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"PLATFORM ECONOMY. IMPACT OF THE PRICING STRATEGY ON THE PLATFORM NETWORK EFFECTS"

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Firma dello studente

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THANKS

I thank my parents for the trust they placed in me, and for teaching me the importance of dedication in any area.

Their support has been a source of motivation throughout the course of study.

I would like to thank all the people who have faced this path with me and helped me to grow on the personal and human side.

I would like to thank Professor Di Maria for her support in writing this thesis.

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INTRODUCTION

Platform Revolution is one of the first attempts to provide the initial clear, complete, authoritative guide to one of the most important economic and social developments of the time – the rise of the platform as a business and organizational model.

The platform business model has brought the success in many of today's biggest, fastest-growing and most powerfully disruptive companies.

It is worth to underline that highly likely platforms have already changed community members life as an employee, a business leader, a professional, consumer or a citizen – and are poised to produce even greater changes in people's daily life in upcoming years.

The *experimental Master Thesis* aims to investigate understanding the components of the platforms; their network models, how to build safe network effects and what are the possible applied pricing strategies, each one's impacts on the user base. At the same time, another crucial point in research is to define followed methods, the required time to solve a chicken-or-egg problem which is considered as one of the main barriers to overcome mostly at the beginning of the platform life or in current, newly targeted markets.

The first chapter discusses the revolution of the platform economy, comparison of platform business with the traditional pipeline companies and possible ways of being converted to platform model and difficulties to overcome.

To be defined power, platform core basis on network effects which refer to the value of each user that has a positive or negative effect on the overall user base. This will be also a focal point considering the analysis in sharing economy and its different characteristics.

In the final part of the first chapter will be analyzed today's world situation, and improvements in platform models, main players, and key competition requirements.

The second chapter will be underlined the *Platform design and governance* by taking into account types of different platforms. As the existence of a huge number of successful platforms brings a high level of competition, it will be important to deep in the literature to evaluate:

-Pricing in Multisided platforms and Governance rules;

-Experienced formulas to chicken-or-egg problem;

-Functions of a platform.

The emphasized topics will help to understand the success formulas of the platform giants and their market-related strategies in order to keep pushing growth and sustain it in a long period.
According to third chapter, referring to literature will be researched on how hard to challenge the monetization of the platform, possible solutions that could be profitable without damaging the network effects of the platform. The main analyzed feature is related to define the possible monetization ways and their positive or negative feedback.
Moreover, in the third chapter is planned to cover also the overall cost structure of the platform, extensivity of collaborative economy and platform effects on the labor market.

The fourth and final chapter will show the results of *Qualitative Research* carried out by undersigned, under the supervision of Professor Di Maria Eleonora of the *Department of Economic and Business Sciences* of the University of Padua.
The choice to opt for Qualitative Analysis, rather than Quantitative one, lies in the need to dig deep into the theme of pricing strategies in platform business models which is still limitedly explored from the unexpected building of network effects, overcoming the chicken-or-egg dilemma and finally analyze the impact of pricing strategy on it.
The aim of Quantitative analysis is to explore how the network effects become the most important defensibility of the digital world by taking into the direction to rise of innovative transportation services. The companies subject to analysis have been selected from successful platforms in ride-sharing and online transportation-related marketplaces by evaluating the overall European market and its main players. The analysis covers essentially focusing on the required time period and followed strategies to build a network model. The later phase of research will refer to understanding practiced tactics to the necessity of applying pricing strategy and its impacts on the core network power of the platform that has created hard so far.

CHAPTER 1:

The Revolution of the platform economy.

1.1 Platform economy

Rapid development, expansion of the internet, mobile devices and software development enable platforms to become the important actors of economic structure. Digital technologies create a condition for mutual interaction and exact matching. In the past, it was not possible to collect people on one side of the market effectively and quickly, and to match them on the other side of the market. In fact, markets and shopping centers are classical platforms as well, that brings buyers and sellers together. However, a remarkable significant portion of today's platforms is digital that acquire, transfer and elaborate the information over the internet.

Platform economy builds a business model that merging two or more independent societies by creating joint value for each counterpart.

Nowadays, what makes platforms different than in the past is that information technology (IT) significantly reduces the need for physical infrastructure and tangible assets. While IT makes the platforms much easier and cheaper to set up and scale to a certain level, it allows for easy participation in platforms, increasing network impacts, and enabling the acquisition, analysis and change of hands of large amounts of data that raise the value of the platform for everyone. The rapid development of Uber, Alibaba and Airbnb, which are growing and spreading as a platform, has created dramatic changes in the sectors they are in (Evans and Gawer, 2016).

Platforms show deep innovation in the digital era thanks to data and software management that bring productive characteristics. Birth of internet and digital connectivity capacity of technologies make an immediately global scale. Moreover, not only physical resources at the same time data and software become easier to combine as well as modification advantages, created extensive opportunities or scope in order to accelerate the third parties innovation. Generally,

opportunity comes from digital technology led to enlarge scale, the scope of activities for platform business in digital space (Karhu, Pajulahti and Syd, 2018).

As it realized so far, platforms should be considered in digital and physical spaces that serve the availability of both goods and services transactions. The originality of digital platforms, suppliers produce complements considering platform needs that make aggregate bundle unique for users' respect to serving components separately. This completeness triggers the rising of network effects and push ahead of the concentration of both components. For instance, in the case of developers integrate apps for the smartphone platforms, automatically this complementarity accelerates adherence of platforms and apps considering the needs of both parties to each other for functionality. The point here, digitalization should be considered rising of either data and software. Related this phenomenon, it is practicable to consider Google Maps, which is the rich provider of consisting software platforms such as mapping service, that creates conditions for third parties for producing complementing services, on the other side data platform, (map database) that different third parties may add complementing interest information related with places. Additionally, created generative clarifications of digital resources, namely connectivity and facilitation of combination, modification enlarge both uses of digital platforms from a geographic point of view and innovation for its complementors. As such, both of these directly strengthen network effects, the growth engine of platforms, boosting platform business in the digital era (Karhu, Pajulahti, and Syd, 2018).

To find an answer how well platform effect will be pervasive, we should accept the word of disruption as a key point of today in the meaning of huge number of traditional companies, value creation models somehow shift or radically transformed, in spite of ownership and control over platforms play different roles, peer groups organize activities or transactions on platforms using challenges through consistent business models. For instance, taxi business are threatened by Uber, accordingly, iTunes and Spotify gets the music industry or camera industry by GoPro through use of the website. So, traditional ones should organize themselves as a platform with new activities such as emerging of the app stores or YouTube (Kenney and Zysman, 2016).

The Internet creates circumstances for enterprises for building a set of functionalities, to allow them to absorb innovation through flexibility as well as range in experimenting for new business opportunities and models, infrastructures, settlement. A combination of technologies in

Internet should bring expected maximum value and these arrangements do requirements alliance and integration for proper software blocks. One of the main improvements is the creation of smart enterprises and needed collaboration capacity for networks. Today's companies are targeted to serve open innovation, creativity and sustainable production thanks to internet opportunities. In the case of the smart enterprise does not include only products and services but also organizational structure modeling and vary of relations that cover network value for company. A new generation needs to have covering applications and services are estimated to emerge, small adjustments considering enterprise users' needs (Galis A. and Domingue G., 2011).

Moreover, due to internet availability today most of the platforms are digital that they conduct and monetize data, considering personal data as well. Those platforms might stay not as purely digital that they could have contained physical elements in service or product offering whereas most of the accomplished platforms are tend to use the advantages of pervasive Internet connectivity with billions of users and software engines (David S. Evans, 2006).

The crucial point with platforms, scale belongs to the result of primary success and engine for further growth. In fact, also before online platforms network effect was existed such as telephone networks but recently peers have easy access through pervasive linkage facilitated by The internet that is able to connect billions of mobile devices in a few seconds. Based on this ease communication network effect has increased. In this case through platforms scale cover additional users' ability and facilities value that led to self-sustaining expansion (Evans and Gawer, 2016).

1.2 Business ecosystem, platform ecosystem, components.

The concept of the business ecosystem has been depicted by Moore (1993) as an economic community that merges several industries to show collaborative work as well as keep competition speed in production, servicing to final customers, innovation processes. Business ecosystems are described by widely interconnected participants who trust each other in order to reach mutual efficiency and stay survived. Thereby, the business ecosystem highlights freely independency among partners in the community (Iansiti and Levien, 2004).

It must be emphasized the main figures: consumers, market intermediaries (channels, independent agents, parties that sell complementary services and products), producers, suppliers,

shareholders and market rivals (Moore, 1996). These mentioned business parties symbolize the context from that firms absorb internal or external market ideas or creating unique value for everybody in the community briefly building the core of open innovation. The key point is investigating how to set up and originate value through links that created among counterparts. In essence, as long as companies are highly dependent on each other, the value does not belong to a specific firm but it is co-produced thanks to the whole network. In this case, all create value show flexibility due to the relationship among partners globally in the business ecosystem (Moore, 1996).

Digital ecosystem: Information communication technology (ICT) made is possible to emerging of the digital business ecosystem by adding "digital" in the meaning of stressing the coevolution between the business ecosystem and its partial digital representation. From this point, the digital ecosystem contains the technical infrastructure and peer-to-peer (P2P) base shared software technology, network transactions due to internet links, connected services, distribution of digital objects within the infrastructure. Those components of the digital world could cover any understandable digital representations through formal and natural language that might be evaluated, processed by software. As an example, applications in software, knowledge, services, skills identification, trust-based relationships and so on.

Digital world brings new business opportunities to serve an extensive range of closely connected services because of the availability to attach services or products. In the case product for instance brings online options as support, dealers will be tended to use online support portal in order to sell additional products or services that will be freely offered. At the same time, this could be used for providing third-party services which are on line for user.

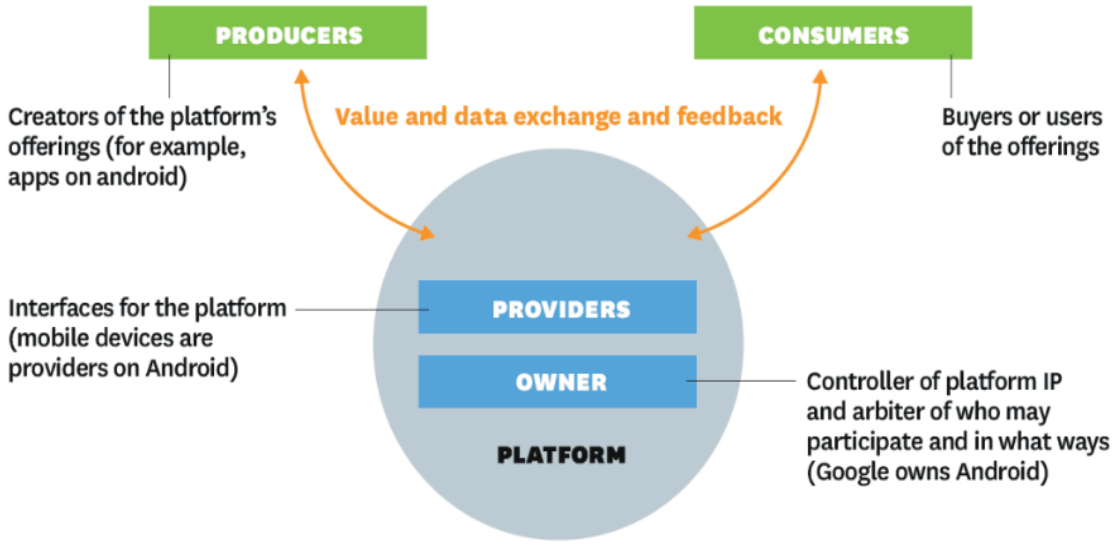
In fact, it is important to reach wider community members by being part of the ecosystem that provides an offering rather than a step with own channels. Generally, for buyers it is worth to get access for related offerings through the digital ecosystem. The point, Digital business model (DBM) enlarges synergies by taking the attraction of beneficial users as well as expand offering and needs to make sure both quality of services that launched at the same time quality in processing. Platforms contain the ecosystems in the digital world therefore platform leaders should be updated always in order to boost business models from deep to top. Organizations analyze an ecosystem model that covers closely related supply and service as a key way of innovation of business that's

why particular attention is in getting money while serving conditions for increasing customer experience. In a nutshell, good ecosystem is not a wider channel management capability, it is also counted way to take direction to provide service for consumers. Moreover, if the user gets low service from ecosystem suppliers, it could count defect as rest the ecosystem counterparts too. Eventually, as ecosystem creates big opportunities on the other side offer big risks as well (Ahorlu M., 2016).

Digital ecosystem was made the availability of unity for three networks, Information communication technology (ICT), secondly social networks and knowledge networks. Internet and World Wide Web (WWW) showed a fast rise linkage of pre-existed social, professional, business networks, collaboration power, companies and friends and so on. Local area network (LAN) has lead to leaking information from single devices to local areas, and finally to the global Internet. Networked computers make an effort for improving the shared architectures also resources, ending up in the P2P model (Carollo and Prencipe, 2007).

Platforms might not be digital that there may also be physical elements within the presented product regardless of the new type of platforms that occur during the digitalization process, almost all of them are based on a structure consisting of four main players. We can count them as the owner of the platform, intermediaries, suppliers, and finally consumers. While the owner of the platform undertakes the management, control and organization tasks, the intermediaries provide an environment where the other parties come together and the interface with a more technical expression. One of the last two counterparts, supplier-producer offers, and the consumer decides whether to buy the product or service offered.

Figure 1.1. Pipelines, platforms, and the new rules of strategy



Source: Choudary P., 2016. Harvard Business Review April 2016

Except for the owner of the platform, if any other party thinks that their needs will be better met, they can switch to another platform. Sometimes they establish themselves a platform and become rivals with each other. As an example, Amazon and Samsung have been able to develop their own operating systems and take users with them while providing devices that can be used by Google's "Android" platform. Sometimes also the suppliers and consumers can replace each other such as a person who uses Uber as a passenger can start working as a driver in his own vehicle in Uber, or a landlord who rents a room in Airbnb can rent someone else's room for himself if he stays in another city (Van Alstyne M., 2016).

1.2.1 Pipeline to Platform, being a platform.

The other dimension of the platforms is that they accelerate innovations and support entrepreneurs outside the platform, especially developers. Rather than focusing on increasing the value created by a particular commodity and service, unlike traditional companies, platforms try to create value for the entire ecosystem, including other players and stakeholders. In doing so, platforms can be more innovative and grow faster. Successful platforms make it possible to use public interfaces such as Software Development Tools (SDKs) and Application Programming Interfaces (APIs) to enable 3rd parties to perform complementary innovations (Dawid-West and Evans, 2016).

IPhone is a good example of this system. Iphone has thousands of applications that these applications are being improved by developers around the world through the software development tools and application programming interface offered by Apple. The main services offered by Apple on iPhone are complemented by innovation and growth. As it is seen here, Apple has designed Iphone and its operating system as a platform where users and developers will come together and create value for both parties rather than a product. As of January 2015, there were 1.4 million applications in the App Store and a total of $ 25 billion was generated for developers by this date (Van Alstyne M., 2016).

More innovative platforms, especially the applications, more to the platform itself and its users benefit. For this reason, the platforms prefer to allow and increase the innovation on complementary products and services.

1.2.2 Transform from a traditional structure to platforms.

An important aspect, additionally to production facilities, platform models try to keep users all together connected that give advantage to platforms because of breaking possible trade barriers. The information-sharing contribute to getting data circulation advantage among millions of players respect to traditional business models with only selling capacity. Creating of selling services and products to customers that traditional models do, stay behind more widen economic system as well as the participation rate of suppliers and final customers that cause assessment competence (Walsh, 2017).

The platforms are changing the concept of leadership by forcing them to rethink existing structures' strategies, business models, leadership, organizational structures and approaches to value creation. Being a platform leader requires a vision that transcends one's own company and aims to establish and sustain an ecosystem of different parties and stakeholders (Evans and Gawer, 2016).

Simultaneous implementation of old business models and new platform business models sometimes is possible. It is not necessary to apply only one at a time. Apple is a good example for this. The majority of the companies in the traditional structure are still quite competitive, but when they enter a new company that doing business with the platform model, as in Uber, Alibaba and Airbnb, these new companies always win. For this reason, some of the giants of traditional business

models such as Walmart, Nike, John Deere and GE are trying to incorporate platforms into their business models (Van Alstyne M., 2016).

Basis on Van Alstyne (2016) report that the transition from existing business models to platform-type business models in the Harvard Business Review includes three key changes:

1. Switching from resource management to source organization,

In the case of resource-based competition, firms gain advantages by keeping control of scarce, valuable and imperishable assets. In the current structure, they include tangible assets such as mines and real estate, and intangible assets such as intellectual property. So, in the platforms, assets that are owned and difficult to be copied by competitors are the resources that the members of the community have contributed to: for instance, rooms, ideas and information of cars. In other words, the network of producers / suppliers and consumers on the platform is the main asset.

2. The transition from internal optimization to external interaction.

Traditional companies focus on planning workforce and resources to create value by streamlining all production activities from raw material to sales. New generation platforms try to create value by establishing a relationship between non-business enterprises and consumers. Thanks to their focus on the outside world they are often stripped of even variable costs from production. Rather than focusing on processes, it is necessary to be able to convince the participants and manage the ecosystem.

3. Focusing on the benefit of the ecosystem rather than focusing on customer benefit

Traditional companies are looking for ways to maximize the long-term benefit for consumers of goods and services at the end of the production process. Platforms, on the contrary, are trying to maximize the total benefits of the ecosystem outside the business, cyclical, repetitive and feedback.

Sometimes managers may not expect the platform-style businesses to compete in business areas that seem to be apparently unrelated to their own; however, the successful platform initiatives are aggressively entering new areas and, at the least, though connected, to sectors that are thought to be different. Google, for instance, initially worked as a search engine, but was successfully involved in smart home systems, mapping, driverless cars, navigation and mobile operating

systems. With such a field diversification, a platform can suddenly change the rival definition of a traditional structure.

Another example is Apple; Swatch may know how to compete with Timex in the same field as himself, but Apple is an unexpected rival to him, and now it has to compete with Apple.

Most of the successful platforms in the first place prioritized high value, but low volume creating interaction between the sides of the platform. In time, they have increased the value and traffic for both sides of the platform by entering into the nearby markets and creating different interactions. As we know, Facebook, for example, the former reason was creating a narrow focus for Harvard students in order to keep connected with each other but a bit later strategy changed to become a platform for college students broadly and eventually made it public. As well as Linkedin has set out to establish a network between professionals, and then added areas such as recruitment and publishing, improved interaction and benefit and increased traffic (Marshall W. Van Alstyne, 2016).

1.3 Network effects on the platforms.

In today's economy, where customers' involvement in the process becomes important, the way to do is to provide services through the platforms which both sides are producers and consumers. Unlike any other customers, network effects emerge as a natural consequence of participating in the process of producing and providing services (Robinshon B., 2016).

Network effects allude to the influence that the number of platform users creates value to another user which it could be explained as positive and negative effects. *Positive network effects* appear with thinking of a large and also well-managed community that produces substantial value to every user of the platform. Opposite due to the increase in numbers of poorly managed platforms cause bringing down produced value for each user which refers to *negative network effects* (Parker G., 2016).

Potential for network impact is perhaps the most important feature that distinguishes platform business models from companies that operate according to the current value chain model.

The driving force behind the industrial economy is supply-side economies of scale. High fixed costs and low marginal costs mean that companies with higher sales volumes than their competitors are working with lower average costs. In supply economies, the firm captures competitiveness by controlling resources, increasing productivity, and removing the difficulties it faces from Porter's five powers. The main purpose of the strategy determined in such economies is to create barriers around the firm which protect it from the competition and direct competition to other firms.

On the contrary, the driving force of the internet economy is *demand-side economies of scale* and is also known as the network effect. This element is strengthened by technologies that influence the expansion of networks such as social interactions, aggregation of demand and development of applications. In the internet economy, companies that create more volume than their competitors, attract more platform participants, offer higher average value per transaction. The reason for this is that as the network expands, there is a better match between the supply and demand sides, and larger data to be matched. Alibaba, which accounts for almost 75% of China's e-commerce volume, is among the companies that enter our lives with their network effects; Google is the largest social networking platform in the world, and Google constitutes 82% of the mobile operating systems used and 94% of mobile searches by Facebook, the world's largest social networking platform (Marshall W. Van Alstyne, 2016).

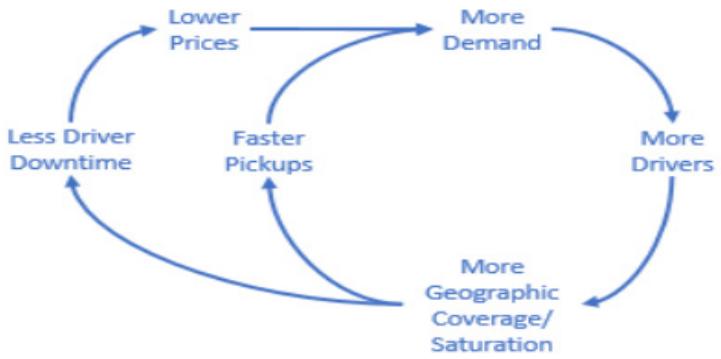
Network effects, platform business models from other business models were previously mentioned that distinguishes the key feature. As more and more people use the platform, the platform is becoming more attractive to potential new users. When existing users attract more consumers to the platform, a dynamic structure is created that spontaneously triggers the growth cycle.

Platforms are basically creating value by bridging the gap between two or more groups of consumers, which will not have the opportunity to come together and take action. The benefit of platform owners and users increases with the expansion of the customer base thanks to the cycle of indirect network effects. These network effects, which are considered to be a property that platforms must have, reflect the external dependence of demand among customer groups and shape competition between platforms (Gawer, 2014).

1.3.1 Two-sided network effects & Growth building tools.

Two-sided network effects (Strategies for two-sided markets, 2016) could be explained better with David Sacks's napkin sketch example related to Uber growth.

Figure 1.2. D. Sacks' napkin sketch of Uber's network model



Source: Choudary P. and Parker G.,2016 Platform revolution book

Comparison with the one-sided market as telephone users only could attract more users, differently in Uber's platform business model, both sides of the market are involved such as riders mostly attract drivers and vice versa. Similarities might be noticed in different business models, for instance Google's Android, app developers attract consumers and vice versa. Or Fiver job freelancers could get attracted by job offers as well as on PayPal, Airbnb models guests attract hosts and hosts attract guests. As it's mentioned before all these platforms get benefits of two-sided network effects with *positive feedback* which the necessity of these effects led to great network growth that platform does not need to invest money to attract users to both sides of the market. One side of the market will push another side to follow as an example how Uber experienced giving free rides until worth 30$ each in doing so Uber get market share considering this promotion attracts virtuous cycle of consumers and drivers which later they will pay full amount to be part of the network (G. Parker, 2016).

One of the key points is to explore the difference between network effects and market building tools which contain brand and price effects. More clearly companies could create easy *price effects* via going discounting. Having the interest of users thanks to extraordinary price

discrimination is a foolproof method of getting market share considering the temporary period due to these effects are fleeting, in the case of another competitor brings the better price to market or discounting period ends positive effect will disappear. Venture incubator Techstars's CEO, David C. says in order to have a profitable giveaway model platform should reach millions of users before (Needleman S. and Loten A., 2012).

Differ prom price, *brand effects* don't base on a temporary period with being sticky but the joint point is tough to sustain because of brand & quality association. For example, it costed millions for EToys establishing a brand which was expected to have competitive advantage respect to Amazon another example comes from Kozmo that online company hoped to get the advantage of promising free one-hour delivery of basic goods in US cities and invested a lot for having spoke person and so on. After a while business got collapsed. On the other side Super Bowl ads have been used by 19 new start-up companies in order to reach the high level of brand recognition and only 10 years after half of the platforms were not existed anymore (Bennett D., 2011).

In some cases, network effects could be also confused with the *virality* which addresses going viral. Virality could be defined as an idea or brand to be circulated quickly as well as properly from one Internet user to another. The phenomenon could attract large user base to a platform such as fans of the funny or surprising video make influence their friends visit YouTube but the key difference appears with the lack of keeping users in the platform in a long period having enhanced value to each other which network effects base. Therefore, virality is about attracting people who are off the platform and persuading them to join it while network effects are about increasing value among people on-platform.

To sum up, market growth tools contribute a lot during the start-up's growth strategy, but only network effects lead to creating a virtuous cycle that brings lifetime network of both platform sides as we can name is *lock-in* ability. It is a curiosity to get known which successful companies got failure due to mostly relying on price or brand effects. Contrary, success continues with the companies who analyzed the features of two-sided network effects pushing traffic from one user group in order to get revenue from another group such as today's successful models; Uber, Airbnb, eBay, PayPal, Google (Rysman M., 2009).

Network effects could be explained in the phases: direct network effects which are named also same side-effects and cross-side indirect effects. Direct effects refer to utilization that the user gets from a particular service to enhance the number of other users. These effects are mostly experienced in communication, social media platforms that joining networks brings value as being as a family or friends in the same networking. Recently network size and direct effects have become the competitive disadvantage/barrier for smaller platforms to compete.

Particularly, direct network effects seem less suitable for limited-capacity assets considering the total network effects are relevant for getting attracted by users and suppliers in the same joint network. Additionally, there is not so strong positive effect on users or suppliers in the case of if the same-side grows up only. Cause service providers have terminated inventory to offer means that a limited number of users could access possible inventory at a given time. For instance, taking into account particular Airbnb apartments or Uber driver only a certain amount of users could use these services at a given time. When efficient presence is available in order to have an attractive platform, further listings could lead to higher competition areas to existing service providers such as competition for a specific ride or room considering capacity (Moazed A., 2016).

Contrary, indirect network effects play a prominent role in multi-sided platforms in the sense of value increasing happens for a group of users when a new member of different groups comes to the network (Johnson L., 2016). For instance, a new apartment owner joining Airbnb provides additional value to accommodation seekers since this creates them a lot of options to evaluate and choose a better one. Mentioned action could attract more guest users to the platform that leads to obtaining more hosts. By the way of explanation, indirect network effects could bring efficiency for scaling the business model rather than direct network effects.

1.4 Sharing economy.

The sharing economy is characterized by asset utilization considering backup capacity and implies decreasing the use of sources as well as environmental impacts (Guttentag D., 2018).

This refers to the sharing of limited capacity assets such (e.g. rooms, cars) on the other side it could be related to the provision of experience, a performance that depends on shared labor and assets such as cooking or dining experience. Probability is lower that the sharing economy is related to intangible assets such as loans.

The sharing of unlimited capacity constrained resources such as music, films, information is totally different from limited capacity assets that could be simultaneously used by a lot of people without capacity management containment. Contrary it must be mentioned capacity-restricted entities are principally beneficial in matching capacity and demand depending on features of entities, market needs, geographical requirements, time availability thus creating additional value for all participants in the ecosystem. Briefly, the focal point of the sharing economy is noted with mostly access based platforms in order to get matched limited capacity sources and platform users' demand (Cusumano, 2015).

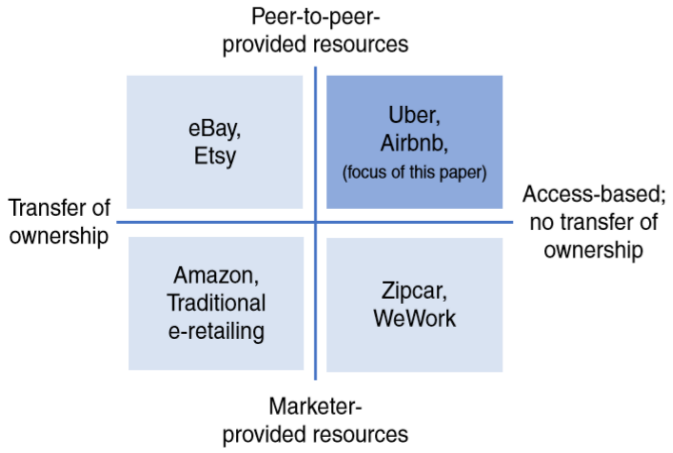
Based on the literature, it is possible to separate the constitution of the sharing economy in two dimensions, firsts should be defined whether the core transaction of the platform based on temporary access or comes from ownership transfer. The second point whether the market needs (resources, assets) are supplied by directly peers or platforms. These main distinctions define the various platforms arising.

Peer-to-peer (P2P) utilizes changing the products' ownership such as Etsy or eBay on the other side Amazon or classic e-retailing don't refer to sharing economy due to assets selling assets are focused point instead of sharing an interest. Thus sharing economy is related only to creating access opportunities to services or resources without thinking of ownership transferring that is coherent with most of the sharing economy literature (Benoit, 2017).

Peer-to-peer assets & Assets provided by platforms

Based on the literature we could say a shared economy frequently focuses on and compared with the peer-to-peer economy (Benoit, 2017). Nevertheless, there are also platforms that act also for access-based products and services which is called marketer-provided resources. For instance, Zipcar and bicycle sharing platforms which is not based on the peer-to-peer economy. Differently from peer-to-peer platforms, these sharing platforms should provide resources from their own inventory of assets.

Figure 1.3. Platforms, Peer-to-peer sharing economy



Source: W. Jochen and K. Kevin, 2018. Platforms in the P2P sharing economy.

Comparing marketer-provided assets with traditional market giants, it's evident to notice strong similarities that both business models based on providing own inventory of assets such as comparison of Zipcar and Hertz acting models might be a proper example. The key difference comes marketer-provided resource platforms provide app interfaces which need to invest in vast technology that brings ability to better control of location assets or resources, increase reserving capability and lastly consumer is able to do seamless, convenient payments. The advantage comes thanks to advanced location analytics, permits instant access to platform offers (e.g cars or bicycles) that makes it available to users to pick up or drop assets in proper. convenient location. Thus, these business models also provide boost the utilization of resources thanks to sophisticated sharing. Going back to the Zipcar and Hertz comparison, Zipcar has reached to higher utilization of cars' respect to Hertz due to platform focuses also renting a day or longer period considering the idle time even if the vehicle is rented out. Given the variable form of sharing platform example shows that even marketer-provided resources platforms should be taken into account as a part of sharing platforms (Jochen W. and Kevin K., 2018).

So far platform literature has been highlighted about three primary terms which are access based sharing economy, peer-to-peer sharing economy, the sharing economy. All three categories contain significantly sharing of same features and variations (Chen and Kumar, 2018).

1.4.1 Access based sharing economy.

Access-based services underline the type of core transaction that procures limited, short term access to services such as car or bicycle sharing but not being concentrate on ownership transference and simplify transaction that a large amount of users consecutively get access but legal ownership always remains to the service provider (Schaefers, 2016). Another definition could be related commercial sharing marketer managed system that creates availability to consumers in order to get benefits of products or services without any ownership (Lamberton, 2012). Additionally, it's needed to bear in mind access-based services are only relevant with limited capacity assets.

1.4.2 Peer-to-peer sharing economy.

The contrary, *peer-to-peer sharing economy* might be also named collaborative economy main examples could be Airbnb and Uber platform models. Platforms functions as peer-to-peer related activities of getting, sharing login to services or goods organized by society-based online services as well as the consumer who intends to get access by peer service provider for a temporary utilization of assets, services. These make it happen for a large amount of people to get *use of underutilized inventory* through price-based sharing (Zevas, 2017).

The sharing economy broadly contains both access-based services and the peer-to-peer sharing economy. Current literature explanation of sharing economy show direction to mainly the peer-to-peer economy. Considering idle capacity consumers provide access to each other in order to get use of underutilized inventory for a temporary period which lasts a limited period of time (Frenken, 2017). Another definition, centralizing to online platforms, sharing economy provides the availability of unused assets or services among peers of the platform with charge fee or free. However, W. Jochen and K. Kevin in their peer-to-peer sharing economy 2018 publication mentioned that sharing economy terms also cover platform-provided/owned resources or services with the ZipCar example company model permits efficiently sharing of assets in spite of assets owned by the platform. To sum up, the sharing economy covers online sharing platforms that could provide temporary login/access goods or services which belongs to individual peers or direct platform.

1.5 Rise of platform Economy, main players, competition.

In order to keep competitive power, platform companies try to stay one step ahead compared with their traditional competitors' thanks to applying platform development strategies and connectivity. Considering the digitalization of network effect huge platform companies go with consumer skimming strategy. Today, companies such as Airbnb as well as Uber stay on the same strategy as service providers, in spite of these two companies do not have any physical assets but platforms' power gives them availability to pose a problem to huge hotels and taxi companies, respectively and get the market share. On the other side eBay, Alibaba, Amazon offer millions of products in a single click to customers. Customers have the possibility to see all suppliers offers in one platform at the same time comments of previous buyers about the products quality. It must be highlighted PayPal and Square because of secure payment availability in the online platforms (Chain D. and Voortman F., 2018).

Online structures trigger P2P activities and platform economy has become emerged by platforms giants such as Facebook, Amazon, Google, Uber and so on. This issue led to appear some changes in earned profits, working conditions, how well users become sociable. Internet was the cradle of acceleration for IT services transformation and competition among competitors that was based on price ups and downs for homogeneous products. Movement of algorithms into a cloud that posed easy accessibility, created a structure on platform markets and ecosystems. (Martin Kenney, John Zysman, 2016)

In terms of functionality and structural points digital platforms are different. Such as Facebook and Google are platforms which offer social media and metasearch engine, but at the same time both provide infrastructure for newcomer platforms. On the other side eBay and Amazon are marketplace that compare all possible products and services for consumers. However, a lot of SMEs use also Web Services from Amazon that provides tools in order to transform physical company to platforms. Another acting field by Uber and Airbnb changes the conditions of job arrangements and re-organization for markets, value creation (Kenney M. and Zysman J., 2016).

In spite of prominent market success and tactics to capture market there are some platform companies that are not based on sharing strategy. Contrary such incumbent platforms get the advantage to monetize existing customer assets as well as human activities. In fact, Facebook,

Airbnb, Uber's platform activities are matching with well above-mentioned activities. Indeed, platform companies take the protection of workers, consumers, communities and eventually markets that give advantage to platforms take value experiences accepted by platforms and existing rules established by operated companies. Additionally, quick improvement of content platforms as well as phone app stores give possibility to artists to sell their daily work activities through galleries (Kenney M. and Zysman J., 2016).

As long as we mention P2P service creation, users play a prominent role due to being in the middle of value creation. However, it is possible to see the results of this value from a social and economic point of view. Mostly highly heterogeneous consumers have become successful in platforms with their unique selections.

1.5.1 Products to Platforms.

Feng Zhu and Nathan Furr (2016), they have mentioned in their articles for Harvard Business Review about checking the difficulties for each company to be successful in platforms. In order to explore deeply they have taken into consideration more than twenty companies which targeted to be platform. Based on research, there are four main reasons that make a difference between successful and unsuccessful rotation. However, to know why some companies have defeated barriers and others failed:

- Having a protectable product and sufficient mass of users

It is important that the parties interacting through the platform have a sufficient number of advantages for users that these contain benefits sufficiently to prevent users' shifting to competitors' platform. The platform should be able to attract sufficient permanent users at the same time to increase its appeal to third parties. The fact that it is creating a value for people who are not yet is one of the main conditions for the revival of these new generation enterprises.

- Creating a hybrid business model based on creating and sharing values

Entrepreneurs are expected to choose one of the business models that refers to product-based business model or a platform-based business model. However, in the mentioned research, it has been observed that those who implement a business model consisting of the mix of those two

from the product-oriented organization in the traditional structure to the new platform business models have been more successful in the transition process.

In existing business models, businesses create value for their customers by developing differentiated products for their specific needs. Businesses are creating value for themselves by properly pricing the products they offer in this way. In platform business models, companies create value by allowing users to connect and build relationships.

By applying mixed business models in the transition process, companies are able to develop new opportunities to create value and achieve value without distributing the existing customer portfolio. One of the most important obstacles faced by firms in the process of transition from product-oriented structure to the platform-oriented structure is the way of thinking. In the form of product-oriented thinking, firms consider the return cake to be relatively stable and endeavor to get as much share as possible from this cake. However, if companies are implementing a mixed model and are in a platform-driven mind structure, these companies are more likely to find new ways to create value for existing users and non-users.

- Quick transition to the new platform

A valid product and business model do not guarantee success. It is at least as important to be able to convert the product's loyal customers into the platform permanent customers. Three factors are becoming essential here:

a. The platform must be able to create new value to allow customers to use it.

b. Companies can carefully accelerate conversion to the platform by adding new products and services that are also compatible with their brands.

c. Companies need to introduce internal and external users to include in the platform developments and to strengthen the product and the platform.

d. Define and implement opportunities against competitive imitation

As with any other new business model, the transition from on-going business models to platform business models will begin to be imitated successfully. The ability to identify and control

value-creating tools is an effective way of overcoming fraudulent opponents. Therefore, when such situations arise, businesses should know which qualities platform has created, which ones will be controlled by the platform itself, and which ones will be provided by people outside the platform. For example, a platform's privileged contract with PayPal, a leader in online payment systems, could deter potential competitors from using lesser-known online payment systems.

Lastly, considering the digitalization spreads rapidly, platform owners must take care of possible growth opportunities and attentive control capacity is needed always. As an example launching own search engine and offering services via web browser permits the company to capture market share thanks to search advertising.

1.5.2 Importance of data for Platforms, “big data”.

Digitalization brings data as a crucial corporate asset for business leaders due to the necessity for business giants who want to know which information they hold is worth. Nevertheless, the value of data comes if the company knows how to use and when to use it. Data may also contain useless information or yield access to launch products. Even it may take impact as a small percentage in the company’s profit but at the same time, data can be a good investment for future market opportunities or share growth.

Considering the huge amount of people that prefer to use their smartphones in their daily life that makes mobile devices as a private command center. Based on the US survey more than 40% of people use internet few times a day, and 21% of users stay online constantly during the day. Considering the use of the Internet, these activities leave a huge amount of personal or common information that companies may run as valuable data which accelerates the rising the term “big data”. According to this, Internet companies capture behaviors of users and their web search, explicitly what kind of websites users click, how often and for which reason they use and so on (Henke N. and Bughin J., 2016).

Nowadays, Internet consumers have shifted their roles to active content creators through social media as well as other forms rather than staying as passive users. It is evident that most traditional companies still rely on physical assets, have stayed far behind from gains from data or analytics, nevertheless, they go on to digitize customer-facing or internal operations as well. In

fact, now those companies have the more accumulated experience to collect, elaborate and make use of data, analytics.

Considering day to day operations data has not only increased into wider level terms of volume, it has also reached diversity, richness and important value level. Regarding the new era we could say the physical world has been importantly connected to the digital world. Now, data is collected by everything from cameras, sensors or heart devices even make it possible get insight into human behavior. For example, retailers try to complete consumer profiles with all touchpoints and so on. Additionally, analytics capacities of companies have become a competitive advantage in industry competition because of creating conditions to evaluate markets well ahead than rivals. As business leader companies take advantage of using the data as well as analytics in order to reach higher revenue, create new e barriers to entrants or absorb market feasible opportunities. At the same time data has been beneficial for digital companies to change way of relationship with consumers or rise organizational goals. Companies that stay behind of minimal needed analytic capacity, must adapt quickly earlier than gap shows a wider impact. From the managerial point of view digitizing customer interaction builds a wealth of information for platforms that are useful for product development, sales, marketing activities while internal digitization composes data that might be used to optimize plan running and boost productivity Henke N. and Bughin J., 2016).

Platform leaders such as Apple, Google, Amazon, Microsoft, Alibaba, GE, Facebook, Tencent have become the most precious companies thanks to high investment and specialization in analytics. These above-mentioned companies have diversified themselves through valuable data sources, worthy analytic capability, and R&D in data infrastructure (Jacques Bughin, 2016; Big data). A similar trend can be followed between the further wave of disruptors, that these “unicorns” tend to be platform companies with business models which based on data and analytics. For instance, Uber, Didi, Chuxing, Palantir, Airbnb, Snapchat, Pinterest, Flipkart, BlaBlaCar, Spotify. Those range of companies are shifting to be digital leaders of the next period. Nowadays, it is been witnessed the moving of analytics capabilities from West to Eastern world such as India.

Data leaks from everything that leading business models do. While digitizing consumers’ behaviors or interactions contribute a huge amount of knowledge that the organization may feed marketing, sales and product development strategies. With different words, digitizing gives the

ability to companies target new customers to acquire and improve products and services more personalized for specific customer targets. In order to increase internal efficiency such as better sourcing capability, predictive accuracy, supply-chain logistics management platforms get benefit from internal digitization as well. Differently from the past, we can notice that transactions indeed keep in touch with each customer that produces valuable information, contrary in previously companies sold products and get money and negligible information that does not create new sales or service possibilities for the future. Additionally, there are platform companies such as LinkedIn, Facebook, Pinterest, Twitter that those give free services in order to obtain data which is valuable and in line with companies further strategies. Mostly, platforms strategy applies in the case of giving free service and consumers personal data that with doing so "consumer" is already transforming to user. Actual consumers can be marketers that should pay for targeted advertising based on users' data. From this point of view it is critical to sustaining consumer data as well as user acquisition and interaction. Venture capitalists have steps ahead understanding the necessity if consumer base data value. There are many internet startups that have focused on getting valuable data from users in order to use it or sell it such as Quora and Jet. (Maya Kosoff, 2015)

1.5.3 The current situation of the world in platform business models.

Business areas in the sharing economy are based on providing financing among individuals, doing freelance business on the internet, renting rooms and houses among people, sharing cars and downloading music and videos. The traditional business areas are equipment rental, hotels and other accommodation, car rental, book and DVD rental.

In the report, the current situation of the sectors is compared with the stages of the life curve, while the sectors in the sharing economy are still in the beginning and development stages and it is observed that the sectors in the traditional structure are in the stages of completion and maturity.

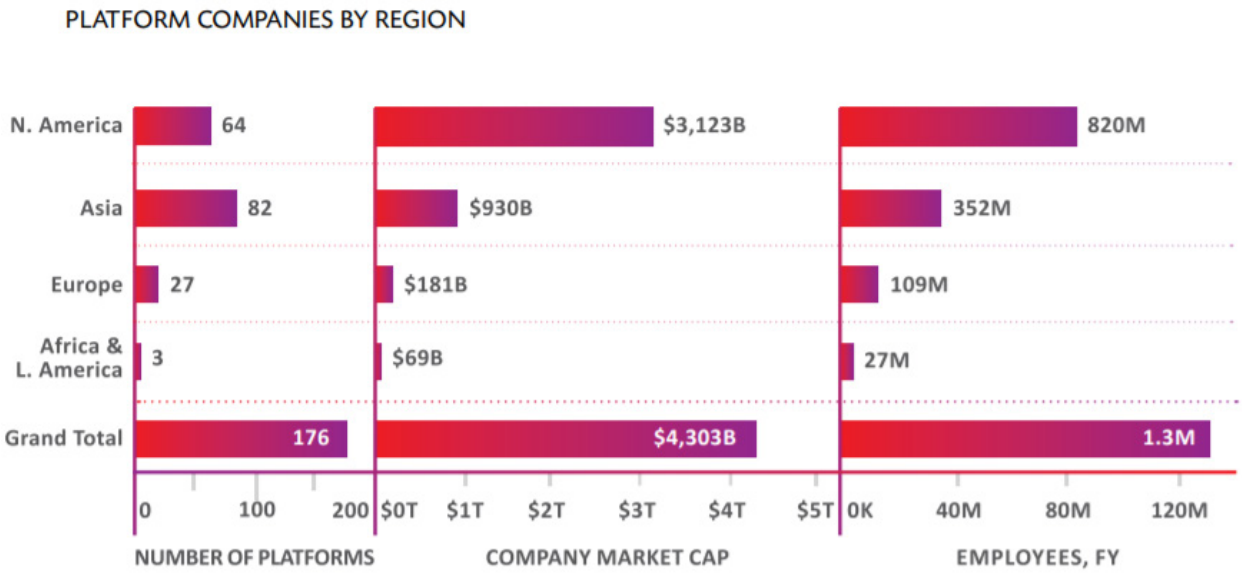
The Global Report, which was completed in 2016 by academicians and professionals on the platform economies under the leadership of The Center for Global Enterprise, has been worked on 176 different companies based on platform business models and operating in different parts of the world, with a value of over 1 billion $. Among these companies, there are large companies like publicly traded companies such as small companies such as Uber and Airbnb. The total market

value of all these companies is above 4.3 trillion $, which shows the volume and scale achieved by the platform companies in recent years.

Here are some of the results of this report:

As can be seen below, Asia ranks first in terms of the number of companies in North America after the company, and Europe is one of the biggest users of the platform services. Although there are some companies in Africa and Latin America, they are limited in number and value.

Figure 1.4. Platform companies by region

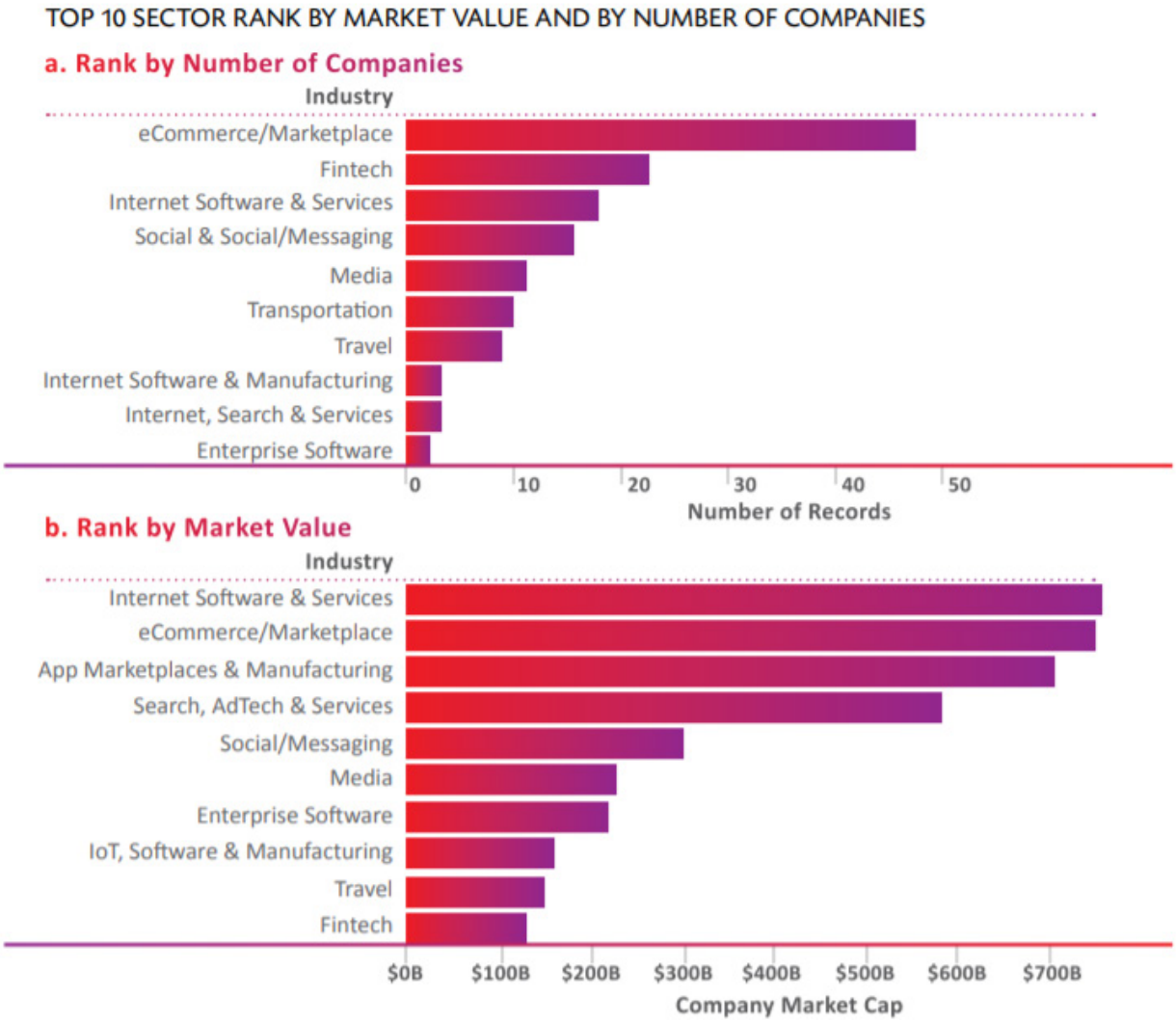


Source: Global Platform Survey, The Center for Global Enterprise, 2015.

The companies in Asia are concentrated in China, the companies in North America are in the United States (San Francisco), the companies in Europe are concentrated in the UK, Germany, Russia and France, and in South Africa in Africa.

The sectors in which the Platform companies operate most are listed according to the market values of the companies operating in related sectors and the number of companies. As can be seen below, different sectors have appeared in the top ten rankings in both cases.

Figure 1.5. Top 10 sector rank by market value and by number of companies



Source: Global Platform Survey, The Center for Global Enterprise, 2015.

CHAPTER 2:

Platform design and governance

2.1 Types of platforms.

As it is mentioned in the previous chapter, one of the important points is platforms create value mainly by optimizing interactions directly with a producer and consumer at the same time this generated value by platforms give an opportunity for producers to create complementary products and share or distribute this value among the large audience. In order to be more precise, it is worth to handle platform business models in two categories. Considering some platforms that their core target is more focused to decrease transaction costs such as Alibaba, Uber or Airbnb on the other side others actually more focused on underlying infrastructure that creates value for final consumers. For example it is possible to talk about IOS, Android at the same time YouTube or any other content platforms that, where users can post articles or blogs such as Medium. All these above-mentioned platforms provide a tool, infrastructure for producers to form software, written content, videos, codes and so on. In contrary to those platforms like Alibaba, Uber, Airbnb is are tend to facilitating direct exchange. To be more clear we can do basic platform split like (Modern Monopolies, Moazer A. and Jonson N., 2016),

A. Maker platform- A platform that provides value by enabling producers to create complementary or supplementary products and share them with the larger audience. Intention for matching in maker platforms are infinitive *1:Many* by considering maker platforms as content and development platforms.

B. Exchange platform- A platform that optimizing exchanges directly between a consumer and producer, intention for matching in exchange platforms are always limited, discrete value, we could say *typically 1:1*. Exchange platform contains payment platforms, service marketplaces, investment platforms, social networking, product marketplaces, communication platforms and social gaming platforms.

In spite of both categories share the same underlying business model, there are some differences how in exchange and maker platforms function.

➔ Matching intention *1:1* and *1:Many,*

The matching intention is as maximum as a possible number of units of an item that producers can get used by changing at given time. It could be better to clarify an example, in Amazon or Alibaba seller wants to sell an item and when the auction ends item can not be bought by another buyer. It's possible to consider the seller could have multiple copies of products to sell but the point is *matching intention* of every unit/inventory is equal to 1. Another example of an Uber driver we could say matching willingness is the same. The driver is able to give a ride to only one passenger at given time although he could have multiple rides over the course of an hour. When the driver looks for passenger, one single passenger books that Uber service then the driver is no longer available in platform during his booked duration, as it is underlined matching intention is only 1. Depending on the involved interaction matching intention could be different but it should be considered that for exchange platforms matching intention has limited, separate value with 1:1 or in some cases 1:few.

Differently, in maker platforms do not have the same restrictions, matching intention in maker platform is theoretically infinite. As an example, people can watch any number of YouTube videos, download and use a new app or read a book in an online library. The producer's role is to publish newly created content or app to a large audience in this case matching intention is going to be *1: many.* Another example could be Twitch (a platform that you can watch users that play video games) or Instagram live stream that communication does not limit 1:1 manner.

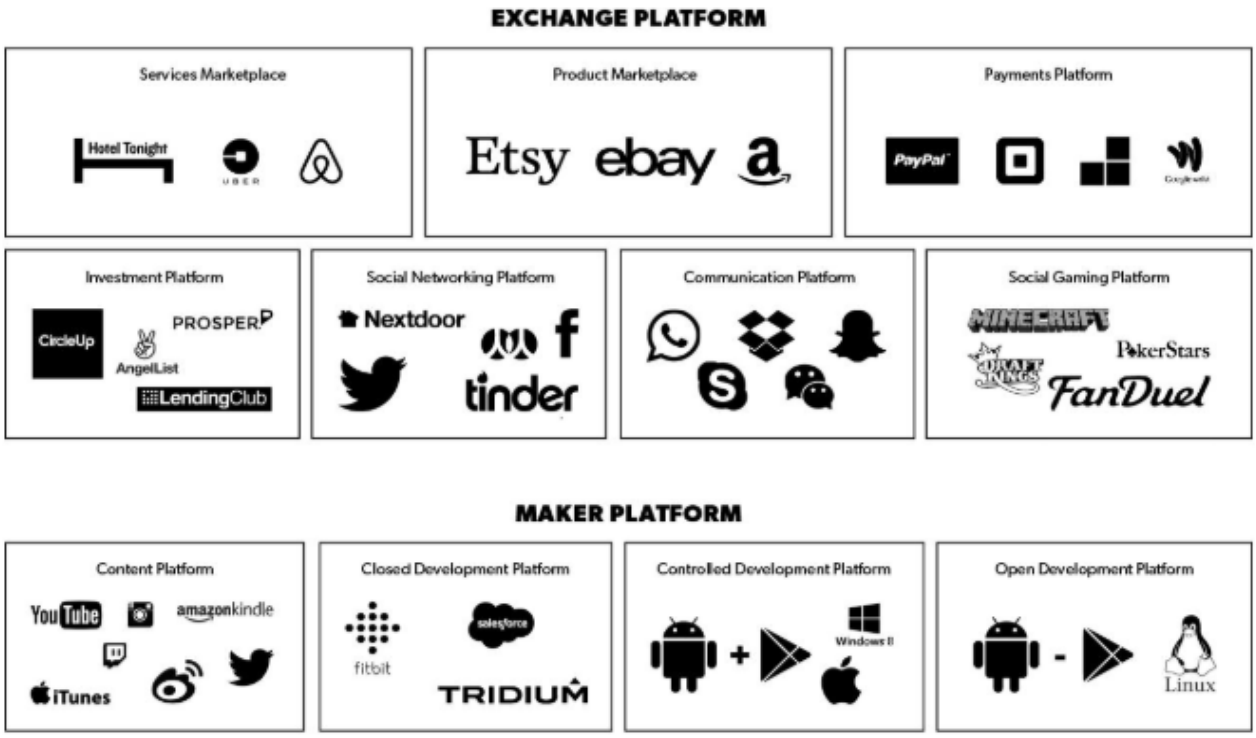
Another way of thinking *exchange platforms* have limited inventory that only a limited number of people can get use of inventory while *maker platforms* don't. As noted previously a same piece of content can be watched by any number of people on YouTube. However only several numbers of users can get a ride using Uber or getting the rented house on Airbnb at a given time.

2.1.1 Exchange and maker platforms.

Taking into consideration exchange and maker platforms, it is possible to separate platforms into distinct types. It's evident that each type has a core transaction because of the particular value being exchanged. Platforms also within each type can operate closely even in across industries.

The nine platform types are listed with the type of value that defines core transaction:

Figure 2.1. Platform types with examples of each type



Source: Moazed A. and Johnson L., 2016 Modern Monopolies book

Exchange platforms:

1. *Service marketplaces:* Platforms' core transaction is to focus the exchange of service between both complementary sides of the market with simplifying and coordinating the procedure. Business models such as Booking.com, Uber or Airbnb could be an example with successful market history.

2. *Product marketplaces:* As service marketplaces, also product marketplace refers to the same consecutive schema exception appears only exchanged value that's based on the physical product. Considering eBay's example, eCommerce site targets to contain all possible products from various suppliers in order to offer to product seekers.

3. *Payment platforms:* PayPal could be an example of a monetary payment system.

4. *Investment platforms:* Online marketplace allow the exchange of invested amounts to financial instruments such as loans or equity.

5. *Social networking platforms:* Building of social interaction such as Twitter, Facebook.

6. *Communication platforms:* Availability of direct communication 1:1 (messaging).

7. *Social gaming platforms*: Involvement of multiple users with creating gaming interaction either competing or cooperating.

Maker Platforms:

1. *Content platforms:* Content creation (Video, photo, blog article).

2. *Development platforms:* Developing software programs.

2.2 Role of Commoditization in platform business models.

One of the necessary factors for the platforms is the level of commoditization spectrum (complexity level of core transaction within a given platform type which has a large impact on platform design) that's how the platform should be built and designed. We can say the level of commoditization is a reflection amount of complexity inherent in the core transaction of the platform. From a different point of view, we can think commoditization as an influence of transaction costs for producers or consumers that for completing the transaction. It is obvious that more commoditized platforms have advantage to operate with naturally low transaction costs. As long as the level of quality is guaranteed by the platform at the right place, all that matters to the final consumer is that there is someone available to fulfill a request (Modern Monopolies, Moazer A. and Jonson N., 2016).

To sum up, platforms that are offering commoditized services should take care of matching users with available product suppliers as seamlessly as possible, which best platforms do exactly that. For instance, Uber's automatic matching or its controversial surge pricing is giving availability to facilitating the most transactions. If we compare Uber's commoditized services with

non-commoditized services, like renting apartment services by Airbnb. In this specific case, it could matter to consumers to deal with additional characteristics such as where is apartment location, how large it is, what different amenities are offered by the owner of an apartment, if the host will be there if it's a fully furnished apartment or just a couch and so on. Here, we could talk about too many relevant characteristics for automatic matching to work well. That's why Airbnb prefers to focus on facilitating easy search and discovery for its users rather than automatic matching which is the right way to work for non-commoditized service platforms.

Platform's success comes the structure of platform design to exact matching, the platforms that don't get this usually are obliged to stay behind of competition. Related with service marketplaces, Task Rabbit (one of the important service marketplaces in the US) could be a good sample. Core service is related to hire someone like "tasker" to do odd jobs, like repairing the home or cleaning services. In the beginning, the platform was used to serve non-commoditized services such as based on an auction model, users were able to post a required task in the platform on the other hand contractors would look for it and make a bid when they wanted to complete it. After a while, TaskRabbit realized that the mentioned core transaction wasn't right. In 2014, a company replaced its auction model with a transparent pricing model which could be simple also for consumers/platform users. Regarding the new business model, it could be possible to get three different producers with their hourly prices by consumers as well as there was availability to order services on demand rather than having to wait for bids to come in. This update might be a good solution but considering lacking control over pricing by platform this update did not get everything right. As a result, we could say in commoditized service marketplaces must take care of responsibility for setting prices to make sure its users to receive the optimal price. As we compare commoditized services in Handy, Uber, Lyft which consistent as well as transparent pricing is the core part of platforms' ability to deliver seamless matching (Modern Monopolies, Moazer A. and Jonson N., 2016).

To be clear, the platform has more commoditized core transaction does not refer that business has a disadvantage. In contrary, the comprehending the platform's commoditization level shapes in order to how business models must be designed to optimize its core transaction. The difficult part could define how commoditized or non-commoditized platforms could be in the right state of the exact industry and platform type.

2.3 Competition effects on pricing.

One of the crucial points is to explore how prices get affected by competition among platforms. The basic concept is that competition may affect to have prices close to the marginal cost of production as well as help to increase economic efficiency that crates advantage to users as a consumer surplus. It is clear that in two-sided markets possible competition among platforms results with different effects for both sides of the market such as making prices less clear. On one side it's needed to highlight competition could decrease market power and prices for both parties of the market. The decreasing price might be powerful on one side of the market than the other but the market benefit goes to consumers who are on both sides of the market. Another probability, nevertheless competition decreases the market power and price on one side of the market but keep the constant or even higher price for the other side of the market (Akshaya Katiyar, 2011).

In two-sided networks, user's requirements are totally different for each side of their common platform. Considering different requirements, the platforms give preference to specialize better in serving users on one side compared with both sides in two-sided platforms. Regardless, in case if platforms try to reach dominant position one side or both sides of the market at the same time competing with others, the probability is high to face with problems on both sides of the market.

Taking into consideration the arguments from Rochet and Tirole (2004), defining the characteristics of two-sided platforms based on 2 different aspects breaking up aspects for prices in the face of buyers and sellers and how prices are set might be not neutral. For instance, if we consider newspapers, papers' costs to consumers are lower than marginal production expenses thanks to earned money from advertisers this negative revenue could be covered. At the same time, eBay's example could be proper that the company devotes part of its revenue to providing convenient services to large sellers. Moreover, more clearly balancing the prices on different sides of the platform market could be dependent on these options available to platform holders:

- The lump-sum basis could be the option for platforms to charge for services. This is literally an agent's tariff which doesn't depend on the performance of the platform on the other side of the market. For instance Windows OS is generally dealt with at a posted price.

- ➢ Another option, it might be technologically possible to define the tariffs considering the measurability of platform performance. For instance, in practice Tv channel or YouTube tends to make advertising charges an increasing function which really depends on how large is reached audience.

- ➢ In other cases, subsequent participation, as well as the level of transaction could be the measure for the platform owner to charge for actual interactions. As an example, debit and credit cards could be a proper explanation considering bank gets charges depends on the level of revenue transacted from one client to another.

2.3.1 Pricing in Multisided platforms.

Due to the functionalities of MPSs that has the capacity to service certain various types of customers, MPSs potentially generate multiple revenues or profit sources. In practice, the majority part of MPSs has discovered that offered services should be free or at least with a subsidized price to one side of the platform and concentrate to get profits from the other side (Schmalensee L., 2011).

Table 2.1. Pricing structures for multisided platforms

PRICING STRUCTURES FOR MULTISIDED PLATFORMS

Many multisided platforms have discovered that they have to offer their services for free or at subsidized prices to at least one side of the platform and derive their profits on the other side.

MULTISIDED PLATFORM	LOSS-LEADER SIDE	PROFIT-MAKING SIDE
Advertising-supported media (newspapers, over-the-air TV networks, Facebook, Google)	Users	Advertisers
Alibaba.com, eBay, Rakuten	Buyers	Sellers
Payment systems (American Express, Visa, Square)	Users	Merchants
Video game consoles	Users	Game developers
PC operating systems (Windows, Mac OS)	Application developers	Users
Ticketmaster	Venues/event organizers	Users
Fandango	Movie theaters	Users

Source: MIT Sloan management review "Top 10 lessons on strategy".

It’s important to look for answer to how MPSs define their pricing structures or what would be a proper charge for each side regarding the others? Studying the pricing structures has been an initial and dominant focal point for the economics and strategy work on MPSs. Business executives have summarized most used pricing principles below (Hagiu A., 2015) :

1. It should be charged a higher price in case if a group that has lesser price sensitivity.

This principle should be considered all types of product and services that rely on every type of multisided platforms treat independently of the others. The availability of substitute products and services could be measurability for price sensitivity at the same time bargaining power which multisided platforms have over a particular group.

2. It must be charged more to the side that stands to get use of the presence of another side/sides considering no priced transaction among the sides.

In this category, the key point is related to specific MPSs. For instance, organizing business conferences will be considered to charge only attendees but not all invited speakers that as it’s mentioned before who will get benefit more from presence/attendance.

3. In the case of the possibility of prices transaction for both sides, the platform charges more to the side that pulls out more value respect to the other side.

Let’s suppose that considering monetary transaction if side X gets more value from side Y, the MPS has to charge side X more due to not exceedingly penalize side Y. Apart from this side Y may not reproduce well enough value from warrant participation of a multisided platform. For example, OpenTable is offering online service in order to get matched for dinners in wished restaurants. In doing so OpenTable does not charge consumers on the other side restaurants get charged for the fee for each online reservations. As it’s mentioned before the point is restaurants get benefit from consumers by selling them a full-prices menu. MPSs have to select their pricing structures which would better optimize balance value and creation of value of multiple sides. In broadly, they must be charged more user groups that benefit more value.

2.3.2 Platform design.

Platforms include a lot of different functionalities that may reason to have lower search costs such as Airbnb or Uber ensure search functions based on wished accommodation characteristics or desired destinations, respectively. Regarding the transaction costs eBay offers the possibility to get use of PayPal which declines the costs for both parties, buyers and sellers. On the other side product development has been less costly with companies such as Sony that make it easy to facilitate game development for PlayStation 3 with using API (application programming interface) and development kits. In most cases, cost-benefit analysis make a signal to whether include these features amenable. In case the cost of creating and also the implementing costs are lower than the value provided for the different multiple sides served, the choice should be implementing them (Hagiu A., 2015).

Nevertheless, it's still possible to discuss the scope of costly errors. For example, PayPal has been acquired by eBay in 1999 which decreased tremendously transaction costs for sellers and buyers by offering a convenient method to complete the transactions. Based on revenues, in 2013 as a whole PayPal unit took part in $1.5 billion of the $3.7 billion revenues for eBay. Contrary, considering eBay's other 2005 acquisition of Skype did not reach the expected value creation for sellers and buyers with less revenue than the price paid. Possibility of voice communications led to turned off many users as putting unneeded pressure on convenient anonymity of internet transactions. After a while in 2007, eBay published 1.39 billion overall results with the 936 million loss from Skype acquisition (K. Regan, 2007).

The MPS design decision is one of the most difficult parts as decided features create various conditions for different sides of the MPS. Such features provide strategic trade-offs for the MPS due to the availability of generating positive value for some participated groups or value created for MPS itself. On the other side rest participants could get negative value as these features push them to stay out of the market. These might be hard to get dealt with, even if not considering the cost of creating and implementing the new features (Evans and Schmalensee, 2007). Some following examples are provided to be clearer:

- In 2010, one of eBay's first AdCommerce strategies in order to provide more presence to some sellers with paying more than their offers could appear always on the top of buyers'

eBay search results. In spite of this those programs caught more popularity for sellers as well as for eBay were an additional source of revenue except the listing fees. At the end, considering the not showing relevant product listing for the buyers later eBay had changed program in order to keep only relevant products for users. (Steiner, 2011)

- It is clear that any ads-supported media such as search engines, TV channels, social networks should take into account advertisers desires' in order to display users to numerous, important or targeted ads considering users' preference for less intrusion. For instance, Microsoft added do not track feature availability to Internet Explorer 9 which allows users to protect online privacy in a Web browser on the other side it made it impossible for advertisers to reach users or know their potential preferences. This move which "not tracking feature" had been pushed down by online ads owners and content providers (Wingfield, 2011).

The central question so far, how MPSs could find a solution for such conflicts among the interests of different contributor groups? The answer is not simple, sometimes it's worth for MPSs to be ready to make some sacrifices in order to not alienate both sides of the platform whose utility could reduce by new design features even if there are direct short term revenue impact. Especially it would be a huge mistake to bear mind that design decisions must be in favor of one side that take part in the largest share of current revenues. Contrary better determination could keep consistency for solving trade-offs for participant group that is crucial to MPSs for long term results. To sum up, evaluating the trade-off considering the interests of different groups, successful design decisions could be longer toward decreasing the possible risks of unrepairable design mistakes and the cost of the design testing process (Hagiu A., 2015).

2.4 Governance rules on MPSs.

The creation of value by MPSs which facilitate the interactions for third parties should be some regulation of third party actions that could directly impact the entire ecosystem and customer proposition of MPSs. In most cases MPSs regulate existed various customers by applying the *non-price governance* rules that could be explained in the 2 main categories:

- Rules related *get access* to platforms: Who are permitted to join?

- Regulation *interactions* on platforms: Which different services third parties allowed to do?

MPS governance rules could be examined in terms of how tight or loose rules are, examples below will clarify better:

➔ US-based Match.com and eHarmony are leading online dating services. Respectively, match.com settled fewer restrictions for who can register as a new member and how members interact. On the other side, eHarmony has tighter rules that make it more restricted for online matchmaking services such as get access and interact on the platform. For example, it monitors candidates by requiring them to fill the questionnaire about 250 questions and sometimes it's possible to reject membership to some candidates even if they are ready to pay a membership fee (Piskorski, Mikolaj, 2008). Platform members are not permitted to view for different profiles more than limit and communicate them freely. Nevertheless, the company uses an algorithm for matching that helps to generate potential matches that each user can only contact, communicate with his/her potential matches. Moreover, the key point is, governing rules at the beginning of communication guided by the platform's questions unlike both members might be agreed to "fast track" open touch.

➔ Another example related to different governing rules comes from the smartphone market. Apple recently paces push ahead some restrictions to third parties for its iOS two-sided platform unlike this example Google prefers to be more permissive to developers for its three-sided Android platform such as allowing developers to get the benefit of using third-party tools in order to build Android apps or being more acceptable for new apps. While Apple does not permit to a fix set of iOS provided tools. Another point confirmation of new apps in Apple's App Store takes a few weeks and mostly apps get denial due to the level of satisfactory quality and how app content, functionality fit with the iPhone users. It is not unexpected that Apple criteria are examined as unprompted by some developers (S.Kovach and P.Viswanathan, 2013).

In the long term, multi-sided platforms' strict governance rules make the impact of trading-off *quantity* in favor of *quality*. Actually, the power on MPS for cross-side network effects is not defined only by the number of users on the sides of the platform, a number of interactions are important those they engage, but also in a qualitative way.

The utility of creating high quality should be weighed with the comparison of expenses of implementing the strict (tighter) governance rules. Those costs could be related to technological or operational such as making analysis for the individuals' profiles to eHarmony service. Considering the possibility if quantity pushes out the quality to a limited extent, an optimal solution could be *get rid of costly governance rules* or *out-source* the enforcement to users as some MPSs founded as a resolution. For example, Airbnb and eBay have implemented a ranking system for sellers and buyers in order to keep both sides fair.

In general terms platforms' governance has been indispensable so far. The key attentive point MPSs should examine which type of "market failures" could create a barrier to the work ecosystem properly and what is the possibility of eliminating through pricing? As mentioned before platforms could, to certain enlarge, make a correction in supply and demand equilibrium or conceptual bargaining power by adjusting pricing structures. Moreover, relative pricing structure could provide additional governance advantages, such as preventing/restricting the entrance of out of favor constituents. For instance, video game console makers get charges for the game copy royalty from independent developers which does not serve only the main revenue stream for console makers also the deterrent strategy for low-quality game developers to attend. Generally, market failures could be examined in three cases. First, if the market has the lack of sufficient information and transparency regarding the quality of products and services that are exchanged through platform might lead to market failure in going so it's possible that low-quality producers/suppliers wipe on high qualitative ones which led to market breaking. Secondly, the case of the platform has a high level of competition on one side of the market could decrease the incentive to get enough investment opportunities for developing high-quality goods or services. Lastly, lack of tight governance rules by the platform, each component could fail to take actions or investments which might reason to have positive overflowing effects for the platform. Rules are dedicated to exploiting positive complementarity for retailers that could not materialize if the latter were towards to decide independently. In order to be well prepared from one or all of these potential market unsuccess, MPSs should take into consideration the enforcing governance rules for the target to specific market failure

Case of emergency

As it's mentioned platform's rules and standards prevent harmful behavior. Nevertheless, in some networks, transactions could bring a lot of risk in early-stages of the platform which means platform must take a more active role. For instance, in 2000, PayPal faced fraud detection with only one case that costs 5.7$ million (Jackson, 2001) but PayPal was not the only one. Fraud problem with transaction risk could be common for early-stage platforms particularly once that get use of in-person transactions that make it happen outside of the platform. Once the user ordered an Uber service, the customer should get into a stranger's car which customers should trust the driver abductor will not do any accident also considering a lot of rest potential worries. The same case happens, when the user book an apartment on Airbnb which usually hosts gets key direct from the owner before entering and considering the apartment is belong to someone else possible worries for both parties could be ongoing. How to overcome this transaction risk? Most of the platforms require credit card details which could allow to get minimal personal information as well as make it at least sure that customer has enough financial situation to pay. From the producer side, this is a common confirmation. For instance, Uber drivers are obliged to undergo what company requires as a tight background check on the other side Airbnb started in 2014 to check *"Verified ID"* in order to verify the identities if hosts details overlap their social media accounts with government-issued identification. However, taking into account the thousands of producers and the above-mentioned screening services might not detect everyone as well as the rating system by consumers might not be as exactly in line due to not all users are attended. Thus, platforms need to be ready for each possibility such as in 2014 Uber increased $1 "Safe Rides Fee" to each Uber ride in order to improve funding in case of safety procedures. Collected amount partially goes to covering the costs of "background check" and rest to commercial liability that Uber provides to drivers. After increasing the fee Uber has upped its driver coverage to 1$ million during the driving passenger and up to 100.000$ when driver does not have a current passenger but the app is open. On the other side, insurance companies provide comprehensive but affordable coverage which is designed particularly for Uber drivers. Another example is related to Airbnb that in the case of damage platform host guarantee coverage is up to 1$ million (Jonshon L., 2016).

2.4.1 Platform launch strategies

It would be assumed launch strategy gets success for Platform X will bring expected success for Platform Y. But platform revolution history shows that launching strategy could be more successful if it's different and customized to considering the marketplace. Taking into account even platform business models are similar or competitors, in order to reach the unique marketplace position, competitors must adopt diversified launch strategies. More explicit details could be evaluating three online video platforms' (YouTube, Megaupload, Vimeo) stories.

YouTube became the first democratic video hosting platform considering the possibility of uploading functionality by anyone who gained mainstream transactions. Platform applied this strategy considering the entirely content creators. It is worth to say even YouTube organized different contents in order to encourage the content creators for uploading videos. Furthermore, it allowed to embedding videos to off-platforms that rapidly shared the word about YouTube. The new venue became highly attractive even for potential new users. For instance, MySpace that contains engagement on the social networks was improved around indie bands. YouTube brought one-click video creating an experience by creating the Flash-based which made easier for bands for uploading videos of their music. This provided a beginning corpus of content available for YouTube as well as at the same time leveraged the content creators to bring in consumers, some of whom eventually become content creators too. With the increasing focus on producers, YouTube offered partner status to top content creators which could be entitled to the sharing of ad revenue (Parker G., 2016).

Overall, YouTube's producers' focus strategies' results could be evaluated in four ways. First, strategy contributed to seed platform with continuing content. Second, it provided functionality to platform in order to define the qualitative content by allowing viewers to vote up or down for watched contents and furthermore, it pushed producers to bring in consumer users. Finally, most importantly strategy led to having a bunch of qualitative content creators who invested to the platform and got users' follow which would not be easy for content producers to move other platforms and begin from zero to invest (Parker G., 2016).

Another online video platform Megaupload faced with the *late-mover problem.* In 2005, when Megaupload launched, most content creators were already operative on YouTube and there

was no need for content creators to be in another platform considering the fewer viewers' availability. Considering that Megaupload's second-mover situation, platform was not able to enter competition with the same head-on user acquisition strategy as effective as market leader. Thus, alternative launch strategy was related merely on viewers (consumers) by providing the content internally, particularly creating in categories which being specially policed (prohibited) on YouTube, considering pirated and pornography-related videos. In doing so, Megaupload has gained substantial traction by focusing these ostensibly underserved needs. However, in the next pillars platform exposed itself to lawsuits and negative publicity (Parker G. and Paul S., 2016).

At the same time, Vimeo was another late market entrant in 2004 but platform success revealed due to *producer-first* strategy that platform entered the competition directly with YouTube. Platform chose to focus-point on creating a new set of higher-quality tools which became preferred high amount of users who felt unheeded by YouTube. In the beginning YouTube's particular key focus was hosting and creating bandwidth infrastructure, forming compulsive value proposition to content creators. Considering by the time, YouTube gained attractiveness by producers, the platform's focus changed from providing better video hosting infrastructure (value-creating to producers) to creating better matchmaking between producer's content and user flow (focusing video search matching). Vimeo's reaction was focusing on it's platform to producers and providing them better infrastructure in order to create high-quality video playback and advanced functionality for installation on blogs. This strategy received successful results and chased YouTube producers to Vimeo platform who would prefer to create a sustainable flow of contents (Parker G., 2016).

Eventually, before launching a platform, studying the value proposition supplied by market competitors could be a key element to way of structuring the platform strategy. In doing so platforms might be able to claim untouched related market niche even if the fundamental value could seem similar on the surface.

2.5 Chicken-or-egg dilemma & Experienced formulas

Evaluating the necessity of pull strategies in platforms, moreover, the level of analyzing and responding to competitors' business designs take a substantial part of the platform launch strategy. Nevertheless, still founders have barriers to build a user base two-sided platform which is

faced a *chicken-or-egg dilemma* that when each side of the market strongly depends on the prior presence of the other side? Referring to Choudary and Van Alstyne 2016 platform models related publications below-mentioned strategies could be solutions to overcome the dilemma.

Addressing the solution could be avoiding the chicken-or-egg problem by getting the benefit of building a platform based on an existing product or pipeline model. This type approximation could be named as:

- *Follow-the-rabbit method*. Get use the success of pipeline (non-platform demonstration) model thus attract the producers and suppliers to the new platform thanks to built project's approved infrastructure.

Taking an example from Amazon business model which never faced with chicken-or-egg problem due to conversion of successful pipeline business as an online retailer to platform business model with opening its system to external producers as well which is known Amazon Marketplace. Growing consumer base contributes to the platform enable thousands of suppliers to meet with millions of consumers in the marketplace. As a result, Amazon gets a small amount of revenue thanks to each made transaction.

By the way, it should be underlined the limited possibility to apply follow-the-rabbit strategy due to sometimes the platform has to start to create an attractive market for sides which an inevitable challenge (Eisemann T. and Hagiu A., 2007). In this case, there are multiple numbers of successful results that have been improved and exceeding the chicken-or-egg problem. Overall, three main techniques could be given as a solution.

1) Focus to value creation

Created value by platform should be in a high level of one or more sides of users and indicate the core benefit of participating in the platform. Considering the created value for primary users will be a reason to attract others which counts as a positive feedback factor for the platform to get continuing growth.

2) Designing the platform centralizes to one set users

Attracting one side of the platform marketplace either producers or consumers with building tools, products or increasing service quality. In this case platform functionality brings favorable feedback thanks to the presence of a crucial mass of users on one side of the platform marketplace pull the interests of another marketplace side. For instance, as a restaurant reservation platform OpenTable's same that approach to restaurant owners with providing the electronic tools which showed positive effect when consumers started to get use of the site or making dining plans. As it is mentioned one side crates attractiveness to the other side.

3) Synchronous onboarding

Taking into consideration the lower level of the network size, as a starting point platform could build conditions that are suitable for users. Which then triggers to stimulate the growth of activity that give a contribution to the simultaneous attraction of producers and consumers. Reaching to an adequate number that provides a wide number of value collaboration as well as value-generating interactions, informs to beginning of earning network effects. As for how Facebook applied this method with beginning its small network attractive to students with very small limited users at a university.

- *Piggyback strategy.* Link with present a user base from dissimilar platform and creation of stage value units for building opportunities to agglomerate users in order to join the newly launched platform.

The classic strategy has been profitable for many accomplished startup launches. As an example, it is important to mention PayPal reached a high level of platform appearance thanks to the collaboration with eBay when platform piggybacked the online auction of different platform eBay.

Another example could be YouTube & Myspace piggyback that considering the Myspace linear growth by offering unique tools for improving the videography industry which was attracting the social network users. As soon as YouTube subjected millions of Myspace consumers, virally platform reached instant growth.

- *Seeding technique.* Providing the value that targets to be proper with at least one side of potential platform members. In the meantime, when the targeted users are earned by platform who prefer to engage in interactions from the rest side will start to follow.

When the platform company makes objective to build unique value upon itself becoming a first producer. Additionally, applying the platform which mentioned method make it available to platform manager/owner to define characterize the type and level of qualitative units that is needed to see in the platform. Thus, following producers who are encouraging a culture in order to reach high-quality additive (Boudreau J., 2012).

Relevant example could be Google that when in 2008 company launched Android operating system in order to get competitive advantage comparing with Apple, platform went to seed strategy with 5$ million as different prizes for attracting best developers in order to provide qualitative apps in each required category such as social networking, gaming, entertainment and so on. The point appears winners not only became satisfied with prizes on the other side platform converted them to market leaders in specific categories that pushed the platform to reach a large number of customers as a result.

- *Marquee method.* The platform mainly focuses on providing extra incentives in order to attract key user groups which in most the cases right user set could lead to bringing the success of platform with their active participation. From this point of view also seems logical for platform managers to incentivize the attendance of important user set through any type of payment or providing particular advantages.

A related example could be initial PayPal market growth strategies that the company offered cash motive to consumers in order to persuade shoppers to get adopted PayPal online payment mechanism.

- *One-side technique.* Building a business contains products and services that start to be beneficial to a single side of users which later strategy brings the conversion to platform business model that contributes with the interests of the second group of users who later keep going to interact with a primary set of users.

Taking into account the OpenTable case, reservation platform initially faced with the classic chicken-or-egg problem due to a lack of participant restaurants on the platform website. The primary question was due to what platforms should choose to participate? Later on, the solution came by as a beginner platform provided booking software facilitates to restaurants in order to have availability to manage seating inventory. In doing so the platform could able to gather one side of the platform on board thanks to being beneficial for the single side with a unique facility. After a while, OpenTable focused on to build the consumer side that gave the possibility to apply booking strategy and getting commission fees from the participant restaurants thanks to each booked table.

- *Producer attraction technique.* Platform design mainly gets the attraction of producers who could inspire set of users in order to be participant of platform. Strategy feeds up by creating customer relationship management (CRM) which exceeds the chicken-or-egg dilemma by being attractive to one side of users — producers who become responsible to bring own consumer base to be part of the platform.

For instance, producer evangelism showed positive effect to grow the consumer base for education platforms such as Udemy as well as Skillshare that tutors get allowed easy access in order to host online courses that help to be being influential tutors in platform. Thus, platforms became convenient for tutors who immediate after play the important role gather own students on board.

- *Focus on the micro-market.* The strategy targets the tiny market which settles on users who have already participated in interactions. In spite of beginning growth steps, the strategy also makes it easy for the platform to overcome efficient matchmaking features of a large market in the future.

Facebook's initial market objective to launch particularly in the near Harvard university community was not only because of accessible market niche as well as it was a successful decision which immediate after brought solution to solve Chicken-or-egg problem. Thanks to primary few hundred users in the same area contributed Facebook to leverage initial existed micro-market that converted platform to utilize traction by progressing qualitative interaction between the user groups. Targeting the tiny market brings simple matchmaking with decreasing the critical mass in order to be onset on the interactions (Parker G. and Paul S., 2016).

2.6 Four functions of a platform.

The platform has to have key support functions in order to make it possible to turn core transaction network to value. Functions of the platform help to create a network, markets, communities that didn't exist before. In the beginning platform has to be placed for get users together to its network. Then it should be proper to match users in order to get use of exchange value and lastly for making all these with the convenient way for users, platform needs to provide right tools or services to sustain quality and facilitate transactions in its network. There are four main functions of platform (Moazed A., 2015):

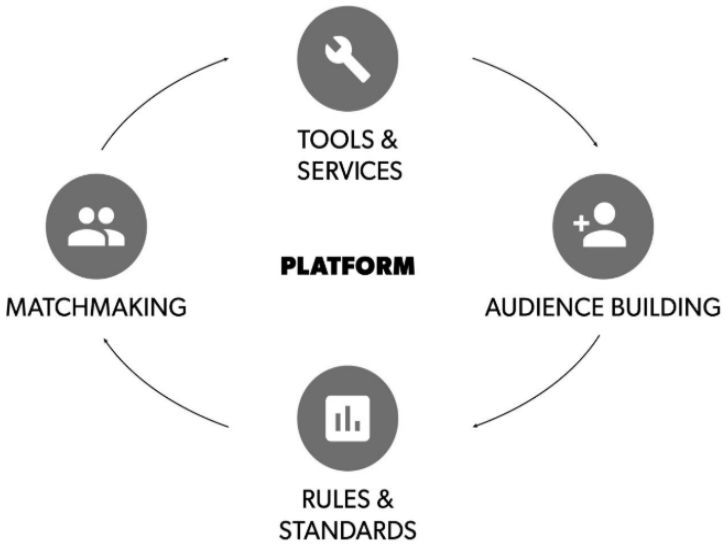


Figure 2.2. Four functions of a platform.

1. *Audience building*: Creating liquid marketplaces with considering the interests of the mass of producers and consumers.

2. *Matchmaking process*: In order to facilitate the possible transaction or interactions platform needs to connect the right producers with the right consumers.

3. *Core tools and services*: Functionality of platforms which could reason to reducing transaction costs, avoiding new entrant barriers, get use of data to build a more valuable platform.

4. *Rules & Standards*: Set of behavior for sides of the platform in order to know which could be appreciated or forbidden to do. (Detailed explained in platform governance rules)

2.6.1 Audience building & Liquid marketplace.

As platform needs to get interested by external product suppliers in order to create inventory in platform due to there is not direct control of inventory by platform. At the same time the platform should be in the consideration set of consumers who will complete the value exchange. In this case, audience building is an important term in order to grow the network effect and creating the connectivity which then could be converted into transactions.

Supplying the long term operations growth

In order to explain the hardship of creating an audience on the sides of platform, we could take an example Uber case that how company experienced in the beginning. As Uber initially started in 2009 in San Francesco, the company needed to have a liquid market place which means all transactions could be clear on time because of having enough overlapping supply from producers and demand from consumers. The key point balances should be maintained for both sides. Also for Uber sustain a right balance is necessary such as in the case number of joint drivers are well ahead than potential passengers, they will leave platform due to lack of enough demand or vice versa.

Figure 2.3. Uber - services marketplaces platform

Most Uber contentious practices are focused to overcome this barrier. Mainly "*surge pricing*" by Uber which dynamic pricing that shows ups and downs depending on high demand is directly related to getting equilibrium on supply and demand. The mentioned method are designed to raise the number of drivers in the platform even if it causes to decrease the users who can afford the price. The idea is rather than having prices same and facing the possibility of high wait times for drivers or unfilled rides from the consumers' side, Uber increases prices for getting balanced rides among drivers and users are looking for rides. Nevertheless, there were many claims about this method, but dynamic pricing could be helpful for providing a balanced growth of the platform (M. Sheldon, 2015).

Another well-done practice would be a win-at-all-costs approach that Uber has done so far for acquiring the drivers. We could say somehow the company well succeeded to reach the higher level of demand by consumers for its service but from the drivers' side it's hard to have the same ratio as the number of customers. The ratio for driver/riders in main regions is approximately 1/10 (Hall J., 2013) that's why platform suppliers are the side that competes for more. If the platform could not get interested in more drivers, it will impossible to satisfy a growing amount of customers who want to get service. So attracting more drivers are key for Uber which is why the company shows an aggressive strategy to maintain more drivers additionally.

Hacking the networks for growth: Airbnb case

Considering the beginning years of Airbnb, the company had a small part of market share in the online rental industry. Back in 2010, Craigslist had more traffic and listings than Airbnb or any other competitor. In order to building and enlarging network effect Airbnb made unofficial integration with Craigslist (Moazed A., 2016). The feature was related "*Post to Craigslist*" as well as it permitted to any guest to post their listing offers on Airbnb website the regarding the section of Craigslist in a few seconds. Key point that Airbnb made, rather than allowing viewers to answer to rental offers through Craigslist, the post would forward them back in order to make a reservation in Airbnb. In doing so, Airbnb steered many of customers from a competitor company to its platform.

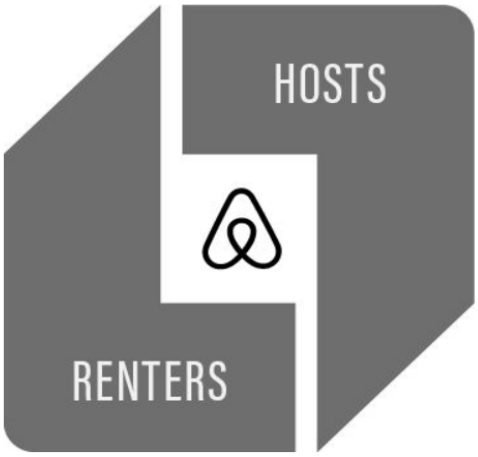


Figure 2.4. Airbnb - service marketplace platform

Alternative used way by Airbnb, company was stealing traffic from Craigslist, clapping the hosts networking. It went clever to spam Craigslist posters using multiple Gmail accounts. Emails did not seem to send from Airbnb but individuals who simply made the posters know about the availability of another platform, they have to check out (Brown M., 2016).

Additionally to above-mentioned controversial methods, as some other platforms is possible to build liquid audience/marketplace. For example the main success of eBay comes to go against to auction-based listings from competitors like Amazon, Yahoo. To sum up, platform could take part to use in black-hat tactics or traditional methods but building a liquid market is important proposition that is particularly suggested in the early stages when network has not yet reached fundamental level of liquidity as well as positive feedback from network effects. Only with massive network effect could reason to platform to provide value.

2.6.2 Matchmaking.

Once platforms attract huge number of users in platform then it should be figured out how to match different sides' requirements more clearly matching of right customers to right platform suppliers. Particularly, this might be not complicated when the platform network contain only few thousands of users. Considering bigger market players with huge network capacity, task is going to be even harder. Generally, matchmaking system includes getting the data to define key product features that will make sense to user group which then could be used to create right matching system that involves the data and platform users as properly as possible. Everything contains

providing automatic, algorithmic matching to designing user-friendly search and finding the other capabilities.

How does Uber efficiently do matching? Company uses algorithm related with location tracking which picks the most efficient driver to send. Nevertheless, there is not optimal solution in the context of transportation network to apply for linking the user and driver (Chen X, 2011).

Comparing Uber's business model with age-old taxi industry in the case of dispatchers try to optimize the matching sides of platform and couldn't do with the limited resources cub company may lose few rides which is only limited impact. Contrary, considering the thousands of transactions matchmaking is more important issue for Uber due to lack of efficient match could cause drivers get willingness to quit the platform, possibly join to rival network.

Collaborative filtering solution

Recently, Amazon has faced with tough issue: how to match exact product that could be preferred to purchased among hundreds of items? Taking into account also Amazon Marketplace which it allows third party traders to sell items, problem is more complicated. As third parties include additional listing that Amazon might not define before the related items based on its own inventory. Then company preferred to use collaborative filtering which process that bases individual preferences of large group of users to identify patterns. The algorithm uses data on products that customers often purchase together such as could be books by the same actors, phones from the same producer company. This pattern is Amazon's well known customer "*Customers who bought this item is also bought"* feature (Johnson N., 2016).

Both Uber's automatic matching as well as Amazon's related items feature are focused to be sure that possibility increases to connect right producer and right customer. It is evident that both platforms have large amount of users which means that they have built liquid marketplace. But liquidity does not make sense if there is not the right match between platform users.

2.6.3 Core tools and services.

Platforms should provide core tools or services in order to be supportive to core transaction. It should be highlighted that distinction between tools and services is platform's core transaction that platform focuses to centralize. Thus, tools is mostly self-service and decentralized in the sense

of all users might use them but considering tools do not require assistance or continuing requirement from platform. Tools contain much of the technology as well as software based products in order to be as an extra value for user to connect with each other. For instance, tools from Airbnb which help to better scheduling to hosts, navigational tools from Uber that are given to drivers for getting around the city easily or on the other side we could talk about filtering tools by Instagram to editing the photos and tools for uploading the YouTube contents. Tools play the prominent role as a *"plug and play"* so that both sides of the platform could transact easily. Contrary, services are mostly centralized which require ongoing involvement as a customer support that is most common example. Customer support is the facilitation that almost all platforms have to offer which well-organized customer care brings satisfaction and loyalty that provide avoiding gap immediately between user and platform when something going wrong. For instance Airbnb focuses to increase the level of customer safety while having special team to helping the platform in order to keep users happy.

Generally, every tool and service that provided by platform should be forwarded at a special pillar in the core transaction as how Airbnb safety team gets focused to more consumption or Instagram filters have contribution to enabling content creation. Taking into account that if tools and services are on inline with one of the important steps for platform's core are often unnecessary. One of the mistakes by platform owners they try to add a lot of tools that considering users could desire. Remembering Facebook founder Mark Zuckerberg's suggestion it makes sense always think before what you could take away rather than adding new feature. In particular, in the beginning platform should concentrate to focal point on building tools that accelerate the core transaction rather than provide new kind of value as considering simplicity and efficiency are key (Kirkpatrick D., 2010).

CHAPTER 3:

Platform competition, monetization

3.1 Limitation brings solution to avoid multihoming.

Accessibility

Taking into account the Porter's five forces which would be addressing the control ability of unique, inimitable resources by widely shaping to the business strategy. Recent platform revolution pushed the new competitive determinants to the fore which these factors define the participants in a platform ecosystem such as contribution on value creation, who gets the control of value and eventually the size of the competed market. So far, those factors get necessity to be the focal point of the new competitive strategies.

Shifting to the strategy of limiting platform access brings control and gets the higher share of the value established on the platform. As it's noticed applying to platform businesses needs entire modification due to considering the value come from resource-based business view. Moreover, resource-bases highlights on unique resources that get its collateral in the world of the platforms. Platforms targets to have particular access to essential resources which in doing so, brings the appearance of sets of rules, specific reports and practices in order to argue out of *multihoming* (Choudary P., 2016).

Availability of engaging in similar sort of interactions on more than one platform straight on brings the word of multihoming. For instance in case of freelancer attends two or more marketplace platforms with his credentials such as driver who could get rides request from Uber as well as Lyft or apartment owner establish presence on Airbnb and Booking platforms at the same time which all exemplify the multihoming phenomenon. Platform objectives encourage businesses to seek ways to prevent from multihoming since it simplify the switching actors. Considering user incentive to change a platform in favor of another, getting prepared beforehand in competitive tactical position by platforms accelerate the limiting multihoming (Choudary P., 2016).

Example of how platform companies endeavor to limiting the multihoming in the new phase of platform strategy shows it's effects in Adobe Flash Player and Apple's experience. Adobe

Flash Player is app to brows, delivers the audio/video playback as well as gaming content to internet users. Taking into account this functionality Flash could have become useful by app developers in Apple's iPhone operating system. Contrary to this future dependent facility, by preventing from this solution Apple preferred to launch iOS inimitable system and importunate developers to switch to use similar tools launched by Apple itself. Key point appears, Flash developer tools by Adobe, facilitated the allowance to transfer content or program from iOS and Google's Android system that could lead to multihoming which decreases the iPhone's distinctive functionality. Later on Adobe came up also with extensions that permitted in-app purchases which would allow developers to porting the interactions of iTunes platform. In doing so Apple could slip 30 percent of each interaction as well as inspection over the data which bring important clues related market trends in platform. Taking into consideration the mentioned case, if Apple would follow the Flash strategies, it would give an access opportunity to users to get known huge amount of content that already existing on the web by Adobe also simple ways to developers to monetize their investments by multihoming which would lead to enormous loss for Apple (Landsman V. and Stremersch S., 2011).

3.2 Fostering innovation then capturing its value.

The open-ended feature of platforms brings broad opportunities in the process of value creation by users. Platform principals make it possible to build core business by providing frictionless chances to partners reach the high level of innovation. Then platform's objective is tend to capture partners' business value by way of acquisition or replication of the business model.

In a long term, platform managers focus on main sources of built value in their ecosystem in order to get completely control which would be explained resource-based theory: *A business model must be owner of all inimitable sources in its ecosystem with looking for most important actors of the ecosystem.* For instance Facebook has created search functionality in its own platform rather than Google as well as Alibaba provide search availability in its platform rather than Baidu which both platforms compete in order to keep all users in their own platform with decreasing the dependability from rest search engines. Another similar experience could be Microsoft strategy rather than getting service from outside developers platform has released own Word, Excel, PowerPoint that contribute with extra value for platform and majority of users. At the same time is

needed to mention platforms have willingness to assign less valuable or potential niche resources to near platform ecosystem partners with taking into account the inability of becoming competitive status with platforms itself.

Mentioned principle underlines that why platform managers should be attentive to notice on new features get presence in platforms. Based on *"long tail"* approximation few of the new participants will be successful to jump over the rank. Reminding the gaming platform Zynga and photo-sharing services Snapchat and Instagram started as non-important market players but thanks to the power of network effects which made them possible to reach a higher growth. Considering the growth of these launches could be reason for beginning of war, platforms might look for how to absorb the power of innovative partner which the unique value could be received by acquisition. As how in 2012, Facebook won through from the acquisition of Instagram for 1$ billion. On the other side platform couldn't success acquisition of Snapchat even if it offered 3$ billion in 2013 (P. Choudary, 2016).

3.2.1 Necessity of the data.

As it's mentioned in the first Chapter, one of the important features of the internet economy is refers to data that store a lot of truth. Capability of high level of data analysis could be tremendous source in the value creation process as how platform businesses and successful firms are getting use of it in order to keep their competitive position globally.

Particularly in platform models, data could bring improvement of ambitious performance by doing investigation on two common ways which could be explained as tactically and strategically. For instance, optimizing the specific properties of the platform could be tactical usage method for Amazon if platform prefers to define which part of homepage would be proper to placing buy-it-now button in order to reach higher sales statistics. It could be an option to randomly take turns the placement and tracking the sales results. Tactical data became exclusive important for the Amazon due to thanks to experiment's result platform puts buy-it-now widget at the top right of the homepage.

On the other side, strategic data analysis covers the wider in its scope. It targets to give contribution to ecosystem by following up who else attend in creating, monitoring and getting use of value considering both on and off the platform which makes important to invest effort to define

the nature of main activities. Monitoring the data about member activity is essential for Facebook to notice whether Zynga making something in unexpected level or to spot diverting Instagram traffic in different ways which is known strategic data decomposition. The platform companies take advantage of data superiority to outcompete with the competitors which is known as one of the essential platform strategies to win the battles so far. For instance, job search platform Monster has been market winner due to being as one of the first market entrants which gathered first mover advantage. Platform ability is to build strong network effects in the both sided market of potential workers and employers looking for each other. Taking into account data gathering method, platform focused on only actual job seekers not collecting information relating users' wider social networks which brought limitations to overall data effective usage capacity. Explicitly, as soon as particular job seeking interaction terminated, both sides could leave the platform that reasoned the lack flow of data altogether (Van Alstyne M., 2016).

Contrary, differ from Monster, LinkedIn objective was to addressing social networks of all professionals rather than real job searchers which was reason to reach the higher level of continuing engagement as well as sourcing data from larger audience who would have willingness to assess new job opportunities. Additionally, the availability of getting interaction between professionals and recruiters became another necessary actor to distinct feedback rotations on the same platform. Lately, platform's content creation, sharing functionality encouraged real job seekers and potential audience to spend time on it. Comparing the LinkedIn's strong superiority in the scope, depth, density on valuable marketplace data, has brought excessive utility in competing against Monster (Van Alstyne M., 2016).

To sum up, data analytics could evaluate considerable factor in the process of improvement capabilities of platform company and its ecosystem collaborators, providing increasing ability to generate value for users push platform to be more mission accomplished. On one side specialists could redirect investments to advance product design, on the other side intensifying the network effects, platforms partner and consumer's success should take major part of objectives. Collectively, data tools build strong entrant barriers which signalize if competitors don't have the data, creation of valuable interactions becomes impossible that goes even worse with restricting the data accessibility.

3.3 Merger and Acquisition brings power.

It's known from classic M & A strategy put forward for consideration leaders should maintain targets that either contribute unique products or niche market access or decrease supply chain costs. Transferring the classic tactic to platform world, managers should adjust the application of this strategy with referring whether purposed company provide value for a user flow that substantially overlaps with the one that platform already present to the market. Thus, positive feedback could be tentative ending that target might be worth for acquisition. Furthermore, there is a high probability to face additional impediments before performing the commitment such as expected level of profitability of company and also it possession of skills to elicit ongoing stream of interactions from platform ecosystem. It's fortunate that platform business has exclusive condition during the measuring value of the potential target M & A. Differ from traditional pipeline companies, sometimes platform managers could postpone performing further steps until it's been monitored how partner transacts on the platform which bring solution traditional barrier to information asymmetry in M & A assessment. Moreover, platforms don't need to possess oneself of all essential assets as long as that they get access directly in their ecosystem, companies could follow lesser M & A deals respect to traditional pipelines are in need of to do which brings another significant benefit (Choudary P., 2016).

Studying on Facebook experience with Zynga, despite Zynga's increasing stock market value due to having prominent hits in gaming which would be easier to Facebook leaders attack to buy platform in order to capture full value, but Facebook wisely challenged to resist from acquisition. As it's clear game development becomes incalculable, sometimes even market leaders lose power in a few years due to higher competition bases, new trends. In doing so, Facebook decision took company to let thousands of game start-ups to compete in order to produce the next hits and then enjoy capturing the value of the upside rather than shouldering liability to working on creation of next big splash.

Another critical point, keeping the parties at an independent level (arm's length) shows positive impact in terms of platforms technological complexity level. Comparing with pipeline businesses vertical integration refers to the integration of purchased business with core production which would be reason strategic or technical challenges on platform models. Referring to successful platforms service functionality, number of independent developed technologies mean

not system integrated partners when become worse such as costs more than complementary alternatives, not well-enough customer experience that platforms conducts preferring with the alternatives in order to preserve lean architecture of the core transaction. Considering the partner or part in the integrated system get failure it costs more to swap with relative alternative that entire layout might grind to trouble (Parker G., 2016).

3.4 Platform Envelopment.

One more way to stay strong, competition demands platform envelopment that managers must keep going on scanning entire scope, observing the updates of market shareholders especially if rival's core transaction and set of users overlap. Adjacent business models follow whether the novel accomplishment appears in competitors ecosystem which would be potential threat since probability increases that users might prefer new feature attractive to start multihoming or quit the platform entirely. In this case, response could be either integration of similar feature or indirectly offering the services secondarily through ecosystem partner. Considering the application of strategic determination becomes successful, platform could impressively absorb the functions, user flow of the adjacent that is called platform envelopment (Geoffrey G., 2016).

Strategy have been experienced commonly by many market giants. For instance, Apple targets to increase usage of its iPhone platform in order to surround the markets for mobile payments system which could be transferred extra user flow to multihoming also its platform or become permanent user. It is needed to underline the possibility of running mentioned opportunities or threats in both aspects. In the case of if platform X becomes to apply adjacent strategy to in order to absorb the extra value from platform Y, similar kind of moves could be always expected by platform Y. In the case of consecutive enveloped strategies, mostly, larger platform seems triumphant in this battle due to wide amount of primary user base and high level of positive network effect. On the other side considering the Monster and LinkedIn example, users could prefer the platforms that brings superior value in spite of initial size disadvantage.

Comparing with pipeline businesses, innovative platforms make it possible to respond quickly to competitive changes as well as to coordinate offensive assaults of their own. Market moves to one who could promise biggest value for its users. To sum up, considering the today's market conditions could be wrong to mention about permanent winner, as long as updates brings

advantage, platforms should be aware of guarding against user satisfaction as how war goes between traditional companies.

3.5 The Challenge of monetizing network effects.

As it is underlined previous chapters, spontaneous value of a platform economy refers mainly created network effects. As network effects bring self-reinforcing feedback which raises the user flow, even if in most cases with minimal endeavor or investment by the platform executives. Nevertheless, monetizing effects become unique challenge, superior value by producers make it possible to attract consumers which becomes reason to forward value creation and increasing the number of potential producers again.

Determined any charge on users access could be reason to discourage for participating a platform or preferring alternative ones. It could be avoiding the platform altogether such as applying usage fee might restrict the frequent participation on the other side charging for production accelerate the lack of value creation, decreasing the attractiveness of the platform for producers as well as charging because of consumption decrease extremely the consumption (Van Alstyne M., 2016).

Important question appears, how to monetize the platform without breaking down the network effects that have been achieved so hard?

Based on some marketers' assumptions collaborative structure of value creation on the Internet should base on no fee added to natural price regarding products and services addressed online. It's also well accepted that in some level free pricing might be beneficial in creating the network effects for business. Nevertheless, considering the platform's charges in order to survive in a long term requires to get benefit from its offers also the investors may lose incentive to supply needed capital for increasing and maintaining the needed resources.

As it underlined in Chapter 2, platforms would also offer free or subsidized price quotes to one side of user base while monetizing the full price from the other side of user set which could increase the complexity of monetization. Taking into account platforms ensure that value that goes to one side might be used to absorb value on the other side. Accomplishing the right equilibrium between the complex complicated elements involved in two-sided market pricing becomes harder.

Referring to one of the initial companies of the Internet era Netscape provided free browsers availability with target of vendoring web services. Lack of proprietary linkage with browsers and servers platform was not able to do reliable control. At that time anyone could easily get use of Microsoft which signalized Netscape could not monetize other side of it's free offered business. Description of the example highlights that in case business model has intent to build free pricing as a part of its strategy requires to ensure provided value is completely controlled by the platform (Eisenmann and Parker, 2005).

Differ from pipeline business, platforms cover high level of designing and advanced technology that rather than offering direct technology to a user with the fee exchange conditionality, they offer to participate first then look for ways to monetize. In the first phase charging fee intends to cover the cost of the value that platform technology provide for members. More explicitly, mentioned value could fall into categories:

- Access value for consumers on the platform

Such as YouTube creates value for video viewers to find wished content, users in Android platform receive various functionalities thanks to offered apps in the platform or students could find unique courses offered through web-site.

- Market access for producers or third-parties

Airbnb model becomes precious for hosts due to platform maintains access to universal the market of travelers, LinkedIn brings extra value for human resources department, mainly recruiters due to connect them with suitable job-seekers or Alibaba enjoys to be favorite platform for merchants because of enabling offering trade products with bunch of customers around the world.

- Access to tools and services, facilitate interaction

One of the important functions of the platform, it provides value by decreasing barriers for interaction of both market sides. Remembering the eBay's PayPal acquisition , platform targeted to be online store that let customers to purchase products or services anywhere in the world.

Above mentioned forms wouldn't actual without the platform, thus these might be explained as a sources of surplus value that business effectuates. Most well-developed platforms

compose far better value respecting directly captured. That's why successful models gather large amount of user base who prefer to get utility of "free" offered value by the platform. Clever way to begin monetization requires deep concentration on all mentioned forums then defining how sources of excess value could be utilized by platform managers without restrain the ongoing growth of network effects.

3.5.1 Monetization ways

Network effects as taking the range of only visitors don't necessarily refer to the monetary valuation of a platform. Interaction streamlined should generate essential amount of surplus value that could be possessed by the platform without producing negative network effects. When the case is not applicable monetization might be impossible. The correlation between network size and potential ability to monetizing does not finish due to in some cases is possible to experience monetization capability show increase while the number of platform visitors decrease. Which signals the impact of negative network effects on the platform.

Meetup was launched in 2002 as an online service platform that connect various groups of people. After getting traction as a free platform, it was time to bring the monetization moves. Initially platform's monetization strategy was referring to generate revenue from different locals such as restaurants, bars due to number of new consumers came during meetup events. At that time in pre-smartphone world there was a barrier to reach successful results. Platform's problem was lack of counting heads to defining appropriate fee because of extreme fluctuation on number of people online signed up event respect to actual presence number. Meetup postponed the lead generation model and tested other solutions in order to find successful monetizing way for its service. Meetup's later advertisement tactics failed also to attract enough bigger customer base. Company even faced with modest revenue from applying fees for political organizations that was bigger slice of user base (G. Parker, 2016).

In order to solve the monetization problem, platform leaders were in need of taking risky decision with applying new rule that was targeting to charge events organizers, despite the high probability for substantially scale down the platform size as well as impoverishment in its network effects. In doing so platform could reach the balance for solving the monetization issues while detecting the event coordinators who weren't serious about their objectives. Nevertheless, Meetup

faced negative and adverse reaction by organizers by claiming the possibility of plenty of open resources to build platform and get use of it like Meetup services (Rob Hof, 2005), strategy went in order to reach expected results. The number of promoted events fell sorely but interactions became qualitative to generate objected revenue. Explicitly new wave of the market strategy reasoned to losing 95% of total interactions but improving to half of the events successful as adverse 1-2% of previous outcome (M. Linderman, 2011).

Platform's mission is not simply heighten the number of members or interactions. It should concentrate also moves to encourage engaging interactions and enervate the undesirable ones which applied model contributed to accomplish exactly this. By discouraging the organizers who didn't show serious willingness, monetization mechanism built a culture of quality on the platform. It could be an error to bear in mind that network effects might forever be optimized by avoiding charging users. Successful approach could be assessing the monetization challenge by addressing the results of how to effectuate the revenues without decreasing the positive network. Behind the approximation platform also interest to find ways to ascertain pricing methods that superior positive network while weakening the negative effects.

3.5.2 Charging a transaction fee

Platforms that enable transactions might monetize the value offered by charging transaction fee that could be calculated as a fixed amount or percentage value of service price. Second option seems simpler to administer and refers when higher periodicity of processing is estimated without important variation in the operations size. Implementation of transaction fee is familiar method for monetizing the value created without preventing the growth of network effects. It is needed to account users get charged when actual transaction being formed. Thus, user set doesn't discourage from being part of the network taking into consideration if fee isn't in extreme level. On the other side one of the lasting challenges, what if parties are naturally preferred get interacted off the platform on account of refrain from paying transaction amount? Thinking of terminating the interactions require an agreement on the terms of the services by directly both sides, these direct interactions impoverish platform ability to seize the value by increasing a probability to service buyers and sellers agree a deal off-platform. Hereby refraining from fee, the service buyer could obtain achieve a discount while provider also continue to keep more of the service charge. The negative impact goes to only platform itself.

Based on Fiverr and Airbnb experiences, platforms challenge this issue by temporary stopping participants from connecting. Platforms effort to ensure all information user requires to participate in interaction without linking service provider and consumer directly. Thanks to established rating mechanisms and rest social metrics show the reliability level of service supplier which decrease the direct contact willingness of parties. However, sometimes mentioned method could be inadequate due to thinking of cases like platform facilitate market availability for professionals who require exchanges or management of workflow process, discussions before and after the service proposition. According to this, it's not always possible for platforms to keep control of all interactions between buyers and sellers as well as applying the fee to consumers ahead of the interaction couldn't be an alternative. Under this circumstance platform should enlarge its role as an interaction facilitator in order to run value-provided activities. Solution could be launching tools focused to monitor service suppliers remotely that could enable customers of services to monitor work quality and proceed payments referring to actual delivery (Parker G., 2016).

3.5.3 Charging access base

In the same cases, platform monetization method might refer to charging producers for access to group of user sets who have intended to participate not in order to interact with producers but for other different reasons.

Dribble has quickly gathered importance in the design community as a superior quality platform for graphic designers, logo creators to whom, are capable to present their work by that means gaining exposure, reliability, worthy feedback from community. Platform managers were aware of the importance of long term value creation by particular community members. Thus, charging users for access was not an option due to avoiding probability to damp down the positive network effects. In doing so, platform's monetization roots from third-parties who desire to pay out in order to receive presence in large groups of the platform. On this term, companies searching for designers who pay fee to share employment listings on the website. This type of monetization bring more interactions that build benefit for both sides such as producers are satisfied to post up best of their work which could generate guide to new gigs on the other side consumer companies take on access to top-flight suppliers whose portfolios have been ranked by platform members. Described method could be confused with simple term "advertising" but is needed to bear in mind

differ from ads, platform's extremely purposed listings compose value for community, increase core of the platform, enrich network effects rather than bringing noise or work out value (Van Alstyne M., 2016).

In a similar trend, LinkedIn lets recruiters to participate with presentation of job opportunities to platform community as well as offers companies to take comparison ability of potential work flow then purpose for specialists considering resumes and professional brands. As a platform LinkedIn pushes users to update profiles regularly thanks to power of recruiting bases which maintaining the activity of the platform.

Summarize, sustainable monetization method appears when platform increase the level of positive network effects rather than weakening. Implementing fees for third-party producers because of access becomes successful if only third-party brings new content such as offering new vacancies due to boost the value of platform for its users.

3.5.4 Fee for enhanced access

How to cover the expenses of a platform if facilitated interaction becomes impossible to monetize, own? In such cases, platforms choose way to charging of producers for superior access to consumers which backs on provision of tools. Tools features serve a producer to stand out society and be observed on two-sided platform in spite of increasing market entrants which results to intense competition. Platforms receive fees from producers for ahead of targeted communication, more appealing presentations and also interaction with specific worthy user groups that are utilizing superior access as a monetization method. Taking into account all service providers and buyers are allowed to take part on the platform on an open, not enhanced basis, this type of monetization method doesn't refer to damaging the network effects. Business model serves to whom the extra value of improved access is substantially great might be charged for additional value, considering a portion of this value to be seized by the platform business.

Similar trends could be observed by Google search engine that every content publisher could accomplish higher traffic to its site through search engine optimization. Going with the organic way there is not any revenue of self-managed websites for Google. Nevertheless, considering the hardship of optimization competition some publishers prefer premium placement

through Google Ad-words. Explicitly thanks to paid fees content reaches higher placement in the top ranking of Google search (Choudary P., 2016).

Key point is Internet users could easily separate between content has been qualified or underlined as a part of marketing campaign and content that has reached high ranking is organic. Premium listings appear with different looking in Google's search pages rather than organic results which bring transparency that gain consumers trust. Search engines that failed to follow up this guideline became to be confusing for users and overall damaging the value of the platform. As explained so far, paid content promotion on the Internet is styled to look like unpaid content but needed to take a risk of appearing tricky and alienating users (D. S. Evans, 2009).

Platforms should take care of not permitting monetization of raised access to form feeling that platform members' access is being limited. Basis on Facebook experience, worlds' giant social media platform provides valuable presence to huge amount of brands which prefer to engage and enjoy current Facebook consumers. Even if some brands reached massive followers growth on Facebook, in 2014 platform was completely criticized for having curation alterations that restrain the access of branded content on the platform. Exception was applying to brands those were paying extra for reaching wider community. There was sensation that Facebook declines the services exist to participants due to the willingness of capturing higher revenue. In Despite of this strong network effects and bulky size of the platform helped to avoid complaints so far (G. Parker, 2016). Facebook's value refer to concern to its news feature as well as flood of sponsored content could lead to lack of conformity which could eventually push users out of the platform.

3.6 Cost structure in a platform company.

Strong network effects could be only one of the essential factors that why platforms models become powerful today. In order to evaluate all factors, needed to take a deeper look for cost and revenue structure in business model.

Starting with the economics of information goods such as apps, music, ebooks which might cost a lot to develop the original version. On the other side, thanks to the Internet and bound technology, app could create copy of original one that charges next to zero. As considering information goods costs almost nothing also launching to the market becomes less costly. Some of

the initial companies to take advantage of this shift were SaaS companies that went to distribution of their software over the Internet at zero marginal cost rather than developing and maintaining physical server that would be paid by consumers in order to host software. Still it costs high to build initial application and if company decides to enlarge its business, it must build extra modules to sell for generating inventory (Moazer A., 2016).

Platform's strategy basis on one step ahead of this dynamic by removing the large fixed expenses of creation and serve zero marginal costs to suppliers of the business. For instance, adding new inputs to Wikipedia or editing the existing ones, business model doesn't require hiring of another researcher. Contrary it needs a user to build a new page or edit it. In spite there is obligation for up-front costs in order to build software program, thus platforms enjoy the efficiency of business model and its growth which is substantially becomes larger.

Accomplished scaling the business model depended on new channels that exponentially decreased the cost of building demand and reducing the supply expenses. Today, Internet itself commutes some of high fixed expenses to enter market as finding large audiences becomes easier. But still linear business models has marginal cost difficulties that enforce companies to raise the cost of supply for compete. Reminding the ideal of M.Porter's value chain, companies assemble activities to reach the expected value with lesser cost which directly would be addressed decreasing of the production charges. Overall linear models' growth comes from increasing physical assets or human resources, or both. Because business model generate value by controlling production which requires investment on essential resources in enhancing volume to achieve sales of more inventory. Comparing with platform models, physical assets and human resources don't scale well as effective as network effects do.

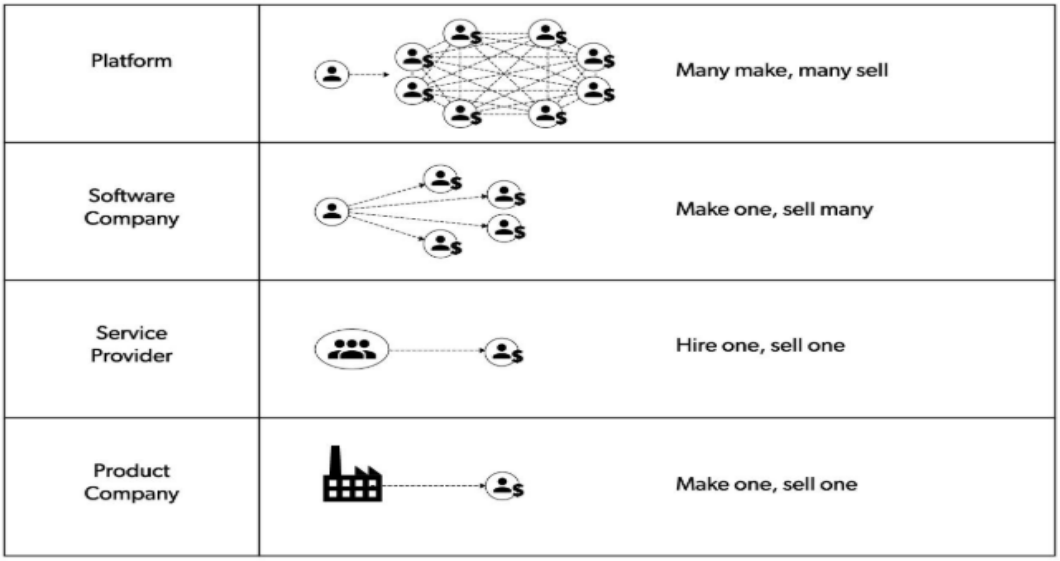
Platform could become even successful at scale with less capital expenditure as well as using fewer inner resources than linear business do. For instance, Uber, Airbnb or LinkedIn each operate global transactions with lesser than 8.000 employees. The same trend observed in Alibaba, platform had near to 35.000 workers at the beginning of 2015. Contrary, Walmart has more than 2 million employees but both companies have similar yearly sales volume (Moazer A., 2016).

Platform advantage is to extract out the marginal cost of production by centralize on facilitating the connections which network goes at production. Uber doesn't possess or operate any

a fleet of cars or Alibaba doesn't build factories that supply products it markets available online. These platforms based on natural business model of the Internet which zero-marginal cost information businesses. Platforms facilitate interactions and serve networked production. Low-marginal cost refers to not enhancement of expenses as fast as revenue does.

For instance hotel hospitality company Hyatt serves bookings online through its website and get reserved via different sites. However, company has restrictions to exceed more than inventory beyond current capacity due to company owns all offered inventories and costs huge to build new hotel in case of high demand. In contrast, in the case of needs for expanding rooms availability Airbnb just needs new listings on website by current or new customers. As platform model doesn't refer to ownership basis, there is not needed to own resources that take part of inventory creation. Platform's networked production functionality switches the cost structure of business and converts number of internal resources in order to create value. To sup up, marginal cost reduce next to zero and potential market size increases.

Figure 3.1. Platform models have lower marginal costs

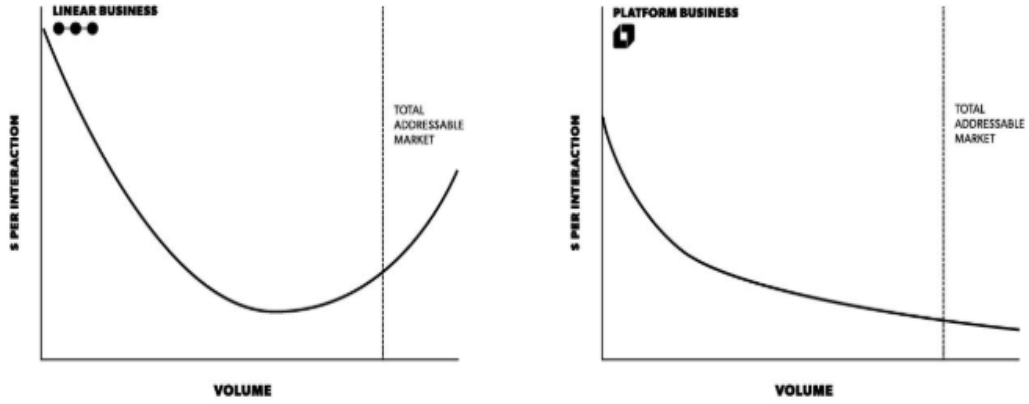


Source: Moazed A. and Johnson L., 2016 Modern Monopolies book

The cost structure refers to platforms are capital light and build higher return on investment opportunities comparison with linear business models. That's why in order to get started in

platform business there is no requirement of large investment base respect to linear business model. The capital requirement of linear business model will continue to increase as it grows while the charges of the platform model becomes contrary (Libert B., Wind Y. and Fenley B., 2014).

Figure 3.2. The average cost curves for linear and platform business



Source: Moazed A. and Johnson L., 2016 Modern Monopolies book

As it's observed being able to grow and control wide network has been more crucial than having high investment proportion to capitalize on scaling internal resources of linear model.

As we mentioned about the power of platforms, a question appears why everyone doesn't build a platform? Answer is basically network effects that bring unique challenges. Risk for platform becomes substantial particularly during the network building period. In order to ensure the usage value platform must convince external producers to participate in the platform with their inventory which becomes even more difficult when platform has few members on board. Sometimes even if members of groups are aware of benefit opportunity of being in the platform they are not tend to participate until members of other groups get joined. As is explained in Chapter 2 eventually platforms overcome the barriers of chicken-egg problem when value to new users on the platform becomes overruns the cost of participation.

3.7 How extensive is collaborative economy.

Digitalization reasons the broad changes in the labor market due to bringing new way of working with information-sharing and online transmission. According essential role of human

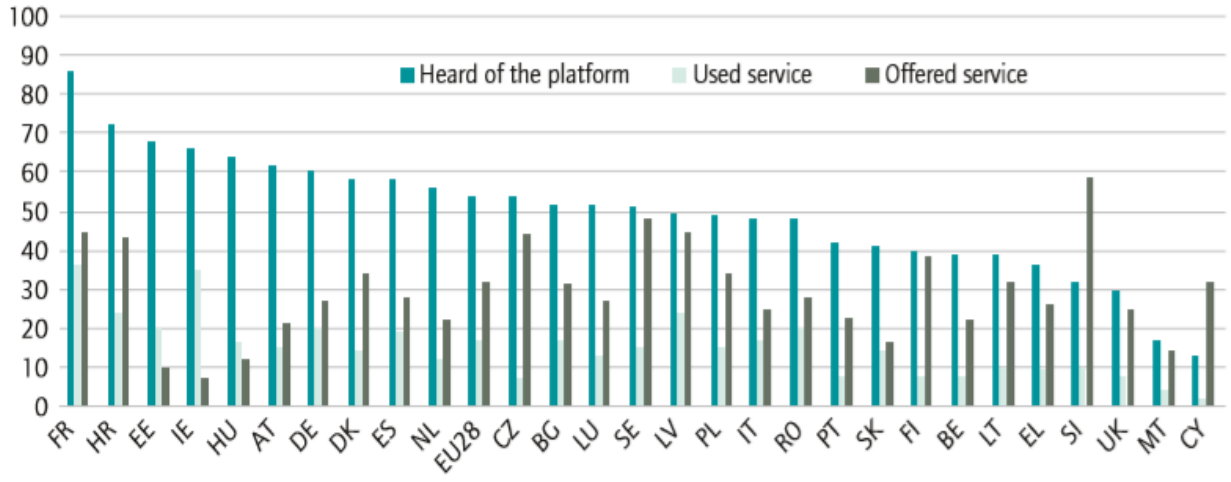
interactions on continuing digital evaluation, it's necessary to mention about required alterations on the side of work. Considering the platforms' role becomes intermediating work among people without the interposition of third party individuals or organizations expect platform concerned.

Diving deeply at the collaborative economy, it becomes evident that market doesn't compose homogenous activities with taking into account the various characteristics of the required jobs that are facilitated by platforms. In general, it's observed two main separating factors. First of them is the possibility of remote servicing due to some products/services became virtual such as graphic design or IT services could be carried anywhere in the world thanks to Internet connectivity. On the other hand second category requires the performing from particular location or is physical. For instance householding, home repair or taxi services which could be distinguished both high or low-skilled categories (De Groen and Maselli I., 2016).

The progressing importance of the platform economy is evident. The taxi service, Uber has became from a local corporation to global company with the market valuation over 60$ million in the last half decade, which is considered the fastest growth in history of platform start-ups (Steinmetz K., 2016). The preference of platform models have not been restricted to equity investors. However, pipeline companies have shown also interest to invest in platforms which undercut or weaken their current business models. For example, FedEx preferred the acquisition of DoorDash and car2go which is owned by Daimler for the moment. This type of capital flow has lead to fast growth of the platform economy. Referring to PricewaterhouseCoopers report (PwC, 2015) company anticipates the revenue increase in the important sectors of the sharing economy from 15$ billion to 335$ billion in 2035. It runs without mentioning that an estimation looking so far into the future is of limited use. Moreover, platform sharing characteristics don't only compromise of internet platforms as well as not all internet platforms form the sharing economy. Nonetheless, the idea that is expanding field is already widely shared. The prediction by the European Commission on the dimension of the "platform economy" are extensively in line with this sight; revenue of mentioned platforms in Europe is predicted to be totally 17$ billion and 17% of the European people have got usage of these platforms at least once (Drahokoupil J. and Fabo B., 2016).

Considering knowledge and usage rate of the platforms, there is a large variation. Referring to particular Eurobarometer questionnaire that dedicated to the subject, for online platforms extensive usage comes from France, Croatia, Estonia while decreasing trend goes on Cyprus, Malta and the United Kingdom. It is curious that is observed more workers comparison with users which could be explained the possibility of customers are companies often rather than individuals. Overall, platforms refer to younger and high level of educated and urban demographics.

Figure 3.3 Knowledge and use of online platforms



Source: European trade union institute, policy brief, 2016.

In spite of important points remain concerning the intensity and frequency of the job possibility. Empirical evidence underlines the engagement on the platforms is often a one-off basis for potential employees who could use app, might take a job offer or two and later go out forever. Probably this type of potential work flow prefer also to try on some different platforms or they may leave altogether. Corresponding to Eurobarometer survey regular service offers come from 15% of the workers while 28% engage only once (Drahokoupil J. and Fabo B., 2016).

3.7.1 Platforms effects on labor market

Range of different platforms brings equally different range of impacts on the labor market. So far explained different platforms business models contribute to evaluate and understand various types of impacts.

- First, platforms could permit the re-organizations of services that in pipeline model it relied on employment relationship into activities of self-employment. This, perchance, is the most radically transformative effect and entitle interest from policy makers. Up to now, anyhow, thriving businesses have rather built sectors which is relied on some conditions of self-employment which Uber could be great example (Maselli I. and , Fabo B., 2015).

- Second, facilitation of distant availability of services, therefore potentially referring to the offshoring of job offers from local work-force markets. Instance of these effects could be Fiver which platform matches job offers with service providers around the world.

- Third, platforms leads to increasing of competition while reducing the entry barriers even if they only reorganize self-employment while bringing pressure on pay and work requirements. In this case, Uber model creates competition between professional drivers and individuals on parental leave seeking an occasional top-up of their income. In doing so, platforms reduce the entry barriers as well as help to transmission of physical limits work and home atmosphere, providing health and secure risks to service producers (Osha, 2015).

- Another impact could be reputation mechanisms are chosen by platforms further help to the marketing of the world of work.

To sum up platforms might facilitate enhanced trouble of working activities into singular tasks which then are required to separate work that need creativity or high skills and rest could be left to "hands". Considering the former kind of high skilled work requires high standard level of employment concerning hourly payment on the other hand the latter type of low-skilled labor is frequently are demotivated by offshoring and automation which could take an excessive form on several online platforms especially in Amazon Mechanical Turk where users were asked to handle tasks are relating deining particular objects on a picture for as low as 1 cent (Drahokoupil J. and Fabo B., 2016).

Platforms that provide to find work opportunities become increasingly precarious. Actually there is a lot about new economy that is common to researchers of precarious employment. For example, as Uber approach to drivers as a "partners" this way of referring to employees is a

standard sign of the application known as “fake self-employment” (Jorens, V. Buynder 2008). Workers are anticipating to continuously present themselves as a “unique, valuable goods” to large customer audience and offer their availability for individual worker seekers. Only in doing so is possible to be chosen by customers like product from a catalogue otherwise being stuck in the trap will bring the dead-end employment (Huws, 2014).

The rapid development in the importance of the platforms might also potentially cause to build a high level of employment standards considering the platform economy practices. Even radical approach could be comparing employment relationships with platforms themselves in order to replace in the future by virtual peer-to-peer engagement, avoiding the harshness of the currently acting shapes of capitalism (Sundararajan, 2016).

CHAPTER 4:

Impact of pricing strategy on the platform network effects: Qualitative research.

After a general analysis of the platform economy, it is necessary to go deep in the analysis of the network effects that bring the market competitive advantage. As it is mentioned in previous chapters, the positive network effects could only build the largest company in the platform market that is extremely difficult for competitors to overcome. Thus, it must be highlighted the needed time frame to enlarge the user base and unique value of the platform could build strong network effects.

As in Internet era giants invest in demand-side economies of scale, companies like Uber, Airbnb, BlaBlaCar or rests are not valuable because of cost structures: the capital they employ, the machinery they run or human resources they command. The value comes thanks to the set of users that interact in these platforms. It's not coincidence or value of the tangible assets that Instagram sold $1 billion with thirteen employees or WhatsApp are valued $19 billion with fifty workers, the acquisitions were referring the strengths of network effects both businesses had built so far (Chourdary, 2016). Which is being most valuable defensibility of the digital world that comes to a focal point to investigate in this research with taking into account pricing impacts.

It's worth to keep in mind, in case of from the beginning platform owner is eager to leverage network effects will also face the difficulties of attracting a sufficient number of users in order to produce enough momentum for a network effects to even take place (Clifford C., 2018) which signalizes the classic chicken-or-egg dilemma. Based on the variety of following strategies by the start-up platforms building enough strong networks could take a different amount of time for each model to overcome the dilemma or sometimes it ends with the failure of the start-ups. Due to the lack of unique core value of the platform which doesn't lead to adding value of new users to whole platform users. One of the objectives of this research also refers to investigate the experiences of the platforms about solving the chicken-or-egg problem.

As business models could attract the early adopters or users to surpass the crucial mass point then it is possible to get started leveraging network effects. On the other side considering the

hardship of today's competition platforms somehow must be able to sustain their network growth in order to avoid congestion or saturation.

Referring to one of today's focal points on the platforms, how to optimizing business that lies chiefly in the network effects which should bring revenue to companies to survive in the beginning and even being competitive later on. Challenge has been complex to analysis to have simple formula due to various platform models and different pricing strategies, their impacts on overall networking. Monetizing may pose a unique challenge in the case of losing the balance to monetize which side of the platform in which stage of a platform life and what amount.

Network effects considering measured by numbers of visitors alone do not necessarily refer the monetary value of the platform as companies could get use of rest three main defensibilities such as scale, branding, embedding which could be successful for a temporary period. The interactions facilitated must generate a significant amount of excess value that could be captured by the platform without producing a negative impact on it. If it is not the case, a pricing strategy may not be even possible. It would be better to approach analyzing the pricing challenge by evaluating the possibilities of generating revenue without reducing positive network or even get an increase in that as well as explore the opportunities of different possible monetization ways. At the same time, another focus point could be working a strategy that would encourage desirable interaction while reducing undesirable ones. Real experienced strategies will be possible to see later in the qualitative analysis by targeted platforms.

4.1 Qualitative analysis on effects of the platform strategy on network effects.

4.1.1 Companies selection and methodology.

The aim of this paragraph and of the following ones is to show the results of Qualitative Research on the Transportation-related mobility platform companies' network building models and pricing strategy implementation, its positive or negative results on overall network effects, exploring the different monetization methods that platform could get benefited without damaging existed networking.

The analysis carried out by the undersigned a group of five important platform companies in the transportation sector of Europe.

- *UBER*: it is the platform acting all over the world which known as a multinational ride-hailing company offering services that include peer-to-peer ridesharing, food delivery services and offers micro-mobility service with electric bikes.

- *BlaBlaCar:* it is the platform acting in all Europe which offers long-distance carpooling service, connecting drivers with empty seats to people traveling the same way.

- ComparaBUS: it is s platform company that basis on France which aims to offer the comparison of the fastest, cheapest travel options for all transportation types (bus, train, carpool, plane) from all over the world.

- Mobicoop: it is the platform acting in the French market which offers web developing IT services and free short-distance carpooling solutions, connecting drivers with empty seats to people traveling the same way.

- DriiveMe: it is a platform marketplace basis on France which aims to offer 1€ car and rental across Europe. This price is symbolic as users provide a service to s company or a private individual who wishes to relocate a vehicle.

The aforementioned companies have been selected by evaluating the successful platforms in ride-sharing (Nicoll E., 2016 and Griffis E.,2014) and online marketplaces for transportation types

(Wigngaarde, 2018) in the last decade. Considering the huge market impact with the unique value proposition to all their users in the main targeted countries, helped to become the main players with enjoying a big slice of market share. Business models of targeted platforms mainly based on the power of network effects that make it crucial to invest time in research that to bring up the approach of each to pricing strategy and its impact on the overall user base. The objective of the research to define the network models in different ride-sharing transportation-related mobility platforms and their applied pricing strategies, following results in a long term perspective. Selected companies could bring objected results due to the existence of different business models and pricing strategies.

Selected each company is a market leader or one of the important market players in targeted public and niche markets, thanks to getting also fist mover advantage that brought sustainable competitive power.

Hence, 5 companies have been selected as the "group" to be analyzed for the development of *Qualitative research* in the implementation of pricing strategy in the platforms.

The contact with companies took place following three steps:

-sending the e-mail and LinkedIn prospection with contacting the request for collaboration and general explanation of the research aim;

- a phone call or brief explanation by e-mail for an in-depth interview concerning the topics to be discussed during the research phase and aims of the latter;

-face to face interview and Skype interview with the company responsible for the related questionnaire, head of the business development department or related person.

After the second phase – that involves phone call or e-mail prospection about the willingness to make an interview regarding the application of *Network effects, impact of pricing strategy on it*, all the companies agreed to continue with exception of DriiveMe stated that due to time restriction and protecting the confidentiality, company was not interested in being part of this research project.

Hence, I made a direct interview with four companies that are decided to take part of this research project: *Uber, BlaBlaCar, ComparaBUS, Mobicoop.*

The key points of the questionnaire are the following:

-Brief description of the activity of the company, the reference market, the current amount of platform users.

-Understanding of how well the platform's power basis on network effects, define the networking of the platform.

-Discussion of how costly and difficult was to build network effects, required time frame to build it (Chicken-egg problem).

-Understanding the strategy for a platform to create network effects and how to sustain it permanently.

-Defining the difference of network effects and growth building tools (price effects, brand effects and virality).

-Analyzing whether the importance of growth building tools in the beginning of the platform life and later.

-Understanding the importance of applying pricing strategy, brief revenue cost overview and its possible negative or positive influence on network effects.

-Analyzing the possible methods of the monetization in the platform and their impacts (Ads, premium listings, access fee, transaction fee, data selling and so on).

-Understanding the impacts of pricing strategy for each side of the platform, when and which side could be the better target (producers, consumers or both).

-See the possibilities of devising pricing strategies that strengthen the positive network effects.

4.1.2 Qualitative research

The purpose of the following paragraphs is the evaluating different business models by the four companies investigated, in order to understand the building and even sustaining of network effects and impacts of pricing strategy on it which brings the competitive advantage in case if both are well-balanced. The interviews have been done by undersigned in two ways: face-to-face or via Skype, on the base of responsible person availability from the companies.

4.1.2.1 UBER

The Qualitative Research concerning *UBER* has been done through an interview and discussion with Mr. Lorenzo Buzio – Head of Business development department of UBER Portugal office - considered as the main expert for Portuguese and Italian (Uber Eat) market. Interviewer answers cover the Uber taxi and few points on the Uber Eat model.

Uber is the ride-hailing company that offers mobile App, which users can submit a trip request for wished destinations that are automatically directed to an Uber driver. The confirmation by the Uber driver, passengers will be assisted to the ordered destination. Uber is available more than 700 cities worldwide and averages 75 million platform users.

Source: https://www.uber.com/en-GB/newsroom/

The platform has launched also a distributed logistics network with already launching Uber Eat food delivery services.

Considering both Uber business models it is important to mention the role of positive network effects that brings a competitive advantage to be a market leader in acted most countries.

During the interview, Mr. Lorenzo defined the network model of *Uber taxi* thanks to new drivers join to the platform, it becomes more useful and valuable because of lower wait time and fares which attracts more riders. In reverse, increased the number of riders brings higher earning potential for drivers and reasons for the covering of more geographic locations. Thus it makes network effects speed up.

More clearly it would be better to define all Uber taxi model's network such as:

- **More Drivers** – which always focus point to attract as a prior partner.
- Drivers provide accessibility to **more geographic coverage**.
- More coverage leads to **faster pickups and less driver downtime** which directly **increases to higher demand** thanks to **reliable and on-time service**.

Regarding question related Chicken-egg problem interviewer talked about the existence of the ongoing problem in new targeted cities for Uber Taxi and Uber Eat model.

Basis on the Uber Eat model (interviewer's comments are based on the Italian Market), platform is **nearly reaching a million monthly users** with taking into account not being a market leader in Italy. In the beginning company's strategy refers to **get the advantage of Uber taxi user base** to the new differentiated product of the platform in order to solve the chicken-or-egg problem from users' point of view which became successful to new start-up model thanks to **getting use of reliability level of existed Uber's loyal users**. As we considered **Uber Eat with a three-sided marketplace** rest to sides are restaurants and driver delivery partners which one side will bring the quality with the tastiness or healthiness at the same time another side reliable supply build it an extra value of overall platform service, respectively.

During the interview, Mr. Lorenzo mentioned in the first phase the necessity of attracting all available and high-quality partner restaurants in the platform which core of business basis on. Accordingly, the special operational team has been dedicated to analyzing all the regions with restaurants in order to be a partner with as maximum as restaurants. Evaluating the case from

supplier restaurants' point of view, in most cases, they appreciate to be part of Uber which gives them accessibility to **reach a large amount of eaters**. Taking into account to availability all possible reliable suppliers in the platform makes evident that **each partner restaurant will reason to attract new eater groups** as well as in reverse each loyal Uber **platform user get the interest of restaurant** owners to be in the platform in order to double the sales with is defined as a cross-side or indirect network effects.

Related chicken-or-egg problem with Uber Taxi services in the new cities platform does strong marketing activities with creating price effects somehow being cheaper for user side (vouchers, coupons) on other side more valuable for drivers such as bonuses or offering the use of surge pricing with higher rates particularly in the beginning in order to make people aware of Uber taxi services and its advantages.

Additionally, both Uber models interview underlined the importance of same-side network effect which refers to *word of mouth effect* that thanks to products' unique value that push the user to talk about it in different social communities. Referring to the interviewer: *An of example a student in England who is been user of Uber for a while, during his education period in Italy, if the Uber launches the new Uber eat model he is the potential positive or negative network creator with speaking about to his friends depends of previous experience with the brand.*

Considering the following market leader and rest market players' competition at the beginning of Uber Eat model platform *price effects* played important role in order to attract also new users to the platform by taking into consideration the lack of core Uber model in the Italian Market (due to country law).

One of the important points of how Uber brand could sustain the network effects and even increase it regularly. As analyzing the interviewer's opinions, the higher competition in ridesharing due to competing for a large number of mobility platforms and local taxis of the cities, in order to catch more interest by the local community sometimes the value of the service can't be the only solution. In this case, **Uber prefers to get use of branding strategy** with increasing the intangible value of the company. As it is underlined in the theoretical part **brand effects are stickier** as well. They arise when people come to associate a particular brand with quality which even for Uber brand becomes hard to sustain nevertheless burning of the huge amount of investment.

On the other side in order to be consistent in network effects pricing of the platform play a crucial role which could bring positive or negative effects on overall networking. As we are considering the **lack of switching costs for drivers** to change the platform could make a really big impact on the future of the platform.

Moreover, in order to balance the platform demand and supply sides, the Uber taxi model is based on the logic of fairness to apply **surge pricing method** which goes into effect **in case of more riders than available drivers in the requested area**.

- Surge prices achieve two important objectives for the platform and its customer groups. First makes a **positive impact on the increase of supply-side** by taking into consideration the opportunity to earn more which encourages supplier partners to serve more in the busiest areas over time. As doing so platform gets being valuable for drivers who give a positive response to the demand side.
- The second the applied method becomes an efficient way to **control the demand side** at the same time **allocate available rides to users who give more value** with taking into consideration who is willing to pay the surge price.

Referring to Mr. Lorenzo's comment related to pricing strategy and its effects, he mentioned the focusing **strongly on pricing could be a reason to get negative effects** due to lack of being costly of platform users from both points of view. Taking into account Uber's long term strategy for being differentiating the platform services platform's focal point pulls company to deliver unique product or service with increasing the reliability once is done automatically revenue model bring the positive results. For the moment Uber differentiate model different fields which overall network could bring the fast solution to Chicken-or-egg problem and accelerate the success of the platform. In order to create network effects platform should focus as a priority on branding with a qualitative value that gives natural results rather than wrong balancing tricky pricing strategy. For instance taking into account Uber Eat business if the competitor (Delivero, Glovo) does market trigger strategy in most cases platform follow which leads to the burning of money. Price effects – eaters bring new people as applying coupons or vouchers for customers plays a prominent role to building community.

To sum up, Uber models' success refers to giving priority to build an efficient network model of the business which sustains the growth and being profitable in a long term sometimes rather than designing a pricing strategy as an objective of short term profitable balance sheet.

4.1.2.2 BlaBlaCar

The Qualitative Research concerning *BlaBlaCar* has been done through a call interview and discussion with Mr. Guillaume Protard – Head of marketing, specialized in the French market.

BlaBlaCar is the world's largest long-distance carpooling platform – a worldwide, reliable community of 80 million drivers and passengers in overall 22 countries. The marketplace connects people looking to travel a long distance (263 km average distance) with drivers **heading the same way**, so they can travel together and share the cost of the trip.

Source : https://blog.blablacar.fr/blablalife/lp/zeroemptyseats

Interviewer answers refer to mainly the French market which the company has been launched and got the first market experience and now the BlaBlaCar marketplace has 15 million registered users from France.

During investigating the business model it became an important point to underline the marketplace's power that directly basis on network effects with considering the created value by cross-side or same side peer groups. Depending on the quality of the value network and applied terms and conditions, the marketplace takes a negative or positive direction.

Referring to Mr. Guillaume comments platform gets the advantage of largely indirect network effects between different peer groups but at the same time, it is evident there are also impacts of

direct network effects by considering the influence of same sides users influence to each other about the quality of marketplace which is named *word of mouth* effect.

As cross-side network effects appear after the final service's quality, from the beginning BlaBlaCar **targets to attract supplier peers, drivers as a priority** in order to make it available different long- distance routes for travelers, increasing the offered inventory which is beforehand planned for in a time period. Differ from the UBER model BlaBlaCar refers to attract principally driver peer who plan to go from long A destination to B with/without passengers which brings key difference as being **money saver or lower cost trip** for ride supplier rather than coming to the platform only for a taxi service for being able to work on that regularly.

Network model of BlaBlaCar would be better explained as a circle existence of below-mentioned points:

- **Attracting peers with free seats** who offer a seat by own car.
- Bring the market availability of fast and cheaper **alternative transportation types**.
- Getting **attract of users** → stealing seats from rest transportation types.
- More users → higher number of **supplier peers for saving money**.

After understanding the platform network building process, it is worthy to understand the difference in solving of a chicken-egg problem in order to make network model work. One of the advantages of the platform comes from being **a cost-saver for the drivers** in their planned trips. As it is evident BlaBlaCar had also **first-mover advantage** with being first in the market but referring to interviewer's comments it is true of first launching would bring tons of advantages but also former in the market was tricky with considering in need of building new market alone as **challenge to convince passengers** to spend hours locked in car with a stranger as well as possible strategic, technological app or API mistakes would be negative image for the marketplace model. Only offering qualitative and consistent services would convert to have an advantage. Depending on the market and value offering being the first market creator could be a good advantage for competitors to see and evaluate negative or positive matters. By means of first-mover has plenty of pluses but solving the chicken-egg problem is more difficult to for the market creator rather than the second comer who has different tactics to apply such as **applying driver passenger rating system** which sides are heavily relying on it.

Generally for growth and sustaining the network effects for new routes in French market or new launched countries, BlaBlaCar model also gets use of marketing strategy such with applying

advertisements in different platforms and **being a partner with related meta-search engines** which redirect involved users to platform as an example ComparBUS and BlaBlaCar partnership means with having existence in ComparaBUS platform company gets attraction of also bus, train, plane tickets searchers' availability as an alternative offer which on the other side is also **cost for company to have existed in meta-search** due to sharing revenue for each transaction has been made through meta searches' users.

During the discussion Mr. Guillaume underlined the particularly **help of ample media attention and growth in membership when a strike shut down the national train system**, forcing travelers to search for an alternate war to get around which pushed users to try BlaBlaCar and then keep using it.

BlaBlaCar's other nowadays common strategy to working on content creating (there is a team dedicated on that) on the website thanks to this also gets traffic from Google, Yahoo and others with taking rank during the not service are known users to get awareness.

In addition, each applied market strategies **help to enter consideration set of travel seekers** depending on the service and quality users' preference shows the definitive influence. Considering the value of services results of pricing effects could convert from temporary to permanent. The fact that the company cannot apply price discounts in an infinitive time period in terms of financial point of view this's why the applied time period should be strategic well-evaluated.

Regarding the BlaBlaCar model for monetization company charges only for each transaction have been made between peers which becomes also crucial to make a balance in terms of price of service and platform revenue model. The platform automatically suggests the price range per seat to supplier driver which may be increased or decreased by **+/- 50%** depending on trip providers' decision for route price which **principle is not allow peer provider to make a profit**. Regarding each country has been defined as maximum amount that can be charged cost estimation per km, which is usually based on governmental guidelines. In fact, platform price is characteristic of **platform governed peer transactions** which give **limited freedom for peers** to influence considering transaction, including the price.

Pricing strategy plays an important role in taking into account the French market, the company's model basis which as the main market signalizes terms about BlaBlaCar models to future targeted

countries. As BlaBlaCar manage the availability of driver offers in its platform with applying commission fees to driver decided prices which at the end of each made route platform makes a transfer to the driver account the amount that has been paid by the passenger. Indirectly marketplace applies the revenue fee to the driver with increasing his/her deciding amount. Referring to the interviewer's comments in few cases **drivers claim about extra commission increase** that decreases the probability of getting seats booked. From the BlaBlaCar point of view its role as intermediary connecter, revenue is generated thanks to users, not drivers which sometimes could reason leaving of the platform with preferring the competitors (the case will be explored in **Mobicoop case** which platform doesn't apply any commission fee).

On the other side as it is important to build community as a priority of network effects and because of some governmental guidelines needed to improve there are some countries **BlaBlaCar does not monetize the platform** in order to be competitive and build network effects which will give positive feedback in the day of getting revenue. Which is named the **cash-for-rides model**, a total of 12 (mainly east European and South American, Indian market) countries out of 22 the trip is booked online through a website or app but paid offline in cash during or after a ride which doing so the **platform doesn't charge a fee**. Not applying fee increases the satisfaction with overall experience and likelihood to use BlaBlaCar brand name in the future which enlarges the supplier side, route inventory as well as user base. Platform strategy follows the being valuable service providers for travelers in order to get existence in as maximum as different countries with also strengthen the level of the brand name.

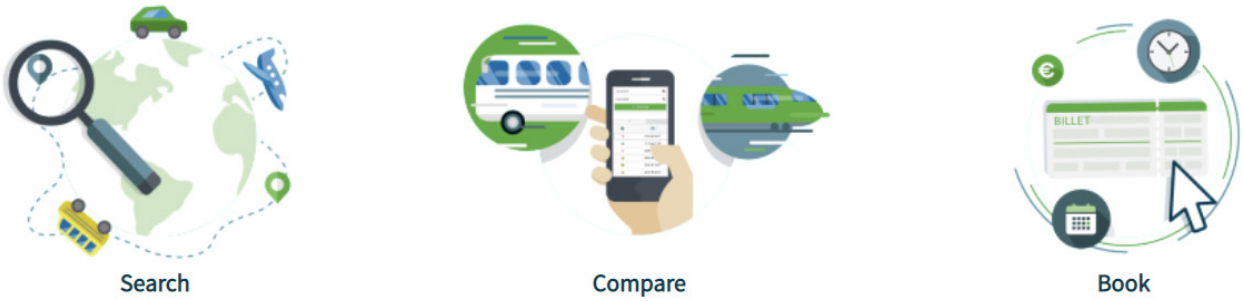
It would be worthy to underline in spite of the final price has been defined by the driver but also there is still a need to improve the pricing model of BlaBlaCar due to reach market demand and supply equilibrium. For the moment one of the solutions could be the Surge pricing model but considering the availability of getting booked in days before is not possible to apply or predict competition of upcoming days for routes. A challenge could be to stay cheaper than rest competitors by taking into account the necessity of a positive effect on growth in the users' size.

To sum up the Mr. Guillaume opinions regarding to the impact of pricing strategy on the network effects of platform, BlaBlaCar's actual not monetizing approach in above-mentioned countries involving on investing time, effort and huge amount of capital placement refers to potential market expectation and understanding the **necessity of building community, in the beginning becomes heavier in a long term objectives rather than temporary financial loss**.

4.1.2.3 ComparaBUS

The Qualitative Research concerning *ComparaBUS* has been made face to face interview and discussion with Mr. Remy Mellet – Chief Executive Officer (CEO) of the company which basis on France.

ComparaBUS is the platform that searches, compares and give booking availability for all possible transportation type (bus, train, carpool, flight) offers from all over the world.



Source: https://www.comparabus.com/en/

During the discussion, it has been clearer that platform business model mainly basis creating of **indirect network effects** with **connecting ticket sellers and transportation carriers** (bus, train, carpooling, flight) in order to give availability to users to find most suitable offers in terms of time, price, duration of the ticket. Currently, the platform has an average monthly 500.000 ticket searchers on one side and near to 2000 transportation carriers' offers on the other side. Platform's main market is France with the nearly 70% of overall platform users due to platform launched in French market which in first years put all team effort to investigate the market and bring unique solutions and rest 20% is shared among United Kingdom, Spain, Italy and 10% rest countries. For the moment transaction percentage is average 7% of users side go to buy a ticket which is counted above of the average in e-commerce platforms.

As platform builds cross-side network effects which refers to getting **more carriers to the platform will bring the large community of ticket searchers** with taking account of the higher possibility to find a ticket for different routes or bring an alternative solution to ticket searchers to compare and choose the cheapest, well-scheduled offers.

More clearly it would be better to define all platform's network model such as:

- **More carriers** (bus, train, carpool, flight) at the beginning of platform life is crucial to begin with attracting.

- **Carriers,** which leads to cover as maximum as routes with different time, duration, price → alternative availability different means of transportation.
- **Less time in ticket search** → all individual carriers in one platform.
- **Attracting more users**, this point accelerates the interest of new carriers due to more business potentiality.

Regarding building community, in the beginning one of the main problems has been solving the Chicken-or-egg problem which dilemma stills ongoing for future targeted country markets. Referring to Mr. Remy's comments about how to bring platform sides without existence of any of them in the beginning point, it is needed to mention the hardness of bringing both sides at the same time which in this case company prefers to have carriers side onboard first on the other side challenge is not in the interest of carriers to be in platform which does not have user base. In the beginning, it has become as a dilemma to solve. But thanks to technical team advanced skills ComparaBUS followed the strategy which is named *fake the presence of competitor* by the interviewee, the team integrated three main bus companies offers in different servers of the website without informing the companies whether they wanted to have a presence on it. In the second, phase ComparBUS had prospected each free-integrated company with enabling only one server that show the presence of two main bus companies in the platform which triggered the prospected carriers to be the part of the platform as also due to competitor existence perception. Which reminds the similarity to Airbnb and Craigslist case.

Moreover, It is worth to underline the ComparBUS first-mover advantage thanks to being first in the market builds also fast cross-side network among people due to interest of get known unique market offers besides the pros to be first market creator there are also strong challenge needed aspects that platform should be able to represent market alone and get success which makes easier to second movers to evaluate the possible market ups and downs depending on business strategy. Besides, one of the key points differs from any other business model to be part of ComparaBUS does not require any cost in terms of time or investment for the carriers which accelerate the attendance. Partners are required to give access to their API to get presented on ComparaBUS platform.

Furthermore, another essential point platform regularly improves the partnership with transportation operators by discussing better customer experience for targeting better solutions. At the same time, unique value comes thanks to strategy to bring all possible carriers to the platform

with prospecting also outside of the core market due to cover all direct travel destinations for users in case of long-distance traveling. Being a partner in the platform transport carriers should sign a contract that does not incur any cost initially and in case of leaving the platform for any reason and expect if the partner brakes the information confidentiality agreement which could incur a cost.

Moreover, differ from competitors, the platform has better ranking in Google results thanks to effective Search Engine Optimization (SEO) strategy which helps to bring average monthly more than +100 000 new travel searchers to visit website (number basis on results of Google Analytics in 2019 average results). As well as referral platforms and travel influencers have a positive effect to advise their audience to reach the destination by checking the cheap tickets.

As being digital platform, company's tactics to create brand image is mainly refer to google or rest meta searches basis activities such as advertising, branding which earlier helps to sustain in the market considering the cost and its potential revenue analysis for the ComparaBUS business model branding is not profitable maybe in a long term, that could be profitable to make branding for specific routes that are revenue is more than cost. However, the company's CEO mentioned the advertisement mostly does not bring a permanent user as network effects that bring lock-in effect, taking into consideration if a competitor makes prices cheaper advertised *price effects* will disappear which shows temporal effects due to it is not sure if the user will be back to the platform again.

As company build network between user groups and ticket providers, monetizing the network effects could be one of the important points in order to find the best proper way to both sides to not damage both networks of both sides. Platform pricing strategy refers to give **free service to users who search for transport** solutions and get **% commission in the case of transaction made** from transport carriers that who get more value with being represented in ComparaBUS platform to sell tickets easily. At the onset, in order to build a platform supplier side company was used to apply pricing discounts which give extra interest to carriers to be onboard. As in a long term, the less commission could lead to negative financial impact to the platform, the objective is to make balance on commission % in after building a strong partnership. Mr.Remy defined pricing strategy could be correlated with the current market situation and the following of partners' tactics. *For instance, it could be possible to monetize the traveler's side if there is no another possibility in the market to find tickets online but the amount should be less in order to not give market availability to new entrants.*

To sum up, being aware of market reaction in case applying tricky pricing strategy could bring effects that harsh the overall activity. Especially in the case of willingness to launch the business model in most cases **new market requires to being free for supplier**, being part of the platform and **going free will boosts the enlarging of community** that could be possible to get revenue in near future prospective direct from user groups or get use of different monetization methods.

Apart from core pricing strategy **platform makes premium listing** to some transportation companies by making their offers on top and more visible as well as **related advertisements** such as accommodation, car rental offers which is directly related and useful for travelers after the end of their trip in order to not losing time to search rests again. Referring to Mr.Remy's comments it is needed to be careful to during the applying advertisement banners or showing in the offers with premium listing because if the quality of offered services is lower or not related it could negative bring an impact in the overall value of a platform that could become to decrease the number of users. Another monetization method could be **data selling that related platforms could apply their cookie** to ComparaBUS to generate travelers' data in order to use this in the marketing of their brands. *For instance, by knowing that Paris-Lille is the busiest route in France, accommodation companies could effort a lot to make strong marketing activities in Lille.*

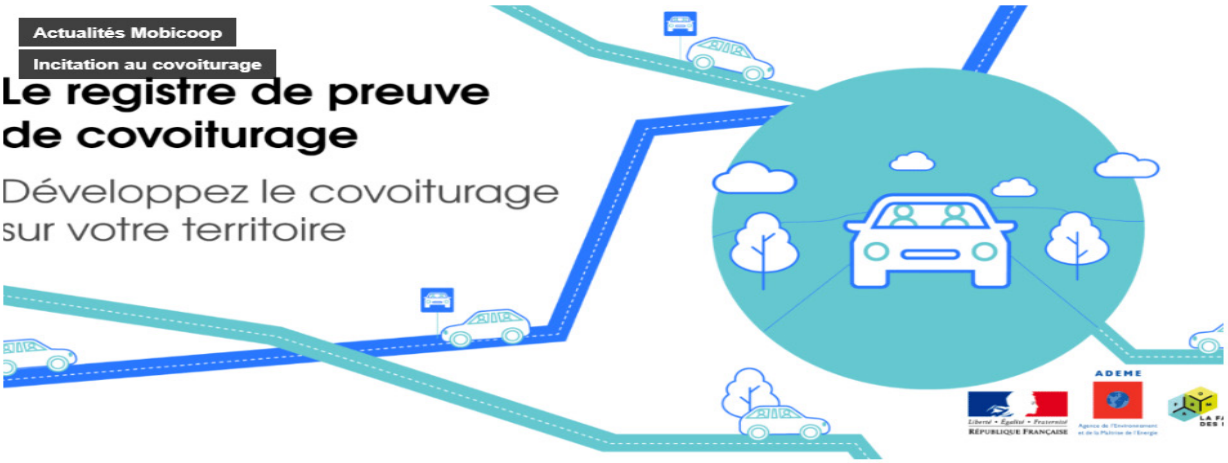
Considering the ComparaBUS case and the hardness of competition for the core market, it is better to monetize one side of the platform which takes more value margin to respect to another side. The objective of the platform is not direct monetize the network power there is also the possibility of applying above mentioned methods without damaging the quality of the core activity.

4.1.2.4 Mobicoop

The Qualitative Research concerning *Mobicoop case* has been made through a call interview and discussion with Mr. Adrien Bailly – Manager of shared mobility projects in Mobicoop.

Mobicoop offers webs developing services and acts as mainly **free short and long-distance carpooling** platform which is launched on the French market that brings the solutions to **connect drivers and passengers also for short distance.** The platform has near **400.000 registered users** taking into account a one-year market existence as a public carpooling marketplace that has launched 2018.

One of the growth reasons for the Mobicoop model refers to give the availability of also short distance offers which was the competitive advantage of platform comparing with only long distances based carpool platforms.



Source: https://pro.mobicoop.fr/

In doing so Platform also gets **use of user database** in offered web-based services which play a key role in terms of the overall revenue of the company at the same time provides publicly free carpool solutions. Depending on the peer's willingness to appreciate offers during the transaction there is an optional donation possibility that takes action in order to compensate the company expenses. In a long term platform vision is to **change the word of carpooling as a free service** in the people's mind. One of the advantages of the Mobicoop appears with increasing the web developing services as having a **strong brand name** in related markets.

The idea of the Mobicoop free carpooling platform basis on the market domination of BlaBlaCar in order to bring the availability of the same quality service marketplaces as not an extra fee for platform members.

During the interview, Mr. Adrien also highlighted the word of *carpooling* could already become an effort for people with taking into account passenger with the stranger driver should travel in a destination as locked-in in the car during the trip. In spite of the platform does an effort to inform the reliability of each user with the rating rank from previous users' experiences, still both sides do the effort to travel together. Thinking from this point of view, adding also fee could become less attractive to the community that price becomes near to rest public alternatives (bus, train).

At the same time, the **claiming by the users about BlaBlaCar commissions** has accelerated the procedure to launch a platform that does not add any fee. Therefore, differ from rest competitors in the platform **driver chooses the price from the range** refers to considering the km distance has been defined automatically as in the BlaBlaCar case. As the main objective of the platform underlines sharing the cost of the supplier side, this's why there is an applicable limitation in the price range in order to avoid regular profitable work perception for the supplier peer group. Therefore, the platform refers to governmental guidelines, cost per km. Chosen price without applying any fee becomes a public offer for the passenger peer groups.

During the discussion, Mr. Adrien has confirmed the necessity of building network effects that directly kicks up the growth of the marketplace. Referring to answers related with network models and investigation on the platform, it is worth to mention the similarity of the network model with the BlaBlaCar model with being almost the same structure platforms.

Explicitly, Mobicoop case **is addressing to the efficiency of indirect network effects**, an important key difference from competitors appear with consideration of **not price adding to drivers** offers which trigger to **bring more drivers** and at the same time indirectly also for passenger users because being less costly with comparing the rest competitors' offer.

Likewise, existed platform network could be specified better:

- Due to no commission adding being an effective alternative to BlaBlaCar drivers → **More supply** side.
- Covering the **more geographic accessibility** → route availability **also for short distance**.
- Lower **market prices for the final user passengers**.
- Attracting **more passengers** → awareness of getting services cheaper.

As being free Mobicoop has the **advantage of also cross-side network effects** with considering word of mouth effect for the same value offering with the competitor but being a free platform.

Particularly platform gets the help of being free in order to solve quickly Chicken-or-egg problem for still existed high-demanded routes. On the same side, as the management team's one of the main duties is related to web services, **integration of referral platforms** to the Mobicoop platform help to **get visited by the new users.**

Regarding users of Mobicoop which important part comes for being **opposed to BlaBlaCar** model. As an interviewee's comments, there are some political activist users who want to enlarge the

awareness of Mobicoop by comparing the advantages of the platform and thanks to company attempt also being part of environmental sustainability activities. On the other side, Mobicoop has also a strategic advantage for having voluntary work power which volunteer presents the company in important public sectors for free and being good alternative thanks to pricing and not enforcing the monetization policy in the platform.

In terms of growth contributors, it could be mentioned additionally platform rests IT service offers for different French cities' private and governmental tourism agencies about overall transportation and carpooling solutions that it brings usefulness to because of indirect usage of Mobicoop database and redirects users on it.

Referring to Mr. Adrien's opinions applying direct monetization from both sides or one side strategy could bring a huge barrier in the growth of overall platform network effects. In doing so the platform does not become valuable comparing with market rivals, being a copy of the market leader doesn't lead to building community and even sustain it.

As an alternative platform could be focused to get use of existed community with improving the related services, there is not sometimes need to monetize the direct network effects being a market studied could give different revenue models depending on business differentiation which company considers the existed network as a unique success even if not going to monetization. As the company's strategy refers to increase community with being free services, also adding apremium listing or any related advertisement could be tricky in terms of not fair balancing the drivers' offers. In this case, Mobicoop's vision is to increase the level of quality for customer experience which could naturally bring travelers thanks to the power of network effects. Giving the only donation availability at the end of the transaction for both sides doesn't decrease the positive effects as long as is optional and in the incentive of peer groups.

Considering all the mentioned points in the *case by case analysis* would be better to have a look overall table below of the main issues and followed strategies by researched companies. In the table key points from each business model have been highlighted in order to be able to see the different approach to building a network model, tactics and advantages to solving the chicken-or-egg problem, applied pricing strategies which could differ basis on core or new targeted markets and its overall impact on network effects.

Key issues	UBER	BlaBlaCar	Mobicoop	ComparaBUS
Network Model	**- More drivers** **- Geographic coverage** **- Faster pickups, lower driver downtime** **- Lower prices** **- On time, reliable service** **- Higher demand**	**- Driver with free seats** **-Alternative transportation type** **- Fast, competitive prices** **-More booked seats** **-Increased supplier traveler drivers**	- The model refers the copy of BlaBlaCar, advantage appears to have also short-distance offers and get attraction of **non-satisfied BlaBlaCar** or rest market competitors' customers → **due to being Free**	**- Transportation carriers (bus, train, carpooling, flight)** **- More tickets availability for different routes** **-In one click comparison of all possible tickets** **-Less time in ticket search** **-Attracting more users → more carriers**
Chicken-or-egg problem	❖ **Help of existed brand in differentiated business** ❖ **Price effects** ❖ **Marketing activities** ❖ **Easy accessibility, smart app** ❖ **Low cost, risk being on board**	❖ **Alternative transport type** ❖ **First mover advantage** ❖ **Cost saving feature** ❖ **Marketing activities** ❖ **Meta-search engine partners who has large user base** ❖ **Being free in new markets**	❖ **Free alternative to BlaBlaCar** ❖ **Work on competitors mistakes, weak sides.** ❖ **Integration of referral platforms** ❖ **Influencers support**	❖ **First mover advantage** ❖ **SEO, Marketing activities** ❖ **Demand side free services** ❖ **IT related tactics** ❖ **Pricing effects** ❖ **Being short time totally free in new targeted markets**
Pricing strategy	**1.Surge Pricing in case of higher demand** - increase of supply side - control on demand side **2.Price discounts – on board both parts again**	**1.Automated price range commission included in core markets** **2.Cash-for-rides model, no more fees –** targeting to building community first	**Free public service →** no fee added to supplier drivers price decision from the automated range considering km and government guidelines.	**1.Charging fee** from supplier transportation carriers **-Making related advertisement** **-Premium listing**
Impact on network effects	**Satisfied drivers →** opportunity to earn more **Increased demand →** reliable service with on time accessibility. **Growth and sustaining network →** more coverage, price competitive services. **New markets opportunity →** brand name, market experience	**Satisfied drivers →** sharing the trip costs. **Higher demand →**Cheaper, fast alternative. **Core market →**some users claims due to have free alternative. **Growth of quick network size →** free market alternative.	**Rapid growth in indirect and direct network effects** **Positive impact on brand image for rest offered services.** **Less challenge to build network effects in new markets in terms of competition**	**Satisfied Supplier side →** fee is charged only in case of sale. **Satisfied Demand side →** no added fee. **Growth in network size →** due to generated value > cost for supplier.

4.1.3 Comparative analysis on the Qualitative Research

After the case by case analysis of the different platform business models, their strategies to build network effects and the impact of pricing strategy on it, in order to have an overall picture of the theme it is necessary to do a *comparative analysis.*

First of all, to identify the points that could be valuable to evaluate the **steps for building network** effects which are explained as the core of the platforms in the research phase by companies. It is necessary to combine the various approaches reported by the transportation-related platform companies in the previous paragraphs.

These are the main steps for highlighted:

- A platform should define the demand and supply side clearly and **evaluate the current and in near-future possible difficulties to connect the peer groups**. As being the first mover in the market, brings tons of advantages to capture the market share on the other side **creating a market alone becomes a challenge for the company to convince the user base**. In case if the platform is not the first mover in the market is required to invest more in market research, define the leaders and their difficulties and competitive advantage which is objective to reach.

- As being hard to gather both parts at the same time, considering the more dependency from each other, platform **preference is to build mainly the supplier side**. Referring to researched companies' opinions this approach could rarely be changed depending on the business model of the platform. In both cases, platform precedence goes to **evaluate the sides in which one's existence brings more value** at the beginning of kick up the model work.

- In transportation-related mobility platforms, the **availability of the supplier side plays a significant role** to launch a business model to the market. Being available to offer **market-related activities make it possible to attract demand-side** users.

- Quick, effective response to market demand accelerates the platform growth and **attracts the new suppliers due to current business opportunities** which make it possible for the circulation of the network model.

Taking into account the explanation of network models from each company, building a network brings a huge challenge for platforms as facing the chicken or egg problem particularly in new targeted markets. In the solving of the problem, in some cases, it is known as a challenge to comprehend the **difference between network effects** and **creation of pricing or branding activities**. One more time during the research phase, companies reported the help of pricing effects until the offering lower prices than market competitors which carry **foolproof of buying a market share for a temporary period**. Only network model could lead to building *lock-in effects* and known as an objective goal in chicken or egg problem.

Referring to different applied tactics from the platform companies, the overall picture of the case regarding solve Chicken-or-egg solution could be addressed as below:

- Getting used to **connecting with existing user base from different platforms and stage** the creation of value units for attracting those users to participate in the platform.

- Making it easy, **no-cost** (dependable considering the market situation) and **low-risk** for sides to be on the platform.

- Starting by **targeting a tiny market** that comprises members who are already engaging in interactions. This **enables the platform to provide the effective matchmaking characteristics** of a large market even in the earliest stages of growth.

- **Building value units that will be appropriate to at least one set** of potential users. When these peers are attracted, another set of users will follow in order to engage in interactions.

- **Designing the platform to attract the suppliers**, who can persuade the customers to become users of the platform.

- Applying the marketing activities with **creation price effects, branding** to attract high volume and attention to the platform. This triggers simultaneously onboarding effect if the served offers are unique at least for a temporary period.

- Create an **ambiance for competitors to feel in need of to be in the competition** born of new business opportunities.

The Qualitative Analysis, obviously, has been also highlighted about applying pricing strategy and its impacts of overall platform network effects. As is the same for each company, the final objective of the business refers to apply a pricing strategy that covers monetizing the services served by an intermediary with the different methods thanks to the connecting role of the platform. Regarding explored companies' opinions pricing could be defined in two phases **first deciding the supplier service price in the platform** and secondly due to making platform profitable, **monetizing with adding a fee** for the key connecting role of the platform or **going rest pricing methods**. Taking into account the analysis of various platform types results and applied methods, tactics could be changed for each case but all platforms' intent is based to **apply pricing strategy that doesn't destroy network effects** contrary bring positive effects to sustain it.

Considering the building network effects as a priority, overall similarity among all the companies **not applying access fee** to the platform in the transportation-related field which could become a **most dangerous feature** in peer activity due to limited access to offered services. Moreover, investigated three models based on charging transactions have been made (can be changed in newly launched markets) and one's strategy refers to free services which company offers publicly free and getting revenue from using of networking as a database for offered out of the platform rest services.

From all the companies subject to the Qualitative Research in the transportation sector results underlined points considering different pricing methods and followed effects on networking:

- Deciding the **price range automatically for the service** with taking into account cost per supplier and government guidelines (if are required), *adding a fee for the final price* to monetize the transactions → reasons to **positive effects in reliable, well-balanced platforms** depending on the size of the supplier and demand-side and how well the platform

responses the market needs. Successful platforms refer to this method due to affordable fees added to final service and with other words **marginal cost of service is less than a benefited advantage** for both sides.

- *Offering surge pricing method which includes the platform fee* in the case of higher volume in the demand side than suppliers. Surge price accomplishes two main objectives:

    - First brings a **positive impact on the rise of supply-side** with considering an opportunity to earn more which encourages supplier partners to serve most demanded services/areas over time. As doing so platform gets being valuable for suppliers who lead to a positive response to demand side.
    - The second strategy causes efficiency to control the demand side at the same time **allocate available suppliers to users who give more value** with taking into consideration who are willing to pay more.
- *Structuring a platform without adding any fee* → nevertheless, **short-term financial loss** but it gives **tremendous advantages in terms of quick-growing network effects** which would be used to apply fee or rest monetization tactics in a long term, mostly strategy is applied during the launching existed successful models in new competitive markets in order to destroy the position of the market leaders and build a community and brand.

- *Not applying the commission fee for the platform*, monetizing the *platform by giving premium listing, related advertisement possibility* → depends on the quality of the additional pricing strategies effects on network effects could be changed. Taking into account qualitative supplier promoting in the platform doesn't generate negative results, **strategy becomes sufficient due to give publicly free services**. Additionally being free makes quick growth of the platform.

- Not changing the supplier deciding price being available supplier to be on board by getting a *commission from supplier for each transaction made* → **comply with efficiency as long as demand-side get the product in a no-fee added price**, tricky point could appear if the supplier considers the cost of being in platform and add fee include the price, effects to

supplier side also becomes positive due to get charged fee during each booking has been made, in most cases considering the financial loss for supplier side in beforehand fee price is included to final one.

CONCLUSION

The platform is a simple-sounding transformative conception that is drastically ever-changing the business, the economy, and society at large. To realize the well-built forces that are being unleashed by the explosion of the platform businesses, it reminds to think about how value has long been established and transferred in most markets.

Nowadays, the number of platforms that have been launched in the transportation sector has increased particularly in ride-sharing with the objective of being successful as easy as market leaders. Due to a lack of study to investigate the right matters, business models have failed with being the copy successful models that do not enough to qualify the achievement.

In order to structure a prosperous platform model, competition requires to bring better solutions to the marketplace which would be positive feedback in the demand side and give the business opportunity to the supplier side. More explicitly, successful platforms should define the right problem statement which would be useful to solve the unmet need for customers. In addition, reaching critical mass leads to ensuring reliability and efficiency which should be taken in to account from the ground up on these principles. In doing so platform gets customer loyalty and builds the community which refers to the word of network effects.

The abovementioned factors become to be a profitable conversion for a company with the right design choices in the business model that pricing strategy could be one of the important factors to build and sustain the platform success. As it is noticed in the research phase companies attentive tactics on designing the price due to depending of the decided range and charged fees various results would appear in the platform life.

In this research main objective has been to look over the different platform models in the transportation sector which lead to the more case availability to discuss and reach each of their success formula about network effects and impacts on pricing strategy on it. It is necessary to emphasize, from the beginning of the literature review and researched platform models in various sectors, main power addresses on how well the platform owns, manage intangible assets mean the network effects and designing the revenue model that could convert to a successful platform model.

Simultaneously, well-managed platforms' focal point goes to investing research time dedicated each market with considering the current situation and needs define the potential supplier and user peers which will carry the company to have a competitive advantage.

It is indispensable to underline – as demonstrated by a study carried out Marshall Van Alstyne in his *Platform Revolution* book – that power of the platform refers to network effects means the impact of new or existed users have value created for each other. Definitely, the concept could be explained as *positive network effects* referring to producing significant value by a well-managed platform community, on the other side *negative network effects* community could decrease the value produced by each other due to lack in the quality of offered services or poor-managed platform community. Moreover, the study mentions in order to capture value by created network effects depending on the applied pricing strategies impacts could be negative or positive which brings the critical mass point to discuss pricing, its related effects on the community of the platform (Alstyne M., 2016).
The referenced study coincides with the results of my *Qualitative Research,* showing that network effects become the most important intangible assets for transport-related platforms, only building a community with the competitive sources makes efficiency in the connecting role.

The results of this Qualitative research emphasize the crucial role of the pricing strategy in the platform that directly impacts the platform quality. In a word, it would be worthy to mention monetizing the platform is correlated by the size of building a well-balanced community. In addition, the pricing strategy could change for each business type with considering also the current market situation. In spite of sometimes possibility to apply pricing strategy for both platform sides in temporal markets due to lack of well-developed services, as a prior rule platform's success formula refers give free services to one side and charge another side which can extract more value than other that in doing so with the competitive prices will not damage peers willingness to be in the platform.

In case of temporal market availability apply transaction fee for each side, in order to protect the qualitative customer experience, platforms are better to charge a higher price to the side that has less price sensitivity.

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