The Mechanics of Disruption

Disruption is a *hallmark* of market ecnomics. It promotes innovation. It is should not be feared, but embraced.

Different types of disruptions

Following are the main categories of disruption:

1. **Technology Disruption**: Disruption due to change in the fundamental technology. (IoT)
2. **Architectural/Design Disruption**: Disruption due to developing efficient design to deliver the best value using technology (iPod)
3. **Business Model Innovation:** Using technology to redefine the value proposition. (AirBnB)
4. **High End Disruption**: Disrupt markets with high-end products/services. (iPhone)
5. **Low End Disruption**: (Xiaomi)
6. **New Market Disruption**: One industry disrupting other's market. (smartphone disrupting camera industry)
7. **Value Chain Disruption**: Disruption in one part of value chain affecting other parts of the chain. (whatsapp/skype affecting cellular calling/texting)

Disruption is mainly promoted by the following five domains:

1. **Data**: Use of data to improve products and services.
2. **Innovation**: Due to technology, innovation cycle has become very quick due to easy real-time testing.
3. **Competition**: Easy for other players, big and small, to try their luck.
4. **Value**: New ways to create and deliver value.
5. **Customers**: they are informed and their needs are ever-changing.

> *One with the best technology/innovation doesn't always win. You need to disrupt the market with your innovation to emerge victorious. It doesn't need to be the best, as long as you can capture the market.*

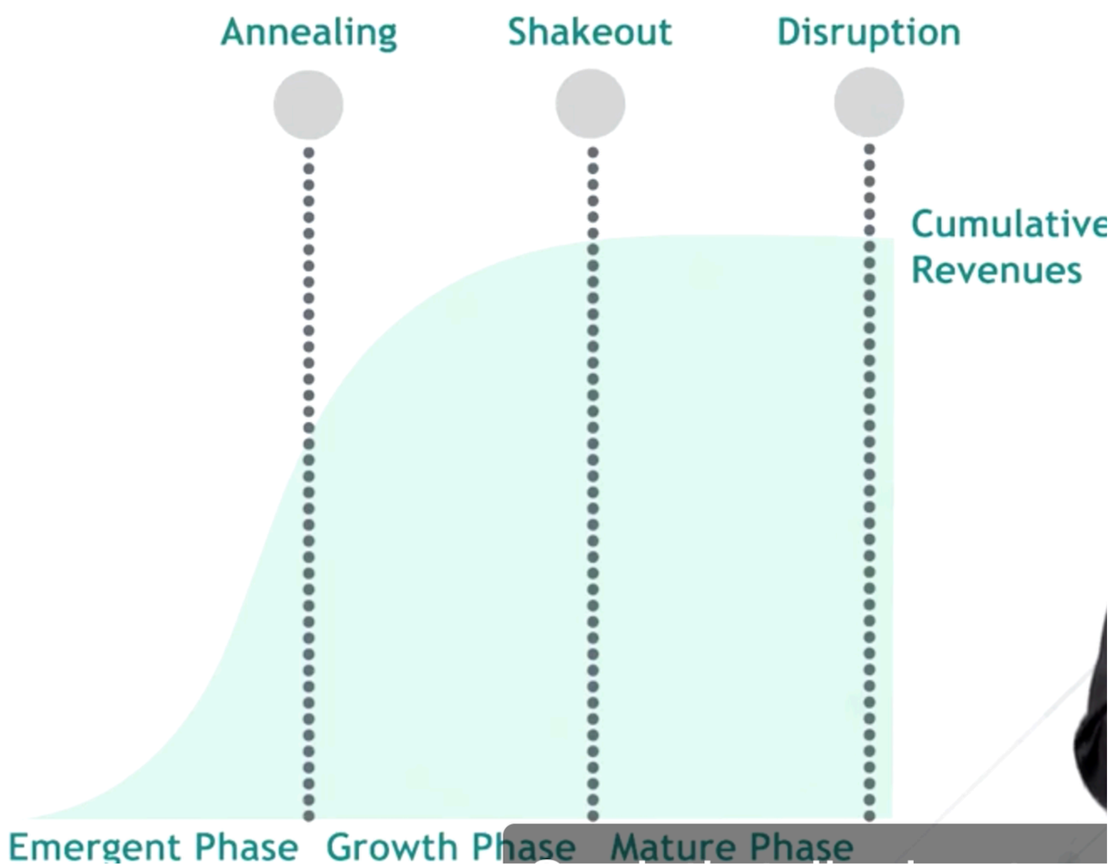
There are four underlying drivers that drive digital economies and have disruptive potential. When you are trying to jump into competitive cycle in a disruption, you should always consider the following four drivers and try to identify where you and your product/service stands with respect to your market. Each of the below driver will help you determine how you can gain a competitive advantage. Of course, there can be many more drivers, but following are the most observed drivers, with others more or less being a combination of these.

1. **Network Externalities**: A good/service might improve in value as more and more people use it. (telephone, OS, Facebook)
2. **Winner-take-all markets**: Competitive cycle can end in a major winner standing tall in the end.
3. **Platform Technologies**: A tech that has value across multiple sectors and allows different players to plug-in in different ways (Mobile, Cloud Computing)
4. **Complementary Capabilities**: Provide some extra benefit along with the actual value proposition to make it more attractive or valuable to the customer. (customer service)

> *Old sources of competitive advantage are disappearing*
>
> 1. Natural monopolies
> 2. Scale
> 3. Learning curves
> 4. Vertical integration

Competitive Lifecycle

There is a common trend in how transformations and disruptions play out over time. It is an industry-level trend.



This is an S-curve. The area under the S-curve is the cumulative revenue of the industry

1. **Emergent Phase**:
   - Players are exploring & innovating. It can be short or long depending the nature of technology and industry.
   - Focus is more on tech. Profits are earned through differentiation and niche placement.
   - More small players are active in this phase.
   - Leads to annealing.
2. **Growth Phase**: A sharp increase in revenues.
   - Focus is more on things such as manufacturing, value delivery, service, cost structure, etc.
   - Marked by prevalence of a dominant design in the market.
   - At the end, a shakeout occurs.
3. **Mature Phase**:
   - Market is tapped out and revenues become steady.
   - We should think about renewing the process through a new disruption.
     - It can either be driven by a technology change i.e. **Technology Push**.
     - Or it can be driven by consumer preferences or market itself i.e. **Demand Pull**.

At the same time, technology goes through the following points over the course:

1. **Annealing**: Overtime market converges towards a dominant design. Marked by start of growth phase.

2. **Shakeout**: Occurs when there are too many players. M&As and shutdowns can lead to a winner-take-all market. Marked by end of growth phase. (start of mature phase)
3. **Disruption**: Marked by start of emergent phase of some other innovation. Hence, we have overlapping S-curves.

Incumbent Firms during Disruption

Why do some incumbents struggle with disruption?

- New tech renders their offerings valueless in the market and it has **no experience** in the new tech.
- **Fail to see** the value of new innovations happening in their industry.
- **Core Rigidity**: Idea that what made you successful in the past will do so in the future as well.

Why do some incumbents succeed during disruption?

- **Capital & Expertise** required for RnD is available.
- **Assurance**: Customers are sometimes, or in some markets, risk averse.
- **Complementary Resources**: Provide added benefits.
- **Dynamic Capabilities**: Firm has ability to adjust quickly to changing business trends and requirements.

Economics of Innovation

Total value created by an innovation is shared by the following stakeholders:

1. Innovator
2. Supplier
3. Customer
4. Imitator or Competition

> ***Timing is everything.*** Sometimes, being a *pioneer* matters. But being the 1st doesn't always mean you'll succeed.
>
> ***Timing strategy depends on the sort of capability of a company or the nature of the market.***

Exploitation: Invest in RnD to improve current goods and services.

Exploration: Invest in RnD to improve overall technology.

It is important to maintain balance between the two. Too much exploitation and you'll lose in the disruption. Too much exploration and you'll not become profitable.

Value Appropriation

How to appropriate value during disruption?

- **Intellectual Property Protection i.e. licensing, patents, etc.**
- **Complementary assets i.e. providing additional benefits that others can't or won't provide.**

- First-mover advantage.
- Standardization: Become the player who decides the dominant design.
- Ease of Imitation: Come products/services are not IIP, but are inherently complex such that they can't be imitated quickly.
- Diffusion: It means that you diffuse among customers quickly before others have a chance to imitate. Not seen very often.