

# An Introduction to the Economics of Multi-Sided Platforms



Marc Bourreau, Telecom ParisTech

# The emergence of platforms

---

- ▶ Platforms have been around for a long time: example of insurance markets for shippers in ancient Greece (Evans, 2008)
- ▶ Formalization of two-sided (multi-sided) platforms in the 2000's
  - ▶ Development of new business models in digital markets: advertising platforms (Google), marketplaces (eBay, Amazon marketplace), social networks (Facebook), etc.
  - ▶ Extremely low marginal costs → high pricing flexibility
- ▶ Early academic references: Rochet & Tirole, Caillaud & Jullien, Armstrong, Parker & Van Elstytne, etc.



# Explosion of multi-sided platforms!

---




# Definition of multi-sided platforms

---

- ▶ A multi-sided platform provides products and/or services to distinct groups of users (two or more)
  - ▶ ... who each *value* the level of participation of the other groups (indirect network effects),
  - ▶ ... and who *rely* on (affiliate to) the platform for making transactions between them.
  - ▶ The price *structure* (and not only the total price) affects the way the platform works.
- ▶ The platform serves as an intermediary because it strongly reduces transaction costs between the distinct groups of users.



# An example: LaFourchette.com

 lafourchette


INSCRIVEZ-VOUS


CONNEXION


## LA SURPRISE DES CHEFS


choisissez, réservez et profitez des plus beaux restaurants de France

Où ? Ville, adresse, quartier, nom de restaurant...

 Autour de moi

Date  7

Heure 

Pers. 

Trouver un restaurant

## Comment ça marche ?



**venez nourrir  
votre curiosité**

Choisissez parmi 7000 restaurants,  
grâce à 1 million d'avis



**complet ?  
pas pour vous**

Réservez gratuitement en ligne,  
inutile d'appeler le restaurant



**demandez l'addition  
avec un vrai sourire**

Bénéficiez de promotions sur l'addition,  
pas sur la qualité



**la récompense  
au bout de la fourchette**

Cumulez des Yums à chaque réservation  
et bénéficiez d'une remise fidélité

# An example: LaFourchette.com

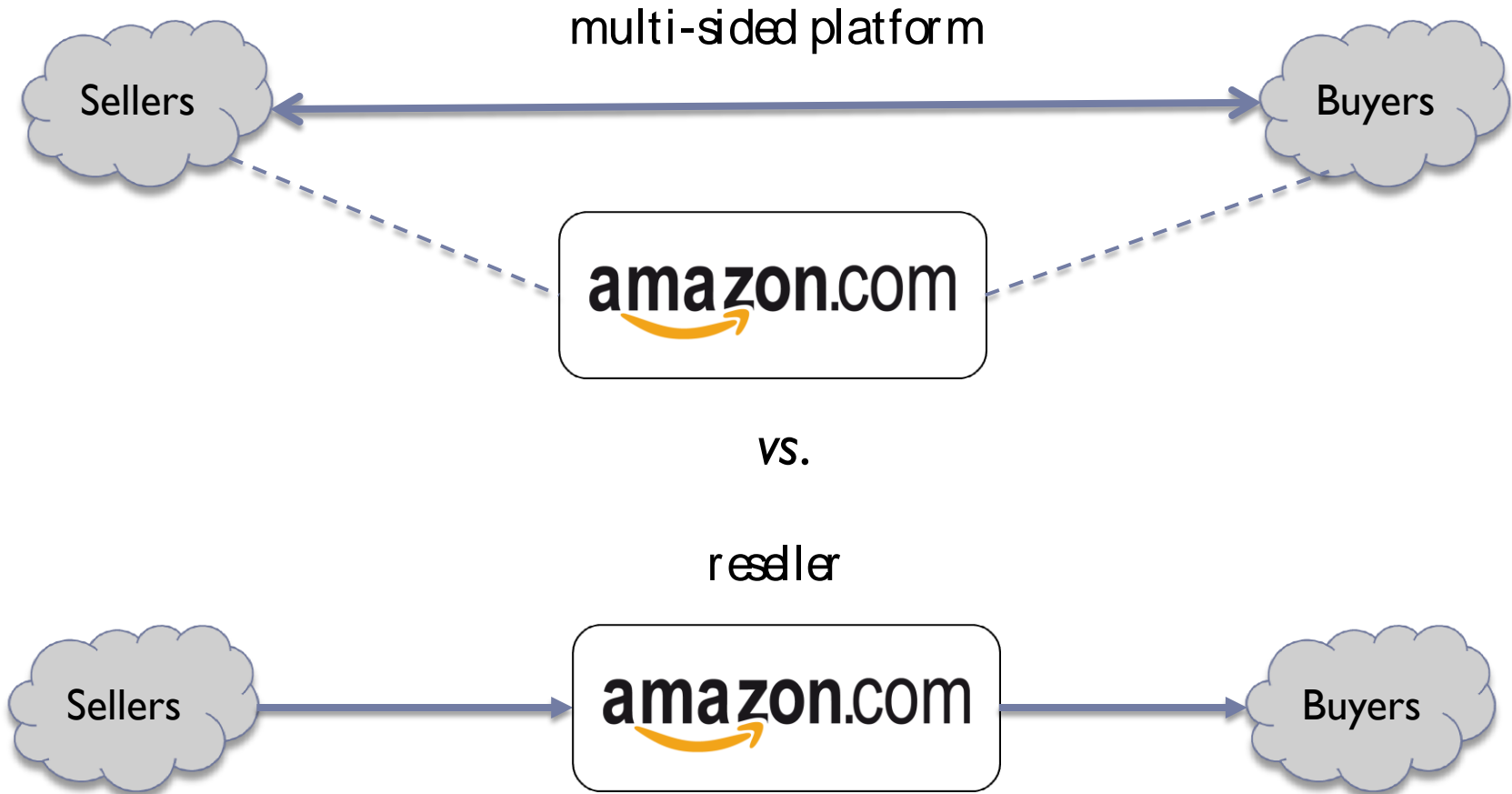


# An example: LaFourchette.com



# “Platforms” are not necessarily multi-sided

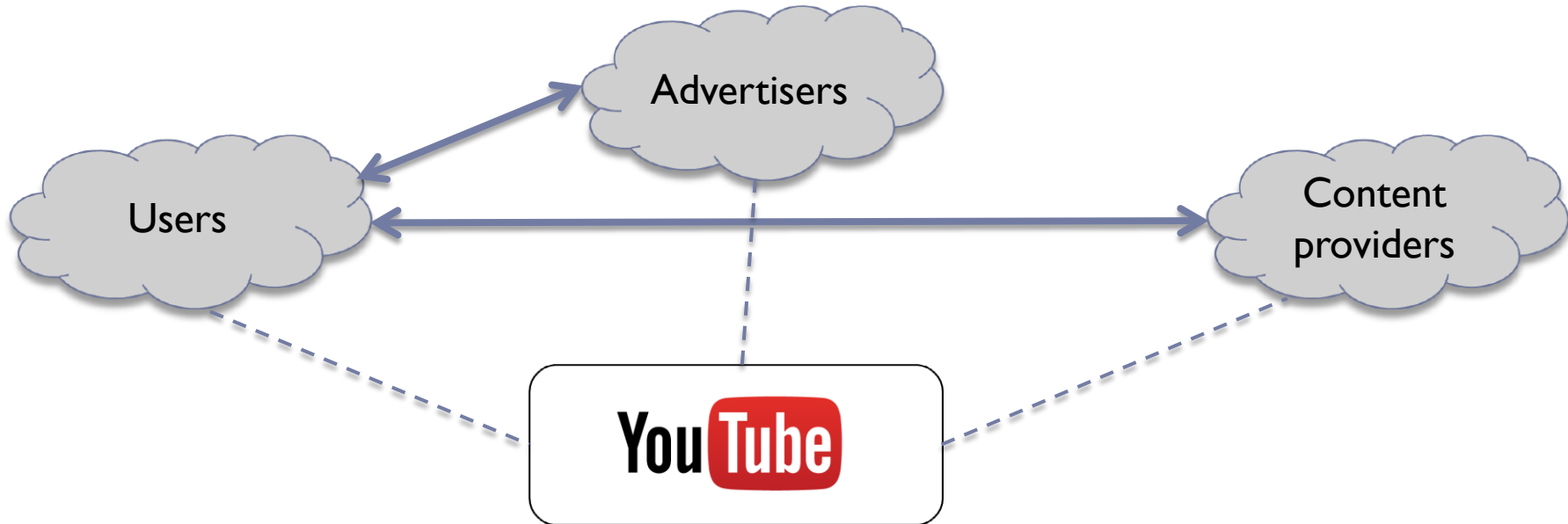
---





# “Platforms” are not necessarily multi-sided

---



VS.



# Some economics of multi-sided platforms

---

- ▶ Asymmetric pricing
- ▶ Competition on all sides of the market
- ▶ Single-homing *versus* multi-homing



# Asymmetric pricing

---

- ▶ One side of the market pays generally a **lower price** than the other side to use the platform
- ▶ The platform must set a very attractive price on one side of its market to attract a sufficiently high number of users, and thereby make the platform valuable to the other side
- ▶ Which group of users benefits from the lowest price? The one that is “needed more” (i.e., which generates the strongest indirect network effects)
- ▶ At the extreme, the platform can offer its product *for free* to one side of its market: free newspapers or web sites, free software development kits (SDKs) for OS, etc.



# Competition on all sides

---

- ▶ Indirect network effects essential for the success of the platform → important to attract both sides of the market simultaneously (“chicken-and-egg” problem)
- ▶ Competition on one side of the market affects both sides of the market
- ▶ Customer base on both sides of the market = competitive advantage
- ▶ Exclusivity deals as a way to limit indirect network effects for rivals (or compensate a competitive disadvantage):
  - ▶ Exclusivity agreements in media, video games, software, etc.



# Single *versus* multi homing

---

- ▶ *Single homing*: consumers use only one platform
- ▶ *Multi homing*: consumers use 2 (or more) platforms
- ▶ Multi homing → **competitive bottleneck** (Armstrong, 2006): the group of users which joins all platforms ends up paying a high (monopoly) price; strong competition for the group of users (side) that single homes.
- ▶ Strategies to limit multi homing:
  - ▶ Exclusivity agreements
  - ▶ Loyalty programs
  - ▶ Switching costs



# Policy concerns for platform markets?

---

- ▶ Indirect network effects & economies of scale → strong tendency towards **concentration** and constitution of “big firms” in this type of market
- ▶ Increasing role of platforms in traditional industries → concentration in these industries too
- ▶ Persistent effects: strong network effects → (positive) feedback effects and risk of lock-in
- ▶ *Remarks:*
  - ▶ Two-sided markets are not necessarily “winner-take-all” markets, due to (1) consumer taste for variety, (2) diseconomies of scale (congestion, etc.)
  - ▶ Concentration *ex post* balanced with strong competition *ex ante* “for the market”



# *Ex-ante* regulatory intervention?

---

- ▶ Potential market failures due to network effects, market power → a case for *ex-ante* regulatory intervention?
- ▶ **General principle:** *the benefits from ex-ante regulation should outweigh the costs*
- ▶ Potential costs of *ex-ante* regulation in platform markets:
  - ▶ Markets characterized by strong innovation dynamics
    - ▶ Regulation could slow down or distort innovation
    - ▶ The rapid pace of innovation calls for fast adjustments of rules
  - ▶ Markets with heterogeneous players
    - ▶ Asymmetries in business models
    - ▶ Asymmetries in size, scope
    - ▶ Asymmetries with respect to existing regulations
    - ▶ Asymmetries in cost structures, etc.



# Conclusions

---

- ▶ Specific strategies in multi-sided platform markets: asymmetric pricing; competition on all sides; limiting multi homing
- ▶ Economies of scale and indirect network effects: strong tendency towards concentration in platform markets → concerns from regulators & competition authorities
- ▶ Due to strong innovation dynamics, *ex ante* regulation should be the exception rather than the rule, when market failures very likely to occur

