

DEMO



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Revenue Models in Digital Platform Enterprises

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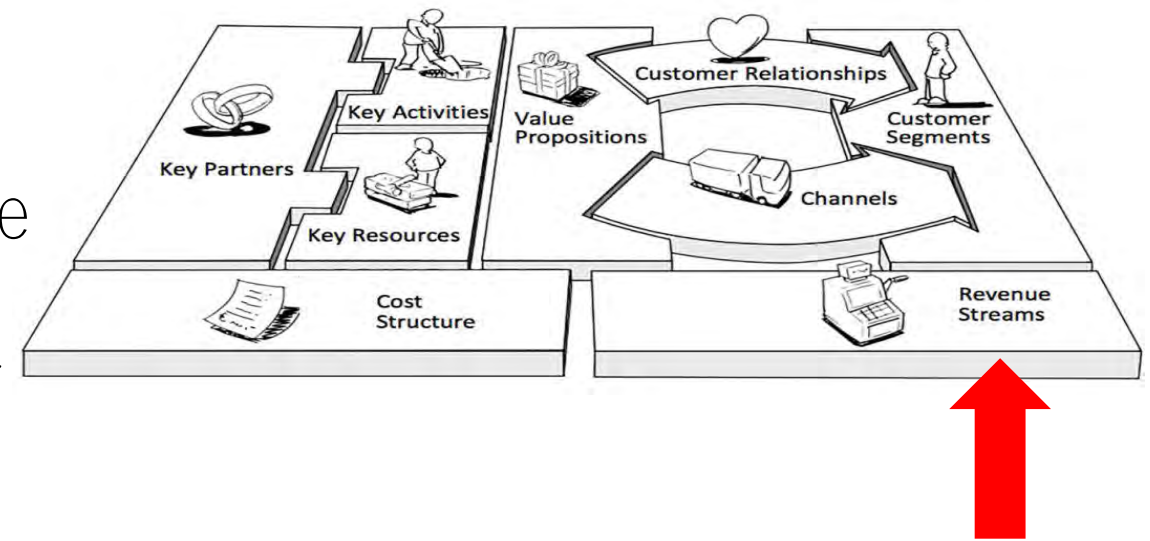
Agenda

- I. Business models vs. revenue models**
- II. Types of revenue models**
- III. Growing a platform business: strategic leverage points**
- IV. Integrating revenue models with business models**

Business Model vs. Revenue Model

A business model is a holistic framework to understand the business capabilities and potential opportunities and how they can be leveraged to create sustainable economic value [1].

A revenue model is a framework for generating financial income. It identifies which revenue source to pursue, what value to offer, how to price the value, and who pays for the value. It is a key component of the business model [2].



Platform Business Model

...remember that only in the case of transaction and integrated platforms the Digital Platform Enterprise generates revenue

...in the case of innovation platforms (think – Linux) resources are made available mostly free by the enterprise and in turn third-parties/complementors provide their resources (time, knowledge, code) for free to the community => we will not discuss about these types of platforms in the remainder of this lecture.



Types of revenue models



Commission model (1/2)

- The commission model is a revenue model where a user is charged a fee for each transaction. When the customer pays the supplier, the marketplace charges a percentage or a fixed fee for its services.
- The platform may charge either the seller or the buyer. Another scenario is taking a commission from both of them.
- This marketplace revenue model is the most common since the fee is justified. The parties may operate for free and pay only when they get some value from using the platform. At the same time, the marketplace gets revenue from each conversion as well.



Commission model (2/2)

- Keep in mind that the commission model is not the same as the merchant model (e.g. wholesalers, retailers etc.)

e.g. Amazon is a pipeline business for books => use merchant model (mark-up on wholesale prices); but Amazon Marketplace is a transaction platform => they use a commission model

Commissions can have a wide range depending on the layer the platform is on

Paypal charges about 5%

Apple Store about 30% for each app sale

Udemy about 65% on the sale of online courses [3]

Subscription model

- Is a model which involves recurring payments (monthly, yearly).
- Is used in a large number of (digital) businesses not only platforms (e.g. newspapers), especially where content is consumed.
- Attractive for platform providers due to higher predictability of revenues.
- Often part of the Freemium model.



Freemium model

- Is a model which involves providing the customer with a free product/service sample (either full functionality for a limited time or a limited/slimmed down functionality for an indeterminate period) and the opportunity to upgrade for premium product/service
 - Free features – powerful marketing tool => attractive to scale up, attract user base without additional resources on ad campaigns or sales force [4]
 - Challenge to define and realize target conversion rate
 - Challenge clear communication of premium benefits
 - Freemium commitment to innovation to attract new users (potential conversion customers)

Advertising model

- does not monetize on products/services the platform
- examples: search engines, social media platforms, Amazon
- USP: better targeted delivery than print media, TV, radio etc. due to more detailed user (behavior) data
- do not sell user data!!!

Other revenue models

- Lead Fee: Customer posts a request on the platform, and suppliers pay to bid for the job/project e.g. Upwork
- Affiliates & Referrals: Let third parties promote your platform or let existing members refer new members to your platform e.g. foodora.
- Data Monetization: A platform charges customers for giving access to its transactions data sets e.g. Zalando.
- Dynamic (Surge) Pricing: A platform charges customers a higher fare to encourage more suppliers to offer their services e.g. Uber
- Token Based: Decentralised platforms with crypto payments and a blockchain infrastructure e.g. Open Bazaar.
- Platform Cooperative: Financial value of the platform is owned and distributed among its users and workers e.g. Fairbnb. [5]

Conclusion

A lot of the platform revenue models are already well established in the pipeline business

=> What drives the exponential scale-up of revenue in platforms?

Network effects

Externalization of internal costs

Search and transaction costs

Strategic positioning in demand/supply spectrum

(Value creation vs. value capturing)

Growing a platform business: strategic leverage points

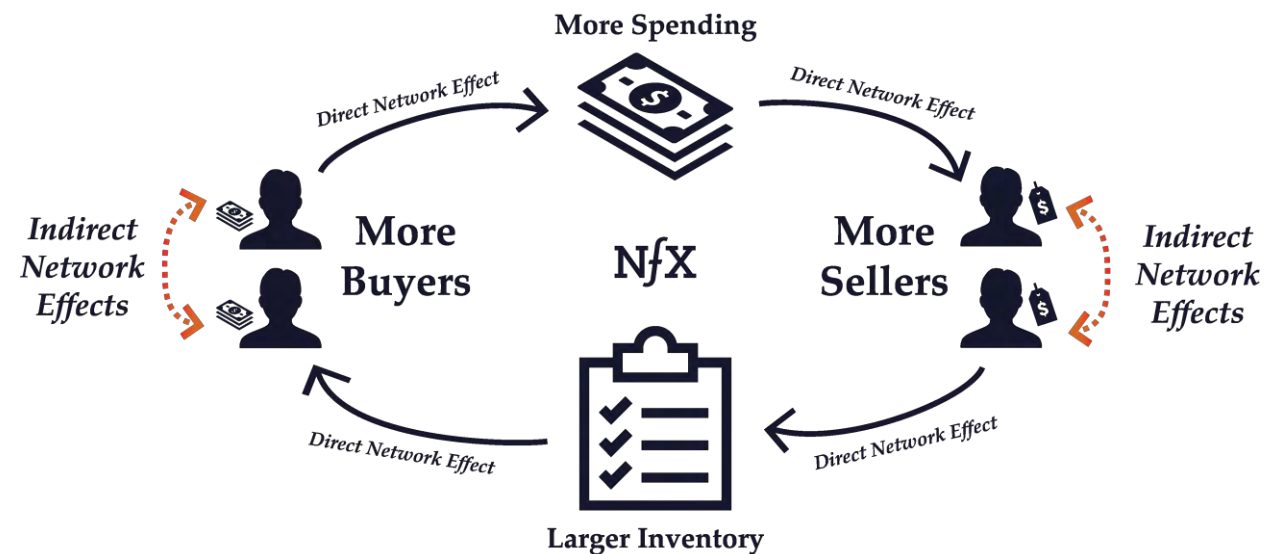


What drives value in platform business models?

Do you remember network effects from the introductory lecture?

They are the facilitators of exponential growth in a platform business and the main difference between pipeline and platform businesses in terms of scaling revenue.

- **Direct network effects:** occur when the value of the network increases as a result of one type of node benefiting from the other type of node (e.g. telephone, fax machine etc.)
- **Indirect network effects:** occur when the value of a network increases as a result of one type of node benefitting another type of node directly, but not directly benefiting the other nodes of its same type.



Source: [Indirect Network Effects](#) | [The Network Effects Bible](#) | [Guides](#)

What drives value in platform business models?

Direct network effects leverage points

- The more users are on a platform/use a product the more value the platform has without developing new features/providing new services

Indirect network effects leverage points

- The value of the platform increases with the number of cross-side participants (or participation)
- The more participants every side of the platform has the stronger the reinforcing effect is for value creation for the other side
- Design and operation of platform drives indirect network effects => is a critical strategic leverage point for the development of the business model

Network effects and the chicken/egg paradoxon (1/3)

Direct and indirect network effects are directly linked to solving the chicken and egg paradoxon, i.e. in the beginning network effects are too weak to sustain platform growth

How to work around it?

Subsidies

- producers (sign-up bonus, referral bonuses, preferential visibility, access to resources, trainings, guarantee of access to key resources in perpetuity, etc.)
- customers (e.g. freemium model, heavy discounts etc.)

Piggy-back

- high visibility users (e.g. celebrities – Twitter, Ashton Kutcher)
- other networks or platforms (e.g. cooperations – Paypal and eBay)

Network effects and the chicken/egg paradoxon (2/3)

Direct and indirect network effects are directly linked to solving the chicken and egg paradoxon, i.e. in the beginning network effects are too weak to sustain platform growth

How to work around it?

Start in a niche market and expand

- Start with a niche which corresponds to available resources and grow organically (e.g. only a limited geographic area – Uber, AirBnb)

Transform from pipeline to platform

- provide a valuable product/service, build the customer base and then open up to the other side (e.g. video editing – Instagram, fulfillment – Amazon)

Network effects and the chicken/egg paradoxon (3/3)

Direct and indirect network effects are directly linked to solving the chicken and egg paradoxon, i.e. in the beginning network effects are too weak to sustain platform growth

Examples for critical thresholds

Facebook – 1 person engages if they have 10 connections within 14 days

countermeasures – import contacts from peoples e-mails, suggest connections, engage users with games and news etc.

Uber – drivers drop out at a high rate before they complete 25 rides

Opentable – customers need around 25 restaurants in their area to perceive value from the offer

Wikipedia – 1% write, 9% edit, 90% read

Identify the critical mass thresholds and ratios to derive KPIs to define the necessary critical mass of one or the other side of the platform.

Externalization of internal costs

...digital transformation/digitalization and automation enable businesses to externalize costs; platforms are able to take more advantage of this due to their structure

Platforms externalize as many costs as possible to the supply or demand side (e.g. product quality assessment – ratings from customers) but they provide also incentives from the sides to accept them

Examples of demand side externalization: Booking.com, Expedia etc.

(is being copied also by pipeline businesses with increasing digitization – airlines from ticket booking, to check-in and luggage dropp-off)

Incentives: personalization, convenience and (typically) lower costs

Examples of supply side externalization: Google/YouTube, Facebook, Instagram etc.

Incentives: some monetization, visibility

Search and transaction costs*

Basic functions a platform can perform:

- a) Reducing search costs incurred by the constituents when transacting
- b) Reducing shared costs incurred through the transactions themselves. (A. Hagiu, Harvard Business School)

Types of costs: time, money, effort, knowledge, skills, risk or decision aversion etc.

Examples of:

- search costs: awareness, selections and filters, recommender systems/algorithms, online and not physical, time
- transactions costs
 - before buying: reduced communication, clear pricing, clear scope, clear transaction status, platform as escrow, reminder system
 - after buying: rating, insurance, dispute resolution and refunds managed by the platform

* “search and transaction costs” goes back to Ronald Coase, 1937 and includes all costs incurred to be able to use the price mechanisms

Strategic positioning in demand/supply spectrum

- a) Create a new channel for existing demand/supply
- b) Create a new type of participant on the demand side/supply side

Examples for b) on the demand side: Facebook and Google – the advertising banner as tool for SMEs; created new market segment of small digital advertisers (several millions)

Examples for a) on the supply side: Amazon Marketplace, eBay – moving sellers (who were previously offline but also some who were already online) to their platform

Examples for b) on the supply side: Uber, AirBnB, Fiverr - created a new workforce (part-time, not professional drivers or graphic designers/programmers/assistants)

Examples for a) on the demand side: Booking.com – hotels already used electronic means to communicate with agencies; rooms booked already by third-parties

Integrating revenue models with business models



Key business models in ecosystems

Typically four key business models can be observed in platform ecosystems

- **Aggregators** focus on consumer ecosystems by aggregating consumer demand (and data) at scale
- **Integrators** focus on the integration between producers (providing supply) and consumers (providing demand) to more efficiently organize a fragmented ecosystem
- **Infrastructures** coordinate and organize production by providing critical infrastructure and standards
- **Capabilities** address a specific part of the value chain, typically proprietary IP and narrow focus

Source: Ecosystem Innovation Playbook, Choudray S.P, Chahhira P., Platform Labs&Infosys Finacle, 2022



Aggregators

Functions

provide consumer services and engage consumers through data-driven personalization and habit design

How they scale

a) learning effects – more data leads to the ability to deliver personalized and relevant customer experience => greater consumer engagement => greater scale and scope to capture data

b) benefit from two-sided network effects; more consumers=>more producers => more consumers =>

Strategic leverage point: increase multi-homing costs (especially for consumers) to increase network effects

Revenue model(s)

a) transaction fee for facilitating marketplace transactions

b) charge producers for customer access to promote themselves

c) generate leads from consumer data and drive sales in their traditional business(es)

d) Advertising fee for third-parties

e) Monetize data in form of data products

Integrators

- **Functions**
 - integrate production side services and deliver a one-stop shop for distribution partners
 - facilitate matchmaking and exchange of data between the production and consumption side of the ecosystem
 - aggregate data across the consumption side and provide ecosystem analytics to production partners
- **How they scale**
 - a) learning effects – more partners, more aggregated data, better matchmaking, more participation on both sides
 - b) network effects – more distribution partners, more potential, attracts more partners, produces more supply, attracts more distribution partners,.....
- **Revenue model(s)**
 - a) transaction fee for distribution
 - b) licensing fees for APIs or key capabilities for partners
 - c) charge for access to industry wide analytics

Source: Ecosystem Innovation Playbook, Choudray S.P, Chahhira P., Platform Labs&Infosys Finacle, 2022



Infrastructures

- **Functions**
 - define the emerging ecosystem and specify standards and data models that organize and support participants' activities
 - capture industry-wide data on production processes and provide knowledge services to the ecosystem
 - organize third party services for producers building on top of the infrastructure
- **How they scale**
 - a) create lock-in - due to standards and services
 - b) economies of scale – fixed costs of ownership are spread across a growing (large) number of participating firms => high(er) utilization of fixed assets
 - c) learning effects – increasing data captures improve prediction models
- **Revenue model(s)**
 - a) selling infrastructure products and services to producers
 - b) diversify into a higher variety of business model as soon due to lock-in

Source: Ecosystem Innovation Playbook, Choudray S.P, Chahhira P., Platform Labs&Infosys Finacle, 2022



Capabilities

- **Functions**
 - deliver a non-commoditized capability at scale (IP or data advantage)
 - enable embedding through architecting (i.e. developer ease of use)
 - use data captured across the ecosystem to improve function of capability or provide analytics and insights as an additional value proposition
- **How they scale**
 - a) learning effects
 - b) network effects – the more platforms and systems they are embedded in, the higher the diversity of captured data, the better the prediction models
- **Revenue model(s)**
 - a) freemium models (with ease of use and integration being a critical adoption factor)
 - b) free initial integration and then usage-based value capture (strategic leverage point – expand into adjacent services/capabilities to create lock-in)

Source: Ecosystem Innovation Playbook, Choudray S.P, Chahhira P., Platform Labs&Infosys Finacle, 2022



Literature

- [1] Osterwalder A., Pigneur Y.: Business Model Canvas, [Business Model Canvas – Download the Official Template \(strategyzer.com\)](https://strategyzer.com), last visited on May 20, 2023
- [2] Afuah, A. 2004. *Business Models: A Strategic Management Approach*. New York: McGraw-Hill/Irwin, pp. 67-69
- [3] <https://innovationtactics.com/platform-business-model-complete-guide/>, last visited on May 20, 2023
- [4] [Making “Freemium” Work \(hbr.org\)](https://hbr.org), last visited on May 20, 2023
- [5] [Platform Economy: The 4 Key Business Models | by Marco Torregrossa | Euro Freelancers | Medium](#), last visited on May 20, 2023
- [6] [Ecosystem Innovation Playbook](#), Choudray S.P, Chahhira P., Platform Labs&Infosys Finacle, 2022

