

Non-Price Discrimination by a Prejudiced Platform

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Discrimination in the online world

By users is well documented:

1. short-rentals: Edelman and Luca (2014), Edelman et al. (2017), Laouenan and Rathelot (2017)
2. transportation systems: Costillo et al (2013), Goddard et al. (2015), Ge et al. (2016), Farajallah et al. (2016)
3. lending: Pope and Sydnor (2011), Duarte et al. (2012)

and several managerial changes to address it have been proposed
e.g. Fisman and Luca (2016).

But what happens when the platform has a prejudice (is racist)?

Focus on non-price discrimination

Modelling choice

What is the impact on prices and total welfare of non-price discrimination by a prejudiced platform?

- ▶ two-sided model ala Armstrong (2006)
- ▶ on one of the side, $1 - \lambda$ share of users is a minority
- ▶ network effects non affected by the minority status:
 $u_i = \alpha_i n_j - p_1$, where $n_i = \phi_i(u_i)$
- ▶ platform (owner of the platform) has a prejudice against the minority, which results in higher cost of serving them $f_h - f_l$
- ▶ suppose the platform can discriminate the minority by decreasing their utility from the platform by D

Private incentives to discriminate

For prejudice high enough platform introduces discrimination:

$$\lambda \Delta f \geq \frac{\phi_2(u_2)}{\phi_2'(u_2)}$$

- ▶ comparing level of prejudice to optimal mark-up
- ▶ the lower the fraction of minority, the more likely is discrimination

Discrimination means the platform saves on cost from prejudice, but discrimination also makes the platform less attractive to users

Social incentives to discriminate

For prejudice high enough discrimination is socially optimal

$$\lambda \Delta f \geq \frac{\phi_2(u_2^w)}{\phi_2'(u_2^w)}$$

,where u_2^w is the socially maximising utility level given discrimination level D

- ▶ discrimination means fewer users join $\Rightarrow$ lower welfare created
- ▶ platform decreases prices in order to maintain attractiveness, if decrease in price is high enough welfare increases
- ▶ simulation results show that private and social incentives can be aligned/misaligned

Comments

- ▶ set-up of the model; profit/utility maximizing firm:

$$U(\mathbf{u}_1, \mathbf{u}_2, \mathbf{h}) = (p_1 - f_1)n_1 + (p_2 - f_2)n_2 - hn_2$$

,whose utility? if owners' why not sell the platform to someone without prejudice?

- ▶ non-price discrimination modelled in the same way as increases in price: $u_i = \alpha_i n_j - p_i - D$
- ▶ tipping market with a prejudice platform-> what's the impact on entry