

# Network effect (Network Effect)

Network effect is the most appropriate way to understand why Facebook can reach more than 1 billion users and many people want to give up this social network but not goats.

**Network Effects is a very important topic but sometimes confusing.**

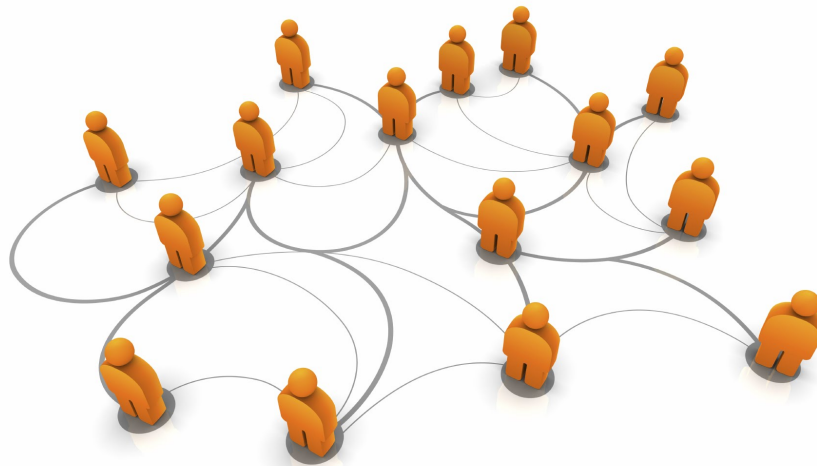
The reason why Network Effect plays an important role in business is because companies create reliable network effects that can stand up to stressful situations, retention rates and customer interaction. High, there are many typical characteristics of monopoly and are able to persist for a long time.

Definition of Network Effect:

The network effect is achieved when adding new users creates value for existing users.

Exactly here is the overall experience and value within the network will increase when there are new users.

## So how does the network effect take place?



Any user always wants something from other users. **Each user in such a network is both a producer and a consumer.**

For example, I posted my article on a blog and I also read it. I tweet and I also read tweets from others. I check the amount of users accessing Wave and I also contributed to increase traffic for that website.

In other words, I am both a producer and a customer. I am both a reader and a writer.

## Companies with strong network effects

Consider three business areas with strong network effects: **Social Networks** , **Multiplayer Games** and **Sensor Networks** .

For example, **Facebook** - is famous for its strong network effect and organic growth. Facebook was developed by a group of Harvard University students, then, exploded in the careful calculation (of the founders) and was in no hurry to ensure a strong connection. The more friends and family join, the greater the value of the current users.

That core network effect is the basic activity on Facebook, including sharing or posting status / posts. Posts are "**glue**" and "**starter kit**".

**Every Facebook user is both a producer and a customer. They are both writers and readers.**



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Next, consider another example - **Twitter** - just like Facebook - has a strong strong effect. What's interesting about this social network is because it's shared faster on Twitter. However, Facebook has a stronger network because the attachment to family and friends and personal photos is seen as a glue capable of "super" strong adhesion!

## Network effects in multi-player games

By definition, this game genre is designed with the participation of many people. When a new player joins, gamers who have played for a long time will benefit. Just like on Facebook we see your friends' information, in the multi-player game, we also get the information of other competitors.

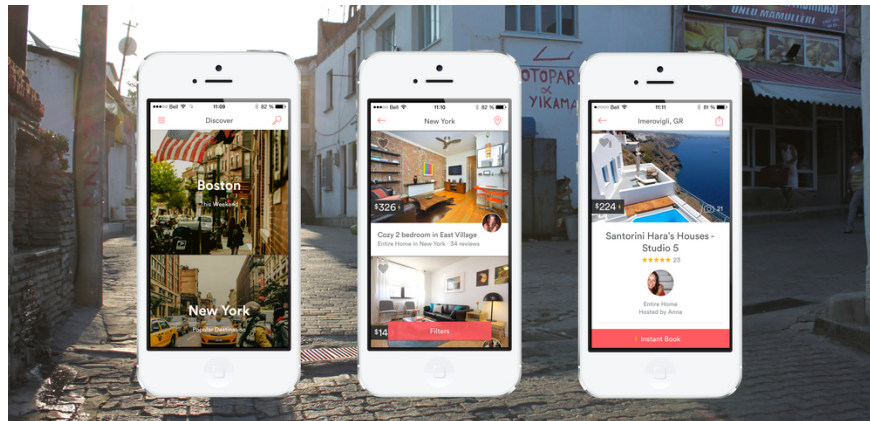
"Glue" and "starter" for network effects in that game are **the games** and **objects in the game** itself.

They provide contacts (touch points) and opportunities for all players to create a game just for gamers. The game has a high degree of cohesion because players need to level up and new entry into the worlds created by these people is quite expensive.

Finally, let's look at another example that is Waze - a traffic mapping application acquired by Google. Waze developers were very wise to realize that traffic participants were willing to share their position in exchange for getting traffic information in other places they wanted to go.

Users share their information and receive other information. Each user is a producer and consumer of information.

## Network effect and spread (virality)



Take a look at the difference between **Network Effect, Virality, Marketplace** (E-commerce model operating in the form of C2C - customer to customer, helping manufacturers meet more customers) and **Economies of Scale** (advantage by regulation tissue) - terms that are often confused with network effects.

**Virality describes something that spreads very quickly through an existing network . Meanwhile, Network Effect is creating a completely new network.**

For example, word of mouth is an example of Virality - news of the attack on Parisian tourists spread fast via Twitter. **Pokemon Go** is another proof of Virality - millions of people race to hunt Pokemon in this game. And sure enough, videos of funny cats on YouTube are also easily recognized as spreading.

Virality is great and really important for successful businesses. However, it does not last long. All of the above examples are short-lived phenomena that suddenly break out and then (sooner or later) will settle down. They will not be sustainable over time. They are fortunate or unusual, unexpected events, not a solid foundation in business.

To clearly distinguish these two concepts, you can understand that **Virality is not guaranteed for Network Effect** but **Network Effect will ensure that Virality becomes stronger.**

## Network Effect and Marketplace

Next, let's look at the relationship between **Marketplace** and **Network Effect**.

It seems that companies like **Uber** and **Airbnb** already have network effects built into the system and operate within a range of certain users, but this seems to be inaccurate when considered on other scales.



**Marketplace consists of two aspects: supply and demand, manufacturers and consumers.**

In the case of Uber and Airbnb, some manufacturers seem to be customers, but not all. Not all Uber drivers travel by Uber and not all Uber riders are drivers. Not all Airbnb owners / rooms are guests and not all Airbnb reservations are apartment owners.

These e-commerce models and other high-quality models are word of mouth but the network effect is quite weak.

## **Economies of Scale and Network Effect**

Marketplace and larger-scale business models achieve high efficiency in supply volume or economies of scale.

For example, **UberPool** is cheaper by size. This means, once the number of users is large enough (many customers traveling along the route are joined together) the cost of the ride will be cheaper. This is the network effect because the more people join, the cheaper the travel cost.

Another example is delivery services like **Postmates**. If the number of orders is low, then orders will be delivered separately, leading to very expensive ship charges. However, if more and more applications are bundled together, the shipping cost will be cheaper because at this time, customers who are near each other have signed up for purchases that have been gathered for delivery once.

In general, the scale advantage will be achieved when business activities develop. For example, companies can negotiate with suppliers and receive a discount if they buy goods in large quantities.

This has nothing to do with Network Effect - which is considered usable to protect business and monopoly.

Larger companies with higher profit margins are more powerful and more likely to resist when the market turns bad.

## Network effect in nature

Before going into the mechanisms of network effects, let's also look at nature, does this effect exist?



Science calls them self-organizing networks. If I'm not familiar with the term, I suggest you read the **Complexity** - one of the very interesting books about science.

" Carbon-based life" - the whole living world around us is based on DNA and RNA that are able to perform transcription processes themselves. More importantly, DNA and RNA are more likely to be lumped together, leading to a process called **auto-catalysis**.

This may sound very complicated but it is really easy to understand and play a core role to better understand Network Effect.

Imagine the basic blocks of life being A and B. One day, they are combined and created a new block called AB. Next, blocks A and B are combined with AB to form AAB or ABB. In this way, you can create AAAB, AABB, BAAB, BABB .

This means, simple combinations of basic blocks can create more and more complex blocks and chains. This is **the feedback loop**.

## How to implement network effects

Now let's learn about how you can deploy or test the effect of network effects in your business.

Each intersection needs to become part of a simple feedback loop.

On Facebook, users are both readers and writers. Reading and writing create a powerful feedback loop (Facebook loop). This loop pulls the user back to use the service. Just like the basic blocks that form life, it's not 1: 1 **interactions, but interactions between people with many people.**

Groups of Facebook users - friends and family - constantly create and consume information, refer to each other, create feedback loops and pull people back.

Facebook is a very successful company because it is a self-organizing network that is "fueled" by network effects.

Facebook's ability to protect itself is network structure and network effect is continuous. **Users who try to leave will be constantly pulled back by their families and friends.**

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