

Online Market Makers: A study of what they do to reach critical mass

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Abstract

Online market makers bring together two or more distinct different parties to interact and transact with each other. By doing this, they either reduce search costs, shared transaction costs, or both. Reducing search costs reduces asymmetric information among users and makes sampling of candidates easier. Reducing shared transaction costs means making the transaction more flexible, less costly, and less time consuming. Previous research states that online market makers need to attract a critical mass of users for network effects to appear and help further growth. We find that online market makers do not view critical mass as is suggested by existing theory. Instead of viewing critical mass as a certain total number of users, they view as the sum of having reached critical mass in small geographical areas or social niches, i.e. the number of geographical or social communities that have been created. Hence, in the effort to create strong network effects, online market makers need to focus on building up many small communities. After critical mass is reached in one social or geographical niche, the online market maker should expand into adjacent niches, which starts creating network effects. As critical mass is reached in more social or geographical niches, network effects get stronger and people start to spread the word of the platform through word-of-mouth. When enough niches have reached critical mass, we propose that a general critical mass has been reached, which makes further expansion much easier.

Keywords

Critical Mass, Online Market Maker, Platform, Multi-Sided Platform, Network Effect, Customer Acquisition, Retention, Viral Growth

Preface

This master's thesis was conducted during the fall of 2016 and the beginning of 2017. The thesis was written as the last project to completing and receiving a master's degree from Industrial Engineering and Management at the Faculty of Engineering, Lund University.

This thesis has contributed to the study of online market makers and their initial challenges that reaching critical mass on multiple sides of the platform entails. The thesis breaks down the process of attracting users into three steps: acquiring users, retaining them on the platform, and using existing users as well as other tools to achieve a viral growth of the platform.

We would like to express our sincerest gratitude to all the people who contributed and helped us in our research. We would especially like to thank the founders, venture capitalists, incubators, accelerators, and other people that offered themselves to sit down with us and share their experiences.

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1. Introduction

Since the first trades of history occurred, trade has been developed and evolved to much more than it initially was. In the rise of the internet, trade was further developed and much of the previous standards changed. Particularly, demand and supply from different parts of the

world were enabled to interact and transact with each other. Before the internet long travels were often necessary to enable transactions between supply and demand. As the internet arose, supply and demand from the whole world was collected at one single place, which made it difficult to find the right match in the jungle of different actors. Search engines became a first step in simplifying the process of optimizing matchmaking on the internet. At this stage, it was always individuals trying to look for companies supplying a certain good or service. Then came online platforms which enabled different types of users to interact and transact on the platform. Not only did these further reduce the search effort, but they also removed the intermediaries, which reduced the shared cost of transacting with another company or user. A further development of online platforms are the online market makers, which enable distinct different parties to interact with each other over the internet. The success of online market makers lie much in how well they manage to create network effects, which means that they become increasingly attractive as more users join them. When network effects are present people hear about the online market maker, which makes customer acquisition both easier and cheaper. In order to obtain strong enough network effects, online market makers need to reach a critical mass of users. This report will look further into this concept. More specifically, how online market makers work to reach critical mass and how their way of doing so matches the corresponding theory about the subject.

1.1 Background

Trade involves the transfer of ownership of goods and/or services. Since long ago, people have completed trades with each other. Trade has since then gone from barter, to exchanges of precious metals, to finally involve money. Trade exists due to the specialization of labor, meaning, for example, that some are good at farming and some are good at producing sticks.

In open and unregulated markets, price has always been determined by supply and demand. If the demand is relatively high, the price will also be relatively high, and vice versa. If supply is relatively high, the price will be relatively low. Scarcity hence implies high prices, or even the disability to buy something. Open markets have no barriers to free market activities and are characterized by the absence of tariffs, taxes, licensing requirements, and other regulations that interfere with the natural function of a free market.

At the beginning, mainly local trade was made. For example, at a marketplace, people knew where to buy tomatoes and where to buy axes. Later, regional trade rose because different regions had a comparative advantage (e.g. wheat grows better in one country than in

another). Since new markets could be reached, supply increased for some goods, and supply arose for the first time for other goods. Also, some production sites started mass production, which enabled them to offer products at lower prices. In this period of time, people still knew where to get different goods, and they also knew that some goods were not available. As ways of transportation developed, regional trade further expanded, which enabled trade with regions even further away. Yet, transportation implied extra costs, which made trades with those goods more expensive. When having decided what to buy and where to buy it, shared transaction costs can be included. Shared transaction costs can, in general, be costs that include time or money.

From the late 1990's, as internet paved the way for the digital economy, new ways of trade were enabled, i.e. through computer mediated transactions. Internet provided transparency about both supply and demand, and foremost, it enabled global trade in a whole other way than had previously been possible. Varian (2010) proposed four different things that computer mediated transactions facilitate: new forms of contract, data extraction and analysis, controlled experimentation, and personalization and customization. Computer mediated transactions provided a foundation, upon which new businesses could take place. This gave name to e-commerce, which is defined to be "any transaction completed over a computer-mediated network that involves the transfer of ownership or rights to use goods and services" (Fraumeni, Manser, & Mesenbourg, 2000). The first and most simple e-commerce had an "e-shop" from which people could order goods.

The issue of trust came to play a big role as the internet became a part of people's everyday life. Trust has always been important for all types of businesses, but as companies began operating on the internet the conditions changed. Since the rise of e-commerce, building trust has been crucial in order to be successful (Jarvenpaa et al. 1999). As trade on internet became virtual, i.e. the traders could no longer see each other in person, people did not know whether to trust e-commerce or not. For instance, people were not sure if they would actually receive what they had been offered on a webpage. Hence, building trust has always been of great importance for e-commerce.

As internet grew bigger, e-commerce evolved and many more types of e-commerce appeared. A bigger number of e-commerce made it harder for customers to find what they were looking for. The "search cost", i.e. the effort of searching, was very high since people did not know where to look. The search cost was often times so big that customers kept to companies or suppliers they already knew, which implied that e-commerce initially was limited to the already known market for each customer. The high search cost originated in

that demand and supply had trouble finding each other. The supply was dispersed, whereas people searching on the internet wanted to find all supply within a certain category in the same place. The need for coordination was apparent. The big supply that appeared on the internet, which increased the search cost for customers, gave rise to a market for collecting and coordinating supply and demand. This lay the foundation of platform companies, of which the first type was the search engines, such as Google and Yahoo. The search engines reduced the search cost for the demand side by making it easier to search for a specific subject and then several suggestions of appropriate webpages were presented. Reducing search costs in a two-sided match-making setting generally means reducing two-sided asymmetric information. Asymmetric information refers to a situation where a transaction or trade is to take place. One agent possesses information regarding the trade that another agent do not. An example could be a car seller having more information about a car, its history, engine quality, and distance covered, that a buyer of that car does not possess. Reducing the asymmetric information makes sampling of candidates for transactions easier (Hagiu, 2009). This includes providing price information that reduces the cost of obtaining information about additional sellers as well as reducing the ability of sellers to obscure their quoted prices (Bakos, 1997). Examples of reducing search cost is www.momondo.com, where users can compare the prices of multiple airlines of a specific flight.

Another problem of general trade was the shared transaction cost, which is the cost incurred during the transactions themselves, i.e. after search is over and the transacting parties have found each other. A part of these costs is generally common to all transactions between different members of the relevant sides of the transaction, which is why they are called “shared” costs. The shared transaction cost can be monetary, but can also include aspect such as time, place, flexibility, simplicity or the number of participating agents (Hagiu, 2009).

The need for a reduction of shared transaction costs and search costs enabled multi-sided platform companies to evolve, which enable direct interactions between two or more distinct types of users. Examples include marketplaces where buyers and sellers can meet, price-comparison websites, and apartment brokerages. There are different types of multi-sided platforms: audience makers, demand coordinators, and market makers (Evans, 2003). Audience makers let advertisers reach a large user base, such as a newspaper including ads. Demand coordinators make goods or services that generate indirect network effects across its different sides. Demand coordinators are not founded around the transaction, which the other types are, and they are much more focused on the network and users. Examples include operating systems or smartphones.

The last type, which we find the most interesting, is the market maker, and particularly the market makers that operate online. Online market makers enable distinct different parties to interact and transact with each other online. Just as the name suggests online market makers create markets between different actors. They do this by doing only two things: enabling transactions and coordinating these. They then earn money by either taking a commission for each transaction or interaction, or by taking a license fee. Online market makers both reduce search cost as well as the shared transaction cost. They reduce search cost by collecting the supply of a specific category to one place, and they reduce shared transaction costs by removing intermediaries that need to actively participate. Online market makers let the different sides (i.e. the different types of actors) of an interaction or transaction interact or transact directly with each other. By removing the active participation of the intermediary, the setup of the interaction takes less time and becomes more flexible since changes do not need to go through the intermediary. Say for instance that you want to listen to music. Without an online market maker, such as Spotify, you would have to buy all the songs that you want to listen to before you listen. If you then would change your mind about what music you want to listen to, you would have to buy some new songs before being able to listen to them. In other words, Spotify makes listening to music less time consuming and more flexible. Online market makers also reduce the monetary cost of the transaction itself. One example of this is the taxi-service company Uber. By not employing its taxi drivers, Uber does not need to pay salaries to the drivers that are inactive, i.e. not currently providing a ride. Hence, customers to Uber do not pay for anything else than for the ride itself. The same principle reduces the monetary cost for customers of the apartment-rental site Airbnb. Online market makers hence help supply and demand to get in contact with each other in more efficient ways. By allowing many different actors on both the supply side and the demand side to the platform, all participating actors within a category are collected and easily accessible. Another example of this is Tictail, which allows retailers to create their own e-shop. The e-shops of all retailers are then collected on one platform that acts as an online shopping mall, i.e. an e-mall.

Online market makers are a new type of companies and hence the legal aspect of them has been discussed a lot in recent years. Especially the online marketplaces where private individuals can earn money without being employed, which means that the business model avoids taxes. The cases of Uber and Airbnb are particularly interesting in this aspect because people have started using their services as their job, i.e. as a taxi driver or as an apartment-rental manager. In this sense, some online market makers have created markets that get very close to an open market, where supply and demand are the only factors that impact the price.

The online retailer Alibaba, the apartment-rental site Airbnb, and the taxi service app Uber are all examples of online market makers that have gained enormous amounts of publicity over the last few years because of their fast and viral reach. Airbnb is the world's largest accommodation provider in the world, but owns no property. Uber is the world's largest taxi service company, but owns no cars. Alibaba is the world's largest retailer, but owns no stock. These are examples that show how interesting it is when companies only focus on two things: enabling interactions and coordinating these. The term "platform company" was in the late 1990's mostly an expression used by researchers, whereas now it has become something that many companies strive to become.

It is fascinating how online market makers can become so big in such a short period of time. The rapid and viral growth of these companies depend on the strong network effects they possess (Evans, 2003), which makes them increasingly attractive as more users join them. Though, before becoming an attractive platform, online market makers need to have enough users of both supply and demand side. The positive network effects appear if and only if the online market maker manages to reach a critical mass of users. This is a difficult task, which many online market makers fail to accomplish. Hence, it is important to focus on growing the user base of the platform and securing that a certain balance of the different sides is obtained. Having too many of one side and too few on another side will lead to quick failure (Evans, 2009). If an online market maker manages to grow its user base in a balanced way and reach critical mass, people will start talking and hearing about the online market maker, which then attracts more users. The more users that join the platform, the more value it offers to existing and new users. But just as network effects make platforms more attractive as more users join them, they also work against the platforms before they have become big enough. Therefore, reaching critical mass is vital for online market makers.

Literature is however scarce about what aspects there are of critical mass and how different types of online market makers can reach it. Previous research has mostly focused on more mature companies and their pricing structures and revenue streams. However, Evans (2003, 2009) has conducted some case studies and a survey regarding the multi-sided platforms and the initial phases of reaching critical mass. It is important to note that Evans (2003, 2009) regards multi-sided platforms, whereas the findings of this research will focus on the online market makers (i.e. a subgroup of multi-sided platforms, defined on page 18. Evans (2009) also presents strategies on the initial steps of attracting users. However, the techniques are very general and Evans does not describe what types of companies should use what technique. Also, Evans (2009) states that word-of-mouth is an important aspect of

product diffusion and that, according to social network theory, word-of-mouth will spread more quickly the denser a network is. By denser he means that there are fewer degrees of separation among members of the network. However, Evans (2009) does not go more into detail about “fewer degrees of separation among members of the network”, but we assume he refers to geographical, demographical, and social closeness. Also, as online market makers are quite different from each other, we believe that different techniques should be applied to different types of online market makers. Ries (2011) has proposed a framework with three ways of driving user growth. These are: attracting and converting users, retaining them, and getting them to spread the word to new users.

Our objective with this report is to find out how online market makers do to reach critical mass. We then aim to compare this with what Evans (2003, 2009) argue with the framework presented by Ries (2011). Then we will suggest a few subgroups of online market makers and try to relate each subgroup to how that type of online market makers do to reach critical mass.

In order to do this, we have conducted semi structured interviews with founders of one Danish and fourteen Swedish online market makers. We have also interviewed non-founders who influence these companies and know much about them. The latter refers to venture capitalists, accelerators, incubators, and people who have worked closely with many startups.

Our findings are centered on what reaching a critical mass means to different types of online market makers. We find that critical mass is different for all companies, both in terms of number of users as well as what social groups and what geographical areas that need to be addressed. We propose a framework that, depending on broadness of a company’s value proposition and the level of local presence that is required, directs online market makers to how they should direct their efforts when trying to obtain a critical mass of users. Online market makers, where both parties of a transaction need to be geographically close to each other, need to focus on reaching critical mass within a geographically small area in order for local network effects to appear. Online market makers, whose participating parties can interact solely over the internet, need to establish a critical mass within an online community. The other factor is the broadness of the value proposition, i.e. how many different needs the online market maker tries to satisfy. Online market makers with a narrow value proposition should try to reach a critical mass of users within a certain social group that fits into the narrow value proposition. Online market makers with a broad value proposition need to get as big of a total number of users as possible to use its platform. For this group of online

market makers, critical mass is more in line with what Evans (2009) suggests. The framework that we propose divides online market makers into four different categories that include high and low levels of local presence and broadness of value proposition.

2. Theory

The theory section has three main areas. First, the online market makers will be described and defined. Then the process of reaching critical mass will be introduced further, before dividing this process into three major parts: paid growth and user acquisition, user retention, and viral growth. Lastly the research question will be introduced, connecting the online market makers to the process of reaching critical mass.

2.1 Defining an online market maker

Online market makers are a subgroup of multi-sided platforms (MSP), which evolved from the need for a reduction of shared transaction costs and search costs. The fundamental functions that an MSP seeks to accomplish is to either reduce search costs or to reduce shared transaction costs among its multiple sides (Hagiu, 2009). MSPs are business enablers and interaction facilitators (Hagiu, 2009). They act as a meeting point, where different parties can do business with each other. An MSP provides a support that facilitates interactions among the two or more constituents (sides) that it serves (Hagiu, 2009). Examples of MSPs thus include both those platforms where interactions take place online, such as with Airbnb, Spotify, and Uber, and at physical places, such as shopping malls. There are two requirements for a company to be considered an MSP (Hagiu & Wright, 2015). First, they enable direct interactions between two or more distinct sides. Direct interactions imply that the two or more sides retain control over the key terms of the interaction, instead of the intermediary having this control. Second, each side is affiliated with the platform. Being affiliated with a platform means that users on each side consciously make platform-specific investments that are necessary for them to be able to interact with each other (Hagiu & Wright, 2015). The investment could be a fixed access fee or buying the necessary equipment, e.g. a videogame console. The investment could also be an expenditure of resources, as for example users that invest time and money to learn how to develop an app for an application store, or an opportunity cost which could be transportation to a shopping mall (Hagiu & Wright, 2015). Figure 1 illustrates different business models and intents to visually show the direct interactions of an MSP, as opposed to the ways of interacting via an intermediary, as in the other business models. In the others, the intermediaries of the other business models interfere with the interactions instead of allowing the different sides to interact themselves.

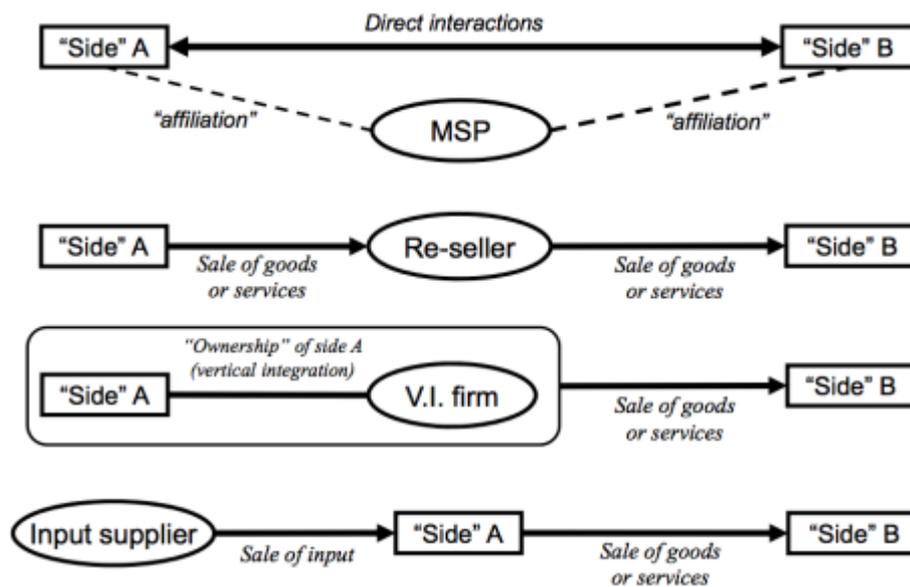


Figure 1. *MSPs vs. alternative business models (Hagiu & Wright, 2015).*

An important aspect of MSPs is that they become increasingly attractive as the number of platform users increases. This is called network effects. Members of one side are more likely to get on board an MSP when more members of another side do so (Hagiu, 2009). In communication networks, such as Facebook, people join because they perceive value in that some of their friends are already on Facebook. The more of a person's friends that have already joined Facebook, the more attractive it becomes for the person to join. If the user joins Facebook, the value for his or her friends, that are already on Facebook, increases as they now have one more friend to interact with on Facebook. Markets like these, where the value of the network increases as more people join, are said to exhibit "network effects", or "network externalities" (Katz & Shapiro, 1994). Network externalities can be defined as "the value or effect that users obtain from a product or service will bring about more values to consumers with the increase of users, complementary product, or service" (Katz & Shapiro, 1985). For instance, a marketplace for vegetables attracts many customers, which makes the marketplace attractive for other types of sellers. As sellers of new types of products join, the value of the marketplace increases. A fruit salesman that joins the marketplace brings complementary products to the buyers of the marketplace. This serves as an example of how the marketplace is able to internalize the network externalities. Network externalities can increase both economic benefits, as well as the number of users (Lin & Lu, 2011).

Many researchers (e.g. Katz & Shapiro, 1985; Lin & Bhattacharjee, 2008) have pointed out that there are two types of network externalities: direct and indirect. Direct network externalities in MSPs imply that an increase of users of side A, adds value to users of side B.

For example, buyers of a market perceive an increased value as more sellers join the market. Indirect network externalities for MSPs, on the other hand, imply that when the number of users of side A increases, the value increases for users of side B, who then increases in number. The increase of users of side B then leads to a greater value for users of side A, which means that both sides benefit from more users of either side, see figure 2 for an illustration. For example, as more buyers join a market, the value of the marketplace is increased for sellers, which then increase in number. This in turn increases the value for buyers. Hence, even though buyers are not directly benefited as new buyers join the market, they are indirectly benefited since the larger number of buyers will attract a larger number of sellers. Therefore, independently of what kind of user joins a multi-sided network, all users benefit. Because all users benefit from more users, better and more complementary goods or services offered to either side also drive network externalities (Lin & Lu, 2011). The terms 'network externalities' and 'network effects' are sometimes used interchangeably, but there is a small difference. The term 'network externalities' implies that the value of the network changes as the number of participants of the network changes. The term 'network effects', on the other hand, refers to the effect that the change of value brings.

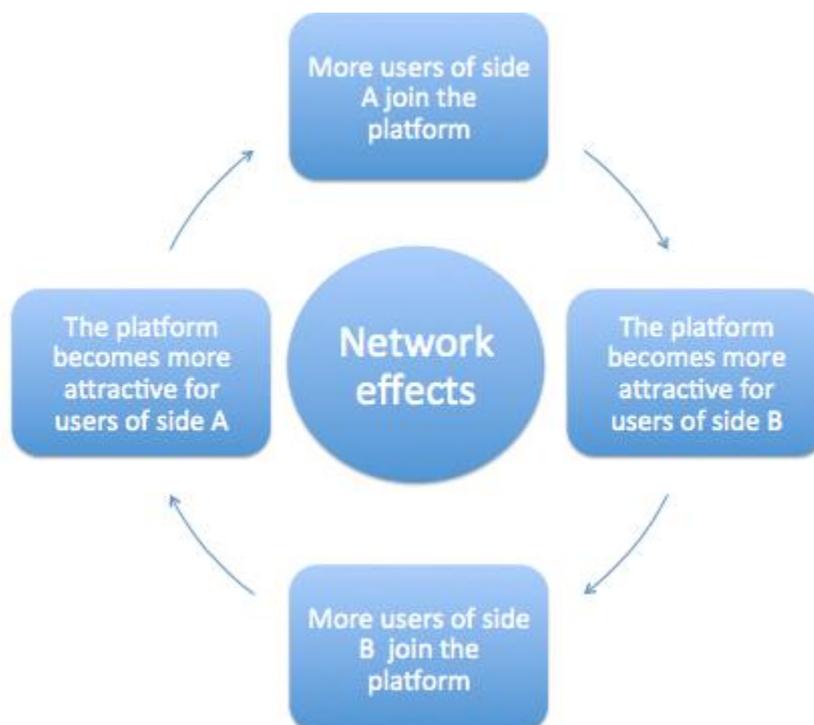


Figure 2. *The fundamentals of network effects. As more users of either side joins the platform, the more attractive it becomes for users of both sides.*

We have so far gone through what an MSP is, though we have not yet explored the economics in depth, neither have we explored the different types of MSPs that exist.

The opportunities for MSPs to create more value than the direct value that is being created through transactions, arise when three conditions are met (Evans, 2003).

1. There needs to be two or more distinct groups of users.
2. Coordinating supply and demand should benefit users of the different groups.
3. An intermediary can simplify that coordination more effectively than bilateral relationships between users of a group (Evans, 2003).

First, there needs to be two or more groups distinguishable from each other. These users could be very alike in terms of person, but each of them hold a different purpose or role in the transaction that is being made (Evans, 2003). For instance, two different types of groups exist and they would benefit from interacting or transacting with each other. One person is looking for accommodation, and one is looking to rent out his or her apartment.

The second condition regards the coordination of supply and demand and the network effects surrounding the users. This means that there are indirect network effects that different users benefit from. Evans (2003) argues that these effects are empirically important for the emergence of platforms. Going back to the example from the first condition - both of these parties would benefit from a place where they could find each other. This is what Airbnb has done. In other words, Airbnb has created a platform where these two distinct groups of users can interact with each other. Airbnb simply coordinates both parties' needs. The users also benefit from new users joining Airbnb, because it would further increase their interaction possibilities.

Third, the intermediary fills the function of being able to internalize the externalities. Simply put, in order to obtain the value that the platform offers, the interaction between users must be conducted on the platform. If a member from each group could enter into a transaction of a bilateral nature, i.e. without using the platform, they would not be able to make use of the indirect externalities internally (Evans, 2003). This condition means that Airbnb users do not benefit from the existence of Airbnb if they do not perform the transaction on the platform itself. Hence, Airbnb had to create value for its users that they can only extract by completing the transaction on the platform.

Evans (2003) evaluates different MSP industries and what implications their different characteristics have on their pricing structures and sources of revenue. With the three conditions presented he goes on to divide MSPs into three main categories: demand coordinators, audience makers, and market makers. Demand coordinators generate indirect network effects across various groups by making goods and or services. These MSPs are differentiated from the other two types in terms of economics. Demand coordinators are not

necessarily founded around the transactions, which the other two are. Examples can include companies working with software, such as Windows, or mobile phones/smartphones (Rochet & Tirole, 2003).

The second group of MSPs is called audience makers. Audience makers focus on creating content on their platform for one group, the audience, and at the same time matches advertisers to this very same group. Facebook and newspapers are examples of audience makers. The value generated for the advertisers is increased if the audience increases in numbers, and specifically if they react positively to the messages that the advertisement is sending (Goettler, 1999).

The third and last group of MSPs are called market makers. Market makers enable distinct different groups of members to interact and make transactions, i.e. the main interaction occurs between the different sides of the platform and not between users of the same side. When the amount of members of either group increases, the value of the service for all groups increases due to network effects (Evans, 2003). Market makers include companies that enable interactions - such as the dating app Tinder, as well as transactions of both services - such as the taxi service company Uber, and products - such as the online marketplace Ebay.

The main difference between audience makers and market makers is that for audience makers, the platform does not offer direct value by enabling interactions between the distinct parties. That is, the advertisers benefit as more users of the other group join, whereas the other group do not find direct benefit from the advertisement. For example, Facebook users probably did not experience extra value when the ads were suddenly permitted to the platform. However, Facebook users are indirectly benefited of the advertisers as these enable Facebook to further improve its platform.

Since these three groups are quite different from one another, the report will solely focus on one. As the background to the creation of MSPs was the lack of coordination between supply and demand, we believe that the most interesting type of MSP is the one that focuses most clearly on this - namely market makers. Since Evans (2003) first described market makers, much has happened to this category. Back then, Evans gave examples such as stock markets and shopping malls, whereas now online market makers have arose, as for example Airbnb, Uber and Alibaba. Reaching critical mass for these types of companies has proved to be a catalyst for rapid and viral growth. The ability of online market makers to become so large in a very short period of time is fascinating. Thus, we will look into how online market makers work as they try to reach critical mass.

Market makers have two objectives: reducing search cost and reducing shared transaction costs. Reducing search costs implies reducing two-sided asymmetric information, which makes sampling of candidates for transactions easier. This means matching supply and demand faster and with a higher precision. For example, Airbnb has enabled millions of persons living in apartments to rent out their apartments for as many nights as wish for. As Airbnb grow more popular in a city, the supply of places for travelers to stay at increases. The supply suddenly not only consists of just hotels and hostels, but also apartments of different quality, size, and price. This allows travelers to more accurately coordinate their demand. Putting this in general terms, resources are used in new and more ways, which has enabled new market segments due to a bigger and wider supply.

The other purpose of market makers is to reduce shared transaction costs. As described earlier, shared transaction costs are costs that occur after the search for a buyer or seller is over, and the actual trade is to be handled. It can be monetary, but can also include aspects such as time, place, flexibility, simplicity, or the number of participating agents (Hagi, 2009). Taking the dating application Tinder as an example, basically all of these aspects are improved. Tinder users can “date” whenever they like to, they can determine exactly in what area they want to date, they can date just as many as they want to, and they do not have to pay anything for getting in contact with a date. Returning to Airbnb as an example, people who rent out their apartments neither have overhead costs, nor do they have to pay salaries and related taxes that need to be included in the price. Removing these intermediary costs paves the way for a big reduction of shared transaction costs.

Market makers are moving more and more from being a physical intermediary, to an intermediary that enables interactions and transactions online.

To define an online market maker, one has to address all its different constituents. Partly, it is a platform. Second, it is “online”, and third, it is a “multi-sided platform”. Last it is a “market maker”. The first part is “platform”. Gawer (2011) refers to a platform as a “foundation” or “building block” on which interactions between parties can occur. The second part is that it is “online”, meaning that the platform exists online, i.e. on a website or an internet based application. The third part includes being a “multi-sided platform”. Being a multi-sided platform implies that the distinct parties are affiliated to the platform and that the interactions between them are direct. Last, it is a “market maker”, which implies creating a market for its distinct parties.

This leads to the following definition of an online market maker:

An online market maker is a website or an internet based application that brings together

distinct different parties, who, after having affiliated to the platform, are enabled to interact and/or transact directly with the other side, which creates a market.

There are several business models that are used by online market makers. These include commission, membership/ subscription fee, listing fee, lead fee, freemium, and featuring listings and ads (Makkonen, 2015). This report will however not go further in analyzing the ways online market makers earn money.

In this report the term “platform” will oftentimes be used. The platform refers to the community that is based on a certain webpage or application. For instance, “joining a platform” mean not only that a user visits a webpage, but also that he or she signs up and creates a login account if that is required. A platform can hence both refer to a price-comparison site such as Momondo, a social medium such as Facebook, or an online marketplace such as Airbnb or Uber. Sometimes ‘platform’ and ‘online market maker’ may seem to be used interchangeably. The difference in these cases is that ‘platform’ refers to the website of the online market maker, whereas ‘online market maker’ is the company.

As stated, this report seeks to answer what online market makers do to grow their user base to reach a critical mass of users. Evans (2009) suggests that reaching a critical mass of users will work as a catalyst for network effects, which enables further growth that will take care of itself. By an economic catalyst, Evans (2009) refers to a business that creates value by getting two or more groups to interact.

As we have now covered the three conditions presented by Evans (2003) as well as the definition of an online market maker, we will now move on to describe process of reaching critical mass.

2.2 Reaching critical mass

Network effects play a vital role for online markets, and more specifically for online market makers. Though, before reaching the stage where external benefits emerge and attracts more users to join, an online market maker needs to reach a critical mass of users (Evans, 2009; Lin & Bhattacharjee, 2008). Critical mass means that there are sufficiently many users on both sides of the platform so that anyone side considers it an attractive market to participate in. If a platform manages to reach critical mass, network effects start to appear. As more users join either side, the more attractive the platform becomes for all sides of the platform. From this point and on, the platform is attractive enough for people to spread the platform through word-of-mouth (Evans, 2009), see figure 3.

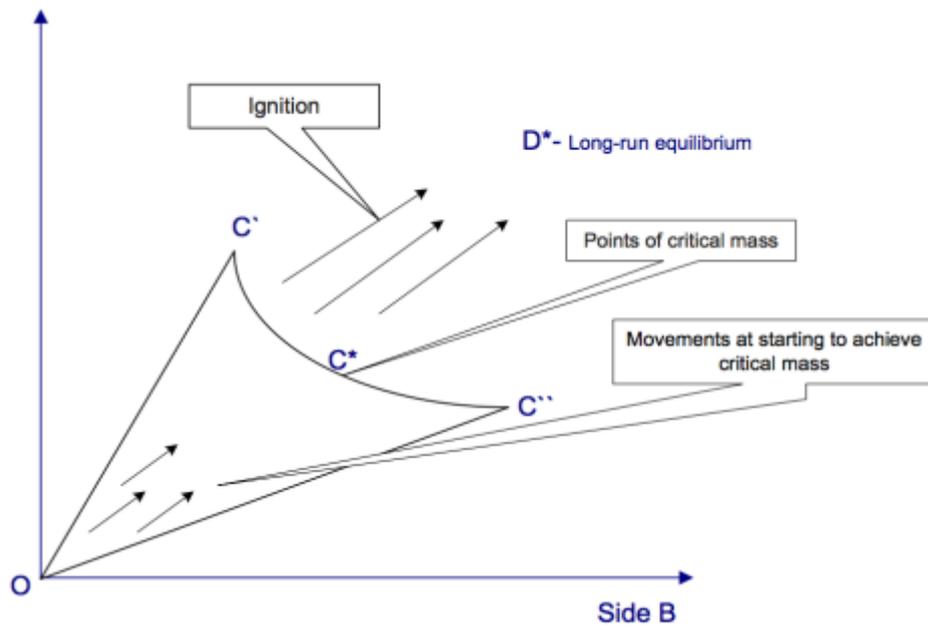


Figure 3. As critical mass is reached, network effects appear and the platform is considered attractive enough to enable quick growth through word-of-mouth (Evans, 2009).

An obvious problem exists when trying to reach critical mass: “when there are no apparent value at a platform, why would anyone want to join it?”. Buyers would never go to a marketplace where there are no sellers. Likewise, sellers are not prone to join a marketplace where there are no buyers. This is called a “chicken-and-egg problem” and it seeks to answer how to attract the initial users (Evans, 2009).

The subject of critical mass is very case specific depending on the characteristics and properties of the specific platform. Some platforms may need a set number of users entering the platform at the same time for the platform to add value. Others may only need a few users, but the density, i.e. number of users per area unit, is far more important than the total amount. As in the case of density, the geographical factor sometimes plays a role.

Regarding the geographical factor, Evans (2009) points out that product diffusion through word-of-mouth is likely to be more effective the denser the network is in the sense of there being fewer degrees of separation among members of the network. Evans (2009) does not explain further what he means exactly, but we assume that he refers to the members of the network to being geographically, demographically, and socially close. Evans (2009) concludes that using influencers to connect to more densely connected portions of networks will tend to have higher payoffs.

Besides the geographical distance between users, social proximity play a big role in a critical mass sense. Social movement activists often use critical mass to refer to that some threshold of participants has to be crossed before a social movement “explodes” (Oliver et

al., 1985). In the sense of a social movement, a critical mass of members of a certain social niche is required to have any impact, which then makes it more socially accepted to join the movement.

The importance of reaching critical mass in a social or geographical niche is not surprising if looking at the globalizing economy. As the world becomes increasingly globalized, more actors are present in all markets. This intensifies competition between the actors, creating a need for actors to specialize on one thing only in order to gain a competitive advantage in that specific area (Dalgic & Leeuw, 1994). As companies specialize, and become well known for excelling within the area, they can utilize the brand awareness to expand into more niches.

Other than the issue of network density (Evans, 2009), previous research regarding online market makers do not state what factors affect how these can reach critical mass.

Furthermore, previous research focuses on MSPs that are much more mature, as well as the pricing structure of these. Though, Evans (2009) describes, from a policy making standpoint, the different entry strategies to acquire users, and how MSPs must secure critical mass to grow their platform. Evans (2009) refers to the securing of critical mass as a catalytic reaction. By focusing on mature platforms and conducting case studies on some of these, Evans (2009) provides some insights to how MSPs work to reach critical mass. However, online market makers only constitute a subgroup of MSPs, which probably makes their strategies different. Also, Evans (2009) focuses on how the most successful MSPs have done, but with a general approach. However, no research has been conducted specifically on online market makers and how they work to reach critical mass.

Research about critical mass for social movement activists (Oliver et al., 1985) is also interesting, but is not anything that has been linked to the type of critical mass that is applicable to online market makers. The same thing goes for online market makers aiming for a niche market or niche population. Research by Dalgic and Leeuw (1994) discuss this in a general sense in the globalizing economy, but nothing has been linked to online market makers.

Different strategies are used for different MSPs as they attract users. The different nature of the platforms might require the platforms to adapt different strategies. An example of different types of entries and their following strategy is illustrated in figure 4.

Evans (2009) discusses two different dependencies and types of entries when choosing a strategy. These are whether the platform requires participation from multiple sides of the platform at launch, and if it is possible to acquire one type of user (side) before switching

focus to the other side or sides. These dependencies describe the nature of entry by the users to the new platform. Coordinating the users and their respective volumes can be critical to use the ‘right’ proportions (Evans, 2009).



Figure 4. *Different types of entry leading to different customer-acquisition strategies.*

The first dependency is the sequential entry. This type of entry is often used by the audience makers, but not exclusively. For these entries, the platform can focus on acquiring one group of users to the platform first, before shifting focus to a new group later in time. The platform can often be seen to attract users by providing content on the platform. The second group, in many cases the advertising-supported media, is later approached. Google attracted one type of users to the platform using content on the web before reaching out to the other side of the platform, the advertisers. This particular entry works because there are in fact non-positive indirect network effects present (Evans, 2009). This means that one side approaches the platform for the content provided, but dislike or pay no regard to the presence of the second group, i.e. the advertisers. Facebook and Instagram are examples of this approach. First they attracted users, and when the user base was big enough and the users were “hooked”, they allowed advertisers to the platform.

The second entry is the one where both sides enter simultaneously. For the platform to provide value, the timing of acquiring both sides becomes central. A time-based online auction site, such as Ebay, requires both sellers and buyers to join the platform more or less simultaneously. Some platforms can however work on keeping one side of users by providing more latitude. This can be done by assuring presence of another group in an “acceptable” period of time even though none are present when the need occurs (Evans, 2009). Even though the initial sellers on Ebay surely would have preferred that there already existed buyers on Ebay, they accepted the situation of not selling their products immediately.

The need of simultaneous or sequential entry affects what strategy to use when trying to reach critical mass. Evans (2009) suggests three different strategies that can be used for this purpose. These strategies are called zigzag, two-step, and zigzag with self-supply.

Evans (2009) describes the zigzag strategy that companies use as an incrementally based strategy. The strategy aims to increase participation and platform presence incrementally from both sides. The zigzag strategy assumes a presence of a small number of users on both sides of the platform at start. Then a persuasive approach is used to get either side to take part in the activity on the platform. The strategy relies heavily on the process of product diffusion, which divides customers into two groups, innovators and imitators. The innovators find the platform through advertisement in the mass media. The imitators, on the other hand, find it through indirect or direct contact with other imitators or from the innovator itself (Mahajan et al., 1998). In other words, innovators of both sides need to be convinced to join the platform. Then imitators will follow and join the platform. An online marketplace for services, such as Uber, is an example of a business using the zigzag strategy. It needs a few users on the supply side, i.e. drivers, to attract any users on the demand side, i.e. passengers. Then the supply side and the demand side will grow quite similarly.

Due to indirect network effects, the platform will increase in value for each successive user that joins the platform (Evans, 2009). Figure 5, below, shows the approach of the zigzag strategy for customer growth. If the platform has users on one side that are commonly e-tailors (i.e. internet retailers) and the other side consist of consumers, this strategy can be adapted. By getting a few e-tailors on board and having a small number of customers valuing the platform, the basis for the strategy is set. By then approaching new e-tailors, the MSP can show an increase in traffic due to the previously disposed customers and familiarity with the platform. As customers become accustomed to using the platform, more e-tailors become more likely to connect to the platform. If the MSP then successfully communicates the increase in supply to the customers, the value of the platform increases (Evans, 2009). When Airbnb communicated that beds would be available in a new city, i.e. supply increased, the value increased with the increased possibilities of travels, provided for the users.

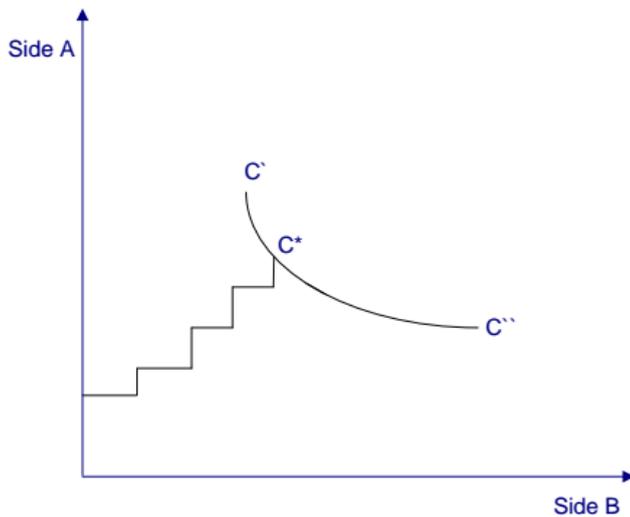


Figure 5. *The zigzag strategy. The different 'C's represents critical mass (Evans, 2009).*

The two-step strategy is often used by the audience makers, but can sometimes also be used by market makers. In the two-step strategy, MSPs solely focus on attracting members on one side of the platform first. In this phase of the platform, the multi-sidedness can be questioned seeing as they only supply one side. By providing content on these platforms, users of the first group can be attracted. These users do not necessarily value the interaction of another side of the platform. As an example, Facebook users join Facebook for other reasons than for encountering the advertisement that can be found there. Also, as search engines mature, they adapt this strategy. Initially, search engines attract users searching for content online. The results of the search renders in suggestions of different web pages. When the amount of search users is considered large enough, or the page views of specific websites increase, the access to these sites can be sold to the other type of users, the advertisers (Evans, 2009). The case of Google¹ works perfectly well as it operated for little less than two years before allowing a new type of users, the advertisers, to enter the platform.

The strategies previously mentioned, as well as the description of MSPs, display the platform as a mediator. Although that is true, the platform can sometimes take another role as well. This occurs if the MSP can act as one of the side of users itself, using a strategy called “zigzag with self-supply”. The MSP could for instance be able to provide the platform with content to attract users, depending on the characteristics of the platform. These platforms can initially jumpstart their platform and customer growth if they have the resources to provide the content themselves. Youtube adopted this strategy initially. In the

¹ Google Milestones: <http://www.google.com/corporate/history.html>.

early days of Youtube, the founders created the content for the platform themselves². This triggered the process of diffusion and would come to attract another type of users, the viewers. When the number of viewers grew, the content providers started to use Youtube as their platform. When sufficiently many content providers had joined Youtube, the founders of Youtube were relieved from that task, letting them solely focus on the mediator role. Hence, the zigzag strategy was then adopted. In this way, Youtube was able to quickly create the catalytic reaction described by Evans (2009). Youtube later introduced a third type of users, the advertisers, making Youtube a three-sided platform (Evans, 2009).

Reaching critical mass is, for online market makers, an important step in the process of user growth. With a scientific approach, Ries (2011) introduces a framework for successful startups. The framework relies on rapid scientific experimentation and practices that shorten product development. Ries (2011) introduces a framework with three ways to drive user growth. These are referred to as paid, sticky, and viral. The first, “paid”, refers to paying for advertisement to attract customers. The second, “sticky”, refers to retaining customers. The third way, “viral” refers to viral growth and includes word-of-mouth and invite systems. The first one called “paid”, will henceforth be referred to as “paid growth and user acquisition” to include the initial steps of making the platform attractive for users. This framework will be applied to the online market makers to allow them to grow their user base and ultimately reach critical mass. An illustration can be seen in figure 6.

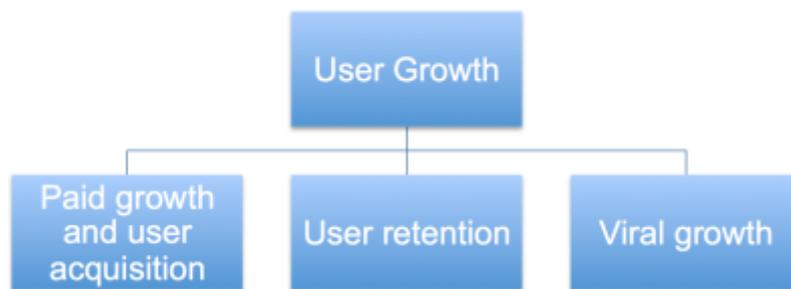


Figure 6. *The three constituents of growing a user base.*

2.3 Paid Growth and User Acquisition

Paid growth and user acquisition means attracting users that do not hear about the platform from a friend or alike. The basic principle of paid growth and user acquisition is to attract new users to try a product or service. Acquiring new users and customers to an online market

² 32 See YouTube videos: —The History of YouTube¹ and —The Real History of YouTube in 3 minutes.

maker requires two steps. The first step regards attracting new users, i.e. getting visitors to the platform and spreading knowledge of the same. The second step is conversion, i.e. getting the visitor to sign up, or in other ways start using the platform. This includes the potential user to affiliate with the platform.

Companies can choose whether to wait until the product is completely finished and refined before testing it on customers, or to test it on users iteratively during its development. A core component of the Lean Startup methodology (Ries, 2011) is the build-measure-learn feedback loop. The first step is problem identification and then developing a minimum viable product (MVP). An MVP is a very basic version of the, thought to be, final product. Once the MVP is established, companies can release it to a few customers, measure performance and in how users use and perceive the product, and then learn from this to improve the product in a way that the test users want. The purpose of this process is to build a product that customers really want, instead of building a product that the company believes its customers to want. By creating a product that fills an identified need, rather than a believed need, the process of attracting and converting new users is believed to be simplified. The MVP approach hence reduces the effort required by the platform. Also, it reduces the invested effort that a new user needs to convert and start using the platform.

Villanueva et. al. (2008) introduce an econometric model for customer acquisition. The model was empirically tested on a platform that provided free web hosting. In the study, Villanueva et. al. (2008) introduce two different ways of acquiring customers.

The first way is a marketing induced method where companies invest in popular marketing tools, which makes it costly. However, this strategy is a fast-acting strategy where immediate acquisition levels are high. Marketing induced user acquisition include using the mass media such as television advertising or direct marketing. Personal advertising strategies use mediums of promotion calls or emails. Lately new ways of paid marketing activities include Google Adwords as well as social media platforms (Hussein & Al-Falahi, 2016). The latter allows exposure to specific groups of potential users based on specific demographics. Social media platforms can also be used to create engagement when platforms interact with their users (Saleh & Shukairy, 2010).

The second strategy is a process which is much cheaper, in terms of monetized investments, but is also slower in its acquisition process. Acquiring users through word-of-mouth or using search engine optimization, SEO, are examples of such processes. These two will be covered in the section Viral Growth.

Another way of attracting new users is by using marquee users (Evans, 2009). This strategy is based on the assumption that different users are valued differently by other users. Users on one side of the platform might value a specific user on the other side of the platform more than others. These users are referred to as marquee users (Rochet & Tirole, 2003). These users might bring a specific content to the platform, or are highly popular to connect with (Evans, 2009). An example of marquee users on the social medium Instagram are celebrities that join and upload photos of their lives, which attracts new users that are interested in the lives of these celebrities. Furthermore, marquee users can bring more users on multiple sides to the platform, which further increases the value of the platform and encourages product diffusion. Finding marquee users on both sides of the platform can be a strategy to stimulate and attract users on multiple sides of the platform. Because of their importance, identifying and recruiting marquee users is important in the early stages. The marquee strategy can be used in the early stages to first establish the necessary members to adapt the zigzag strategy (Evans, 2009).

The first step in the process of acquiring users describes different ways to attract people to the platform. However, driving traffic to a platform cannot simply be transformed into new users or revenue for the platform. Instead one must focus on converting visitors to become actual users. Optimizing the conversion rate can eliminate losing potential new users and ultimately increase the value of the platform (Saleh & Shukairy, 2010). Before having reached critical mass, attracting visitors to the platform of an online market maker is expensive and requires much effort. Hence, optimizing the conversion rate reduces costs and minimizes the time and effort it takes to reach critical mass.

It is important to understand and know who is visiting your platform. Investigating and understanding why people are converting or leaving a website or platform is very important. A market analysis and behavioral monitoring can be used to identify how and why visitors choose to join or not (Saleh & Shukairy, 2010). With that knowledge, the platform can either specialize further on the user types that stay, or try to improve its value proposition for the ones deciding to leave.

Before a transaction is completed on a platform, users tend to look for information regarding the value proposition, comparing supply, or simply performing digital window-shopping (Saleh & Shukairy, 2010). The search costs will again be of a deciding factor when converting a visitor to a user. With low search costs and clear information, visitors can be educated and start considering using the platform. The conversion point is approached in the

evaluating stage. By using incentives or promotions alongside the value proposition the thresholds for visitors to become users can be lowered. Using incentives can influence the behavior of users as well as increase the probability of converting a visitor. While incentives work in terms of increasing conversion rates, the customer lifetime value (i.e. the revenue a certain user generates before he or she stops using the platform) or customer return on investment may not be optimized. The value proposition is what defines the company, or the platform, and incentives should be used to complement that presented value. Online market makers should therefore be careful with what they are becoming known for. Communicating the company values and customer value, in terms of service and reliability, is much more important than being known for incentives, such as lowering prices and large sales (Saleh & Shukairy, 2010). In the transaction stage, visitors are close to converted and ready to become users or customers. A failure in a payment process or process breakdown can cause almost converted users to never visit the platform again. Lastly the post transaction evaluation is critical to further enhance the user relationship (Saleh & Shukairy, 2010).

An important issue is how fast or slow an online market maker should go when entering a market. Reaching critical mass can ensure a sustainable growth of the company (Evans, 2009), which makes it vital in order to survive as an online market maker. The question is how fast online market makers should try to do this. Should it go fast forward and “cut corners” in order to get a large user base, or should it take it nice and slow to ensure that existing users like the course of development of the platform. Platforms are said to exist in a winner-takes-it-all market. That means, once a platform starts dominating a market, it is likely to grow even bigger and take market shares from smaller actors in the same market (Fjell et al., 2010). According to Evans (2003), there is however no evidence that building up market share quickly is a recipe for market domination in platform industries. That is to say, even though more users attract even more of them, it does not guarantee success if existing users do not stay for long. Evans’ (2003) findings mean that there is no reason to be too hasty when acquiring customers.

Growing a user base does not only require acquiring new users, but also retaining them. If user acquisition and user retention are combined, market domination will appear and a platform is then likely to get even stronger. As user retention seems to be a vital part in reaching a large user base and market dominance, the next chapter will cover just retention and the different aspects in achieving this.

2.4 User retention

Customer or user retention means getting customers or users to keep using or buying a product or service. Retention is a retroactive, time-based measure of product use (Seufert, 2013). Simply put, customer retention rate is the number of customers retained with respect to the total number of customers acquired at the start of a given time period. Customer retention is a combination of customer satisfaction and customer loyalty (Kim & Kwon, 2012). It can imply that a customer keeps paying a license fee, as in the case of Spotify, repeat purchases for a specific service, as with Uber or Airbnb, continuous usage, as with Instagram, or continuously playing an application game, as with The Candy Crash Saga. High customer retention implies keeping customers because they are either too satisfied to leave - or too indolent to move, which implies a certain level of commitment (Gould, 1995). The entry barriers are very low in B2C markets. Hence, the ability to retain customers in the face of competition is a major concern for online businesses, especially those that invest heavily in advertising and acquiring customers (Chen & Hitt, 2002).

The benefits of keeping customers have been well documented. Gould (1995) declares that there are primarily three main benefits:

1. The cost of acquiring customers should go down since not as many customers need to be replaced.
2. A long-standing customer is likely to be less price sensitive.
3. A long-standing customer is often times more responsive to suggestions of expanding its current usage.

The above declared benefits are found by Gould (1995) to be true for many companies, but naturally not for all. The first benefit is quite unclear as it stands, and a more correct description would be "it is cheaper to retain a customer than to acquire a new one", which is in line with the findings of Crockett (2000). The second benefit could also be false. Sometimes long standing customers expect or demand special discounts for being so loyal. The third benefit may be true, but should not be taken for granted. One example of this is Google+, an interest-based social network introduced by Google. Google had previously succeeded in expanding the usage of current users to new areas, but completely failed in making Google+ an equal success.

It is always cheaper to retain a customer than to acquire a new one (Crockett, 2000). With examples from e-commerce businesses, Crockett (2000) shows this empirically by comparing the budgets of businesses who create offers to retain users, with the marketing

budgets for attracting new users. Hence, high retention can reduce marketing costs substantially. This is aligned with the conclusions of Reinartz et al. (2005), Tull et al. (1986) and Shintagunta (1993), who all declare that customer retention is more important to focus on than customer acquisition. This is also aligned with what Skok (2012) suggests. Skok explains that “If you can’t keep your customers happy, and keep them using the service, there is no point in worrying acquiring more of them. You will simply be filling a leaky bucket. Rather focus your attention on plugging the leaks”. It is important to acknowledge the difference between different types of businesses regarding this. “Tourist trap” restaurants (i.e. restaurants with poor quality food but attractive location that tourists pass by) will for example not focus at all on retaining customers, since they know that people will not come back anyways. Though, Skok (2012) refers more to so called “Software as a Service (SaaS) companies, in which online market makers are included.

Retention has become increasingly important and is becoming the main metrics that is looked upon when evaluating B2C businesses (Khalifa et al., 2002). The focus has shifted from measures of visitor attraction, such as click-through ratios (the ratio of users who click on a specific link to the number of total users who view a page) and page views, to instead measures of retention, such as stickiness. Stickiness is an intangible ability to keep visitors coming back over a long period of time (Maciag, 2000). Stickiness can also be defined as something that causes long-term engagement (Strecher et al., 2008). As opposed to page views and click-through ratios, stickiness provides a more revealing metric of how effective a website is (Khalifa et al., 2002).

The ability to retain and lock in users in the face of competition is a major concern for online businesses, especially those that invest heavily in advertising and acquiring users (Chen & Hitt, 2002). Costs for acquiring users can be very high for B2C startups (McVey, 2000), which makes it essential for such companies to retain users for a long period of time (Chen & Hitt, 2002).

There are numerous ways to improve customer retention. Theory suggest different ways of improving retention, by building trust (Srinivasan, 2004), by instituting switching costs (Chen & Hitt, 2002), by personalization (Mulvenna et al., 2000), and by creating user engagement (Oliva, Oliver & Bearden, 1995), see figure 7.

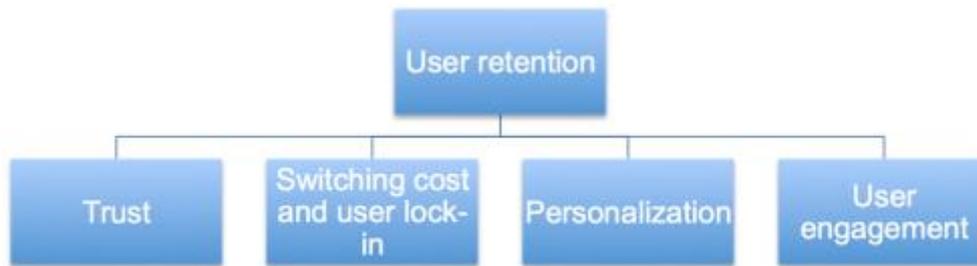


Figure 7. *Trust, personalization, switching costs and user lock-in, and user engagement are factors that influence user retention.*

The importance of trust for the success of e-business, i.e. companies conducting business on websites (Sultan et al. 2003), is well documented (e.g. Ratnasingham, 1998; Tan & Thorn, 2001; Pennington et al., 2003; Buell, 2016). Trust brings in repeat business, i.e. strengthens retention, which is an essential ingredient for success (Srinivasan, 2004).

The word “trust” will in this report be defined as McKnight & Chervany (1996) define it: *“Trust is the extent to which one party is willing to depend on something or somebody in a given situation with a feeling of relative security, even though negative consequences are possible”.*

Creating trust is an important aspect of the relationship between a platform and its users. Fear, uncertainty, and doubt are causes of a platform losing trust or increasing a user’s or a visitor’s anxiety (Saleh & Shukairy, 2010). To battle fear, platforms should focus on the privacy and security surrounding the platform. Uncertainty grows from failures, which can occur in terms of usability, navigational, or other site problems. Doubts can occur when the value proposition is not clearly communicated or the total span of the product or service is not clear. All these factors are important to consider when trying to retaining users. Trust is furthermore important when converting users and customers (Saleh & Shukairy, 2010).

Trust for e-commerce consists of two basic components: party trust and control trust. Party trust means the trustworthiness of the other party in the transaction, whereas control trust is the reliability of the control mechanisms. The latter indicate procedures and protocols that monitor and control the performance of a transaction. The total trust that a person has for e-commerce, i.e. “transaction trust” is the sum of party trust and control trust (Tan & Thorn, 2001). In the rise of the internet, i.e. from the second part of the 1990’s, a lack of control trust was a factor that made it difficult for e-commerce to arise. Compared to physical trades, there was no change in how much people trusted other parties, but they did not know

whether they could trust that payment and delivery would be carried out as promised (Breneman et al., 2005).

Control trust means trusting a trade procedure (Bons et al., 1998) and is created by the institution that issues the procedure (Tan & Thorn, 2001). There are a number of ways of how control trust can take place, including social indicators such as the logo of VISA, positive personal experience from the same control procedure, as well as assuming that a control system protects you against fraud because other members of your community rely on it for protection (Tan & Thorn, 2001). This shows one way of how network effects work, where the more people that approves of something, the more attractive and trusted the system becomes for new users.

Party trust implies trusting a specific individual. Since people are generally skeptical to people that they do not know, interactions online need to find ways to enable a quick way to ensure party trust. The level of trustworthiness is therefore important. The concept of trustworthiness is closely linked to that of reputation, even though there is a distinct and important difference. The Concise Oxford Dictionary defines reputation in the following way: "Reputation is what is generally said or believed about a person's or thing's character or standing".

It is apparent that reputation and party trust are closely connected, hence the role of reputation systems is interesting in how they affect this kind of trust. Reputation systems have become increasingly common and they seem to be a very important part of how to convince people to trust hosts on Airbnb, sellers on Ebay, or drivers of the carpooling service Blablacar. In order to acquire a large amount of customers, and make them retain to an online marketplace, reputation systems seem to play a big role.

Resnick et al. (2000) acknowledge that using reputation systems is one way to enable trust on the Internet. Reputation systems represent a significant trend in decision support for Internet mediated service provision (Jøsang et al., 2007). A reputation system collects, distributes, and aggregates feedback about participants' past behavior. Though few of the producers or consumers know each other, reputation systems help people decide whom to trust, encourage trustworthy behavior, and discourage participation by those who are unskilled or dishonest. Without a reputation system, there is no way to differ between the quality or honesty of different actors (Resnick et al., 2000). Through reputation systems the quality of different restaurants have become more transparent. Tripadvisor does exactly this by letting users rate all kinds of tourist attractions, such as restaurants. The ones that are

good and priceworthy get good ratings, whereas bad restaurants get bad ratings, which makes customers choose the good ones. Hence, the bad restaurants are incentivized to become better in order to get better ratings and thus more customers. The exact same thing is applicable to Airbnb - hosts are incentivized to show their homes from their best sides and to make their guest feel as comfortable as possible. The knowledge of hosts being incentivized to be as good to their guests as possible certainly lowers the barriers of being able to trust a host, hence making it more plausible for a person to start using a service such as Airbnb.

Retaining users can be done in different ways. Either, they retain because they have to or do not bother to switch, i.e. there are switching costs, or they stay because they enjoy the offer, as with user engagement.

User engagement refers to how frequently and how long a user interacts with a website, app, or other product (Ganot, 2015). User engagement has been found to be positively correlated with user retention (e.g. Oliva, Oliver, and Bearden, 1995). Though, it has not been mentioned anything specific about the impact of user engagement on online market makers. Instead research has been focused on customer engagement in games (O'Brien & Toms, 2008) and in social media (Sashi, 2012; Powell, 2009).

Creating engagement can be accomplished through social awareness (O'Brien and Toms, 2008). Social awareness can be reached by the creation of communities, which can be socially or geographically defined. Social communities can exist both offline and online. By joining a community of any kind, individuals can find other individuals with similar interests. These individuals can together then motivate and engage each other to commit to something. One example of this is the social community initiated by the weight-loss company, Weight Watchers. As people join Weight Watchers they become part of a community where members help, support, and motivate each other to stay engaged and committed to a personal goal. Online communities, such as Facebook groups, can be used for the same purpose. In online communities, people with similar interest share opinions and experiences, and give support and feedback to each other. Other common online communities are those discussing stocks. On some internet banks, such as the Swedish banks Avanza and Nordnet, a forum is connected to each stock. In each forum, existing shareholders of that stock as well as investors thinking about investing, can communicate and exchange information with each other. In this way, communities can be built around stocks. Communities can also be physical, as in the case of sports clubs. For members of

sports clubs, the sports club oftentimes represents more than just a sport. It becomes more of a community around which the members are engaged.

Users retain to a platform either because they enjoy it, as with user engagement, or because the switching costs are too high.

Switching costs are defined as any perceived disutility a customer would experience from switching service providers (Chen & Hitt, 2002). There are at least three types of switching costs: transaction costs, learning costs, and artificial costs. First, transaction costs are costs that occur to start a new relationship with a provider and sometimes also include the costs necessary to terminate an existing relationship. For example, an Airbnb host with many good reviews has high transaction costs if he or she is thinking of renting out his or her apartment at another platform than Airbnb. Since it takes time to build a good reputation on a new platform, reputation systems can increase transaction costs. The time it takes to create a new profile at the new platform is also a transaction cost. Second, learning costs represent the effort required by the customer to reach the same level of comfort or facility with a new product as they had for an old product. Last, artificial switching costs include loyalty programs, which make consumers feel as they miss out on staying with the old provider. Airbnb reward customers who invite their friends by giving them credit (that can only be used on Airbnb) if their invitation results in an acquired customer. This credit prevents customers from churning since they can reduce their next Airbnb payment. Besides, there are also implicit switching costs such as decision biases (e.g. “status quo bias”) and risk aversion (Klemperer, 1987). Electronic markets possess low switching cost (Friedman, 1999), which makes it hard to succeed in retaining customers solely by focusing on raising these. Yet, it appears that creating switching costs still have positive effects on retention and should hence be used by online market makers.

Another way to increase retention is by deepening the fundamental functions. Depth creates more value to existing sides and intensifies indirect network effects by either making transactions more frequent, more efficient, or both. This makes the existing multiple sides stickier and less likely to leave the platform for another (Hagiu, 2009). High website usage is highly correlated with retention (Pei-Yu et al., 2002), something that can be achieved by improving and expanding the content of a website (Mulvenna et al. 2000).

A way of finding the right content is through personalization. The basic goal of personalization is to provide users with what they want or need without requiring them to ask for it explicitly (Mulvenna et al., 2000). Personalization can be a way of dealing with the two

issues; information overload, and the principle of least effort (Kim & Kwon, 2012). Simply put, personalization lets a user get what he or she wants with little effort and without drowning in too much information. The technology behind personalization involves software that learns patterns, habits, and preferences (Mulvenna et al., 2000).

For e-business providers, personalization enables implementation of strategies to lock in existing customers and to bring in new ones (Mulvenna et al., 2000). The key to retain customers is to effectively provide customers with the content they need (Spiliopoulou, 2000). Customers only appreciate personalization if it is sufficiently good and accurate (Morvan et al., 2016, Kim & Kwon, 2012), which is why personalization of websites should only be utilized if the quality of the personalization technology is sufficiently high. Hence, personalization should only be used by companies that either want personalization to be their primary selling point, or who have grown big enough so that a natural next step is to invest in great personalization technology.

The terms customization and personalization are often used interchangeably, but most researchers suggest that there are differences between them (Kim & Kwon, 2012). Nevertheless, personalization means that the system figures out a user's preferences, and then constructs an adapted website just for that specific user. Customization, on the other hand, means that the user itself explicitly selects its preferences, which then appear as wished for on the website (Kim & Kwon, 2012). To avoid confusions, this report will, as defined by Poulin et al. (2006), refer to customization as "user initiated personalization", whereas personalization will be referred to as "firm initiated personalization". As proposed by Sunikka and Bragge (2008), and by Poulin et al. (2006), the sole term "personalization" will, from now on, only be used as an umbrella expression for both terms.

Personalization is a way of dealing with information overload. Information overload means users are given more information than they can handle within the time available. This leads to users not being able to locate what they need most (Herbig & Kramer, 1994), and fail to use the relevant information (Wilson, 1995). There are three factors that lead to information overflow: information quality, information quantity, and information format (Ho & Tang, 2001). By personalizing content and interface, information overload can be prevented (Kim & Kwon, 2012). Though, since very few online market makers offer personalization of the interface, we will solely focus on personalization of content, which is commonly referred to as recommender systems.

There are three different levels of firm personalization, one-to-one, one-to-N, and one-to-all. One-to-one personalization equals a so-called recommender agent: the content that appears is adapted solely for one person. One-to-N personalization means that the content is adapted for a group of users whose preferences are similar to the user's. A one-to-all strategy means that the website is equal for all users (Kim & Kwon, 2012). How far a firm should go towards the ultimate goal of one-to-one marketing is one of the key issues of personalization (Arora et al., 2007). Several researchers (e.g. Zhang & Wedel, 2009; Kim & Kwon, 2012) state that the incremental benefits of one-to-one promotions over one-to-N and one-to-all promotions are small in general. Hence, if one-to-one content personalization requires too much time, effort, or cost, a one-to-N strategy is to be preferred. Though, if users of a website have a mission to search for specific information or to buy specific products, the importance of content personalization might increase.

To conclude, personalization could and could not be used by online market makers. If they decide to, they should invest much time, money, or both in good technology. Personalization could be less emphasized if users of a platform do not have something specific that they are looking for.

Attracting customers, converting them, and getting them to retain are important for all businesses. However, a characteristic of many online market makers is that they can scale incredibly fast, and sometimes without much effort of the firm, which enables them to stretch globally. The question is just "how to do this?". Creating virality, or viral growth, seeks to answer just this question.

2.5 Viral growth

Virality for online market makers refers to the tendency of a product to circulate rapidly and widely from one user to another, without any active marketing effort from the business. Often, virality comes up in the context of social media, where posts become viral, meaning that they spread vividly and quickly so that it is hard to avoid. Hence, Feder (2014) defines virality as "the tendency of an image, video, or piece of information to be circulated rapidly and widely from one Internet user to another". If an online market maker is able to spread its platform virally, the population of new users able to convert to the platform is quickly expanded.

There are five important aspects that enable virality: propagation, network, speed, reach, and self-sustainability (Feder, 2014). Propagation implies that people share the product with

others. Network tells us that the product is shared within a network of people, e.g. on social media. Speed indicates that it happens quickly, thus embracing the idea of exponential growth. Reach refers to the possibility of reaching beyond geographical areas or social niches. Self-sustainability means that the viral growth occurs without any active marketing effort, but instead it keeps on spreading effortlessly. A commonly made parable is the one between virality and epidemiology (e.g. Guerini et al., 2011; Howard, 2005), where a virus keeps on spreading effortlessly from one country to another. A virus doesn't even have to mate. It replicates, again and again with geometrically increasing power, doubling with each iteration. Virality can similarly start through word-of-mouth, search engine optimization, or viral marketing (e.g. Kirby and Madsen, 2006; Wilson, 2012).

Viral marketing is defined by Kirby and Madsen (2006) as: "The promotion of a company or its products and services through a persuasive message designed to spread, typically online, from person to person". The first appearance of viral marketing was spotted in 1997 by Steve Jurvetson, who found Hotmail to be using this strategy. In every sent message from a Hotmail user, the following line was placed at the bottom of the email: "Get your private, free email at <http://www.hotmail.com>". In essence, without any effort and almost without noticing, Hotmail users unconsciously became advertisers of Hotmail. This revolutionizing way of advertising resulted in that Hotmail grew its user base from zero to twelve million in only 18 months (Jurvetson, 2000).

Viral marketing shares characteristics with word-of-mouth as it uses the customers in a market to promote a product. Viral marketing is also more cost effective than traditional methods since the users themselves carry out most of the promotional effort. Word-of-mouth boosts viral marketing because people typically trust and act on recommendations made by people that they know rather than on a promotional message (Richardson & Domingos, 2002). When the message sent by a company is fitting, recipients might not perceive it as advertising and are willing to share it, which strengthens the effect even more. Furthermore, consumers perceive viral marketing campaigns as attractive since the campaigns are non-interruptive, which enables consumers to interact proactively with a company rather than be positively dictated to (Kirby & Marsden, 2006). In other words, viral marketing is not considered equally disturbing as other types of marketing, which are sometimes considered as having negative impact on a customer's experience on a webpage.

However, disadvantages are also to be found in viral marketing. One disadvantage is that customers can get tired of receiving the same message over and over again, either via email or on a website (Braamhaar, 2016). Though, email marketing can be set so as one receiver

will not receive more than one message (Goldsmith, 2002). Another disadvantage is that the control of the message can be lost, which means that the brand control is out of hand. Also, there is a risk that groups that are not wished to be associated with the message, picks the message up and spreads in within the group (Krishnamurthy, 2000).

There are two types of viral marketing: passive and active. In passive viral marketing customers spread the message when he or she uses the product (Subramani & Rajagopalan, 2003). The strategy that Hotmail used is a good example of passive viral marketing. In active viral marketing, the receiver needs to participate and actively spread the message about a company (Subramani & Rajagopalan, 2003). In active viral marketing the possibility to easily spread a company's message must be given. Two types of active viral marketing are word-of-mouth and referral programs.

The term word-of-mouth describes the act of communication between people about products and/or companies without commercial intentions. Relatively new definitions (e.g. Litvin et al., 2008), as well as older ones (e.g. Arndt, 1967) underline that word-of-mouth reduces customers' uncertainty about companies and/or products. Word-of-mouth is independent of commercial influence and of marketers (Litvin et al., 2008), thus making word-of-mouth to be considered more trustworthy and credible (Lee and Young, 2009). Communication between closer and stronger communications within an individual's own personal group are called strong ties, whereas weaker and less personal communication that an individual makes with a wider set of acquaintances are referred to as weak ties. Weak ties influence people at least as much as strong ties do (Goldenberg et al., 2001).

As internet usage has grown bigger, online communications on forums, review websites, and social media have substituted parts of the role of word-of-mouth. This type of online communication about companies, products, and brands has resulted in the creation of a new expression: electronic word-of-mouth. Besides the difference of word-of-mouth being offline and electronic word-of-mouth being online, a major difference is that electronic word-of-mouth enables discussions with complete strangers about their experiences (Braamhaar, 2016).

Electronic word-of-mouth refers to "brand-talking" on the internet, which enables people to write, discuss, and advise other possible customers about their preferences (Sen & Lerman, 2007). This means that customers and/or users reach a much wider audience when providing opinions about companies or products, which can be assumed to increase the

importance of customer satisfaction. Electronic word-of-mouth includes interactions regarding and with companies on social media, such as Facebook, Instagram, and Twitter.

A customer referral program is a form of stimulated word-of-mouth that provides incentives for current users to bring in new ones (Schmitt et al., 2011). Referral programs are used by many types of companies, including online marketplaces such as Uber and Airbnb. For example, Airbnb incentivizes existing customers to invite their friends by rewarding them with credit (that can only be used on Airbnb) if their invitation results in an acquired user. In most referral programs, the reward is given regardless of how long the newly acquired customer stays (Schmitt et al., 2011). Even though this provides incentives for customers to abuse the system, they do not seem to do so. Castilla (2005) and Neckerman et al. (2003) find that retention rates and customer lifetime value are significantly higher for referred customers than of those customers that have been acquired through other ways. Castilla (2005) and Neckerman et al. (2003) find that benefits of customer referral programs are realized through the mechanisms “better matching” and “social enrichment”. Better matching means that referrals are more likely to enjoy the platform more than non-referrals, whereas social enrichment means that the platform is enriched by the presence of a common third party (i.e. the referrer).

The findings of Schmitt et al. (2011) indicate that referral programs are beneficial in both the short run and the long run. This demonstrates that the value that is added through referred customers by far surmounts the drawbacks that originate from opportunistic behavior to receive credits from referrals. The same authors also find that people under the age of 55 are more attractive to acquire through a referral program. Since that is the case for most online marketplaces, they are all likely to benefit from creating a customer referral program. All in all, referral programs help firms selectively acquire more valuable prospects and retain them longer (Schmitt et al., 2011).

If the viral marketing is unable to create a direct path to the platform, i.e. through a link or sign-up page, users oftentimes turn to search engines for their low search cost. When potential users are using search engines it is important that the online market maker has created the platform to be visible and easily accessed through search engines. Search engine optimization (SEO) is a proactive measure online market makers can focus on to drive traffic to their platform (Davis, 2006).

SEO refers to the ability to grow the visibility of one's website or platform in search engine results (David H, 2006). Search engines decrease search costs for users and drive targeted

traffic to the platform. SEO includes both technical as well as creative elements to boost rankings, increase awareness, or simply drive more traffic (Fishkin, 2015). Ways to improve SEO include specific words used on the platform and if other websites refer to the platform. Therefore, the words used on the platform, and the ones used by potential users using a search engine carry remarkable value as a match drives the searcher to your platform (Fishkin, 2015).

2.6 Research Question

Online market makers exist in many different industries and for different purposes. Some of which spread rapidly and virally, and some that do not seem to be able to attract and retain users. Evans (2009) suggests that, in order to spread a platform efficiently, network effects are vital. When network effects are strong enough, new users will hear about the platform and join it without much marketing effort from the online market maker. To enable network effects to become sufficiently strong, a critical mass of users is required (Evans, 2009). Hence, after having reached critical mass, the platform can be spread easier, faster, and cheaper.

However, it is unclear what the different aspects of critical mass are. Evans (2009) mentions that critical mass, which he describes as a certain total number of users, is necessary to make the network effects appear. He also says that density play a role in acquiring customers through word-of-mouth, ultimately reaching critical mass, but does not go any further with this. Thus, we aim to find different aspects of user density.

Online market makers are very different from one another, both in terms of what sides are included, value proposition, and how close the different sides of the platform need to be socially and geographically. Hence, we believe that different types of online market makers use different strategies to reach critical mass. Apart from Evans (2003, 2009) having conducted a few case studies of MSPs, a survey regarding critical mass, and a case study on the advertisement on the Yellow Pages by Rysman (2002), there has not been much empirical research. Previous research on multi-sided platforms in general focuses on more mature platforms from a theoretical perspective and analyses their pricing and revenue strategies. We believe the initial stages, when a platform is created, to be vital. Therefore, we aim to contribute to this rather unexplored area. Evans (2009) confirms the importance of this this by stating that “the failure to achieve critical mass quickly results in the implosion of the platform”. To assess the process of online market makers reaching critical mass, the framework presented by Ries (2011) will be used.

This research will compare empirical evidence, about what actual online market makers have experienced when trying to reach critical mass, to what research within each area of the framework, presented by Ries (2011), suggests. Thus, we aim to find out what strategies, within the categories of user acquisition, user retention, and viral growth, that are

used by online market makers. Then we will assess if these strategies differ between different types of online market makers. If they do, we will analyze what aspects of online market makers that decide what strategies they choose.

This leads us to the research question of this thesis:

“How do online market makers work to reach critical mass, and what factors decide this?”

3. Methodology

The theoretical description of the research question created the outline from which we moved forward with the report. The foundation of previous research on online market makers and reaching critical mass was added for a descriptive purpose. That section is important to fundamentally describe the online market makers and their characteristics. That section is also important in order to understand where this research aims to contribute to the academic research, namely focusing on the early stages of the online market makers and their process of reaching critical mass.

As shown in the previous chapter, the field of online market makers is fairly new but not unsearched. Since the field is not a novelty by itself, we neglected a describing purpose of this report. Instead, we focused on exploring the online market makers. We therefore used an exploratory purpose when gathering empirical evidence. We explored multiple companies to reach a coherent understanding of online market makers. The results and conclusions are based on suggestions of how the online market makers, interviewed for this report, deal with the problems of reaching critical mass and what they do to grow their user base. By interviewing founders and non-founders surrounding online market makers, we compared their different features and found coherent conclusions for the companies. Founders were the primary group and focus which the results are based on. A list of the interviewees can be found at the end of this chapter, and a profile of each in Appendix II.

By using an inductive approach, we looked for explanations to solve the problems of reaching critical mass, and we further investigated the factors that influence what the online market makers do to reach critical mass. We used a mapping method to apply a cross-section analysis on online market makers. The mapping method is specified as a question study, where an exploratory purpose can be tested (Rosengren & Arvidsson, 2002). This method is best used with tools such as interviews to gather primary data. This should be chosen when it is important for the research that all questions are answered and when clarifications may be needed during the interview (Rosengren and Arvidsson, 2002).

Aligned with the exploratory purpose, we looked for a wider conclusion and trend, rather than specific conclusions regarding one specific case, hence a case study was neglected. Instead we gathered the empirical data through an interview study. We studied a wide variety of different online market makers. Each potential online market maker was examined to fit our definition of an online market maker. After having searched for potential online

market makers, we initiated contact with the founders of the online market makers and introduced the purpose of the study. We then scheduled and conducted interviews with the founders as well as with different stakeholders, the non-founders, surrounding the online market makers. Through the interviews we found different features of online market makers, the problems they face with the multi-sidedness of the platform, and what they do to attract users to the platform. After each interview, the results were coded following a framework. The interviewee was later asked to propose new candidates that had founded an online market maker. An illustration of the routine can be found in figure 8 below.

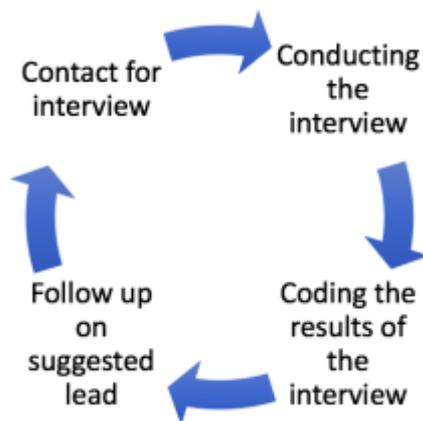


Figure 8. *The process of interviewing and scheduling new interviews.*

The data conducted from the interviews has been coded from a framework to hold the same form and to be compared equally, see Appendix I for the format. The framework follows the same three parts as were presented by Ries (2011). The same format is found in the interview template.

The coding allowed different answers to be placed within the area where the results were best suited. This was done to make the report more reliable and to be consistent in the process of gathering and coding qualitative data. By standardizing the format of the results, the interviews could be compared quite easily. The qualitative data was categorized and sorted depending on the type of interviewee and answers that were received. The interview itself was divided into different focus areas that covered all aspects of reaching critical mass and growing the user base of the online market makers.

We believed interviews would be the most effective method rather than observational studies or standardized surveys, which usually yield in a quantitative report with conclusions based off statistical evidence. Instead, we focused on collecting qualitative data.

3.1 Interviews

The interviewing process began with an introduction to the research area as well as the reasons for holding the interview. The reasons for the research and the main areas of the interview were also described. The interview was then performed by following the interview protocol. To minimize room for misinterpretation, as well as leaving room for further contribution, the interviewees were contacted once more after the interview. Interviewees then had the possibility to follow up on topics, which they felt needed further explanations, and validate personal quotes used in the results.

In order to get as broad a view of the online market makers as possible, interviews were conducted with founders of online market makers as well as with several non-founders that surround online market makers. Fifteen founders of different online market makers and seven non-founders were interviewed. The founders and their online market makers are the primary focus in our results. The non-founders were interviewed with a different protocol and fill the function of a robustness test of the primary results. It is important to keep in mind to separate these two groups when reading the results and findings of this research. As the founders deal with the online market makers first handedly, they make up the primary source of interviews. The non-founders may in turn validate the results from the founders as well as give their opinions from a less biased position, as they are not directly involved in the online market maker.

The sizes of the online market makers have varied since they are all in different phases of their development. The answers from the different companies differ partly because of their level of maturity. For instance, YooDo.se does not exist anymore. Others, like Sports Without Limits and Handiscover are both on the journey of reaching critical mass, whereas Onlinepizza, Tradera, and Momondo are more mature. The companies are young in terms of general existence as the earliest founded company interviewed is Tradera, founded in 1999. The online market makers are active in several different sectors. The search for sampling was conducted without any preferences to sectors. However, five of the companies work within financial services and five with exchanges of physical products of some sort. A study of what sectors or industries online market makers seem to appear in would be an interesting study, but outside the scope of this research.

We chose the semi-structured method of interviewing. A semi-structured interview has a set of predefined questions to rely on or to guide the interviewee with. The interviews did not need to follow the order of the presented questions in a strict fashion. Instead, follow-up questions were often asked and a change of the order of the questions were made to better suit each interview. These questions rather worked as guidelines to facilitate the interviewing process and to make sure that all aspects were covered.

With an exploratory purpose, we wanted to keep the answers and follow-up questions open and not on a fixed format for the interviews. The semi-structured interview protocol was based on the policies and definitions presented by Evans (2009), regarding critical mass, and the framework presented by Ries (2011). The interview template can be found under Appendix I. We used two different templates: one for founders and a different protocol for non-founders. The one used for founders followed Ries' (2011) framework with the three main areas: paid growth and customer acquisition, user retention, and viral growth. The protocol used for non-founders was focused on the ways the interviewees could complement the online market makers, such as common mistakes or features that they deemed important for online market makers and entrepreneurs. These areas were focused around the team setups, financial investments, and general mistakes made by entrepreneurs.

To further validate the report, we decided what was to be fixed and what was to be flexible throughout the study. The systematic way of working, incremental contributions, and timely discussions with our supervisor, allowed us to keep the core of the report fixed. Introducing the semi-structured interviews was also a way of keeping core structures fixed in order to get a representative result. However, because of the exploratory purpose of the report, we believed the approach of the report needed flexibility as well. The flexibility allowed us to adapt to changing circumstances in terms of specific focuses proposed in the interviews that were new. For example, if an interview focused on an area where previous research was scarce, we wanted to be able to add that area during the process. All interviews, except with Joel Larsson, Jeanette Andersson, and Victor Sandberg, Locals, were completed through virtual interviews.

3.2 Sampling of Interviewees

The method of finding interviewees was two folded. As we investigated online market makers in their early stages, we approached and contacted the entrepreneurs and founders of the companies. The search was mainly conducted through tech and startup magazines. We used Breakit, a news site for tech companies and startups, and DI Digital, a department of the Swedish daily newspaper Dagens Industri following the tech startup industry. After

getting in contact with entrepreneurs and conducting the initial interviews, the interviewees were asked to recommend other potential interviewees to take part in the research. In that way the magazine research was complemented by the strong network that often seems to exist amongst entrepreneurs. The non-founders were found through their organizations and websites.

We have strived to hold the highest possible standard during interviews in terms of reliability and representativeness. To validate the expertise, specific knowledge and know-how of the interviewees, our interviewees were investigated thoroughly. The selection of interviewees followed from a thorough background research on both the companies and the potential interviewees. We wanted to ensure the professionalism in each candidate and validate the level of expertise each candidate held before approaching them for an interview.

The interviewees were divided into two different groups. One group included all founders of different online market makers that we interviewed. This was our primary group of interviewees. The online market makers interviewed for this report were, FundedByMe, Handiscover, iZettle, Locals, Momondo, Onlinepizza, Smartster, Sports Without Limits, Tictail, Tink, Tradera, TransferGalaxy, Twiik, Yepstr and YooDo.se. A description of each online market maker as well as each founder can be found in appendix II, and a list of them is shown at the end of this section, in figure 9. As our primary source, these interviews served as a base for our main findings. By keeping a sample with companies from different sectors, types of online market makers, and level of maturity, we were able to make general conclusions for online market makers, instead of focusing on a specific industry or sector. Reaching critical mass is not necessarily defined to a specific sector, and hence specific focuses were neglected when choosing the sample. However, the conclusion will not be used to answer questions regarding other digital phenomena other than online market makers.

The secondary group was one including the non-founders surrounding the online market makers. These include professionals from accelerators, incubators, venture capitalists, as well as people with extensive experience from startups and online platforms. The profiles of these interviewees as well as a description of an accelerator, incubator, and a venture capitalist can be found in appendix II. The results from this group were compared to the founders as a robustness test to find similarities or differences between what online market makers do and what the non-founders thought to be important. In two cases the interviewee fit both the groups of being founders and non-founders. That was the case for Johan Brenner, founder of Tradera and currently venture capitalist at Creandum, and Johannes Ivarsson, co-founder of YooDo.se and currently running the accelerator THINK. In both

these cases the interviews were divided into two parts. The first part focused on the online market maker and their role as a founder or co-founder. The second part of the interview was focused on their current roles.

Some companies, which were initially targeted and their founders were interviewed, were essentially excluded from the report. Litium and Lifesum are two examples of companies that were excluded. The reasons were that they had both pivoted to becoming more of a digital service rather than an independent online market maker. The companies, whose founders were interviewed, are all founded and based in either Sweden or Denmark. Since online market makers seem to break the boundaries of countries rather quickly, it is good to keep in mind that the results are based from interviews with companies founded in these geographical areas. The interviewees and online market makers that were interviewed can be found in figure 9 below.

Company	Interviewee	Founder/Non-founder
FundedByMe	Daniel Daboczy	Founder
Handiscover	Sebastien Archambeaud	Founder
iZettle	Magnus Nilsson	Founder
Locals	Victor Sandberg	Founder
Momondo	Thorvald Stigsen	Founder
OnlinePizza	Erik Byrenius	Founder
Smartster	Andreas Swahn	Founder
Sports Without Limits	Rebecca Sundvall	Founder
Tictail	Siavash Ghorbani	Founder
Tink	Daniel Kjellén	Founder
Tradera	Johan Brenner	Founder
TransferGalaxy	Ali Mohamed	Founder
Twik	Anders Gran	Founder
Yepstr	Jacob Rudbäck	Founder
YooDo.se	Johannes Ivarsson	Founder
Creandum	Johan Brenner	Non-founder
EQT Ventures	Lars Jörnöw	Non-founder
Instabridge	Alfred Beckman	Non-founder
MINC	Jeanette Andersson	Non-founder
MINC	Joel Larsson	Non-founder
THINK	Johannes Ivarsson	Non-founder
Lean Forward	Erik Starck	Non-founder

Figure 9. *A list of all the interviewees.*

4. Results

This thesis intended to answer how online market makers work to reach a critical mass of users, and what factors that decide this. Inspired by Ries (2011), this led to the division of three different subjects: paid growth and user acquisition, user retention, and viral growth. The results will follow the same framework under these three headlines. Furthermore, the results from the founders will first be presented, followed by the results gathered from the interviews with the non-founders.

Everything that is stated in this part are results from the interviews. References or claims that are made to “some of the companies” or “all companies” refer to the fifteen companies that were interviewed. When a wider reach is intended, the conclusion will clearly state that an industry or a larger segment is intended, rather than the interviewed companies.

Our results show that most online market makers either focus on reaching critical mass within a geographical niche or a social niche. If and when they manage to reach critical mass within that niche, they go on to spread it to more adjacent niches. In order to do so, many founders stress the importance of minimizing the thresholds of joining the platform. Also, it appears to be of great importance for online market makers to have a value proposition that is simple to understand and which satisfies a distinct need for its users.

To reach critical mass, conversion is viewed upon as very important. Many of our interviewees said that they optimize conversion rates by minimizing thresholds for all sides of the platform to join. By converting a bigger share of the visitors of the platform to actual users, the cost per acquired customer is reduced.

The zigzag strategy is the most commonly used entry strategy. The only two companies that used the two-step strategy were Momondo and Smartster. We argue that they did so because, as their users are value maximizers, they need to have close to all existing content to be relevant and not risking that better deals can be found elsewhere.

Almost all companies release a minimum viable product, which they build, measure usage metrics, and then iterate this process until they know who their customers are and what their needs are. In this process, our interviewees say that they primarily look at how user retention is affected by the changes made throughout this process. Almost all of our interviewees say that retention is the most important thing to work on.

Below, in figure 10, is a spreadsheet with all companies that we conducted interviews with. In the figure, we have assigned several attributes to each company. As the interviews were examined and compared with each other, different themes appeared of how online market makers do in the different stages of customer growth. As we realized that a certain theme was recurrent for several online market makers, we considered it to be a strategy and it was then either met or not met by each company. In some cases, none of the strategies within a category are met by a certain company. This does not mean that the company does not have a strategy within that category, but rather that the company has focused on other things than those strategies that were common in our sample of companies.

The results are taken from the interviews that we have conducted. In some cases, the interviewees' have talked about certain areas without using the terminology as theory suggests or terms introduced in this report. In those cases, we have interpreted their answers to fill out the spreadsheet. As presented in the methodology, all results are confirmed by the interviewees.

Company	Company attributes			How companies acquire customers					Retention			Viral growth				
	B2C	P2P	Physical product is mediated	Online only, no local presence	Geographical niche	Niche customer segment	Narrow value proposition	Reducing thresholds	Two-step strategy	Social community	Personal -ization	Reputation system	Passive viral marketing	Referral program	Influencers	Incentives to WOM
OnlinePizza	X		X		X		X	X							X	
Smarter	X		X					X			X					
Locals	X		X									X				
Transfer Galaxy		X					X	X		X		X				
Momondo	X						X	X	X							
Tink	X														X	
IZettle	X				X		X									
TicTail	X		X			X				X						
Tradera	X		X			X					X					
Handscorer	X		X			X		X			X, nd		X, nd			
Yoodo	X					X						X				
Yepsir		X								X, nd				X		X
Sports without limits		X					X							X		X
FundedByMe	X						X				X, nd			X		X
Twik	X					X					X, nd		X, nd	X		X

Figure 10. Attributes of the companies and used strategies. "nd" means that a company work with the topic, but not in the beginning.

In previous research, Evans (2009) has described critical mass as a certain total amount of users. In some of our cases this is correct, but in most cases, we find that online market makers either focus on reaching critical mass within a geographically or socially restricted group of users. By doing so, they try to acquire network effects in that specific group of users, and then spread into new groups after that. Hence, in the section of our conclusions, we suggest a model where critical mass is divided into critical mass for social, respectively geographical niches. A geographical niche refers to a small geographically limited area, whereas a social niche means a certain type of social group. A critical mass within a geographical niche hence means building up a strong local presence before expanding geographically, whereas critical mass in a social niche means focusing on building up a user base for only one social group before expanding to others. As companies reach critical mass in various geographical or social niches, network effects start to appear not only within each niche, but also between different niches.

It is first if a sufficiently big number of social or geographical niches have reached critical mass that a general critical mass is reached. If general critical mass is reached, it becomes much easier to further expand into new niches. Almost all of the companies that we have interviewed say that word-of-mouth is how they hope to spread their platform. Evans (2009) refers to reaching critical mass as a dot on a graphical curve. Though, by judging our sample of online market makers, it seems as though critical mass should be the sum of several social or geographical niches that have reached critical mass, see figure 11. The process of reaching critical mass within a niche is similar to the creation of a social movement as proposed (Oliver et al., 1985) - it is very weak until the very moment it reaches critical mass, and then it suddenly becomes much stronger.

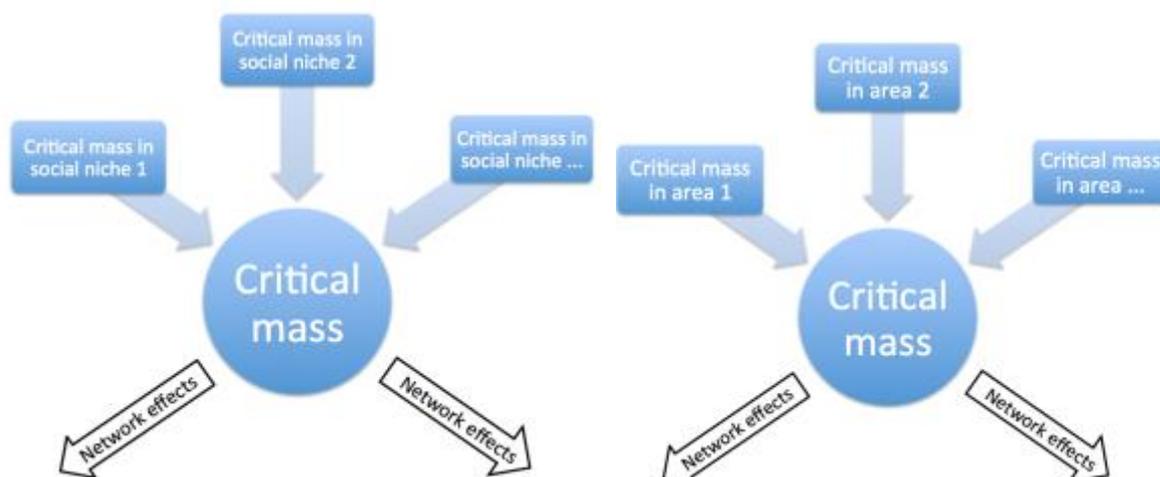


figure 11. *It seems as though critical mass should not be a dot on a curve, but instead the sum of small geographical or social niches that have reached critical mass.*

As the first niche reaches critical mass, network effects start to appear within and around the that niche. Then, as more niches reach critical mass, network effects get stronger and they start working in between the different niches. Ultimately, as the niches get stronger and denser, they all merge into one big general critical mass, where network effect get so strong that people in general become aware of the platform, see figure 12.

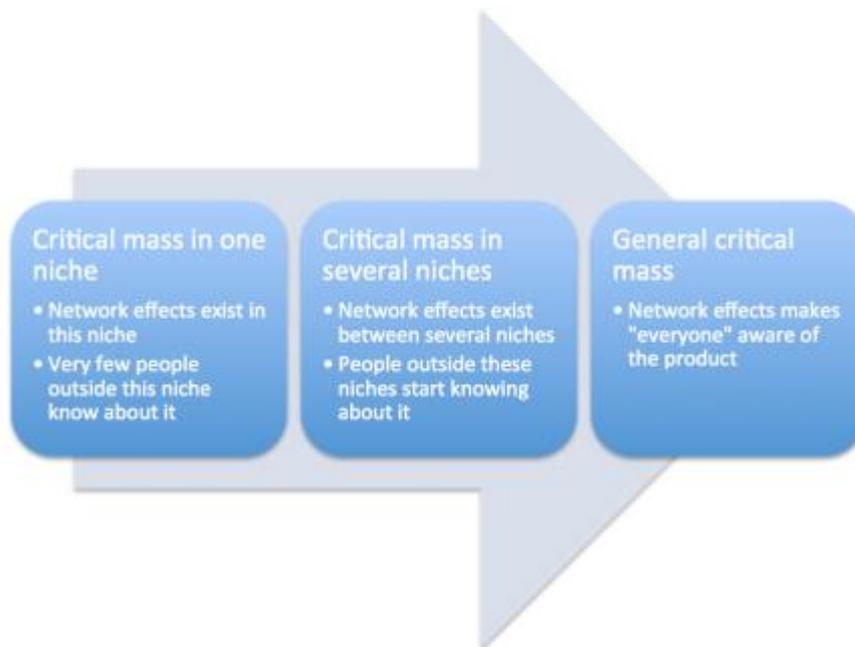


Figure 12. *As more niches reach critical mass, network effects get stronger and reach a wider audience.*

4.1 Paid growth and customer acquisition

Regarding customer acquisition, much of what has been said has been focused on finding a small niche customer segment and a narrow value proposition, see figure 10. Many founders argue that companies should neither try to satisfy everyone's needs (i.e. narrow customer segment), nor should companies try to solve multiple problems at the same time (i.e. narrow value proposition). Finding a small and narrow niche is thus divided into two parts: customer segment and value proposition. In both cases, our interviewees suggest that companies need to start narrowly and then expand to new geographical areas, new customer segments, or extend the offering. Expanding from a narrow customer segment can be exemplified by Momondo, a platform comparing flight fares. After Momondo had converted all the airlines, they turned to the demand side. According to Thorvald Stigsen, founder of Momondo, their

strategy was, compared to their competitors, to create a brand value and focus on clearly defining an emotional branding of Momondo. They built a rich identity and internalized the company value into the brand value. Different social groups identified with the brand value that Momondo has created. Groups that quickly joined were street football teams for women and the gay community. After identifying these “first movers” Momondo also aimed its advertisement to the gay community by advertising in gay magazines. The gay community also embraced the Momondo slogan, “Don’t spend it on the flight - splash it on the night”. Thorvald Stigsen explained that the gay community started seeing flight tickets as a commodity, hence they just wanted good value for the money. Stigsen further said that the gay community thus would not mind taking a low-cost airline and a high-end hotel. What Momondo did was to find a niche social group that connected to Momondo’s value proposition. Momondo then aimed all of its marketing efforts towards this group to make them feel connected and engaged to the slogan of Momondo, so that a community was built around Momondo’s value proposition. Since the users felt connected and engaged with Momondo’s value proposition, they spread it through word-of-mouth to their own networks. In general terms, Momondo focused on reaching critical mass for one specific social niche, who was then so engaged to the value proposition that the members of it spread it to people they knew.

The importance of creating a community is also something that Anders Gran, co-founder of Twiik (an app for improving physical and mental health), and Ali Mohamed, co-founder of TransferGalaxy (a payment medium for international payments), emphasized. Both Twiik and TransferGalaxy each have a Facebook community, which in the case of Twiik consists of a Facebook group and for TransferGalaxy a Facebook page. The one of TransferGalaxy is open for anyone and it works as an important medium for the company. While anyone can join the community of TransferGalaxy, only users can join the Twiik community. Anders Gran said that, through the community, users can provide feedback, communicate with coaches, and connect with other users. Anders Gran added that the background to the community was that they knew that social interaction with others in the same situation is key when trying to change a habit, which is what Twiik users try to do. In the community, users cheer others’ successes and provide advices through their own personal experiences of using Twiik. Anders Gran said that the community makes their users more loyal because they become engaged through the communication with other users. Though, in order to make the users engage in the community, people in the Twiik team, especially in the beginning, needed to be active and participate themselves.

The second way of expanding from an initial niche is by extending the value proposition from an initially very narrow one. This means that a company initially only offers one or a few very specific things, and then expands by starting to offer new things. Momondo did this by initially only comparing flight fares, to include offering hotels and car rental. Another example is OnlinePizza, who initially only offered a platform from which pizza could be ordered and delivered, to include other types of restaurants. OnlinePizza hence expanded one of its user groups from only including one type of restaurants to include a bigger spectrum of different types of restaurants.

Rebecca Sundvall, co-founder of Sports Without Limits (SWL), emphasized the importance of having a clear and transparent value proposition. Even though SWL had several different themes of online workout classes, SWL initially marketed themselves towards narrow social niches saying that they were a platform just for them. For instance, they marketed themselves as a platform with boxing instructors towards boxers. Many boxers then visited the webpage, but as they realized that the platform was not just for boxers they did not convert to being users. Twiik also entered the market with a broad spectrum of services. Just like SWL, they marketed themselves through their different training programs towards distinct group. They did so because they knew that their value proposition would be considered too vague if they tried to include all their services in it. Anders Gran explained that users do not usually look for a broad spectrum of things, i.e. all services that exist on the platform. Instead they look for something specific. Then, after having converted and started using the platform in that specific area they can open their eyes and see the whole offering. This is aligned with Gould (1995), who says that a longstanding customer is often more responsive to expanding its current usage. Gran explains the importance of communicating a crystal clear value proposition by comparing it with headlines of evening newspapers, i.e. it is better to simplify things than being vague.

Johan Brenner, co-founder Tradera, stresses the need of having a narrow focus and exemplified Ebay, who initially was a marketplace solely for Pez dispensers. By doing so, Pez-dispenser collectors knew that Ebay was the one and only place to go when wanting to trade Pez dispensers. When having reached a critical mass around this product, Ebay expanded into new segments. In general terms, Ebay created a social community consisting of Pez-dispenser collectors before expanding into new niches. Johan Brenner stated that marketplaces should do like Ebay did by aiming for a very narrow niche and expand from there. What everyone seems to agree on is to make the value proposition narrow and crystal clear to attract users. If the offering is more complex, different parts of the value proposition

should be communicated to different customer segments. If this is the case, the online market maker should direct its users to the value proposition that they came for.

Two different entry strategies are being used amongst the companies: zigzag and two-step. It seems as the zigzag strategy is the normal choice, but there are some cases where this does not work. One of these cases is Smartster, an e-mall with offers on many types of products. Founder of Smartster, Andreas Swahn, claimed that Smartster needs to have all existing content within each product category to be relevant to the customer. That is, Smartster would not work if it only had some of the current products that are on sale since that would mean that customers could possibly miss the best sale. Thorvald Stigsen said similarly regarding Momondo, where a price comparison of all flights needs to have all airlines to be relevant. Thorvald Stigsen also said that travelers have started to view flights as commodities, hence making them wanting as much value for their money as possible. However, he also stresses the importance of users engaging with your value proposition and brand value instead of solely focusing on technology. As Smartster users are people looking for offers, they also want to maximize the value for their money. We believe that, if there would be content available online that is not presented on Smartster or Momondo, customers would not be certain that they are maximizing the value for their money, which would make Smartster and Momondo irrelevant for its customers.

Zigzag is used in the rest of the companies that we have interviewed. For this strategy, all interviewees have argued that the initial supply is important before inviting the other side. In several cases, especially when local presence of any kind is necessary, our interviewees say that critical mass within a geographical niche trumps a larger total number of users, see figure 10. Yepstr, a marketplace for young entrepreneurs offering simple services to the neighborhood, uses the zigzag strategy in separate geographical areas where a sufficient supply side is needed before inviting the demand side. Brenner said that the demand side must be surprised by the big supply that is already present when the demand side is allowed to enter the platform. Handiscover, “an Airbnb for people with physical disabilities”, also needs a sufficient supply in one city before letting the demand side enter. As the demand sides of Yepstr and Handiscover are enabled to join, the zigzagging begins towards reaching critical mass in that geographical niche. iZettle, a payment-solution provider for small enterprises, also prefers reaching geographical critical mass before expanding to new areas. Magnus Nilsson, co-founder of iZettle, said that by ensuring a strong local presence, iZettle can make use of the local network effects. By having a local presence, iZettle can convert new stores to use iZettle by saying: “xx percent of all the stores in your area already uses iZettle. Why don’t you join?”.

It is obvious that aiming for a niche customer segment or small geographical market is strongly connected to reaching critical mass. Either it is about creating a critical mass within a certain geographical area, or within a certain social group. In both cases, the objective is to reach a high concentration of users that interact with each other, which is what we believe Evans (2009) meant as he stressed the importance of a dense network. Reaching critical mass of users that are geographically or socially close to each other, makes users of both sides experience increased value for their own usage of the platform. A Yepstr user has little use of there being a high number of users in another area, but is instead only interested in the number of users in his or her own area. Only when reaching critical mass in his or her area, network effects will appear and people will start using the service increasingly. Aiming for a social niche is practically the same thing. As much as people who live in the same geographical area are likely to communicate and interact with each other, so are people within a certain social niche - which is why social communities are of great importance.

An important question is whether a social community or a geographical one is easier to create, i.e. if people living in the same geographical area, or people with the same interests but from different geographical areas, are most likely to engage with each other. The questions hence become whether people identify themselves more with where they come from or what they are or do. Most likely, this depends on cultural or social differences between different countries. Probably, the group most likely to engage with each other is one with a mix of social and geographical closeness, as with a local book club or a football club. This is likely to be the reason to why engagement can become so high in local sport clubs.

By judging from our interviews, critical mass, in the sense of total number of users, can initially be less emphasized. Nevertheless, it was obviously easier for Airbnb to solve a chicken-and-egg problem in its 100th city than it was in its first one. Hence, we argue that there are several dimensions of critical mass. At the initial stages of growing a market presence, we propose that it is of great importance to reach a critical mass of users within a geographical or social niche. As this step is achieved in several geographical areas or social niches, the “general” critical mass is getting closer. It is first when the general critical mass has been reached that the platform can be expanded geographically and socially without much effort from the online market maker.

Using influencers, as suggested by Evans (2009), to attract users also seems very popular. OnlinePizza used this to spread the word about its service and to acquire new customers.

Onlinepizza found that certain users or “power users” (popular students with a big social network) used the service for self-interest and managed to spread and share the existence of OnlinePizza at social events. Through the power users, other participants of the social events became aware of the existence of OnlinePizza. Erik Byrenius states that these users helped OnlinePizza to share the platform. However, OnlinePizza had not influenced the users in any specific way, something that he wished they would have been better at early on. Hence, influencers can be used if the online market maker wants to aim in a specific direction to expand to, i.e. what niche needs to be focused on. Tink also uses influencers, but in a completely different way. Since Tink is an app that collects all your bank accounts, savings, loans, and investments, Tink depends on the trust that potential users have for the security of the app. To ensure this trust, Tink turned to some of the most trusted and prominent names in the financial industry. These individuals then turned to the media and explained that they acknowledged Tink as a well-functioning and secure app. Johan Brenner said that using influencers is a great way to reach whole communities, and mentions bloggers as a good type of influencer. Influencers can be viewed in the same way as theory describes marquee strategies. Hence, the purpose of marquee strategies should not only be that users should want to transact with the marquees, but marquees can also take the form of someone validating that a platform is good, attractive, or trustworthy.

Almost all of our interviewees have talked about working with the lean startup methodology, where their biggest takeaway is to work a lot with customer feedback, develop the product in that direction, test it, and iterate this process. Either, our interviewees have said that they have released a minimum viable product to test the market, or they have said that they regret not doing so. This regards understanding what your prime customer segment is and why this segment likes your product. Many of our interviewees suggest that companies, in order to know what causes the best traction (i.e. what the customers seem to like the most), should try to reach out to their customers through various channels (both app and webpage) to see how customers behave.

Another key to attract users of both sides is to minimize thresholds to join the platform. This implies making it as simple as possible for all parties to sign up and join the platform. All steps of the entry stage should be as small as possible in order to maximize the conversion rate of those who visit the platform. Tictail, a platform where companies can create their own webshop, did this by providing detailed instructions of every step of the create-your-own-webshop process. Before launching this detailed instruction, the conversion rate was much lower than afterwards. Twiik does the same thing for its content providers when these are about to upload content. One member of the Twiik team then sets up a one-hour Skype

session to provide instructions to every new content provider. Tictail and Tink also minimize thresholds by offering its service for free. OnlinePizza's Erik Byrenius said that reducing the thresholds for pizzerias to convert was their main success factor. OnlinePizza initially demanded all of its pizzerias to have a computer, through which all orders were being processed. This was in 2005, when having a computer and internet in a pizzeria was not to be taken for granted. Hence, it was a big investment for pizzerias to join OnlinePizza. When OnlinePizza later introduced a small ordering-solution gadget that was easy to install, suddenly all pizzerias wanted to join. Jacob Rudbäck said that Yepstr got a larger share of its entrepreneurs to complete their given tasks by offering an education of what is expected of the entrepreneur. Another way of lowering the thresholds, is for companies that mediate products to include a solution for logistics. This is something that all the product mediators in our interviews have done. The ones that have local presence (Locals and OnlinePizza) offers the delivery themselves, even though pizzerias initially managed this part themselves. Tradera has a third party logistics solution, whereas the ones that are e-malls (Tictail and Smartster) let the companies on their platform take care of the logistics themselves. Magnus Nilsson, iZettle, also emphasized minimizing thresholds. Apart from using similar learning-tactics as described above, he argued that using existing infrastructure is very important. iZettle was able to take advantage of the fact that almost all of their users had bank or credit cards to pay with. Around that time, smartphones were becoming increasingly popular, something that iZettle was able to take advantage of. Comparing iZettle to OnlinePizza, iZettle could assume that an internet connection existed in every store. iZettle could hence focus on its product and software, and did not need to focus on complementary infrastructure. Magnus Nilsson argued that without the access to the different infrastructures, launching iZettle would have been much harder.

4.2 Customer retention

Customer retention is what most of our interviewees claim to be the most important metrics to look at. Many underline that retention comes from good content, an appealing value proposition, and network effects, see figure 10.

A recurring theme has been the importance of trust and security. Reputation systems are only used by peer-to-peer marketplaces, in our case Yepstr, Tradera and Handiscover. Sebastien Archambeaud, founder of Handiscover, said that Handiscover will start using a reputation system soon, but it is currently too early to implement it. Another aspect of creating trust is professionalism, something that was underlined by Jacob Rudbäck (Yepstr) and Daniel Kjellén (Tink). Regarding professionalism, for both Smartster and Tictail, which are

platforms for other companies' products, it is important to manage the brands in a way that pleases the companies owning them. Daniel Daboczy, founder of FundedByMe, said that "trust is everything" for his crowdfunding platform. To simplify building trust for investors with regards to the companies that are being crowdfunded, FundedByMe introduced a checklist of things that companies have to provide for possible investors. The checklist consists of five things: story, team, video, offering for investors, and financial documents. Only when having uploaded these things, crowdfunding is enabled. Both Daniel Daboczy and Daniel Kjellén said that trust is the most essential thing for companies dealing with financial services.

For iZettle, improving customer service has greatly increased retention. Customer service is also something that has been important for TransferGalaxy. Ali Mohamed stated that the 24h customer service is one of their key offering to ensure a superior value proposition compared to its competitors.

Only two of the companies that we have interviewed use personalization, namely Smartster and Tictail who both are e-malls. Aligned with what theory suggests, personalization only seems valuable if users have specific objectives with their search, something that is probable in e-malls.

None of the companies that we interviewed said anything about switching costs or lock-in effects.

4.3 Viral growth

All companies that we have interviewed rely much on word-of-mouth to spread their platforms. Erik Byrenius said that it is important to create a "story" to the product so that it is worth telling others. The example of influencers at social events worked well for the storytelling of OnlinePizza. Andreas Swahn encourages entrepreneurs to talk to everyone about their idea or their startup, which can result in starting a "buzz" through word-of-mouth. Andreas Swahn said that you never know if the person that you are talking to will be valuable in the future, i.e. if he or she could be a future user, member of your team or a possible investor. Rebecca Sundvall, Sports Without Limits, said that telling others about her idea is her most important advice to entrepreneurs. She adds that if you do not tell others about your idea, you risk getting trapped in your own reality. This is aligned with what Saxenian (1996) says about the reason to why Silicon Valley is so successful, namely the openness about ideas to others. Magnus Nilsson emphasized to add a video or sending a message that is easy to go viral. He described the impact of iZettle launching video as

“tremendous”. Within the first two weeks, 35 000 new companies joined iZettle, which was a lot for a startup that is also geographically focused.

Viral marketing in the sense that Hotmail.com used is conducted by three of the companies that we have interviewed: Tictail, TransferGalaxy, and Locals. Locals, a marketplace for city shopping, does it by making the shops delivering the message that the purchase that was completed physically, can next time be completed digitally by using the app of Locals. In that sense, Locals tries to convert physical buyers to use the app instead. TransferGalaxy does it by delivering a text message and an email to a payment recipient, saying that the recipient just received a payment through TransferGalaxy. Tictail also uses viral marketing. On every Tictail e-shop, a Tictail logo can be found in the upper left corner of the webpage. In that way, visitors of the e-shop become aware that all items from that specific store are to be found on the Tictail e-mall. This is something that Siavash Ghorbani said has led to an enormous virality for Tictail.

There is a similarity in the way Locals and Tictail try to spread the knowledge of their platforms. Both aim their viral marketing towards customers of one of the stores that are included in the platform. The purpose for both of them is to convert the customers to order through the platform instead of through the shop. It seems as though viral marketing is used when there is a risk that one of the sides doesn't know what platform the other side is using.

One third of the online market makers incentivize users of one or more sides to market the platform to new users. The only one that is using a referral program is iZettle. A customer of iZettle is given a certain number of free transactions if the customer manages to convert a new customer by offering the new customer the same number of free transactions.

Handiscover is planning and Twiik is considering to introduce a referral program. However, neither of them are consider it their highest priority, which is why they have not yet done so.

Twiik and Sports Without Limits incentivize their users on the supply side to market themselves. Both platforms use their supply-side users to create content and then these are rewarded proportionately to how much traffic their content attracts. Hence, as more buy-side users that supply-side users manage to attract, the more the supply-side users are rewarded, which incentivizes them to market themselves and the platform more.

FundedByMe, a platform for crowdfunding, possesses internalized incentives for both sides to market their platform. Partly investors, but especially the companies that are crowdfunded, want more investors to invest in order to give the crowdfunded companies the best possible conditions to succeed.

Both Sports Without Limits and Handiscover are facing hard times getting their users to spread and share information, specifically on social media. “A couple of years ago users were easy to convince to like, subscribe or write a review. Today we need to work harder to convince them to do the same”, Sebastien Archambeaud said. Rebecca Sundvall experiences tough times for both users as well as influencers, such as bloggers, to actively share the platform. It seems like thresholds of sharing on social media and other platforms have appeared and companies today have not yet understood the reason for the resilience in user cooperation.

To summarize what our founders said about user acquisition and paid growth, user retention, and viral growth, basically everyone said that retention was by far the most important. This view was shared by the non-founders. Apart for retention, the founders focused most on acquiring customers, where the conversion was said to be especially difficult in many cases. Viral growth was barely mentioned, except in a few cases, but the general view seems to be that once you get your retention high, you have come a long way. The founders did not say it specifically, but it could be that viral growth is something that comes after critical mass is reached. In that case, it is aligned with what Evans (2009) suggests about the catalytic reaction that occurs when reaching critical mass.

4.4 Opinions of non-founders

Below, in figure 13, attributes are listed of what the “non-founders” consider to be the most essential things of what an online market maker should focus on in order to grow their user base.

It is very obvious that the non-founders, particularly the incubators and accelerators, ground much of their opinions on *The Lean Startup* (Ries, 2011). Four out of seven non-founders stress the importance of creating a minimum viable product, which is released and tested on users, and then worked on and improved iteratively. It seems as though all companies have either worked in this way, or wish that they did so. All non-founders except one also talked about how vital retention and stickiness is, which corresponds well with what founders focus on.

Five out of seven non-founders claimed that it is essential for entrepreneurs to build a product or service that users “need to have”, as opposed to “nice to have”. As an addition to this, Alfred Beckman said that companies should adapt their product to how it is used.

Many also said that the most important thing that determines the success of a startup is the team. Our non-founders said that they prefer a diverse team with different team members possessing different skills. The skill of programming seems to be the one most important skill that a team must have.

A majority of the non-founders said that startups should focus on a niche customer segment, and equally many stated that a narrow value proposition is important for startups to successfully grow their user base. Hence, non-founders seem to be aligned with what online market makers actually do.

Out of the non-founders, Johan Brenner was the only one who talked about the importance of using influencers and the creation of a social community. Since Johan Brenner has also founded Tradera, it could be that he has caught up on these things from his experiences from that period. Thus, it appears that non-founders underestimate how much online market makers value and use influencers and social communities.

After interviewing the non-founders, it seems as they do not generally speak about reaching critical mass as is proposed by Evans (2003, 2009). At the same time, they are well aware of the development of startups and how they should grow their user bases, just in the way that Ries (2011) suggests.

Non-founders	MVP	Niche cust. segment	Narrow value prop.	"Need to have"	Influencers	Community	Retention/ stickiness	Team
Johan Brenner	X	X	X		X	X	X	X
Joel Larsson	X		X	X			X	X
Lars Jörnrow							X	X
Jeanette Andersson		X		X				X
Alfred Beckman			X	X			X	
Erik Starck	X	X	X	X			X	
Johannes Ivarsson	X	X		X			X	X

Figure 13. Aspects of importance for online market makers, according to non-founders.

4.5 Conclusion

We conclude that there is no “one critical mass fits all”. Instead, there are several dimensions of critical mass and how it should be applied to different kinds of online market makers.

First, there is a difference in critical mass between online market makers that only require online presence, compared to those requiring local presence. By “local presence” we mean that both transacting parties need to be physically present for the transaction to occur, whereas online presence implies that the whole transaction occurs online. It appears to be the case that online market makers with a local presence need to focus on reaching a critical mass within a geographical niche. If there are enough users within a small geographical area, network effects start to appear and the awareness of the online market maker can be spread through word-of-mouth. Those who are only present online need to focus on a small social group and focus all attention on creating a community for these around the value proposition. In other words, they need to reach a critical mass within a social niche. In that way, network effects within that niche can grow strong and the company and its value proposition can be spread to further customer segments through word-of-mouth. There are several different levels of how socially niched something is. The narrower the niche is, the more alike are the people in this niche and the more similar interests or values do the members of this group share. This makes them more likely to connect with each other and create a community. Hence, when aiming globally, it is vital to make the niche as narrow as possible. This further enables the creation of a strong community around the value proposition. The stronger the community is, the stronger the network effects are likely to be.

Whether a social or geographical niche is aimed for, we argue that online market makers should try to expand to adjacent niches after critical mass of the first niche is reached. In that way, the existing network effects can be strengthened by the exchanges between the different niches.

Second, there is a difference in critical mass between online market makers with a narrow value proposition and those with a broad one. A narrow value proposition only satisfies a specific need, whereas a broad value proposition means that products or services satisfy several different needs. Online market makers with a narrow value proposition have two options when looking to attract new users and strengthen their network effects. Either they can aim to deepen existing functions to strengthen the existing community of users, or they can expand their value proposition to further areas to attract new types of users.

Online market makers, starting with a broad value proposition, have from the beginning a bigger potential user base than those with a narrow value proposition. However, starting with a broad value proposition implies two big challenges, especially before reaching critical mass: conversion and retention. First, it appears that users visit a platform for one specific need. If he or she then is met by much wider value proposition than expected, he or she might find it confusing and churn. Thus, conversion seems to be more difficult for online market makers with broad value proposition. Hence, online market makers try to present a specific value to the corresponding customer segment and expose them primarily to what they came for. Second, it seems to be more difficult to make users connect to platforms with a broad value proposition as much as they do to platforms providing a narrow value proposition. If users are not constantly reminded about the platform, they might forget about it because they do not relate a distinct specific need to the platform. Hence, the initial retention, before having reached critical mass, can be difficult for online market makers with a broad value proposition. However, if they manage to convert and retain a user, the user is likely to expand his or her usage to involve a bigger part of the whole value proposition.

We conclude that online market makers seldom try to reach critical mass in the sense that Evans (2009) proposes. Instead of viewing critical mass as a dot on a curve, online market makers tend to view it as the sum of several social or geographical niches having reached critical mass. The deciding factors of how critical mass should be reached, i.e. if geographical or social niches should be aimed for, seem to be the broadness of the value proposition as well as the level of local presence required. Hence, as an addition to the theory regarding critical mass, by Evans (2003, 2009), we propose our own matrix, see figure 14. The purpose of the matrix is to answer our research question, describing how online makers work to reach critical mass, depending on the two factors affecting this: level of local presence and broadness of value proposition

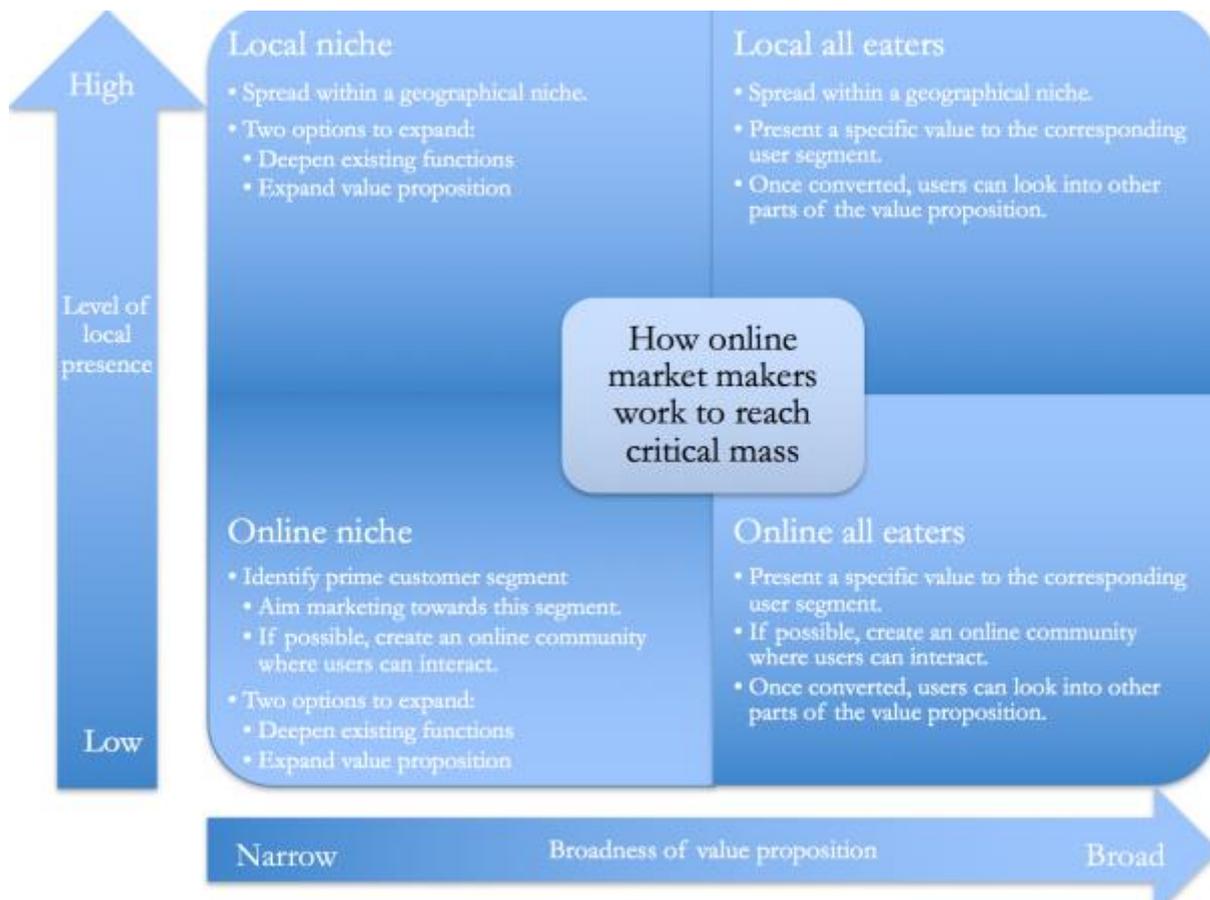


Figure 14. *How online market makers work to reach critical mass. By entering level of local presence required, as well as broadness of value proposition, online market makers are divided into different subgroups. This division shows how each subgroup of online market maker work to reach critical mass.*

In order to reach critical mass in either a social or geographical niche, we particularly stress the importance of two things: having a clear value proposition and reducing thresholds to join the platform.

We argue that a clear value proposition means that users easily can describe the value proposition of the platform by one single sentence, so that others quickly understand the value in it. By having a clear value proposition, thresholds for spreading the platform through word-of-mouth are reduced, and possible new users are more likely to visit the platform.

Reducing thresholds to join the platform is important to convert the persons visiting the platform to actual users. To do this, it has to be as simple as possible to join. If anything in the entering process is difficult or complicated, visitors are likely to churn. Hence, online market makers need to reduce the number of steps in this process and make every step as simple as possible. Building trust is also a way to reduce thresholds to join a platform. For

peer-to-peer marketplaces, we suggest reputation systems to be used. Also, customer service and professionalism are ways to mediate trust. We argue that all of these measures are proactive measurements to reduce search costs. If a visitor, or even converted user, churns and leaves the platform, the reason for leaving is oftentimes that the search costs are too high. Either there is a lack of users on one side, which increases the search costs, or the possibility to engage and transact on the platform has become harder, which increases the shared transaction costs.

By providing a clear value proposition, people know exactly what value that can be found on the platform, i.e. reducing search costs. By minimizing thresholds to enter, search costs are further reduced, and by making the transaction process easier, shared transaction costs are reduced.

Regarding entry strategies, it seems as the zigzag strategy can be used in most cases. Though, we have found exceptions. As in the cases of Smartster and Momondo, we argue that when dealing with value maximizers as users, who do not mind adding some search cost to find the best deal, all existing content is needed to satisfy customers' needs. In these cases, the two-step strategy is to be applied.

5. Discussion

With this research, we have compared what previous research has covered, regarding what online market makers should do to reach critical mass, to what they actually do.

Evans (2009) expressed critical mass as a certain total number of users. However, the online market makers have identified new aspects of critical mass, not covered in previous research. The emphasis on social and geographical niches within critical mass is something that seems new to the theoretical framework. For that reason, we encourage further research to investigate the importance of these two factors for critical mass. The implications of the broadness of the value proposition and what strategies companies are using regarding their value offerings can also be further researched.

As this research focuses on online market makers, we hope that our findings can be tested on other types of multi-sided platforms, and other types of businesses where network effects exist. With research on other types of multi-sided platforms, we believe that a general framework, identifying even more factors of critical mass, for all MSPs, could be generated.

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Appendix

Appendix I: Template for interviews - Interview Protocol

Here follow the interview protocols used when performing the interviews for this research.

The first presented is the one used for founders of the online market makers and the second is used for non-founders.

Interview protocol for founders

Introduction

Could you tell us about the story behind [YOUR COMPANY]?

Do you view [YOUR COMPANY] as a multi-sided platform?

What important barriers have you faced and passed when developing your company and attracting customers?

- How have you dealt with them?

Paid growth and Customer Acquisition

What is, and what has been, important for [YOUR COMPANY] when acquiring new users?

What's your strategy for attracting new users/customers?

- How broad is your customer focus? Narrow segment or broad audience?
 - How has the focus changed over time?
- Did you focus on both sides simultaneously or one at a time?
- How important is the balance between the sides?
- What makes people to know, recognize, or get in contact with your platform?
- What type of marketing do you focus on?
 - AdWords, tv, social media?

Customer Retention

What is, and what has been, important for [YOUR COMPANY] when retaining users?

Do you have a specific strategy for making users come back to your platform?

- Do you have any loyalty program?
- Do you use any personalization on your platform?
- How do you work with building trust on your platform?
- Do you have any lock-in effects?

Viral Growth

Do you have a specific strategy to create viral growth?

- How big are the network effects?
- Do you use any affiliate programs?
- Do existing users spread your platform and recruit new users?
- Do you use any tagging systems?
- How scalable would you say your platform is?
 - I.e. what's stopping you from expanding globally tomorrow?
 - what part of the platform is stopping you?

Final Question:

What are your three best advices you can give an entrepreneur building an online market maker platform?

Interview protocol for non-founders

Could you tell us briefly about [VC Company, Incubator, Accelerator], and/or your background?

What are the characteristics of the startups that you consult or accept?

- How much have you worked with online market makers?

In what stage of a startup's development phase do you usually enter?

How do you view a successful expansion of a startup?

What are the toughest challenges that your companies face?

In what area do you experience the largest lack of competence within the teams of entrepreneurs?

What is, if any, the biggest difference between startups that succeed and the ones that does not quite make it?

- Any specific mistakes?
- How do you proactively work to avoid making such mistakes?

Final Question:

What are your three best advices you can give an entrepreneur building an online market maker?

If they have worked with online market makers specifically

With which online market makers have you been involved?

What were your best advices to them?

- Where did they put their focus in the early stages of the platform?

Do you have any general methods that you use?

- Particularly to create conversion, stickiness or viral growth?

Appendix II: Profile of Interviewees

This appendix gives a description of each online market maker. It also includes a description of the non-founders and their connections to the startup community and online market makers.

Online market makers

Here follows a brief introduction to each online market maker that has been interviewed.

FundedByMe, founder Daniel Dabozcy

Founded in Stockholm, Sweden, in March 2011, FundedByMe is a financial platform that enables crowdfunding. The platform offers loan-based and equity crowdfunding with a one-stop-shop solution making it easy to become engaged and invest. The solution is offered to entrepreneurs and startups throughout Europe as well as everyday investors. FundedByMe targets Europe to encourage cross-border investments. Also they believe that it will benefit both entrepreneurs and investors as well as increase economic growth.

Handiscover, founder Sebastien Archambeaud

Founded in Skåne, Sweden, in September 2014, Handiscover.com is an accommodation-booking website, very similar to Airbnb. To separate them from Airbnb and other accommodation-booking websites, they are the first community based website which is dedicated to help people with physical disabilities. What is unique for Handiscover, apart from solely focusing on people with physical disabilities, is their classification system. This system divides and ranks the accommodations in different groups depending on their level of physical disability. Because of that, travelers can search and select accommodations based on their specific need and disability.

iZettle, founder Magnus Nilsson

Founded in Stockholm, Sweden, in February 2010, iZettle is a reader to a serial-communications port which enables smaller business owners to offer payment solutions through card payments. The hardware is an “easy to use”-device that is connected to a smartphone or a cashier. The software is downloaded for free from different application stores. iZettle is not a Paypal 2.0 but rather focuses on using existing infrastructures such as smartphones, cashiers and application stores to build their platform on. The “easy to use”-device helps the small business owners to boost their revenue stream and not lose potential sales due to lack of payment solutions.

Locals AB, founder Victor Sandberg

Founded in Lund, Sweden, in 2015, Locals is a city platform for individual stores to connect to and pursue a digital presence. The platform exists to strengthen the individual stores by working together on the same platform to get better traction and to gather all consumers on one channel. Where it is possible, Locals adds a delivery service for customers, or an “order and pay and pickup” solution, where everything is solved before pick-up. This minimizes times spent at the stores and customers can avoid unnecessary queueing. They have recently pivoted to focus more on the solutions regarding the payment services included in the previous platform.

Momondo, founder Thorvald Stigsen

Founded in Denmark, in September 2006, Momondo is a free unbiased search engine for flight fares. The search engine enables transparent comparisons of price and time with full market coverage. Through programming and machine building, a non-manipulated list of all flights and their prices can be generated and available for anyone. Momondo’s ambition is to not only be a function or engine that people use, but rather to create a travelling universe which unite travelers and inspire them to meet the world. Momondo has, since its beginning, extended their coverage to now include hotel and car rentals as well.

Onlinepizza, co-founder Erik Byrenius

Founded in Linköping, Sweden, in May 2005, Onlinepizza was the first platform that gathered pizzerias, and eventually restaurants with different offerings such as kebab, sushi, Indian food, and much more, at one place. OnlinePizza helps pizzerias to become present online, as well as changing customer behavior to start ordering online instead of using phone calls or personal visits to place their orders. The platform started from a need that students of Linköping University experienced. They wanted to make it easier for students to order pizza on lazy weekend days.

Smartster, founder Andreas Swahn

Founded in Borås, Sweden, in May 2013, Smartster is an online platform where prize or offer seekers visit the platform to look at the supply from the physical stores, as well as digital stores to look for current products that are on sale. The Smartster platform gathers all possible offers from different stores and brand on one platform. It is the perfect place to look for time based sales and the best supply of offers from a large range of different markets.

Sports Without Limits, co-founder Rebecca Sundvall

Founded in Stockholm Sweden, in September 2014, Sports Without Limits is a training and fitness platform that connects trainers and training amateurs looking for professional training schedules. The trainers vary from fitness coaches, yoga instructors, to world champions and Olympic medalists. The content is shared through video courses that cover the trainers' focus as well as nutrition advices and tips on recipes for cooking. The solution lets the users adapt their training routine to their daily schedule, and all that is needed is a device that can play and display a video. Users can exercise at home, outside, in the gym, or when travelling.

Tictail, Co-founder Siavash Ghorbani

Founded in Stockholm, Sweden, in 2011, Tictail is a social marketplace that gathers independent brands and stores from around the world. It is a platform that offers its users something in between Blocket, an online marketplace for essentially any product, and building your own e-shop. Tictail is very prone to protect their own and their users' brands, which is why the platform differs from Blocket, where essentially anyone can put up an ad. On the platform, shoppers can connect to the global community of the brands and explore and discover new trends in fashion, art and home decor.

Tink, founder Daniel Kjellén

Founded in Stockholm, Sweden, in 2012, Tink is a virtual bank and economy based application aimed to help individuals with their economy. Users connect their different bank accounts from different banks and types of accounts so that all their private economy is gathered in one place. Apart from gathering data, Tink focuses on analyzing the data and communicating “smart things” or giving advice for users’ private economy. Lately Tink has broadened its functions to include moving money or capital and paying bills. The purpose of the application is to make it easy to make economically sound choices for individuals and to get a general view and understanding of one's personal economy.

Tradera, co-founder Johan Brenner

Founded in Stockholm, Sweden, in 1999, Tradera is one of Sweden's leading online marketplaces or online commerce services. The marketplace offers a wide variety of products being listed and sold by users. Users from all over the world are welcome, but most are Swedish. Originally, products were sold through private auctions with a time deadline and a bidding function installed. Today both auctions and fixed pricings can be found, as well as both new and secondhand items.

TransferGalaxy, co-founder Ali Mohamed

Founded in Örebro, Sweden, in June 2014, TransferGalaxy is mobile money transfer service that enables users to send money to relatives or their loved ones internationally. The service is instant and cash-free, mostly used through your smartphone, but it also works on tablets or computers as well. The recipients receive the money instantly to their phone wallets, and the sender pays a significantly lower charge, to a much better rate, than previous agents. TransferGalaxy functions similarly to Swish, the money transfer service provided by the major Swedish banks. There is a sender, often based in Sweden, and a receiver, based somewhere else in the world. As opposed to Swish, TransferGalaxy is used for international transfers through your phone mostly.

Twiiik.me, co-founder Anders Gran

Founded in Malmö, Sweden, in December 2015, Twiiik is a health service platform that connects coaches of different expertise with people, companies, and teams who are looking for a healthier lifestyle. Twiiik helps individuals and companies to visualize and understand their current healthy and unhealthy behaviors. Twiiik then helps its users in an effective and fun way and tracks improvements over time. The coaches on the platform are personal trainers, fitness coaches, yoga instructors, and food specialists who offer programs specialized in their respective field. The platform gives the users an update on mental health and offers programs with smart, daily challenges to allow users to build a healthier lifestyle based on their specific need.

Yepstr, founder Jacob Rudbäck

Founded in Stockholm, Sweden, in April 2015, Yepstr is an online marketplace for household services which lets young entrepreneurs to get in contact with their neighbors. Through Yepstr they can offer services such as babysitting, lawn mowing, and garden services. The assignments are posted by employers, i.e. house owners. The youths can then accept the assignments in the nearby area and the employer can then choose which youth, or Yep, he or she prefers to fulfill the assignment. In the long run, the platform is thought to be more interactive with both sides proposing assignments or services.

YooDo.se, co-founder Johannes Ivarsson

Founded in Lund, Sweden, in June 2011, YooDo.se connects designers and programmers with startups in need of technical competence. From the lack of effective channels to find such competence, YooDoo.se was created. Essentially the platform wanted to make it fun and simple for Swedish startups and smaller companies to find programmers and designers. The supply of the platform was based on ads posted by companies in need of a specific talent or skill set. Programmers and designers would then send requests with details of themselves, and the companies could then choose the best candidate that matched the requested profile.

Description of non-founders

Here follows a description of the different interviewees that were not founders of an online market maker. These people were either interviewed as representatives of an accelerator or incubator, working as a venture capitalist, or had much experience within entrepreneurship, startups and online market makers in general. First follows a description of the different types. Then a profile description of each interviewee, like the ones of the online market makers, will follow.

An accelerator is a fixed-term, cohort-based program, including mentorship and educational components, that culminates in a public pitch event or demo-day. Generally, an accelerator is a non-profit organization that makes investment in the few companies entering through a very narrow and competitive selection process. Accelerator programs usually lasts for three months (Cohen & Hochberg, 2014). We therefore believed that these accelerators can provide us with important intel from a closely observational and mentoring perspective of the platforms.

An incubator is a non-profit organization that provides shared workspace and ad-hoc mentoring and other assistance. Incubators shelter arising businesses, allowing them to become stronger before becoming independent. Typically, the selection process is not as competitive as for Accelerators. The companies that enter pay a reduced rent to the incubator. These companies are offered some educational assistance, which is often ad-hoc and concerning HR or legal issues. They also receive a small amount of mentorship where they focus on tactics. Generally, a company stays at an incubator for one to five years. The incubators were included for similar reasons as the accelerators. Even though they might not provide as much mentoring services as accelerators, we believed them to have great experience and general knowledge of a large number of companies and online market makers (Cohen & Hochberg, 2014).

Venture-capital organizations raise money from individuals and institutions for investment in early-stage businesses that offer high potential but high risk (Sahlman, 1990). Venture capitalists continuously monitor their companies, both by participating on the board level, but also in a more informal way (Rosenstein 1988, Lerner 1995). It is common that they provide valuable mentoring and strategic advice for the entrepreneurs and they frequently assist companies in providing business contacts and recruiting senior managers (Bygrave &

Timmons 1992). Figure 15 describes the differences between accelerators, incubators and venture capitalists.

	Accelerators	Incubators	Venture Capitalists
Duration	3 months	1-5 yrs	1 yrs +
Cohorts	Yes	No	No
Business model	Investment; non-profit	Investment	Investment
Selection frequency	Competitive, cyclical	Non competitive	Competitive
Venture stage	Early	Early or late	Early or late
Education offered	Seminars	Ad hoc, HR or legal	None
Venture location	Usually on-site	On-site	Off-site
Mentorship	Intense	Minimal, tactical	Strategical

Figure 15. Table showing the differences between accelerators, incubators, and venture capitalists.

Profile of non-founders

Here follows a descriptive background of each non-founder.

Jeanette Andersson, MINC

Jeanette is an expert in financing of startups and scale-ups. Today, Jeanette works at MINC, an incubator in Malmö, south of Sweden, where she works as a business developer with a focus on financing and financial guidance. She is also an angel investor who is active in Queen Invest, which focuses on SMEs. Jeanette is also a member of the board at Lund University Innovation, an innovation hub for student and employees at Lund University. Within MINC she helps entrepreneurs to show what paths are available and which to choose depending on the kind of company the entrepreneurs want to build. With the financial touch, she helps the startups to get a clear financial structure on the business right from the start as well as using her network to attract early investors to the incubator.

Alfred Beckman, Instabridge

Alfred Beckman has a 10 year long experience working with startups. With a technological background he has a big interest and skillset in user centric design, creation of user friendly experiences through design, and working with rapid prototyping. He has worked with a wide range of different startups ranging from digitizing receipts through a company called Kvittar, simplifying analysis of sales data with Brisk.io, to creating a platform that enables wifi-access worldwide through his current project, Instabridge. Alfred has experience working with questions such as how you create incentives when you have multiple sides on a platform, to changing customer behavior and creating enough value for customers to start using the service or platform.

Johan Brenner, Creandum

With a background from Stockholm School of Economics and working in larger corporations like ABB and Kinnevik, Johan Brenner has now become a highly experienced venture capitalist with experience from all over Europe and from Silicon Valley in California. He has worked within a great deal of different industries with success stories as both founder and through the role of a venture capitalist. Johan joined Creandum in 2010 where he works with investments in entrepreneurs with a focus on disrupting startups within financial services, marketplaces, and SaaS.

As an entrepreneur he has co-founded E*Trade in the Nordics, co-founded Jobline, Europe's largest Online Recruiter, co-founded Bookatable, a restaurant reservation system, and Tradera.

Johannes Ivarsson, THINK Accelerate

With a background in engineering and consulting and an interest in ICT and online startups, Johannes started THINK incubator in 2013 but turned it into an accelerator in december 2014. Before that, he was engaged in and started multiple companies, ranging from YooDo.se, as described above, Fieldly, which builds digital infrastructure for the construction industry, to producing made-to-measure clothing with Conservatives AB.

The THINK accelerator is a Lean-Startup based program located in Mindpark in Helsingborg, south of Sweden. Through coaching and mentoring and access to the social network surrounding the accelerator, startups have an amazing opportunity to start, develop, and test their ideas. The program is three month long and focuses on early stage internet ventures.

Lars Jörnnow, EQT Ventures

EQT Ventures works to invest and support ambitious founders in their process of creating successful businesses. They consist of company builders, designers, data scientists, marketers, and scaling experts. Lars Jörnnow specializes in global roll-out and scaling of businesses. Prior to EQT, Lars worked at King Digital, where he supported King's transformation from web to Facebook, from Facebook to mobile, as well as initiating King's Growth team and King Labs. Before King, he worked as a product manager at a startup and as a strategy and operations consultant in the U.S. Lars has also been a board member at Rebtel and Sinch.

Joel Larsson, MINC & Fast Track Malmö

Joel is a data scientist, software developer, founder of several startups, business developer at MINC, and managing director at Fast Track Malmö. Joel focuses on early stage startups, user acquisition and growth, and internet marketing. Right now he works as a startup advisor at the incubator MINC, founder of Malmö Startups, a grassroots organization uniting the startup community in the south of Sweden. He is also managing director of Fast Track Malmö, a four-months accelerator programs for startups based in Malmö, south of Sweden. Joel has a broad experience from being an entrepreneur himself, by founding companies like Popgiro, a P2P-payment solution integrated in companies' platforms, Settlebox, an online reputation and payment service, and Popdevelop, an innovative and fun concepts and prototypes company with focus on user experience.

Erik Starck, Lean Forward AB Malmö

Erik Starck is co-founder of Lean Forward Malmö, working to help and create possibilities for product managers in the Malmö region of southern Sweden. Lean Forward works as a platform to get product managers to share ideas and experiences regarding product design, development and management, modelling of company processes and metrics, and user experiences. Within Lead Forward, Erik focuses on growth, and particular user growth. Erik works with growth mining, which refers to the process of value creation through working with feedback-loops from customers or user.