Introduction to Platform Cooperativism

Part 1

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Foreword

- This is Part 1 of the slidedeck for the Introduction to the Platform Cooperativism mini-course.
- The mini-course is divided into 3 parts:
  1. Cooperativism and Platforms
  2. Drivers of Platform Cooperativism
  3. The Platform Cooperativism Movement and Future Industries
- There are no assignments included with this mini-course. If you would like an assignment for your personal use or for use in a course, please send an email to **ledgerback@gmail.com**.
- Platform Architecture was excluded from this version of the mini-course.
- If you would like to make ***updates*** or report the need for ***corrections*** to this slidedeck, please do so by sending an email to **ledgerback@gmail.com**.

Syllabus

- Materials Needed
- Learning Objectives
- Prerequisites
- Topic Schedule
- Schedule
- Supplementary Materials

Materials Needed

- A personal computer
- An internet connection

Learning Objectives

- To attain basic knowledge of:
  - Platforms
  - Cooperativism
  - Sharing Economy
  - World Wide Web (WWW)
  - Relational Dynamics
  - Monopolies
  - Platform Cooperativism

Prerequisites

- An interest in:
  - Transformative politics through digital networks;
  - Cooperativism;
  - Industry 4.0;
  - Platform ecosystems;
  - Personal Data Economy;
  - Self-hosting;
  - Ethical platforms;
  - Digital Infrastructure;
  - Digital Work;
  - Sharing economy;
  - Democracy;
  - Data sovereignty; or
  - Digital citizenship.

Topic Schedule

1. Cooperatives
2. Platforms

Cooperatives

1. Cooperatives Overview

1. Principles and Values
2. Defining a Cooperative
3. Short History of Cooperatives
4. Relational Dynamics

1.1. Values

- Cooperative Values of
  - self-help,
  - self-responsibility,
  - democracy,
  - equality,
  - equity, and
  - solidarity.
- Ethical values of
  - honesty,
  - openness,
  - social responsibility, and
  - caring for others.

1.1.1. Cooperative Principles

- **Voluntary and Open Membership**: Cooperatives are voluntary organisations, open to all persons able to use their services and willing to accept the responsibilities of membership, without gender, social, racial, political or religious discrimination.
- **Democratic Member Control**: Cooperatives are democratic organisations controlled by their members, who actively participate in setting their policies and making decisions.
- **Member Economic Participation**: Members contribute equitably to, and democratically control, the capital of their cooperative. At least part of that capital is usually the common property of the cooperative. Members usually receive limited compensation, if any, on capital subscribed as a condition of membership. Members allocate surpluses for any or all of the following purposes:
    - developing their cooperative;
    - benefiting members in proportion to their transactions with the cooperative; and
    - supporting other activities approved by the membership.

1.1.2. Cooperative Principles

- **Autonomy and Independence**: Cooperatives are autonomous, self-help organisations controlled by their members. If they enter into agreements with other organisations, including governments, or raise capital from external sources, they do so on terms that ensure democratic control by their members and maintain their cooperative autonomy.
- **Education, Training, and Information**: Cooperatives provide education and training for their members, elected representatives, managers, and employees so they can contribute effectively to the development of their co-operatives. They inform the general public - particularly young people and opinion leaders - about the nature and benefits of co-operation.
- **Cooperation among Cooperatives**: Cooperatives serve their members most effectively and strengthen the cooperative movement by working together through local, national, regional and international structures.
- **Concern for Community**: Cooperatives work for the sustainable development of their communities through policies approved by their members.

1.2.1. Defining a Cooperative

- From the **International Co-operative Alliance (ICA)**: “A cooperative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise.”
- From the **United States Department of Agriculture (USDA) in 1987**: “A cooperative is a user-owned, user-controlled business that distributes benefits on the basis of use”

1.2.2.1. Characteristics and Identification

- A cooperative is an amalgamation of an enterprise and a collective.
- The cooperative provides goods and/or services required by members while taking into account the:
  a. interests and needs of members,
  b. entrepreneurial objectives of the organization, and
  c. financial sustainability of the organization.
- Members act as users and owners (can also say producers and users, i.e., produsers, in some cases) by participating in three levels:
  a. Provision of resources,
  b. Decision-making processes, and
  c. Sharing of profits in the form of patronage refunds (a payment from the profits earned by the cooperative, generally based on the number of transactions a member had with the cooperative in a given year

1.2.2.2 Characteristics and Identification

- Cooperatives are also known as *mutuals, fraternals, collectives*, and *social clubs*.
- A Cooperative is not defined by their corporate structure, tax status, or name, but the organization's adherence to the Cooperative Principles and Values, and orientation towards satisfying member needs, rather than attaining a return on investment
- The characteristics that are common to all cooperatives, except for non-profit cooperatives, are:
    - Ownership: Joint-ownership by its members who use or produce the goods and/or services (with some exceptions).
    - Governance: Democratic governance with the underlying principle of "1 Member, 1 Vote"
    - Distribution of Profits: Profits (surplus after costs and expenses) is owned by the members who decide how the profits are distributed, with the profits generally distributed to the Cooperative's reserve fund and to the member-owners in the form of patronage-dividends based on their patronage in the previous fiscal year.

1.3.1. Short History of Cooperatives

- Though Cooperative-like organizations have existed as early as Ancient Egypt and Ancient Greece, the modern Cooperative movement did not truly take hold till the 19th century in England and mainland Europe as a reaction to the effects of the Industrial Revolution.
- A familiar precursor to Cooperatives are the Guilds of Medieval Europe, associations of merchants, artisans, and other skilled professionals where guilds practice member control, equitable treatment of all members, and financial support for members in the event of unfortunate circumstances

1.3.2 Drivers of the Cooperative Movement

- The Industrial Revolution (IR) introduced many inventions and advancements in the production of goods and services (e.g., cotton gin, steam engine), which accelerated a massive upheaval of the social and economic structures of societies across Europe in the 19th century.
- The industrial system of production replaced the home-based production (creating enough goods for household requirements) and cottage industries (developing goods at home to be traded elsewhere) across Europe.
- Before the IR, most families relied on home-based production and cottage industries to survive
- The IR led to a massive migration of individuals moving from the rural areas into cities to find work in factories
- The labor standards of the time were very unfair to the laborers who worked in these factories
- However, the populace also gained greater freedom of expression during this time, which was utilized to express disdain or unhappiness with the status quo and government policies, and demand for more personal rights

1.3.3. Rise of the Cooperative Movement

- Lack of public assistance to address systemic social and economic problems led to the rise of self-help societies across Europe and England.
- Some of the earliest self-help societies were fire insurance mutuals in London, England and Paris, France in the 1500s.
- Particularly, in England, there was the rise of mutual aid societies in the 1700s for providing financial assistance and other aid to members in the event of unemployment, sickness, or death. These mutual aid societies eventually were codified into law in the 19th century because they lessen the burden on the government
- Cooperative and quasi-cooperatives have existed in England since the 1760s. Generally, these were consumer-owned businesses focused on flour milling and baking industries
- In Fenwick, Scotland, the Weaver's Society, a purchasers cooperative, was formed in 1769.
- Purchasing cooperatives started to develop on mainland Europe around the 18th century.
- The rise of labor unions also occurred around this time.

1.3.4. Development in the UK and Europe

- Cooperative and quasi-cooperatives have existed in England since the 1760s. Generally, these were consumer-owned businesses focused on flour milling and baking industries.
- In Fenwick, Scotland, the Weaver’s Society, a purchasers cooperative, was formed in 1769.
- Purchasing cooperatives started to develop on mainland Europe around the 18th century.

1.3.5. Early Cooperative Developers

- **Robert Owen**:
  - A visionary English idealist/industrialist who advocated for the development of a new community, primarily rural, for the alleviation of poverty and other issues associated with the IR, by developing small scale communities pursuant to Phalanx model
- **Charles Fourier**:
  - A French social philosopher who developed and envisioned the “Phalanx”model with Robert Owen, a planned community in where self-reliant communities, primarily rural, would cooperatively operate farms and small-scale industries, and live communally.
  - Also credited with developing the term *feminism*
- **Dr. William King**:
  - English social reformer and physician
  - Published *The Cooperator*, a cooperative magazine sharing ideas and stories on cooperation
  - Involved in organizing numerous social and education facilities
  - Advocated a more realistic, rather than visionary forms of cooperativism that Owen had preached
  - Believed cooperatives should start small with the capital provided by members, rather than capital provided from large investors
  - Inspired the development of consumer cooperatives across England
  - Developed 3 guidelines for consumer cooperatives:
    - Cash-only payments
    - Democratic governance
    - Publicize the cooperative movement
  - Developed the Brighton Cooperative Trading Association

1.3.6. Rochdale Equitable Society

- Created in 1833 as a consumer's cooperative. Reformed in 1844 with the Rochdale Principles.
- The purpose of the retail store was to 1) sell goods, 2) purchase homes for members, 3) manufacture member-needed goods, and 4) provide employment opportunities for members
- The development of the Rochdale Equitable Society is a Significant event in the development of the modern cooperative movement because the Rochdale Equitable Society developed the prototype cooperative model and business practices through the Rochdale Principles, upon which the modern Cooperative Principles are based on.
- The 12 Rochdale Principles, as described in *Cooperatives: Principles and Practices in the 21st century*, are provided below for your reading pleasure:
    - Voting is by members on a democratic (one-member, one-vote) basis.
    - Membership is open.
    - Equity is provided by members.
    - Equity ownership share of individual members is limited.
    - Net income is distributed to members as patronage refunds on a cost basis.
    - Dividends on equity capital are limited.
    - Exchange of goods and services at market prices.
    - Duty to educate.
    - Cash trading only.
    - No unusual risk assumption.
    - Political and religious neutrality.
    - Equality in membership (no discrimination by gender).
- The Rochdale Equitable Society is still operating to this day

1.4. Types of Cooperatives

- Worker-cooperatives: provide employment opportunities for members
- Users'-cooperatives: cooperative owned by customers or consumers
    - Consumer: The cooperative sells retail products (food, clothing, hardware, and other consumer goods) to their customer members and other consumers at affordable prices
    - Utility: cooperative provides utility services (e.g., internet, energy, water)
    - Financial: cooperative owned by depositors and borrowers that provides financial services such as insurance, banking, lending, and investment
    - Housing Cooperatives: provide affordable home ownership
- Producers Cooperatives:
    - Purchasing: Purchases products and services in bulk to reduce or share costs for individual members
    - Marketing : Builds markets for members' products and services, improves bargaining power of members, facilitates delivery of products to market, and improves product quality.
    - Value Added Processing: Adds value to product of members through common service facilities for e.g. post-harvest, storage, and processing
- Consortia Cooperatives: independent producers, usually small businesses, form a co-operative to benefit from collective organising, such as finance or insurance services.

1.5. Relational Dynamics

Power imbalances arising from vertical and horizontal relationships.

- Vertical Relationships:
  - “Vertical relationships refer to linkages between people performing different functions.”
  - Top-down relationship which is often hierarchical
  - Example: Parent-child
- Horizontal Relationships:
  - “Horizontal relationships refer to linkages between people performing the same functions”
  - Flat relationship of collaboration between and among peers
  - Example: Students in a class

1.10. Well-known Cooperatives

- F.C. Barcelona
- The Associated Press
- Oceanspray
- Best Western
- Mondragon Corporation
- Ace Hardware
- Land O’Lakes
- EqualExchange
- REICoop

Platforms

2. Platform Overview

1. Defining a Platform
2. Essential Terminology
3. Essential Platform Concepts
4. Platform Governance

2.1.1. Defining a Platform

- **Defined**: A platform is a market that facilitates interactions (transactions) between one or more constituencies (or sides)
- **Types**: There are two types of platforms: 1) one-sided, and 2) multi-sided.
    - **One-sided platform**: in a one-sided platform, there is one side that the platform owner (i.e., market-maker) serves, such that there are economies of scale to serve this constituency group. Generally, this is a standalone product or service
    - **Multi-sided platform**: in a multi-sided platform (MSP), there are two or more (>= 2) sides that the platform owner serves, such that indirect positive network effects occur because one side is more likely to join the MSP when the other side joins the MSP (and in general, these sides want or need to interact)

2.1.2. Platform Examples

Multi-sided			
Market	**First Side**	**Second Side**	**Example**
Credit cards	Cardholders	Merchants	Visa
Online marketplace	Buyers	Sellers	eBay
Streaming Website	Content creators and studios	Users	Netflix
Software Application Store	Users	App Developers	Google Play
Online Game Store	Users	Game Studios	Steam

2.2.1. Terminology

1. **Network Effects**
2. **Economies of Scale**
3. **Asymmetric Information**
4. **Complementaries**
5. **Transaction Costs**
6. **Long-tail and Short-tail**

2.2.2. Network Effects

- **Description**: In economics, a network effect describes a situation in which the value that a user gets from using a system depends on how many other participants the system has. This dependency can be either **positive (benefits users)** or **negative (harms users)** (aka Metcalfe's law).
    - Network effects have a near exponential effect, rather than a linear effect, on the value of a platform.
- **Direct network effects** occur when increased use of a product or a service benefits or harms the users of that particular product or service (often seen with protocols such as TCP/IP).
- **Indirect network effects** occur when increased use of a product or a service benefits or harms the users of a different product or service
- **Same-sided network effects** occur when adding a new user to one side of the platform benefits or harms all other users on the same side
- **Cross-sided network effects** occur when adding a new user to one side of the platform benefits or harms all other users on the other side.
- Network effects can be planned into a platform’s architecture and governance.

2.2.3. Economies of Scale

- **Description**: Costs of production decrease relative to the increase in production of goods because costs are spread over a larger number of goods, thus production becomes more efficient.

2.2.4. Asymmetric Information

- **Description**: In a two-sided context, when one side of the market does not have enough or the same amount of information as the other side of the market

2.2.5. Complementaries

- **Description**: complementaries are a good or service whose utility greatly depends on the consumption of another good or service.

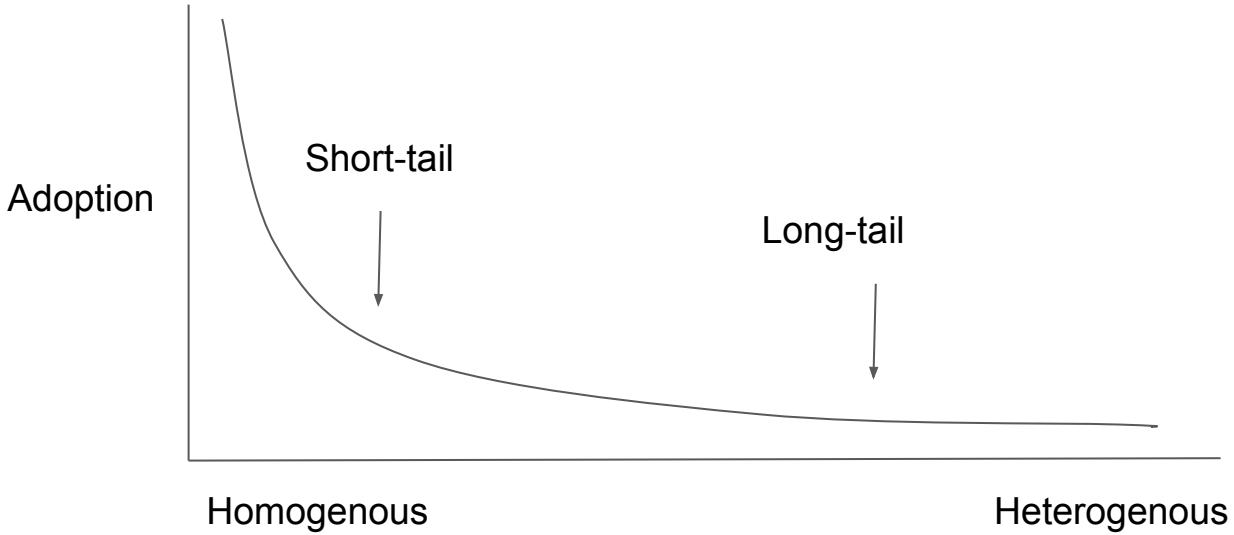
2.2.6. Transaction Costs

- Platforms aid in reducing transaction costs faced by users (generally, the cost of transacting on the platform needs to be cheaper than direct peer-to-peer interaction)
- For MSPs, the two primary transaction costs costs they alleviate are:
  - **Search costs**: costs incurred from one or more sides searching for another side before interacting (generally looking for good partners)
    - 2-sided market: finding members of other sides
    - 1-sided market: creating an audience for the side to search for
  - **Shared costs**: costs incurred during the transaction (i.e., after finding a transaction partner), and generally the costs are common to all participants
    - E.g., Payment systems (Visa, Mastercard, PayPal)

2.2.7.1. Long-tail and Short-tail

- There are **two tails** to market adoption:
  a. the short tail, and
  b. the long tail.
- The **short tail** is the mass market group, which covers the average consumer (homogenous group).
  a. The short tail focuses on meeting the needs of the mass market in developing products and services, which can be delivered with economies of scale and sell in large volumes
- The **long tail** is the niche market group which demands certain functionality (small heterogeneous groups).
  a. The long tail focuses on meeting needs different from the typical consumer, often centered on highly specialized and uncommon functionality

2.2.7.2. Long-tail and Short-tail



2.3.1. Platform Concepts

1. Platform Lifecycle
2. Dominant Design
3. S-curve
4. Leapfrogging
5. Diffusion Curve
6. Multi-sidedness
7. Network Effects
8. Multihoming
9. Tipping
10. Lock-in
11. Competitive Durability
12. Envelopment
13. Architecture
14. Governance

2.3.2.1. Platform Lifecycle: Lifecycle

- **Description**: characterization of where a technology solution is:
  - in its dominant design stage,
  - along the S-curve, and
  - along the diffusion curve (size of its prospective user base that has already adopted the technology solution)

2.3.2.2. Platform Lifecycle: Dominant Design

- **Pre-dominant design**: Influx of competing businesses and flurry of competing solutions to meet market demand
    - Eventually, explicitly or implicitly, the market will center on one (or few) solutions, which generally occurs when constituent groups (used to refer to members of a side) reach consensus on a solution that meets their needs
- **Post-dominant design**: Accompanied by massive exit of companies or companies transitioning to the dominant design (“expected norms for meeting user needs”)
    - Companies do not necessarily use the same technology, nor is it the optimal technological solution
    - Movement towards more price-based competition rather than design-based competition
- **Rule of One**: Self-reinforcing feedback loop caused by dominant design because of increasing returns of adoption (more adoption, more returns), and as design becomes more adopted and improved on, the easier it is for other platform participants to complement the dominant design.

2.3.2.3. Platform Lifecycle: S-curve

- The S-shaped curve (S-curve) best describes the relationship of technological development.
- On the S-curve, there are **five stages**:
  a. **Research & Development**: technology is being developed
  b. **Introduction**: technology is introduced to the public
  c. **Ascent**: hit breakeven and begging to become popular
  d. **Maturity**: technology has become a mainstay
  e. **Decline**: becoming less useful than it used to be
- As a technology hits the decline phase, development switches from product innovation (improve the product) to process innovation (how to improve the process for creating the product and delivering the product)
- Generally, a product declines because of a new technology that is better or cheaper than the incumbent technology solution
- Generally, the best strategy for platform participants whose technology is in the decline phase is to jump onto the S-curve of the disruptive technology solution (i.e., leapfrogging) by adopting the disruptive technology solution as the foundation for its product or service over the incumbent technology solution.

2.3.2.4. Platform Lifecycle: Diffusion Curve

- User adoption of a new technology follows the diffusion curve pattern
- The diffusion curve pattern is a five-piece pattern of a downward concave curve that follows this pattern:
    - Geeks/early influences (3%/3%): adopt tech for technology's sake
    - Early Majority (12%/15%)
    - Chasm: space between early majority and early adopters
    - Early Adopters (35%/50%)
    - Late Majority (35%/85%)
    - Laggards (15%/100%)

2.3.2.5. Platform Concept: Multihoming

- **Description**: when platform participants on either side participate in more than one platform ecosystem.
- A rational approach for platform participants when a dominant platform is yet to be determined. However, this depends on whether the cost of multihoming is high or low. If the cost is high, then participants will stick one or few platform ecosystems. If the cost is low, then participants will participate in multiple platform ecosystems.

2.3.2.6. Platform Concept: Tipping point

- **Description**: the point when the number of adopters has hit *critical mass*, a precedent number of users needed for network effects to become noticeable and develop a self-reinforcing positive feedback loop

2.3.2.7. Platform Concept: Lock-in

- **Description**: how a platform inhibits existing users from moving to a rival platform
- Lock-in becomes more apparent when the tipping point is reached because the tipping point denotes that a viable market exists. Can lead to more platforms developing, and eventually a *race to the bottom*. Thus, platform providers focus on how to secure their users.
- **Two types of Lock-in strategies**:
    - **Coercive**: creating high switching costs (costs associated with migrating from one technology solution to another technology solution).
    - **Value-driven**: making the platform more valuable to users such that switching to another platform becomes unappealing.

2.3.2.8. Platform Concept: Competitive Durability

- **Description**: when adopters continue to use a technology solution long after its initial adoption. Usually, this requires the technology solution adding user functionality and strengthening network effects.

2.3.2.9. Platform Concept: Enveloping

- **Description**: A platform swallowing another platform by offering the functionality of another platform, in an adjacent market, in addition to its existing functionality
- Generally, this is a viable strategy when the platforms have overlapping userbases and the enveloping platform offers functionality that is perceived as more valuable by users of the enveloped platform.

2.3.2.10. Platform Concept: Architecture

- **Description**: A high-level description of the building blocks of a complex system or technology solution and how they relate to each other (similar to a blueprint)
- Architecture is on a continuum with Perfectly Modular (plug-and-play) on one side, and Perfectly Monolithic (one size only) on the other side.
- The aggregate of architectural decisions by ecosystem participants defines the ecosystem architecture
- Ecosystem architecture helps describe how innovation work is partitioned among the ecosystem participants and the platform owner and how their efforts will be integrated.
- Architecture helps simplify the complexity of a platform ecosystem so that an ecosystem participent can work on their solution without concern of another participant's work or compromising ecosystem-wide integration.
- Architecture mostly focuses on technical decisions in the platform ecosystem.
- Architectural changes can have long-lasting effects on the platform which may not have been foreseen at time of implementation
- Architecture is inseparably intertwined with the governance of platform ecosystems.

2.3.2.11. Platform Concept: Governance

- **Description**: who decides what in a platform ecosystem; who has the authority to create rules for creating social order among platform owners and platform participants
- **Types**:
  - **External Governance**: interaction between platform owner and platform participants
  - **Internal Governance**: interaction between providers of a multi-provider platform (i.e., platform owner and other platform providers)

2.3.2.12. Platform Concept: 9 Guiding Principles

1. **Red Queen Effect**: pressure to quickly adapt just to survive brought on by the speed of competing technology solution's growth
2. **Chicken-or-egg problem**: dilemma where neither side of a multi-sided platform with potential network effects will join the platform unless there is a large presence of constituents of the other side
3. **The penguin problem**: when adopters with potentially strong network effects are hesitant to adopt the platform because of concern that others may or may not adopt the platform
4. **Emergence**: the global behavior of a platform ecosystem that arises from the local interactions between platform participants as platform participants purpose their own individual goals
5. **Seesaw problem**: managing balance between autonomy of platform participants and ensuring that the complementaries developed by the platform participants interoperates with the platform
6. **Humpty Dumpty problem**: when separating the complementary asset from the platform makes it difficult to subsequently reintegrate it.
7. **Mirroring principle**: organizational structure of a platform's ecosystem must reflect the architecture
8. **Coevolution**: simultaneously adjusting architecture and governance
9. **Goldilocks Rule**: people will gravitate towards the middle over two extreme choices in any given three ordered choices

2.4.1. Platform Governance

- **Type of Relational Dynamic**: Generally, a relational dynamic between the platform owner and platform participants where this a lack direct authority (i.e., there is a lack of hierarchic relationships between the platform owner and platform participants such that the platform owner does not directly control, direct or enforce the actions of platform participants). Thus, the platform owner needs to focus on motivating platform participants through **performance-based rewards rather than punitive measures**.
- **Platform owner's goal**: shape and influence the platform ecosystem.
- **Key function**: provide a context in which distributed innovation driven by platform participants can arise around a platform.
- **Platform Orchestration**:
  - **Architecture**: reduce structural complexity
  - **Governance:** reduce behavioral complexity
- For the rest of this slidedeck, we shall focus on external governance.

2.4.2. Platform Governance: Dimensions

- **External governance** can be divided into three dimensions:
    1. **Decision rights**: who has the primary authority and responsibility for making a specific type of decision
    2. **Control mechanisms**: tools a platform owner uses to implement and enforce rules for rewarding or penalizing platform participants
    3. **Pricing structures**: how proceeds are distributed between the platform owner and platform participants, and how costs are subsidized
- **3 important notes**:
    1. **The 3 dimensions are interrelated** (i.e., choices about one dimension impacts the other 2 dimensions)
    2. **Governance is costly**. The optimal governance structure is the simplest one that achieves the goals of the platform at the lest co
    3. **Governance structures are strategically inseparable from platform architecture**.

2.4.3. Platform Governance: Decision Rights

- Decision rights exists on a **decentralization spectrum**:
  - The more decision rights the platform owner has, then the spectrum will tend towards the centralized end (i.e., more centralized)
  - The more decision rights the platform participants have, then the spectrum will tend towards the decentralized end (i.e., more decentralized)
- Decisions are made concerning the platform or complentaries. In either case, the two primary types of decisions that can be made are strategic and implementation.
- **Types of Decisions**
  - **Platform**: “decisions relating to the platform”
    - Strategic : right to set the goals of the platform (i.e., goal-setting)
    - Implementation: right to set how goals will be accomplished
  - **Complementaries**: “decisions relating to the complementary assets of the platform”
    - Strategic : right to set the goals of the complementaries (i.e., goal-setting)
    - Implementation: right to set how goals will be accomplished

2.4.4.1. Platform Governance: Control

- **Control portfolio:** Control mechanisms can be used separately or in combination for a specific complementary or complementaries
- **Types of Control Mechanisms**:
  - **Formal**: focus on imposing rules and standards
  - **Informal**: focus on shared or common views
- **Formal control mechanisms**
  1. **Gatekeeping**: predefined criteria for determining which complementaries and participants can participate in the platform's ecosystem
  2. **Process control**: degree to which the platform owner rewards or punishes platform participants for following prescribed development methods, rules, and procedures for complementaries to interoperate with the platform.
  3. **Metrics**: degree to which the platform owner rewards or punishes platform participants based on the degree their work achieves some predefined target performance metrics
- There are prerequisites that must be met before a platform owner can use any of the formal control mechanisms

2.4.4.2. Platform Governance: Control

- **Gatekeeping**:
  - There are three prerequisites before a platform owner can use gatekeeping as a control mechanism:
    1. The platform owner must be sufficiently competent to judge the work of platform participants.
    2. The platform owner must be able to do so fairly and speedily.
    3. The platform participants must be willing to be subjected to such gatekeeping.
- **Process Control**
  - There are two prerequisites before a platform owner can use process control as a control mechanism:
    1. Platform participant behavior should be directly or indirectly observable and monitorable.
    2. It is assumed that following the platform owner's processes will lead to technically better complementaries than if platform participants followed their own processes.
- **Metrics:**
  - There are two prerequisites before a platform owner can use metrics as a control mechanism:
    1. Metrics must be prescribed by the platform owner
    2. The metrics must be objectively measurable

2.4.4.3. Platform Governance: Control Mechanisms

- **Relational control** is the only informal control mechanism. .
- **Description**: platform owner's reliance on norms and values shared with platform participants to influence their behavior
- **Prerequisites**:
  1. Shared values, culture and norms among app developers and platform owners
  2. Low churn fo platform participants
- **Effective Control Mechanisms**
  - **Description**: A control mechanism is effective when the **ratio between attempted control and realized control by the platform owner** over platform participants is small (i.e., not too far apart)
  - **Two requirements**:
    1. The control mechanism should be accepted by platform participants as being legitimate, fair, and reasonable.
    2. The prerequisites for the control mechanism must be satisfied

2.4.5. Platform Governance: Pricing Policies

- **Goal**: incentivize platform participants to take costly action to ensure the prosperity of their complementary assets, and in turn, the prosperity of the platform.
- There are a **four considerations** for pricing structures:
  1. Should pricing be symmetric (both sides) or asymmetric (one side) for the two sides of the platform?
     a. Asymmetric pricing: make money on one side and give a break to the other side (asymmetric pricing), or
     b. Symmetric pricing: make money on both sides (symmetric pricing).
  2. If asymmetric pricing, who to subsidize and for how long?
  3. How to determine the revenue share between platform participants and the platform owner?
     a. **Fixed scale**: platform owner keeps a predetermined percentage of each dollar of revenue
     b. **Sliding scale**: scale changes with an increase in the use or revenue amount of complementary assets
  4. How the platform participants determine the pricing structure of their complementary assets?

2.4.6.1. Benefits of a Platform Ecosystem

- For **Platform Owners**, there are four major benefits from a platform ecosystem:
  a. Massive innovation beyond what is possible within the firm by utilizing the power of a competitive market
  b. Transfer of costs and risks for innovation to platform participants
  c. Capturing the market's long-tail
  d. Increase competitive sustainability through extensive network effects that leads to a positive feedback-loop of users, which will make it harder for competitors to compete unless they can provide a better price-performance ratio and secure platform participants

2.4.6.2. Benefits of a Platform Ecosystem

- For **Platform Participants** (producers), the two major benefits from a platform ecosystem are:
  a. Access to a marketplace which in turn makes it easier to find a potential customer base
  b. Technological foundation (generic functionality) so that participants can focus solely on developing complementary asset (specific functionality)

2.4.6.3. Benefits of a Platform Ecosystem

- For **Platform Users**, there are four major benefits from a platform ecosystem:
  a. Powerful customization of products and services to meet the user's unique needs
  b. Faster innovation leads to users getting products with higher functionality and at possibly lower prices
  c. Greater competition among rivals leads to platform owners and platform participants trying to deliver the most value to users
  d. Lower search and transaction costs for users looking for certain complementary assets and transaction costs are reduced through a transaction mechanism such as a payment system (e.g., Visa, Mastercard, Square).

Supplementary Reading Materials

- Amrit Tiwana, *Platform Ecosystems: Aligning Architecture, Governance, and Strategy*
- Co-op Principles Then and Now (Parts 1 and 2)