Platform Business Models

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Agenda

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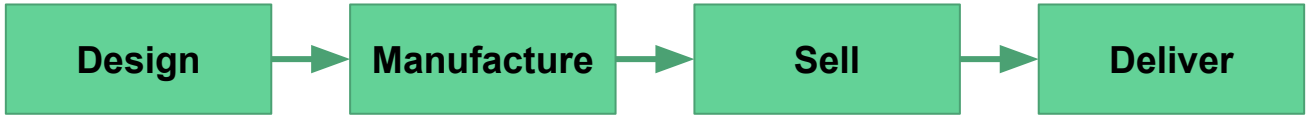
Introduction

- The traditional system employed by most businesses is a pipeline



- Also called Linear Value Chain

Introduction

- However, more and more businesses now adopt a platform structure.
- In a platform structure, different types of users—some of them producers, some of them consumers, and some of them people who may play both roles at various times—connect and conduct interactions with one another using the resources provided by the platform. In the process, they exchange, consume, and sometimes co create something of value.

- For example, IOS and Android platforms.

Advantage of Platforms

- No gatekeepers to manage flow
  - Anyone can publish on Kindle (Traditionally, editors selected a few books for publication)
  - Gatekeepers are replaced by market signals
  - Consumers have more freedom (For example, Coursera vs University; Upwork vs Corporate Job)
- New sources of value and supply
  - Airbnb expands much more rapidly as compared to Marriott.
  - It doesn't own assets, and expansion is much less risky.
  - Sharing economy (Optimizing usage of idle assets)
- Community feedback loops
  - Wikipedia vs Encyclopedia Britannica
  - YouTube comments can signal quality.

In a nutshell, the focus has shifted from broadcast to segmentation, and then to virality and social influence; from push to pull; and from outbound to inbound.

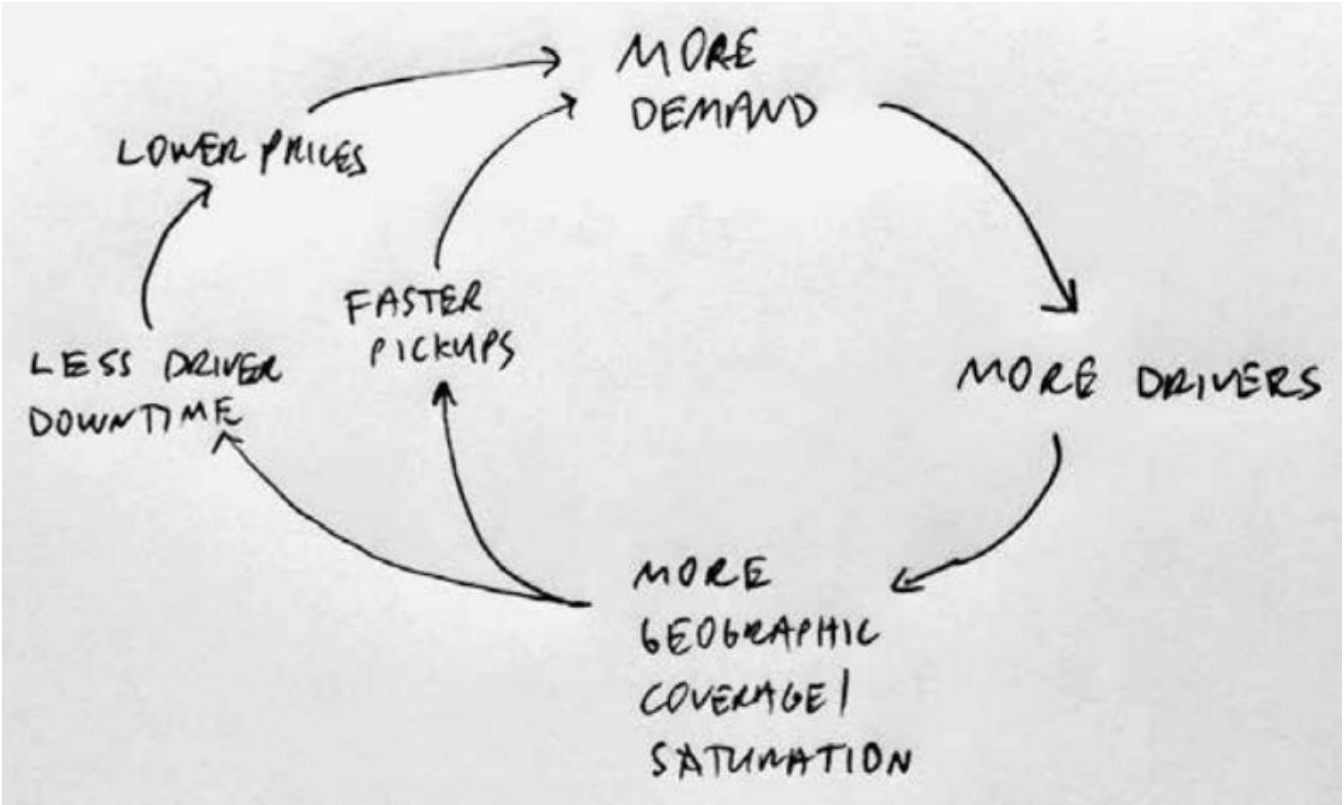
Network Effects

- The impact that the number of users of a platform has on the value created for each user.
  - Positive: Ability of a large well-managed platform to produce significant value for each user
  - Negative: Growth in numbers of a poorly-managed platform can reduce the value for each user
- The industrial revolution promoted supply economies of scale: the unit cost of producing a product or service reduced as quantities produced increase.
- The internet era lends itself to demand economies of scale-bigger networks are more valuable for users-driven by efficiencies in social networks, demand aggregation, app development etc.
- For example, with one telephone, there is literally no value. With two, you can have one connection, with four, six. Growth is non-linear.

Network Effects: Two-Sided

- For example, in the case of Uber, two sides of the market are involved: riders attract drivers, and drivers attract riders. In the case of Google's Android, app developers attract consumers, and consumers attract app developers.
- Firms can spend money to attract participants to one side of the market.
- Quite different from price effects and brand effects.
  - Price effects are evanescent
  - Brand effects are stickier, yet difficult to sustain
- Virality can attract people, but network effects keep them there.
- Most important for firms to be able to scale seamlessly.
  - Yahoo started out as a human-edited database, whereas Google's page rank algorithm considers the extent web pages link to one another.

Network Effects: Illustration



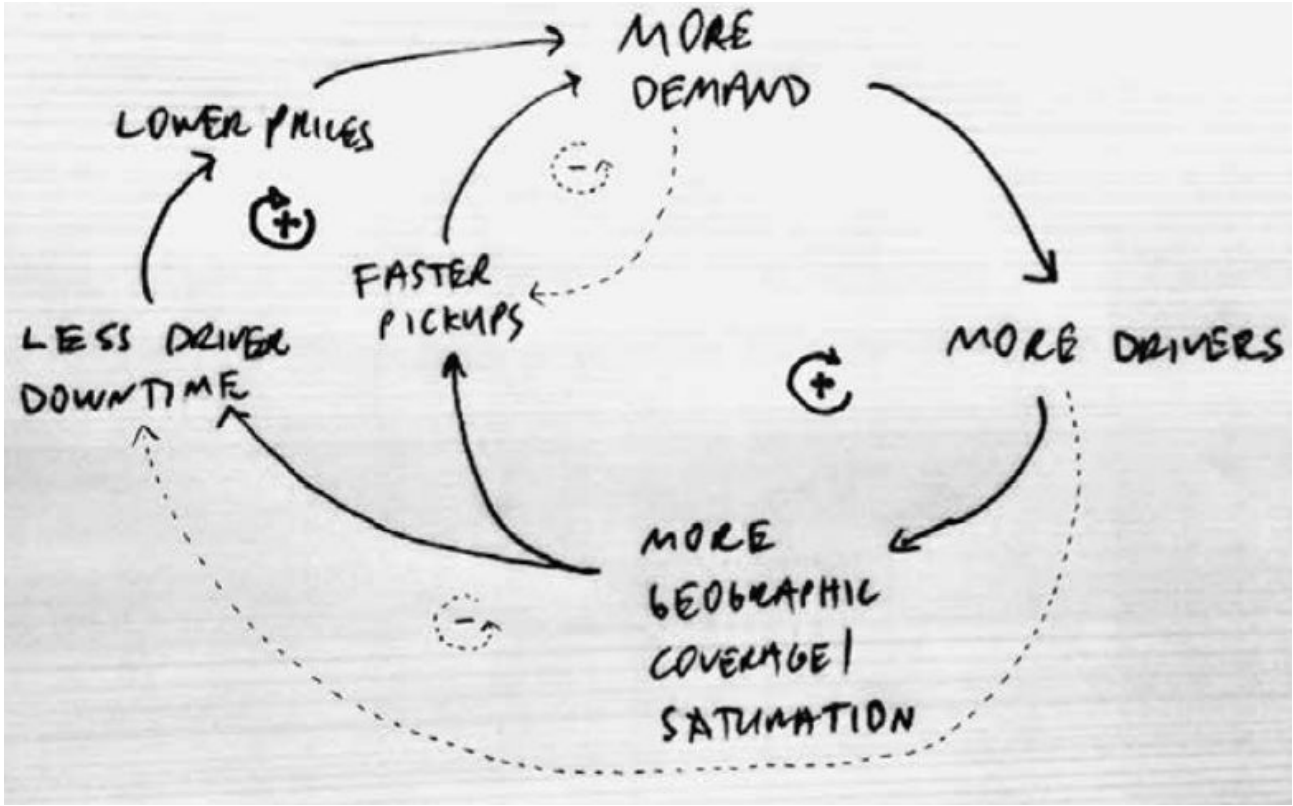
Network Effects: When They are Negative

- Matching difficulties when numbers are high
- This can drive away participants.
- Thus, balance frictionless entry with effective curation
- For example, OkCupid discovered that scale can cause network collapse if not carefully managed. It implemented a curation strategy involving multiple levels of network matching.

Network Effects: Four Kinds

1. Positive Same-Side
    a. The positive benefits received by users when the number of users of the same kind increases
    b. Examples include Bell Telephones, Xbox MMOG from the consumer side
    c. Examples include Adobe PDF platform from the production side
2. Negative Same-Side
    a. Effect of competition
3. Positive Cross-Side Effects
    a. Users benefiting from an increasing number of participants on the other side of the market
    b. Examples include Visa and Mastercard. The more merchants adopt these, the more convenience for users.
4. Negative Cross-Side Effects
    a. Matching problems and clutter
    b. For instance, in the context of the dating example, if there are more men relative to women, while that is theoretically good for women, there could be matching problems. Women may not be able to find the right match.

Network Effects: Illustration with Negative Feedback Loops



Monetization: Making Money from Network Effects

- It’s a tricky problem to solve
  - Inherent value of platform business lies in the network effects it creates.
  - However, any charge for users may discourage them from participating altogether.
  - Charging for usage would also hinder usage.
  - Charging for consumption can reduce consumption and affect producers
  - Charging for production can reduce value creation and affects consumers.
- What are the sources of value?
  - For consumers: Access to value created on the platform (For example, a YouTube video)
  - For producers: Access to a community or market (For example, for Airbnb hosts)
  - For both: Access to tools and services that facilitate interaction.
  - For both: Access to curation mechanisms that enhance the quality of interactions.

Monetization and Network Effects

- While generally network effects can increase monetization, sometimes the opposite effect can happen if the network effects are negative.
- Charging a price can help reduce the negative network effects
  - Example: Meetup started charging $19 per month for the right to keep using the service
  - While numbers using the platform reduced dramatically, more meetups ended up being successful.

Monetization: Charging a Transaction Fee

1. Since, only a transaction is charged, buyers and sellers are not discouraged from joining.
2. Platforms should experiment with various levels of fee to get the fair percentage of value without driving users away
3. What if the users take the activity outside the platform? In these cases, platforms should provide other value added benefits. For example, Upwork enables consumers of professional services to monitor projects and make payments based on actual delivery of work.

Monetization: Charging for Access

1. Charge producers to access to a community of users.
2. This doesn’t discourage the users.
3. For example, LinkedIn allows recruiters to present job opportunities to its members and offers companies the ability to compare and target professionals based on their resumes.

Monetization: Charging for Enhanced Access

1. Charge producers for enhanced access to consumers. Example: Google Adwords.
    a. Important to ensure customers can distinguish between content that has been elevated by paid access.
    b. Important to limit sponsored posts so that the platform still remains relevant, rather than cluttered.
2. Charge users for lowering barriers. Example: Dating websites allow men to view profiles of women without revealing identifying details, and provides additional information to those who pay a subscription fee.

Monetization: Charging for Enhanced Curation

1. Improve quality of interactions for those who pay a premium.
2. Enhanced vetting and screening of service providers for a fee.
3. Transaction to Subscription: Skillshare transitioned from a transaction-fee only model to a model that provides enhanced value upon payment of a subscription fee.

Monetization: Whom to Charge?

1. Charging all users
    a. Rare, as it could reduce network effects
    b. Used as a vetting process
2. Charging one side while subsidizing another
3. Charging most users full price while subsidizing stars (E.g. Online Chess)
4. Price discrimination based on price sensitivity

Monetization: Important Principles

1. Avoid charging for value that users previously received for free.
    a. Not all platforms have been successful like Meetup
    b. Some, like Zvents died or were to dramatically alter the nature of their offering
2. Avoid reducing access to value that users have become accustomed to receiving.
    a. For instance, Facebook needed to cut down on the original organic value when it provided premium content promotion to paying producers.
3. Strive to create additional value that justifies the charge imposed.
    a. Uber received criticisms for charging a Safe Rides Fee for conducting drivers' background checks while apparently cutting corners on those steps
4. Monetization strategies should be considered when making the initial platform design choices.
    a. If charging a transaction fee, then the platform must be able to control the transaction.
    b. If charging for access, the platform should be designed to control the avenues through which content reaches the users as well as flow of data about users.

Class Exercise

Form groups of 3-5 people and discuss ways to monetize Twitter. What are the potential drawbacks of your approach?

Metrics: Pipeline Model

The overall focus of metrics used in the traditional pipeline business models is *the efficiency with which value flows through the pipeline*. Such a model should:

1. Produce goods and services efficiently in sufficient numbers to meet demand. **(Operations)**
2. Reach customers through proper channels at appropriate prices. **(Marketing)**
3. Ensure adequate revenues are generated to produce profits and value for investors. **(Finance)**

Common metrics include:

1. Cash Flow
2. Inventory Turns
3. Operating Income
4. Gross Margin
5. Overhead
6. ROI

Metrics: Platform Models

1. Platforms generate value through network effects.
2. Metrics should measure *rate of interaction success and the factors that contribute to it*.
3. Focus should be on metrics that quantify the success in generating desirable interactions among the participants.

Metrics During The Startup Phase

1. Track the growth of active producers and consumers who are participating in a large volume of successful interactions.
2. Three main metrics: Liquidity, Matching Quality, and Trust.

Metrics During The Startup Phase: Liquidity

- Ensuring there exists a minimum number of producers and consumers, and percentage of successful interactions is high.
- One way is to track the percentage of listings that lead to interactions within a given time period.
- Illiquid situations must be minimised.
- Focus on active usage, rather than number of sign ups.
- Ratios and comparative metrics are best, such as ratio of active users calculated by dividing active users by total users and rate of growth of active users calculated by dividing new active users by the number of total active users.

Metrics During The Startup Phase: Matching Quality

- Refers to the accuracy of the search algorithm, and depends on curation.
- One way to measure is the percentage of searches leading to interactions: sales conversion rate.
- Measure the correlation between interaction rate and long-term rate of activity of users to come up with a threshold.
    - For example, majority of users who experience interaction percentage higher than 40% during their first week on the platform remain active members for at least 3 months
- This threshold can be a measure of the platform.

Metrics During The Startup Phase: Trust

- Degree to which users are comfortable with the level of risk associated with engaging in interactions on the platform
- Excellent curation helps
- Critical in platforms where people may interact with each other for the first time online.
- One way is to ensure platform users review each other. (Airbnb has one of the highest review rates among platforms. It also has photographers certify the accuracy of the information contained in a host’s listing)

Metrics During The Startup Phase: Platform Specific

- Range of metrics measuring commitment to the ecosystem
  - Time between interactions
  - Percentage of active users etc.
- Outcome based metrics
  - Number of nights booked (Airbnb)
  - Number of work hours (Upwork) etc.
- Content creation metrics
  - Consumer relevance (percentage of listings that receive positive response from potential customers)
  - Co-creation (percentage of listings that receive some minimum level of positive response from potential consumers)
- Market access regardless of complete interaction
  - Number of women registered in dating or matrimonial sites
  - Restaurant reservations

Metrics During The Growth Phase

- Once the platform reaches a critical mass of users, startup metrics may not be relevant.
- Managers need to ensure platform is still growing.
- Balance between the two sides needs to be maintained, using for example a metric like producer-to-consumer ratio (among only active users). For example, OkCupid tracks the ratio of straight women to straight men.
- Interaction conversion rate (% of searches resulting in interactions) remains an important metric, as during the startup phase.
- Side switching rate-the rate at which people convert from one-type of user to another is an important metric to track the health of the user base, as well as to maintain balance. (Airbnb discovered that the best source of hosts are people who have been guests)

Metrics During The Growth Phase: Producer Side

- Metrics such as frequency of producer participation, listings created, and outcomes achieved.
- Platform should also monitor interaction failure, where interactions are initiated but fall through.
- Another important metric is producer fraud (failure of a producer to describe a product offering accurately or to deliver it in a timely fashion)
- Retention and Lifetime value metrics as in a traditional business.
    - Repeat producers are profitable.
    - Churn rates should be low.

Metrics During The Growth Phase: Consumer Side

- Metrics such as frequency of consumption, searches, and rate of conversion to sale (percentage of click-throughs resulting in complete interactions)
- Retention and Lifetime value metrics as in a traditional business
  - Promoting loyalty and reducing churn (Monetarily or otherwise)

Metrics During The Maturity Phase

1. Driving innovation: platform must be able to adapt to the needs of its users and changes in competitive and regulatory environment.
2. For example, Microsoft Windows absorbed a number of applications that were once provided by stand-alone companies, such as disk defragmentation, file encryption, media playing etc.
3. This has to be done with care, as otherwise the existing ecosystem is scared. Best would be to incorporate applications that are provided by multiple providers. (so that competition would have reduced benefits anyway)
4. Another approach is to incorporate a feature if a third-party feature provides a large share of value enjoyed by the users. (For example, Apple introduced Apple Maps in response to the popularity of Google Maps in 2012)

Metrics: Some Concluding Thoughts

1. Actionable: Clear guidance for strategic and managerial decisions.
2. Accessible: Comprehensible to people who gather and use the information.
3. Auditable: Real and meaningful based on clean, accurate data and precisely defined reflecting the reality of the business as perceived by the users.

Ultimately, any metric should measure the number of happy customers on every side of the network who are repeated and increasingly engage in positive, value-creating interactions.

The Future of The Platform Revolution

The types of businesses most likely to join the platform revolution are:

1. **Information-intensive industries:** Platforms are essentially information enablers. Industries that value information highly are more likely to be transformed.
2. **Industries with non-scalable gatekeepers:** Retailing and publishing, for example-buyers and inventory managers in the case of retail, editors in the case of publishing.
3. **Highly fragmented industries:** Market aggregation through a platform increases efficiencies and reduces search costs. (Examples include Yelp, Uber, Airbnb etc.)
4. **Industries characterized by extreme information asymmetries:** For example, used car dealers have more information about the condition and history of the cars they sold, along with supply and demand variables, than customers. Platforms such as Carfax are leveling the field. Other examples include health insurance, home mortgage etc.

The Future of The Platform Revolution

Industries that can resist the disruption are characterized by:

1. **Industries with high regulatory control:** Banking, education, and healthcare for example are highly regulated.
2. **Industries with high failure costs:** The costs of matching a patient with a wrong doctor is much higher than watching inappropriate content on a platform. Hence, consumers are reluctant.
3. **Resource-intensive industries:** For example, mining, oil and gas, agriculture etc. all require access to resources and the ability to maintain efficient large-scale processes. Here, the role of information is limited.

Finance and Fintech Platforms

1. Money is a form of value accepted by all participants in a particular economic system. (already sounds like a platform?)
2. Platforms like PayPal have created new categories of merchants.
3. Financial platform companies are trying to leverage the information they have about spending patterns of a large number of customers. (Mastercard has 2 billion cardholders linked to 25000 banks and 40 million merchants)
4. Peer-to-peer lending platforms can provide cheaper loans and higher rates of interest. (using the insights from the trove of digital data they collect)
5. Personal finance platforms can provide users with beneficial financial services that cater to their needs.
6. Even traditional financial institutions are beginning to use platform models. (especially to tap the cash economy while getting troves of data about the interactions)
7. Huge potential exists among the currently unbanked. (without savings, credit or insurance)

Logistics and Transportation

1. Originally Logistics companies such as FedEx enjoyed competitive advantage with their huge fleet of cars, trucks and planes.
2. However, a platform approach doesn’t require fleet ownership.
3. Moreover, platforms can leverage on the aggregate real-time market information on the movement of physical goods and carriers, and orchestrate an ecosystem of third-party delivery agents.
4. Grab and Go-Jek are examples of the transformation.

References

Much of this presentation is derived from the course textbook: Platform Revolution: How Networked Markets are Transforming the Economy and How to Make Them Work for You, Geoffrey G. Parker, Marshall W. Van Alstyne, and Sangeet Paul Choudary, W.W Norton & Company.