Platform Pricing: A Primer

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Introduction

There is a heightened expectation that
digital platforms will mediate sharing of resources
in future smart cities.

Example: sharing generation in a smart grid.

This talk is a primer in platform design:
particularly pricing and fee structure.

Two key questions

What *is the platform selling?*

How *is the platform pricing?*

What is the platform selling?

What are **they** selling?

Lodging

Transportation

Handmade goods

What are **they** selling?

airbnb → Lodging

lyft UBER → Transportation

Etsy → Handmade goods

Transaction costs

Marketplace platforms *enable* transactions:

They are selling the reduction of transaction costs.

Transaction costs are anything that inhibit buyers and sellers from trading.

Three types:

search and information costs	bargaining and negotiation costs	policing and enforcement costs

Transaction costs

search and information costs	bargaining and negotiation costs	policing and enforcement costs

The difficulty of ***finding a match***

Search:

Knowing that potential matches exist (i.e., liquidity)

Information:

Knowing enough about potential matches
to make a "good" choice

Both costs should drop as the marketplace scales

Transaction costs

search and information costs	bargaining and negotiation costs	policing and enforcement costs

Online marketplaces work hard to reduce information costs.

Examples:

(1) Curation
e.g., Uber and Lyft screening drivers (and passengers!)

(2) Data-driven recommendations (collaborative filtering)
e.g., BestMatch on eBay

(3) Reputation systems
e.g., feedback scores on eBay, Airbnb, Upwork, etc.

Transaction costs

search and information costs	bargaining and negotiation costs	policing and enforcement costs

There is a spectrum of intermediation.

low *moderate* *high*

Transaction costs

search and information costs | bargaining and negotiation costs | policing and enforcement costs

There is a spectrum of intermediation.

craigslist

Example:

Craigslist reduces search costs but not information costs.

Transaction costs

search and information costs	bargaining and negotiation costs	policing and enforcement costs

There is a spectrum of intermediation.

moderate

Example:

Upwork reduces search cost,
and provides lots of information (to both sides),
but does not make the match.

Transaction costs

search and information costs	bargaining and negotiation costs	policing and enforcement costs

There is a spectrum of intermediation.

high

Example:

Lyft and Uber remove search and information costs – they make the match for you.

Transaction costs

search and information costs	**bargaining and negotiation costs**	policing and enforcement costs

The difficulty of ***clearing the market***

How do buyers and sellers agree on
what is being sold, and for ***how much***?

Examples:

Suggested donation on Lyft

Surge pricing on Uber

Auction mechanism on eBay

Transaction costs

search and information costs	bargaining and negotiation costs	**policing and enforcement costs**

The difficulty of ***ensuring good outcomes***

Examples:

Host protection insurance on Airbnb

The client and freelancer guarantees on Upwork

Examples for the smart grid

- Search and information costs:
  Who can I buy energy from/sell energy to?

- Bargaining and negotiation costs:
  What is the price I will pay or receive?
  What capacity must be delivered, at what time(s)?

- Policing and enforcement costs:
  How do I know I'll get what I paid for?
  How will I get paid for what I sold?
  How is usage metered and monitored?

How is the platform pricing?

“Pricing”

We **do not** mean:
setting the price at which a buyer and seller transact.

We mean setting the fee structure.

(These are the payments for reducing transaction costs.)

Three (simple) categories:

fixed charges	variable charges	combinations

Fee structures

fixed charges	variable charges	combinations

Fixed amount ***independent of usage***

E.g., membership fees and subscription plans.

Examples:

Amazon Prime ($99/year for expedited delivery)
Instacart Express ($149/year for unlimited grocery delivery)

Fee structures

fixed charges | **variable charges** | combinations

Variable amount ***dependent on usage***

"Usage": the number or value of transactions, listings, etc.

Examples:

(1) Flat fee per transaction

(2) Percentage of total transaction value
e.g., 20% on Uber or Lyft

(3) Both: e.g., $0.20 listing fee + 3.5% on Etsy

Fee structures

fixed charges	variable charges	**combinations**

Simultaneous fixed and variable charges

Examples:

(1) *Two-part tariff*:
fixed charge + variable charge on usage
e.g., eBay Stores

(2) *Menu*:
offer choice between fixed and usage-based charging
e.g., Instacart Express vs. non-Express

Fee structures

fixed charges	variable charges	**combinations**

Simultaneous fixed and variable charges

These are examples of ***price discrimination.***

(1) *Two-part tariff*:
Usage-based discount
(since average price drops with usage)

(2) *Menu*:
Encourages users to sort by willingness to pay
(heavy users choose the fixed charge)

Additional considerations

(1) Who to charge platform fees
Buyers, sellers, or both?

(2) Mitigating risk
Helping participants plan for uncertain spot prices

Concluding thoughts

Conclusions

Marketplace businesses are reducers of transaction costs.

Transaction costs can be:

search and information costs	bargaining and negotiation costs	policing and enforcement costs

Pricing can look like:

fixed charges	variable charges	combinations

The platform should connect the pricing structure to the transaction costs being reduced.