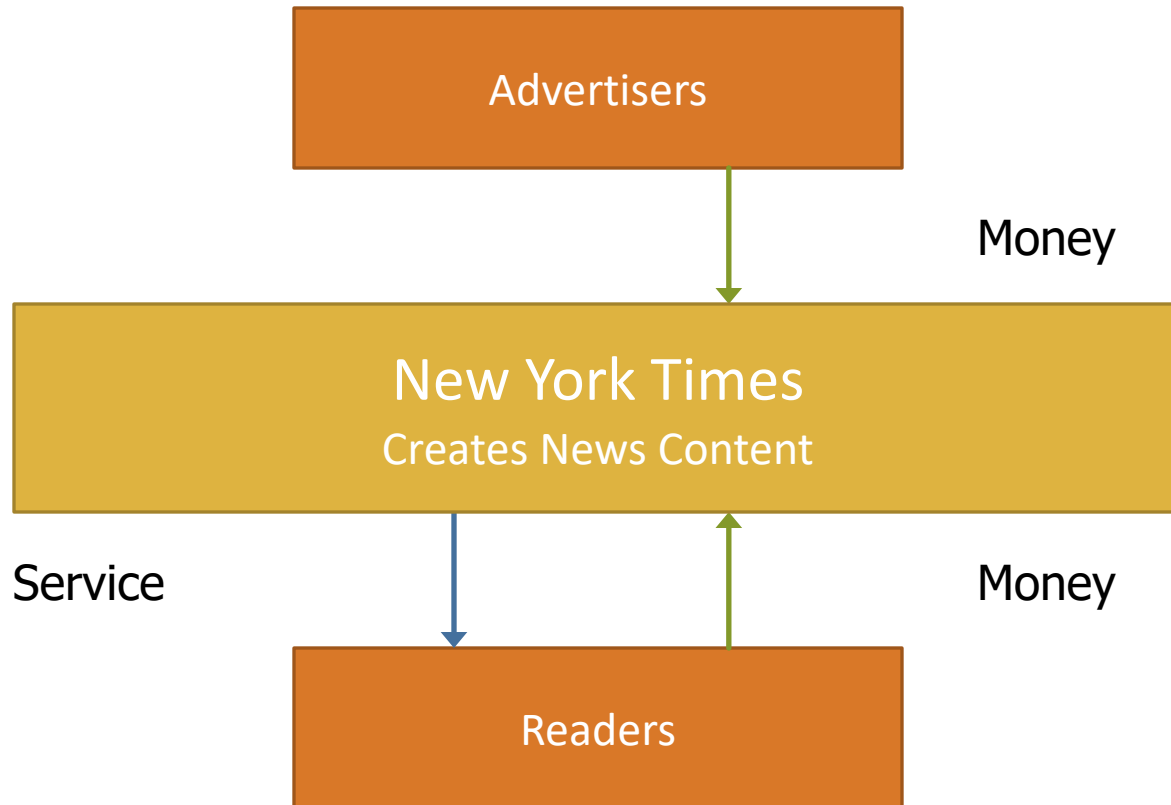


Pricing in Two-sided Platforms

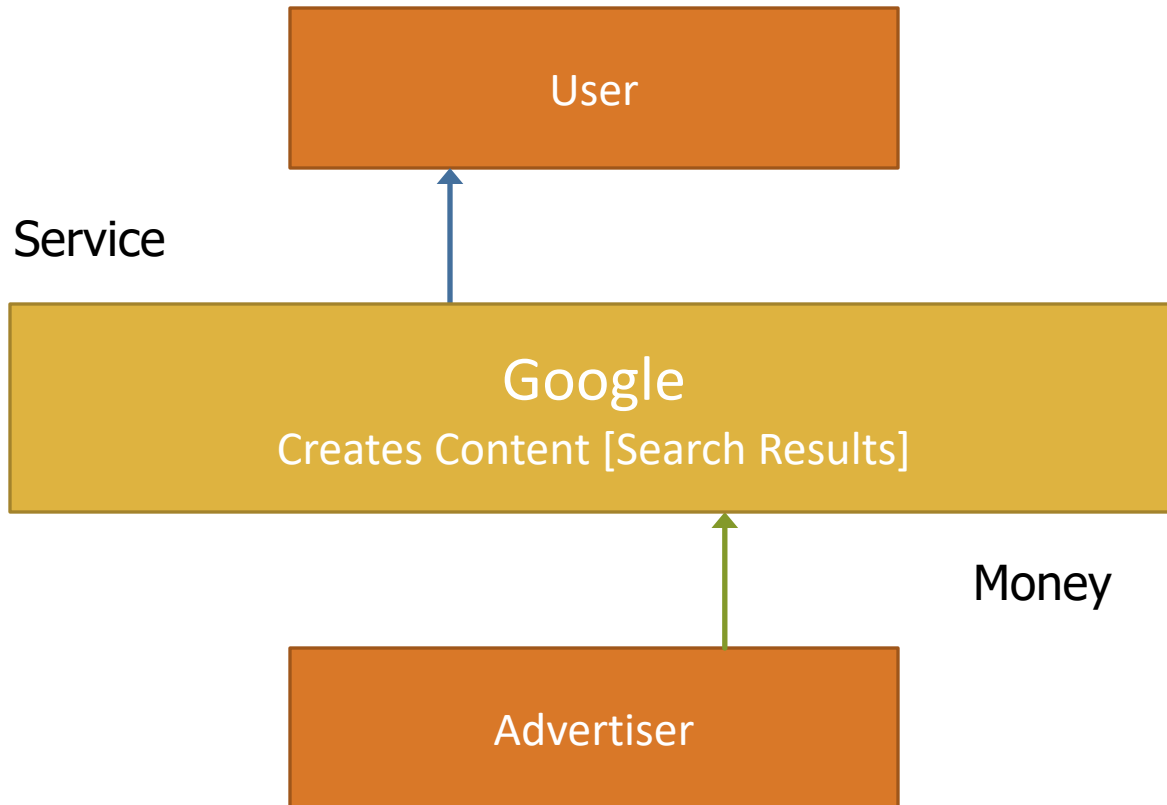


- If $N_a > N_b$ then $\$a > 0$
- If $N_b > N_a$ then $\$a < 0$
- Can subsidize one side if it is more valuable to the end-users!
 - (Visa/Mastercard - credit card points)

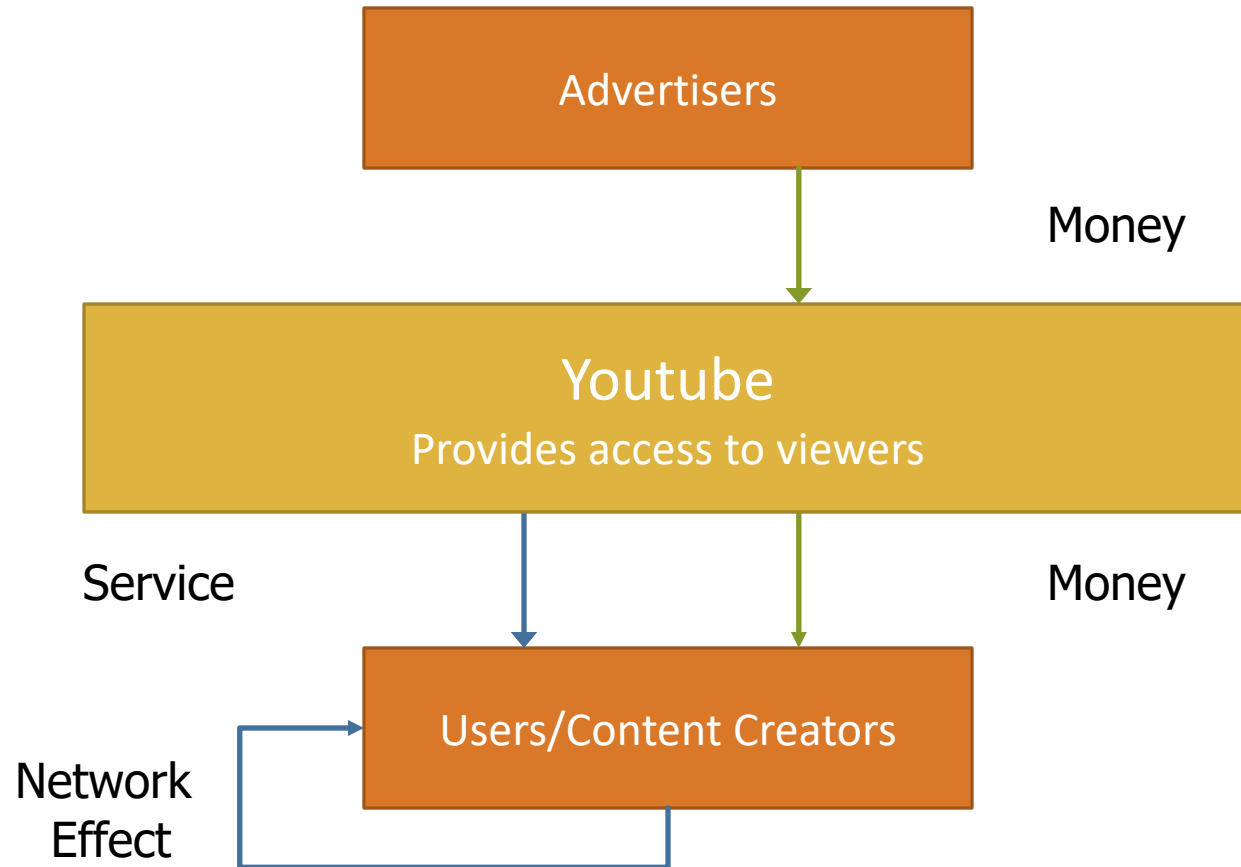
Two-sided Platforms: Examples



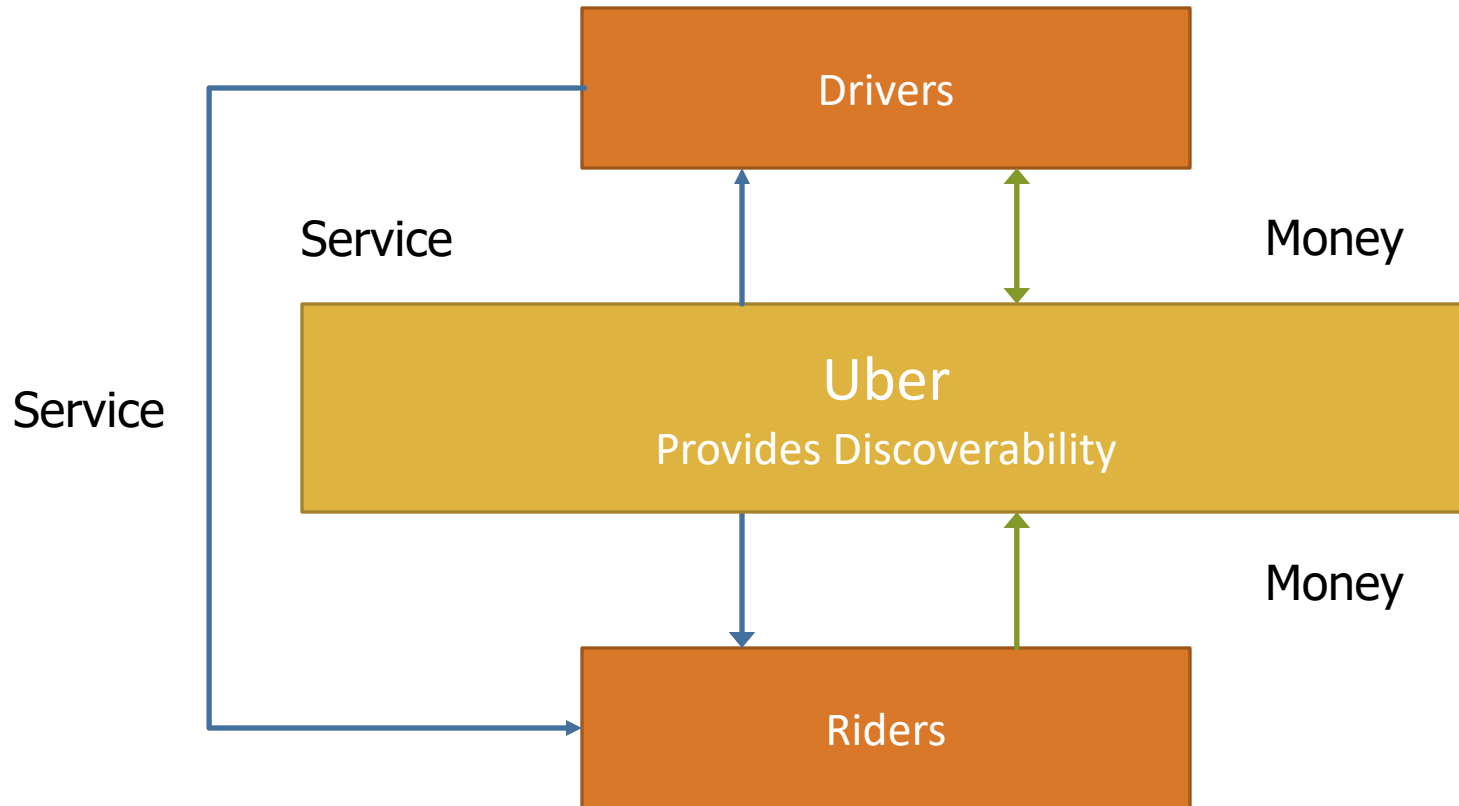
Two-sided Platforms: Examples



Two-sided Platforms: Examples



Two-sided Platforms: Examples



Dynamic Pricing

Dynamic Pricing

- In settings where prices can easily and frequently be adjusted
- Based on current market demand
- Compared with availability of supply
- Other factors?
 - Time/Day
 - Customer location
 - Competitor prices
 - Stage of purchase

Next Few Classes

- Session 4
 - Temporal Pricing and Temporary Price Discounts
 - Problem Set Submission
- Session 5
 - Competitive Pricing
 - Tweeter Case Discussion