THE ECONOMICS OF MULTI-SIDED PLATFORMS

Implications for Competition Policy
**PRELIMINARIES**

- **Problem**
  - Competition Policy (Law + Guidance + General Practice) based on functioning of traditional (one-sided) markets
  - But multi-sided platforms function differently
  - Competitive & welfare-enhancing platform behavioural outcomes can look anticompetitive through one-sided lens, and vice versa
  - Increased proliferation of platforms → more scope for welfare-reducing regulatory failure

- **Methodology**
  - Literature review of antitrust related literature (theoretical + empirical) on economics of multi-sided platforms
    - Focus on recommended methods of antitrust analyses in platform context
  - Compare insights to existing antitrust practices enshrined in Competition Policy
  - Identify possible areas for policy change or refinement
Defining platforms

How do you know a platform when you see one?
DEFINITION

• Evans & Schmalensee (2007)
  – A multi-sided platform “has
    (a) two or more groups of customers;
    (b) who need each other in some way;
    (c) but who cannot capture the value from their mutual attraction on their own; and
    (d) rely on the catalyst to facilitate value-creating interactions between them”
DEFINITION

• Evans & Schmalensee (2007)
  – A multi-sided platform “has
    (a) two or more groups of customers;
    (b) who need each other in some way;
    (c) but who cannot capture the value from their mutual
        attraction on their own; and
    (d) rely on the catalyst to facilitate value-creating
        interactions between them”
TYPES & EXAMPLES

• Market makers
  – UBER, AirBnB, Amazon

• Advertising supported media
  – Facebook, Twitter, Youtube, WhatsApp (eventually)

• Operating systems
  – Windows, Mac OS, Android

• Video game consoles
  – PlayStation, Xbox, Wii

• Payment Systems
  – Visa, MasterCard, PayTM
1. Predatory Pricing

Are cheap taxi rides anticompetitive?
EQUILIBRIUM PRICING BEHAVIOUR - STATIC

• Rochet & Tirole (2003): For a two-sided monopoly platform
  – Price level: Total price cost margin inversely related to sum of elasticities of demand of both sides
  – Price structure: Price to each side proportional to that side’s price elasticity


• Price can efficiently and competitively be below cost
• Dube et al (2010)

• ➤ Expected level of concentration : ➤ Initial discounting
RECOMMENDATION

• Low price to any one side not predatory if
  – Price level > cost of serving all sides; OR
  – Price level < cost of serving all sides but industry is nascent
2. Notification Thresholds

Should I notify the takeover of a loss-making online platform?
Anticompetitive Mergers May Escape Scrutiny

• Many jurisdictions specify notification thresholds in terms of revenue & assets
• But platforms with high market power in large markets can escape notification
  – Assets low: Online
  – Revenue low: If industry nascent & expected eventual concentration level is very high (Dube et al (2010))
RECOMMENDATIONS

• Adopt additional UK style market share based threshold
3. Concentration Thresholds

Are fewer platforms bad for consumers?
USUAL APPROACH TO CONCENTRATION LEVELS

• Market shares or HHI: indicative of market power
• High is bad
• Detailed investigation of mergers if concentration above certain levels
• >50% market share indicative of dominance
CONCENTRATION IN PLATFORM INDUSTRIES

- High not necessarily bad: indirect network effects
  - Sometimes optimal for only one platform to supply entire demand
  - But in certain circumstances multiple platforms are optimal
    - Indirect network effects weakening with platform size
RECOMMENDATIONS

• Concentration measures are useless measures of market power

• Measure market power directly
  – Tremblay (2017)
    • Adjusted Lerner Index = (variable profits)/(revenue)

• Develop Adjusted Lerner Index based thresholds
4. Welfare Effects

Efficiencies? What are those?
Platform mergers can cause large efficiency gains

- Value to users increases due to indirect network effects
- Usually, gains are shared between platform and customers
- Empirical:
  - Video games: Tremblay (2017)
  - Online advertising: Evans & Noel (2008)
RECOMMENDATIONS

• Explicitly consider efficiency gains on all sides due to indirect network effects

• If data availability is good, conduct a merger simulation using Tremblay (2017) model (tweakable for various industries)
5. The Role of Data

Is control over data anticompetitive?
DATA AND THE ANTITRUST OF PLATFORMS

- Literature nascent and evolving
- Proponents
  - Data can confer economic power
- Opponents
  - Data is just another input
  - Existing framework can be used to analyse abuse of control of this input
  - Privacy issues dealt with through privacy laws
RECOMMENDATIONS

• No immediate change in Policy
• Invest in more research to better understand data issues
Thank you!