Expanding the core-business of Stuvia leveraging the data of its existing online platform.

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Jake van Mourik
Student number: 4736583

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First supervisor: Geerten van de Kaa
Second supervisor: Michael Klenk
Advisor: Vladimir Sobota

Abstract

Nowadays, many markets are formed around online platforms, which facilitates a place where sellers and buyers can find each other without knowing each other. An online platform acts as an intermediate between two people who can fulfil each other's needs. In addition to bringing the two sides into contact, a platform also facilitates payments that make purchase and sale possible. Hereby, an online platform exhibits the characteristics of a two-sided market. New challenges arise due to the large amount of two-sided markets on the internet. These challenges are related to technical and organizational aspects, generating problems such as decentralization of user data, privacy concerns, and platform competition. Those problems correlate with the rapid increase of the number of platforms on the internet and the large amounts of data that become available as a result, and call for a new inventive approach. This research aims to present a guideline that enables the development of an extension of two-sided markets towards multi-sided markets, whereby not just two sides provide value to each other, but multiple sides increase both the value to the user and the company. The user-generated data is converted into an additional revenue streams alongside a company's current core business. In addition to providing a guideline, this study aims to see which conglomerate diversification strategy can be used to enter the recruitment market on the basis of user generated data. The results of this research are obtained from empirical research, through interviews with actors from the recruitment market. This study shows that, when choosing the right diversification strategy, several barriers have to be overcome. Regulations that respond to the protection of personal data must be taken into account and the DNA of the company must be preserved. This research provides a guideline that, in addition to crafting the right strategy, should provide handles for companies like Stuvia that have access to redundant user data. The conclusion is that -based on the data available to Stuvia- the recruitment market is a potential market to enter. The strategy that should be used by Stuvia to expand into the recruitment market is segmentation on specific user profiles on the basis of advertisements. These user profiles arise from various aspects mentioned in this research, in which the matching of a user profile and the open vacancy is of great importance.

Executive summary

This research examines how a company that has access to excess user data can convert it into additional revenue streams alongside the company's current core business in another market. The available data arises from the collection of user data obtained during the traffic of an online platform, where peer-to-peer trading takes place. User profiles can be drawn up from this collected data and can be used in another market. In this study, the emphasis was on broadening the student market to the recruitment market. In order to answer questions such as which strategy can best be used when entering this market or which steps must be taken in this entire process, interviews were conducted with stakeholders from the recruitment market. In total, 16 interviews were conducted, which intended to provide answers to social, technical and political issues.

To answer the main question of this research, how Stuvia can leverage user-generated data to enter a different market and thereby use a certain type of growth strategy to create competitive advantages towards the incumbents in this market or collaborate with these incumbents, this question is divided into five sub-research questions to help answer the main research question. First, the study examined how Stuvia should leverage its user data in another market, and looked at the characteristics of Stuvia's current core-business and which aspects need to be changed to make the step to the recruitment market. In Stuvia's current core-business, Stuvia acts as an intermediate that makes the transaction possible between the buyers and sellers of study material. This is known as a two-sided platform. The moment the data obtained from the current platform is used in another market, Stuvia changes from a two-sided platform into a multi-sided platform: an extra side is added to the platform that increases the value of the user. The success of this multi-sided platform depends on network effects, which enables more and more data to be converted into the demand from the recruitment market. The demand from the recruitment market consists of vacancies that must be matched to the right candidate. This research shows that, when the right user profiles can be matched to the relevant vacancy on the third side, the value of the user increases.

Real-time bidding of advertising (RBA) can contribute to the leverage of user data and the matching of a certain vacancy. RBA is a mechanism where advertisers can determine value, based on an impression to users who see the ad. By matching the right user to a vacancy from the recruitment market, a revenue stream can be created in addition to the current core business of the company. Because Stuvia is entering the recruitment market, platform competition is increasing between incumbents in the recruitment market and Stuvia. To avoid or minimize platform competition, Stuvia must use the right growth strategy when entering this market. By making the right choices from this growth strategy, a collaboration can arise between Stuvia and the incumbents from the recruitment market. An Ansoff Matrix indicates that Stuvia needs to use a diversification growth strategy to enter this new market with a new service.

To determine which conglomerate strategy Stuvia should adopt in the recruitment market, different thoughts from actors in the recruitment market have been assessed. This empirical study shows the

highest barriers when entering the recruitment market and how to choose a strategy. This study shows many areas where the user-generated data cannot get a hold on. To expand to the recruitment market, Stuvia should first be able to identify these features of a student. However, this data is linked to personal data, with several privacy concerns regarding recently changed law and regulations, namely: The General Data Protection Regulation (GDPR): it is important to consider this in adopting the right conglomerate strategy. The held interviews indicate that the best strategy for expansion into a new market highly depends on the situation on what vacancy needs to be filled. A combination is intended where a collaboration is created between companies in the recruitment market where the right candidate can be found through user profiles. The leverage of user data can be perfectly applied during the segmentation on a certain user by using advertising. It is very important that, by entering a new market, the current core business should not be harmed and the DNA of the company should remain the same.

To offer tools to companies that want to make the step to a different market based on user data, this study provides a guideline explaining the entire process. The phases in this guideline are: the mapping phase, the delineation phase and the execution phase. To provide a clear overview of the data that must be mapped, an overview of the intended data is created.

This study shows that multiple data cannot be extracted from the available user data. The regulations must be taken into account relating to storage and retention of personal data, in particular the General Data Protection Regulation (GDPR). The preferences of users can indicate which data can and cannot be used; clarity about how behaviour is tracked online is most important to users. In the vacancy in question, the user finds it important that matching takes place properly and that the job description is well presented. All of the above aspects of mapping data must be taken into account during the mapping phase.

In the delineation phase, the social, economic, technological and political aspects are combined. Several variables are extracted from interviews, and are subdivided into soft, hard and decision variables. The soft variables are linked to the demand for data the recruitment market needs and the available data can be leveraged. Another soft variable concerns the norms that the users carry with them. Both variables must be included in the delineation phase. The hard variables in the delineation phase are linked to legislation. When the soft and hard variables are combined, the decision variables concerning the conservation of resources can be preserved. When the above variables are correctly completed in the delineation phase, the execution phase can proceed.

After the delineation phase, the service is up and running, and must be kept running in the execution phase which starts with soft variables that ensure that the cooperation between the recruitment parties and Stuvia runs smoothly. Another soft variable is investing in the new service to optimize the operation. After the soft variables have been achieved, the hard variables have to be addressed, i.e. after-treatment service and monitoring statistics and finally the improvement variables have to be set to be able to

evaluate the entire process is. Identified shortcomings can be brought back into the mapping phase, a cyclic process takes place, fuelling innovation.

Stuvia can use above phased guideline while mapping its data, taking into account the demands of both actors and the regulation regarding the GDPR. To meet the demand from both the users of the platform and the recruitment parties, missing data were identified from both sides. Many specific personal data must be retrieved for a properly functioning service. If Stuvia can achieving this, expanding the platform on the basis of the user data can be of added value for both the user and the companies that have difficulty reaching the right candidate. To determine which conglomerate strategy Stuvia should adopt for entering the recruitment market, different thoughts from actors in the recruitment market were determined: the strategy is a combination of two of the three strategies: first, Stuvia must convert the available data into usable user profiles that correspond to the demand from the recruitment market. Next, segmentation targeting a person allows matching between this person and a vacancy, based on advertisements. When the behaviour of the user during the orientation process to a new job is properly mapped, matching becomes more and more accurate. The only caveat when implementing this strategy is that Stuvia should stick to the current DNA of the company. Students will see the new service as an addition to the current service offered by Stuvia. When the company's DNA is accurately preserved, the user base will be preserved and a competitive advantage will arise over other platforms, because the network effects of the platform increase ensuring that more and more users start using the platform. Marketing activities can also reinforce competitive advantages. In addition to reinvesting marketing activities and investing in the optimization of the service, the guideline shows there must be evaluated what works and what does not work in the new service, testing the service time and again for its operation. Ultimately, continuous evaluation leads to innovation, improving matching.

Content

Chapter 1. Introduction

1.1 Background

Online platforms have become omnipresent these days: sites like Amazon, eBay, Uber, and Airbnb are frequently used by a very large number of people around the world. The success of such platforms is connected to the easy way in which sellers can find buyers. A large number of markets in global economy are coordinated around two-sided market, which facilitate "value-creation exchanges" among potential buyers and sellers of a certain product/service (Cennamo & Santolo, 2010). The popularity and success of online platform marketplaces is growing at an unusual rate (Soska & Christin, 2015). In marketplaces like this, sellers commonly engage with buyers whom they have had little to no prior interaction with. Companies like Airbnb and Amazon have implemented new ways of grouping industry and firm boundaries by shifting organizational design from selling products to economic exchanges between two or more users, and the facilitation of such (e.g. buyers of products, and sellers as Amazon as example). "Such multi-sided platforms mediate user interactions and therefore differ from firms that control a linear series of activities as well as from manufacturing platforms that orchestrate a network of suppliers to build a family of related products" (Zhao, von Delft, & Morgan-Thomas, 2020, p.1)

Due to the high number of platforms online, platform competition is increasing. "The assumption that platform competition is a multi-sided market, where buyers and sellers have uncertainty and asymmetric information concerning the value of a new technology can be confirmed" (Hałaburda & Yehezkel, 2011). In the online environment more and more platforms are competing with each other by targeting the same users, with the same product or service (Cennamo, 2021). Network effects occur when the number of users increases, because users automatically associate the number of users of a platform with a higher value of this platform, the direct network effects (Evans, 2003a). When a platform expands its product portfolio and starts offering complementary products and services, because increased numbers of users, this is considered an indirect network effect (Rochet & Tirole, 2003). Direct and indirect network aspects ensure that platforms become more successful as the number of users and the available products/services increase (Katz & Shapiro, 1994).

The trust level of marketplaces with their users is caused by their reputation (Tadelis, 2016). The reputation of an online platform can be increased by in-house expertise and information exchange from high-quality sources. The success of a platform also depends on customer loyalty which increases when customers can provide feedback and customer service increases (Iriberri & Leroy, 2009). Network dynamics could lead to 'winner-takes-all' (WTA) outcome, which the platform with the largest number of users will be market leader in this market (Cennamo & Santolo, 2010). WTA multi-sided markets indicate that online platforms should expand to other sides of the market using strategies to prevent users from moving to another platform. If an online platform succeeds in doing this, benefits can be added to multiple sides of the market (Cennamo & Santolo, 2010). A two-sided platform can optimally utilize user data to generate revenues, when entering a new market (Reisinger, 2012).

1.2 Problem Definition

Stuvia is a digital marketplace for students who buy and sell study materials, such as: summaries, lecture notes, essays and cases. Stuvia acts as an intermediate between two people who can fulfil each other's needs by using Stuvia's digital platform. Stuvia has the characteristics of a two-sided market, and mediates between two sides in the student market, one side with access to a study-related document and another side that needs this document. In addition to bringing these actors into contact, Stuvia also facilitates the transaction. Stuvia's revenue model is based on a commission on every sale. Because of the large number of users and the amount of data on its users, Stuvia wants to expand its core-business. Stuvia is market leader in the student market with the strongest position in this market, in market share and the amount of sales compared to similar platforms. Stuvia has access to data from more than one million students in the Netherlands. Stuvia wants to use this data to enter a different market where platform competition is high and where it has a weaker position than the incumbents in this market.

There is still a lot to gain in how a company manifests itself on online platforms (Ribeiro & Golovanova, 2020). Innovative online platforms often create monopolies or lose their position due to new entrants in this market. It is not known how this relates to broadening from a two-sided market to a multi-sided market, and which actions are necessary (Ribeiro & Golovanova, 2020). Therefore, the purpose of this thesis is to see which strategy can best be used when entering a new market on the basis of user generated data and to identify which barriers are involved in broadening the current core-business.

Significant barriers must be overcome in the transition from a two-sided market to a multi-sided market. A major barrier are the challenges for regulatory legal practitioners, an unknown area that must be explored (Gürkaynak, Inanilir, Diniz, & Yaşar, 2017). Therefore, this research aims to provide companies a guideline on how to make the transition from a two-sided market to a multi-sided market.

1.3 Research Objective

The practical relevance is that this thesis provides companies a guideline in how to make the transition to a multi-sided market and how to efficiently use their user-generated data whereby, an additional revenue stream can be created. Also, entering a new market could potentially create collaborations with incumbents, whereby established companies and the newcoming company can create more value together. It is important what strategy to use when entering this market.

Filling the gap in knowledge contributes to the literature and should be generalizable for companies with access to large amounts of user data and want to leverage it in a new market. There needs to be a deeper understanding of the relationship between conglomerate diversification stratagies and how a company achieve this. This thesis is therefore of scientific and practical relevance.

1.4 Research Questions

A knowledge gap arises from the lack of information about the links between how a two-sided platform can make the transition to a multi-sided platform while leveraging user generated data, and what growth strategy can have an impact on the expansion into a new market. need to be investigated. It should be determined how they relate to each other and how companies with access to unused data, can use this data to create additional revenue. Therefore, the main research question is:

How can Stuvia leverage user-generated data to enter a different market using an appropriate growth strategy to create competitive advantages towards or collaborate with the incumbents in this market?

To be able to answer this main research question, five sub-questions have been defined:

1. What is the current state of the literature how two-sided platforms transition towards a multi-sided platform market?
2. What is the current state of the literature on entering a different market based on existing user generated data to create additional revenue streams?
3. What is the current state of the literature on how to create competitive advantages and which growth strategy to use while entering a new market?
4. Which conglomerate diversification strategy can Stuvia use to apply user generated data in a recruitment market?
5. What are the directions for Stuvia to collaborate with established names in the recruitment market by creating an additional revenue stream?

The five sub questions will be answered by a literature study and empirical research including interviews with stakeholders in the recruitment market.

1.5 Outline of the thesis

The structure of this research is as follows. After the introduction in Chapter 1, Chapter 2, a literature review, presents an overview of the main concepts related to platforms, zooming in on two-sided markets, and the transition to multi-sided online platforms. Chapter 2 takes a closer look at platform innovation and the concept of user data, elaborates on growth strategy to use when expanding to a new market, how platform competition arises and how competitive advantages can be achieved. After the theoretical chapter, Chapter 3 elaborates on the competitive landscape of Stuvia, zooming in on all stakeholders in the recruitment market. A stakeholder analysis is presented. The research methods are clarified in Chapter 4, explaining the research approach, grounded theory protocol and data selection. Thereafter, the results of the empirical research are discussed in Chapter 5. First, the diversification strategy as emerged from the interviews, is presented giving the directions on how Stuvia should convert the user generated data, generate additional revenue streams, and which phases are involved in this process. After these results have been clearly presented, a guideline is developed in Chapter 6 that should offer handles to companies that are dealing with the same problem as Stuvia. Subsequently, in Chapter

7, the limitations of the research are discussed in more detail and the academic and social relevance of this research is examined. After the discussion, Chapter 8 presents the conclusions of this study. This answers the research questions and goes deeper into practice, i.e. how companies should apply this study in practice. Lastly, the recommendations for future research are presented and the reflection of this study is given.

Chapter 2. Literature review

The aim of Chapter 2 is to review the literature and describes the important aspects in how a two-sided market can make the transition towards a multi-sided market. It is described how an additional revenue stream can arise by using the user generated data in a different market. This chapter also describes how competitive advantages can be created by using the right growth strategy.

What is the current state of the literature how two-sided platforms transition towards a multi-sided platform market?

2.1 Platforms

There are different kinds of platforms, i.e. tangible and non-tangible platforms, like pin machines, telephones, operating systems such as Windows and E-mail (Baldwin & Woodard, 2009). The distinction is between platforms that serve to regulate production within one company, but a platform can also serve as a standard for the entire two-sided market. Apple's iTunes is an example of the first, an intangible platform that works internally and only on Apple devices. Windows OS is an example of a platform which serves as a standard for an entire market; Windows is used on many brands of personal computers, not one brand in particular (Baldwin & Woodard, 2009).

Most platforms originate in a certain field or industry; combined platforms can be seen as an ecosystem. In such ecosystem, a platform is inserted between users enabling supply and demand coming together. The literature indicates that a platform makes it possible to connect products or services to third parties and to increase their use (Boudreau, 2011). The platform serves as an intermediate between these two parties. A triangular relationship is then created between these parties (Eckhardt, Ciuchta, & Carpenter, 2018).

Because platforms are used in various fields, many classifications of platforms exist. These classifications focus on product improvement, new technological approaches and economics. Gawer (2009) distinguishes four types of platforms, namely: Internal platform, Supply chain platform, Industry platform and a Two-sided platform (Gawer, 2009). These four types are shown in Table 1.

Type	**Ecosystem**	**Parties**	**Example**
Internal platform	Within a firm	One party involved	Google drive
Supply chain platform	Within a supply chain	Several parties involved in a supply chain	Lean inventory tools
Industry platform	Within an industry	Several parties that are coexisting in the same industry. These parties do not necessarily trade with each other.	Windows / macOS Android / iOS Norton / McAfee
Two-sided platform	Within an industry	Several parties who trade with each other and at the same time use an intermediary platform.	eBay Amazon Apple App Store

Table 1. Four types of platforms (Gawer, 2009)

A platform that links two parties and enables selling and buying of products or services, can be seen as a marketplace with two parties: the service/product provider and its customer (Figure 1).

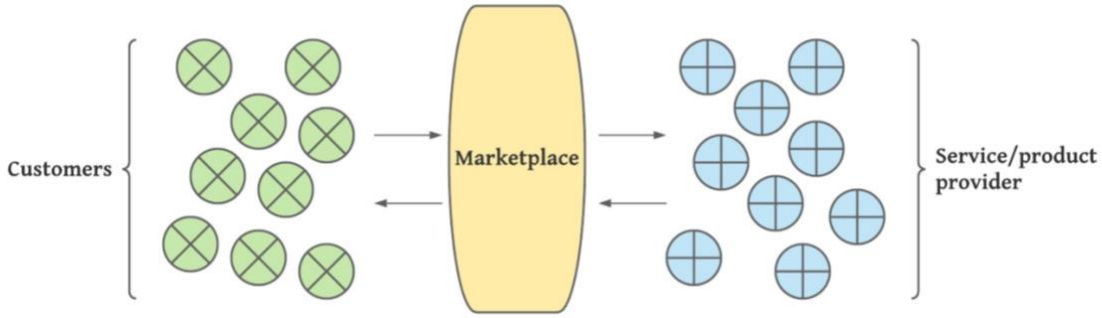

Figure 1. Visualized marketplace from the literature, made in Lucidchart

Looking at Figure 1 it can be concluded that a marketplace has two sides that are involved in the functioning of the platform. The product/service provider is present on one side of the marketplace and the customers who need the provider's offer can be seen on the other side. If these characteristics are compared with the types of platforms that Gawer (2009) mentions in his study, it can be concluded that a marketplace has the same characteristics as an eBay or Amazon. Both providers of the platform ensure that two sides can be brought into contact with each other. Looking at the characteristics of the four types of platforms that Gawer (2009) describes in Table 1, it can be concluded that the two-sided platforms need to be examined in more detail. Namely leveraging user generated data from a platform is recovered in a two-sided market. The most important thing for users in the two-sided market is that the utility of the users is increased. After a user decides to use a platform in the two-sided market, the most important thing for these platforms is to keep the users. This concept is discussed in more detail in section 2.2.

2.2 Two-sided platforms

One of the first academics to write on the subject of two-sided markets was Evans (2003). He explained in his article that two-sided markets coordinate the demands between groups or customers to fulfil each other's needs (Evans, 2003). Later on, Rysman (2009) gave a more comprehensive definition to this concept. He concluded that two-sided markets act more like an intermediate that ensures that two actors, consumers on the one hand and service/product providers on the other, can make contact through a platform (Rysman, 2009). In the same year, Gawer (2009) gave a similar definition to this concept. However, Gawer stated in her literature that the type of platform, two-sided markets, cannot be seen as a platform that values innovation. She argues that such a platform mainly serves as a platform that makes it possible to serve as an intermediate between two groups of stakeholders that makes payment possible.

Industry platforms, on the other hand, can be seen as innovative platforms that can, for example, ensure that processes are improved or increase the sustainability of products through reuse. While considering a two-sided market, Gawer (2009) argues that two-sided platforms are often used to generate more

revenue as an extension of a current core-business. The example she cites in her study is Apple's AppStore. This application is an addition to Apple's product portfolio that allows providers of various applications to be brought into contact with potential buyers (Gawer, 2009). Before the digital era there were online two-sided markets, there were offline two-sided markets. Examples of this are: credit card platforms that enable debit card payments and the Yellow Pages, where advertisers and consumers can come into contact with each other via, for example, via an advertisement in a newspaper.

In 2014, Gawer added that platforms are exceptional forms of markets that enable to connect potential actors who would otherwise never have come into contact with each other (Gawer, 2014). According to Armstrong (2006), two-sided markets have a property that there is a balance between the merits of different platforms and the value of utility that is created for groups or individuals in an ecosystem that use the products or services of this platform (Armstrong, 2006). The price competition between different providers who offer the same product or service is important in this and that determining an optimal price for the use of a platform/intermediate must accurately be determined (Armstrong, 2006).

Network effects influence online two-sided market (see section 2.3.1). In short, network effects explain that, when a user decides to use a platform, the platform becomes more valuable to other users (Gawer, 2014). Network effects occur when the value perceived by users because of a good or service increases with the number of added users of the same and/or complementary goods. In markets with network effects, each user influences decision-making of other users. The different sides in a two-sided market are mutually dependent because of the network effects (Gürkaynak et al., 2017). At present, most two-sided platforms are online platforms.

2.3 Online platforms

There are many views of online platform. This paragraph analyses the main ways platforms are viewed. According to Tadelis (2016) “Marketplaces are booming and providing businesses and individuals with previously unavailable opportunities to profit and succeed. These online marketplaces help match demand with supply in efficient and effective ways” (Tadelis, 2016, p.322). Tadelis (2016) claims that the success of an online platform depends partly on the platform's reputation and feedback systems, the most important aspect of a good working feedback system is to contribute new buyers with information about the past behaviour of a seller. This will promote integrity in an online marketplace and increases the efficiency of an online platform because the irritation caused by asymmetric information is less (Tadelis, 2016).

Farrel et al. (2018) see an online platform as: “A platform that changes economic exchange between two persons. Potential sellers of products or services have many options to monetize income, as online platforms linking suppliers straight to potential buyers or companies interested in their goods” (Paraphrased). The platforms are supported by providers who match suppliers of goods and services to buyers, and facilitate payment (Farrell, Greig, & Hamoudi, 2018).

The views of platforms are equivalent in terms of the practical operation. The difference is that Tadelis adds external factors for the success of the platform, whilst Farrel et al. only describe the different characteristics of a platform.

Lerner (2014), on the other hand, looks very differently at online platforms. Lerner sees online platforms as a collection point for data. “Online providers collect user data in order to improve the services offered to users, and to monetize those services effectively through targeted advertising, which leads to valuable services being offered to users at subsidized prices, often for free. As a result, the collection of user data by online providers is an important part of the competitive process and generates sizable consumer benefits” (Lerner, 2014, p.4).

Gong et al. (2020) view online platforms as: “upcoming marketplaces changing the scene of business ecosystems by permitting purchasers and merchants to connect and exchange in creative ways”. With the rise of digital marketplaces, online platforms have changed the way of thinking of several fields, like marketing, financing, and computer science (Gong, Liu, Liu, & Ren, 2020).

Lerner (2014) and Gong et al. (2020) see online platforms not only as a marketplace, but also as an online platform that can be used for other purposes other than as a mediator between two parties.

Täusher et al. (2018) think that an online marketplace must meet four requirements, to distinguish an online marketplace from another online exchange. First, an online platform must ensure that buyers and sellers can find each other independently via the digital platform. A seller can also be a buyer. Secondly, the two parties can enter into negotiations about the product or service. Thirdly, the platform must ensure that the payment can take place under the right circumstances regarding regulations and conditions. Finally, an online platform should not produce or trade "its own" products, it only serves as an intermediate between two parties (Täuscher & Laudien, 2018). Although these online platforms do not have physical limitations, they can easily offer a product or service to a potential buyer or user. Another advantage is that these online platforms can facilitate many interactions between users and providers (Belleflamme & Peitz, 2016).

Because of the many different views and characteristics of an online platform, there are several perspectives to compare the similarities and differences. Tadelis (2016) claims that the success of an online platform largely depends on a company's reputation, which can be enhanced by a feedback systems. If a company succeeds in increasing its reputation, the number of sales on the platform would increase (Tadelis, 2016). However, Lerner (2014) has a very different view. His research shows that the success of an online platform is determined by external factors such as the collection of user data: “Virtually all online providers track user activity on their sites and collect demographic, behavioural, and other data from users. The collection of user data is conducted by firms of all sizes, by firms offering a wide array of services to users, and by both new entrants and established players. User data also enhances the ability of search providers to suggest “related searches” or recommend particular products

in which the user is likely to be interested. Online providers collect this data in order to improve the quality of their services, and to monetize those services effectively through targeted advertising." In contrast, Gong et al. (2020) see online platforms are driving change in other markets and in marketing. A lot of knowledge about opportunities in the field of user data and marketing, still seems to be gained (Gong et al., 2020).

2.3.1 Network effects

The success of an online platform depends on the number of people or participants who use a product or service, improving the value of that good or service, the network effects. Cusumano (2010) refers to network effects as the relationship between two different components, including the number of buyers of a product or service and the added value of these concepts. Cusumano describes how Apple and Microsoft saw the number of users increase, as network effects caused the use of various applications available on their operating systems. Cusumano (2010 also states that network effects contribute to platform competition in online markets (Cusumano, 2010). Complementary to this literature, Eisenmann et al. (2011) allows network effects to be present on all online platforms (Eisenmann, Parker, & van Alstyne, 2011). Gawer (2009) follows the same line as Eisenmann et. al. (2011). He adds that network effects ensure that certain platforms get a better position in the market through network effects. This is because it is more difficult for complementors to dismantle this platform. It also becomes even more difficult to do this if the number of products or services is increased by the platform with the market leader position (Gawer, 2009).

Cusumano (2010) dissects platform ecosystems in his work. He explains that these ecosystems have been converted from a platform, from complementary platforms and network effects, to platform ecosystems. Cusumano (2010) finds that network effects consist of direct network effects and indirect network effects. The difference between the two is given by Clements (2004), namely: direct network effects appear when a product or service gains more value for an individual when the number of users goes up, whereas indirect effects appear when the value of the product or service goes up when new users start to use the product or service. Already in 1985, Farrel et al. indicated that two aspects that influence direct network effects are compatibility and standardization (Farrell & Saloner, 1985).

A good example of a direct network effect is the telephone. When there is only one phone, its function is very small. However, when the number of telephones and their users increases, the value of each individual increases. Clements (2004) states that indirect network effects indirectly influence a product or service, e.g. a DVD player. A DVD player becomes more valuable as the number of available DVDs increases. Because the number of DVDs increases, the DVD player is used more frequently, and the number of users also increases (Clements, 2004).

The amount of complementors and actors in an ecosystem depends on the number of users and how popular the use of similar platforms in an ecosystem is. The platform is used by different groups of users

in different ecosystems. An example of such a group of users are sellers and buyers who are in contact through an intermediary marketplace. The number of buyers increases as the number of sellers increases and vice versa (Belleflamme & Peitz, 2016). The opposite can also happen: the network effects then have a negative effect on a platform, e.g. when an online platform uses advertisements. Advertisers can use advertising space on a website or platform, but the price paid for this is a decrease in the number of users on such a platform. When the number of users decreases, there are negative network effects on these users, while these users actually exert a positive influence on advertisers. There are different external effects within groups. Belleflamme and Pleitz (2016) provide an example that when a large proportion of users on a platform are the same, negative external effects occur. Increased competition also has negative consequences for the external effects within a group: it exerts a negative influence on the sellers on a platform (Belleflamme & Peitz, 2016).

2.4 Multi-sided online platforms

Looking at the success of an online platform that has the characteristics of a two-sided market, where network effects are positive, a two-sided platform can make an alteration to a multi-sided platform. Figure 2 (see next page) shows a platform that has the characteristics of a two-sided market (above). The product/service provider is present on one side of the two-sided market and the customers who need the provider's offer can be seen on the other side. An additional actor is added to this two-sided market (below): the added value in the data that is obtained in advance through the interaction between the two current sides, the providers and the consumers. An interaction can arise between the additional actor and the consumer and at the same time between the additional actor and the provider.

This interaction creates a new market in which a platform becomes intermediate between not two actors, but several actors of different types. As a result, the platform can not only monetize income from the conventional consumer and provider, but also indirectly generate income from additional actor affiliation between provider and consumer. If the platform is able to give good value to the data obtained from the interaction between consumer and provider, many supplementary actors are willing to pay for the platform. Examples of these additional actors are advertisers or parties that want to reach a specific person based on the obtained data (Yi, Jiang, Li, & Lu, 2019). Alaimo et al. (2020) indicate that platforms in a two-sided market, with the correct use of underlying user data, can focus on complementarities and then expand to a multi-sided market. The platform creates value for multiple actors, which can then lead to interaction between multiple organizations and industries. This means that the transition has been made from platform to a service ecosystem, which then increases relationships between different companies and eventually lead to platform innovation (Alaimo, Kallinikos, & Valderrama, 2020).

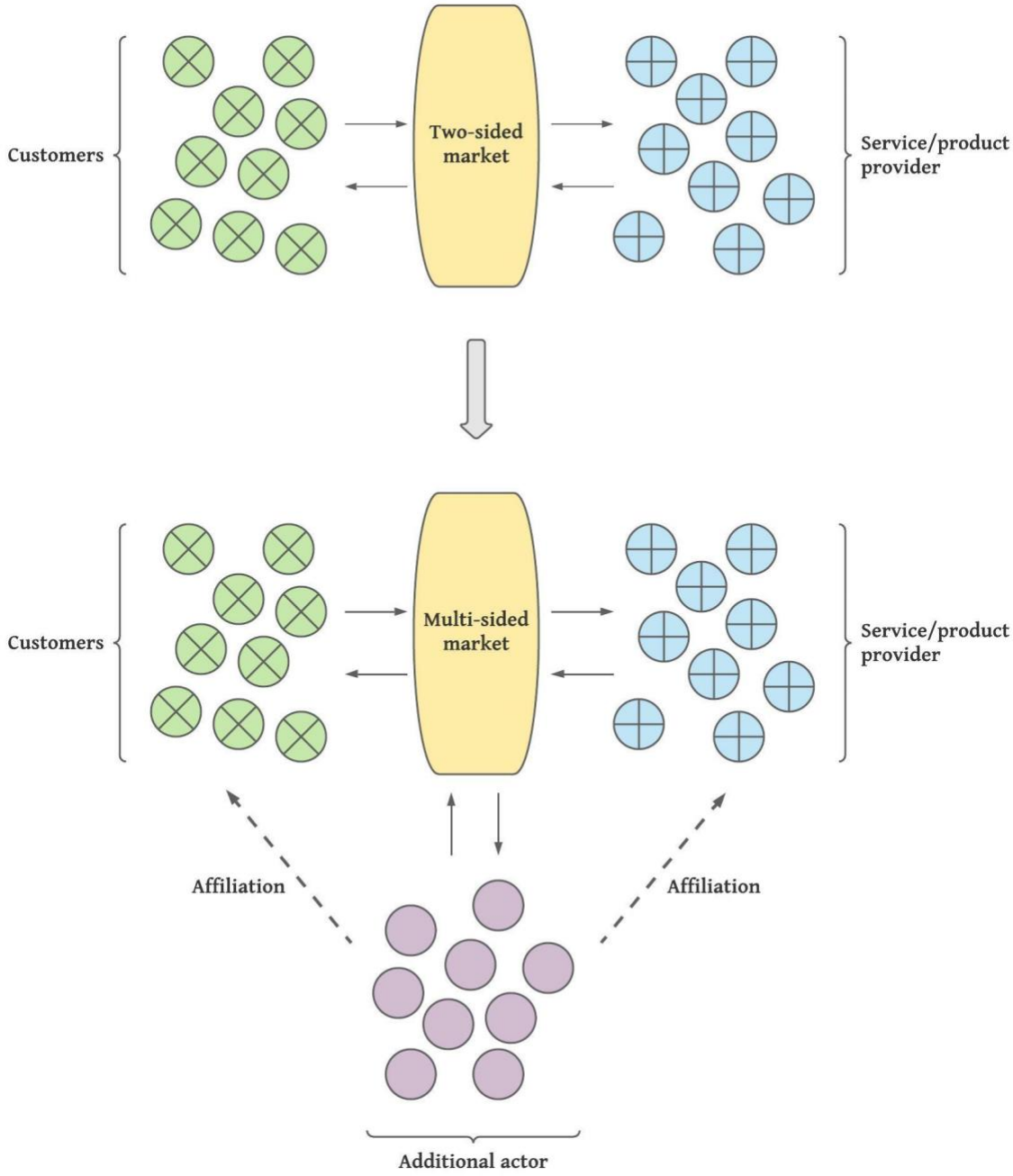

Figure 2. Change from two-sided market to multi-sided market from the literature, made in Lucidchart

What is the current state of the literature on entering a different market based on existing user generated data to create additional revenue streams?

2.5 Platform innovation

Platforms are increasingly used in the digital world. More and more companies operate globally and break through internationally by increasing their network effects. Because there is more and more traffic on these online platforms, opportunities arise for creating new products or tapping new users that were not previously targeted. All these opportunities can be exploited if the platform innovates at a level that creates more value for both the user and the platform itself (Zuboff, 2015). De Reuver et al. (2018) indicate that online platforms are an interesting combination between economic markets where supply and demand meet, institutions where legislation and regulations are determined, and technologies (De Reuver, Sørensen, & Basole, 2018). Platform innovation is a complicated process involving with different types of stakeholders in the same ecosystem. In order to positively stimulate innovation, all actors in the market in which the platform is located must be taken into account: a process without a manual and different every time. Libert et al. (2016) indicate that, when a technology such as an online platform grows fast, innovations quickly come into play (Libert, Beck, & Wind, 2016). Trabucchi and Buganza (2020) indicate that online platforms in the two-sided market are looking for innovation to increase the value of the user; one solution is to increase the value of the user first ensuring that several transactions are possible simultaneously. If a platform succeeds in making this happen, the intention is to leverage this data appropriately to extract new additional revenue (Trabucchi & Buganza, 2020).

2.6 User data

A trending concern in the debates about competition behaviour and its application in online markets, is the collection of user data by online services or suppliers such as Facebook and Google. The concern lies in whether the collection of massive volume of data subtracted from users, cause markets to lead online platforms and, as a result, profit from more aggressive and early intervention of trust and reliance (Lerner, 2014). The user data of Alaimo and Kallinikos (2020) suggest that the data obtained online is a resource that could be used in multiple areas. These authors indicate that user data ensures that online companies are forced to participate in the digital economy: “Many contemporary services traded across platforms and their ecosystems are data made or data underwritten. Such services are essentially data relations.” (Alaimo et al., 2020, p.26). Therefore, user data is a very valuable input for the arrangement of online services.

Online providers use the collected data of their users to develop and better the services offered to their users. These services result in more profit, e.g. through segmented advertising, at lower prices or even for free (Davenport & Dyché, 2013). As a result, the collection of user data by online providers is an important part of the vying process and generates humongous consumer benefits. Because of the competitive advantages, all online platforms are collecting data from their users, by capturing the

activity of their users on their own sites and elsewhere, in order to monetize and improve their services. It is very typical for online firms to collect and use customer data, but conventional offline businesses make use of this as well. The selection of user data can be regulated by both settled businesses and new entrants, which can be big or small firms offering a varied set of services. The search for new potential customers needs to be done as efficient as possible for the advertisers.

One of the ways to find new potential customers is through segmented advertising to make users aware of a product or brand, i.e. advertising in places where the consumers that are most likely to be interested in a certain service or product have the best chance of seeing it, and are most likely to respond by purchasing. Placing advertisements can be segmented based on the residence of the user, consumer activity, or behavioural characteristics and preferences. This results in online platforms being very valuable data resources for demand-oriented and forecasting strategies: Li (2010) states: the biggest strategic convenience for these platforms is the data collected and their algorithms. Next to selling these observations, owners of platforms can use data to examine network effects and make their platform more appealing. In both cases, data is an important pillar of an online platform business. Services based on recommendation systems use this data in order to investigate and determine insights for customer purchasing preferences, and demand of customers in general. (Li, Liu, & Bandyopadhyay, 2010).

The challenges in the field of collecting user data for the future are important to consider. When making decisions about horizontally differentiated products, it often compresses to the customer personal preference of taste, and platform companies might consumer welfare and influence on the market. Regulatory antitrust authorities encourage competition by limiting the market power of any particular firm. Those authorities are also tangled with challenging concepts about if, and how, platforms should be allowed to enable data collection (Goettler & Gordon, 2014).

Another big challenge is that platforms may or may not be allowed to share user data from different services and activities. Further research has to be done about how companies can collect data in the most responsible way by guarantying privacy of its users, and at the same time develop business opportunities to generate turnover and profit. Sriram et. al. (2015) claim that digital technologies, when it comes to data, will play a major role in the opportunities that lie in the near future for online platforms (Sriram et al., 2015). Trabucchi et. al. (2017) add that merging data obtained in two-sided markets and penetrating a new market, will play an important role in developing new business models (Trabucchi, Buganza, & Pellizzoni, 2017).

2.6.1 User data privacy

Though the use of user data for advertising is seen as useful in the online environment, in the practice of advertising and real-time bidding, there are serious privacy risks for the users of an online platform or website (Estrada-Jiménez, Parra-Arnau, Rodríguez-Hoyos, & Forné, 2017). Common privacy concerns arise from the misuse of user data used to advertise. Data obtained by monitoring purchasing

behaviour or preferences, allows advertisements to be shown that contain the same preferences and same features to several users. Obtained profiles are traded unchecked, which creates problems in violating online privacy (Narayanan & Shmatikov, 2006).

In addition, Olejnik et al. (2013) describe an algorithm that compares different user profiles and can distinguish which profile contains more economic value than others. The so-called "auctioning price" of a profile is based on this mechanism. The mechanism behind this algorithm is called the "ad distribution mechanism" (ADM) (Olejnik et al., 2013). ADM creates discrimination between different users and sorts different user profiles.

The interaction between companies that trade the collected data to companies that directly benefit from it is also of concern. This interaction has a huge effect on user data privacy and increases abuse.

2.6.2 Real-time bidding and data trading

Real-time bidding of advertising (RBA) is a mechanism where advertisers can determine value based on an impression on a user who sees an ad. RBA can be used by various advertisers to find out whether their way of advertising can be profitable, but can also be used to see whether user preferences match the placed advertisements. Using this approach, strategies can emerge as to how other companies operate in the advertising market and how this should be anticipated to find out how a company pays the right price compared to another advertiser (Jin et al., 2018).

The moment the number of advertisers increases on a platform, the visibility of a single ad decreases. This is one of the problems RTB is trying to fix. One of the biggest problems associated with advertising is Bid Optimization (BO). The spot of an advertisement must be linked to a certain price that corresponds to the potential value that can be recovered from this advertisement. BO makes this possible. One of the challenges that arises in BO is the correct determination of the Key Performance Indicator (KPI). Companies can have several requirements in their advertising, the so called KPI. Examples of KPI are the high amount of conversion, and that a certain cost-per-click (CPC) is agreed before advertising is started (Yakovleva, Popov, & Filchenkov, 2019).

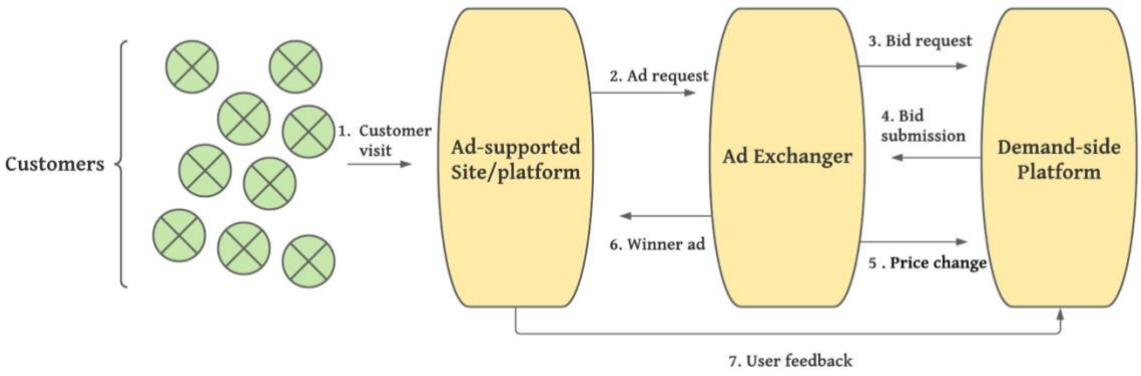

Figure 3. RTB ecosystem, retrieved from (Yang et al., 2019), made in Lucidchart

A visualization of the RTB ecosystem was introduced by Yang et al. (2019). Figure 3 explains the RTB ecosystem and the various techniques related to this ecosystem. Potential customers visit the ad-supported website/platform (1), then an advertisement request is sent to the ad exchanger (2). The ad exchanger requests an "auction" where bids are made from the Demand-side Platform (DSP) (3). Based on the strategy with which an advertiser wants to place an advertisement, the DSP calculates the bid of the advertiser's request. Because advertisers often find it important that the conversion is high, the click-through rate (CTR) and the conversion rate (CVR) are included in the strategy as variables that determine the price. The conversion indicates the percentage of customers who proceed to a transaction after seeing the advertisement. The DSP contains various advertising providers that want to advertise to potential visitors of the website/platform. When an advertiser in the DSP wins a bid, the price of the advertisement is determined. An advertiser's bid is then sent back to the ad exchanger together with the ad (4). The ad exchanger judges which advertiser wins the "auction" and charges the winning advertiser (5). Next, the content of the advertisement is sent back to the site/platform (6). Finally, after the ad campaign has run, feedback is sent back from the site/platform to the advertiser (7). His feedback contains actual numbers that emerged during an ad's campaign. The CTR and CVR are then returned from the site/platform to the advertiser. From these results, the advertiser is able to convert this feedback into predictions that directly influence future strategies. These strategies can then influence future bids. It can therefore be determined afterwards to bid lower the next time in order to get the advertising space at a lower rate. All feedback is taken into account in the future pricing of an advertising space. Because this cycle takes place through and through, the advertiser can adjust its strategy for the future (Yang et al., 2019).

2.6.3 User profiles and the Ad Distribution Mechanism

The conclusion is that in the RTB ecosystem the price of an advertisement placed is based on the potential customer on a website or platform. The price is determined based on the user profiles of each visitor. Olejnik et al. (2013) claim that user profiles are made up of so-called “context information”. This context information consists of the time that a user uses a website or platform and the physical location of this user (Olejnik et al., 2013).

Another outcome is that for users whose use of the website and preferences are already known, the prices for a product or service for these user profiles are higher than for users who use a platform or website for the first time. Olejnik et al. (2013) also claim that a significant proportion of users do not even realize that their user profiles are used and traded in the RTB ecosystem. Mehta et al. (2020) add that real-time bidders from the RTB ecosystem are looking for ad impressions from the ad exchanges (See Figure 3) and sell numbers of clicks to companies that want to advertise. When a bidder manages to win an auction, clicks are bought indirectly, which should lead to a higher conversion. The CTR on an advertisement largely depends on the user profiles (Mehta, Dawande, Janakiraman, & Mookerjee, 2020).

Once these user profiles are obtained and it is known how the right advertisements should be shown to the right user, the technology -also known as "Cookie Matching" (CM)- that makes this possible must be looked at. CM makes it possible for a user profile of an individual to be linked to the activities of a company. This is an extremely important aspect of RTB, because without the correct matching of potential users, conversion will not increase. User profiles can generate predictions that can then be traded among potential advertisers (Bashir & Wilson, 2018). On the one hand, clarification of how a price is established for a user profile must be better mapped out for advertisers. On the other hand, privacy issues need to be fixed for the users. Today there is no clear picture for users of what kind of information is collected about their online activities. This gives rise to different concerns about segmented advertising, their wishes in online activities and the use of privacy tools (Turow & Hennessy, 2016).

What is the current state of the literature on how to create competitive advantages and which growth strategy to use while entering a new market?

2.7 The concept of platform competition

In the market, where more and more platforms are emerging, platform competition arises. First it is described how platform competition arises. Network effects influence platform competition and the allure of a platform. Since marketplaces are online platforms, where many users provide interactions and transactions, more users would attract more other users. “In the case of positive network effects, these platforms tend to grow fast and becoming market leader in their respective markets that may lead to monopolistic market structures. With negative network effects, the adverse occurs and obtaining a critical mass of users as well as interactions will be less and less likely.” (Alt & Zimmermann, 2019, p.145).

Another reason why platform competition can arise is the ease for users to switch to another platform offering the same service. The attempt to increase cross-network benefits for consumers can contribute to enhancing this. Cross-network benefits are the inconsequential benefits which users acquire from another seller on the platform. In order to outcompete platforms from the competing platforms, they should spend all their resources to manage this. This move will provide them with the ability to higher the prices from sellers and therefore increase their profits (Adner, Puranam, & Zhu, 2019).

Ruutu et al. (2017) conclude that platform architecture ensures that cross-platforms reduce the opportunity of WTA situations to arise (Ruutu, Casey, & Kotovirta, 2017), whilst Inoue (2019) argues that the ease of cross-platforms enhances the chances of a WTA position: “Regarding the indicator for the influence of preceding platforms, a high value indicates that the platform has a large pool of complementors that can move to the new platform. Accordingly, the complementors will switch to the new platform when a new generation of platform ecosystems starts to emerge” (Inoue, 2019, p.19). A recent study by Cennamo (2021) adds to this, how different platforms compete with each other and how the competitive dynamics work. When examining how these incumbents can be dismantled by new entrants, who do not yet have a customer base at all, further research needs to be done on how competitive advantages with respect to incumbents could be reached and which strategic mechanisms should be used (Cennamo, 2021).

Huotari (2017) revealed in his literature that various events can cause disruption due to overcrowding. This phenomenon occurs when the number of providers of products or services on a platform is so large that it becomes less profitable for sellers (Huotari, 2017). The reason this occurs is because sellers start to find other platforms more attractive than the platform they use. This can be prevented by ensuring that supply and demand are kept as equal as possible, on both the consumer and the sellers’ side of the platform. From this it can be determined that both the number of users and the number of sellers must grow simultaneously. The moment one grows faster than the other, a way must be devised to counteract

this. One solution that Huotari describes is to increase the prices, for the side that grows faster. This may be a reason that actors consider not using this platform and overcrowding could be counteracted. Nevertheless, this is a solution that goes against conventional growth. With this, a company actually gives complementors the opportunity to let actors switch to their platform more easily, on the basis of price. Another solution to the overcrowding problem is that the platform places higher quality control on the seller side of the platform. This ensures that quality is guaranteed and that potential buyers will link to a platform that values this aspect (Huotari, 2017).

2.8 The concept of competitive advantages

To determine how competitive advantages can be related to entering a new market, it is first necessary describe how competitive advantages are created. First it is analysed how an online platform that is two-sided will broaden its market to a multi-sided market This is explained in section 2.4.

Amazon is a good example of how to manage the conversion of their platform from a two-sided market to a multi-sided market. Amazon first acted as an intermediary between sellers and buyers of products and services. Revenue was obtained as Amazon received a commission on every sale. In addition, Amazon also earns from advertisers who advertise on the site and sell their own products (Dolata, 2017). Since Amazon has the characteristics of a multi-sided market; Amazon finds itself in a WTA market. In such a s market, a company manages to remain market leader and ensures that it is difficult for smaller parties to intervene. This is partly due to the presence of positive network effects (Kuchinke & Vidal, 2016). (see also paragraph 2.3.1). More and more suppliers of products are coming on board, which means that Amazon's product portfolio continues to grow. As a result, more consumers indirectly use the platform because the number of complements becomes smaller. It is concluded that the installed base of sellers and consumers will by now become part of the resources of such a company, resources which ultimately lead to competitive advantages over other platforms (Zeng, Mahdi Tavalaei, & Khan, 2021).

Pricing strategy can cause potential buyers to move away from the incumbent platforms and thus increase competitive advantages. The pricing strategy exerts force on the indirect network effects (Hinterhuber & Liozu, 2014). A new group of buyers can attracted by passing on the costs on the buyer's side to the seller’s side of the market. Amazon's used this strategy and attracted new buyers by making buying a product or service as cheap as possible. The commission costs earned by Amazon are passed on to the seller, not to the buyer. As a result, the buyer pays less and therefore it indirectly becomes more attractive to switch to the Amazon platform. Thus, the strategy to be adopted by a newcomer is to make the price as attractive as possible for actors who are already using another platform. This makes the step to switch to a different platform smaller. An indirect consequence on this is that incumbents lower the prices, e.g. of commissions. They do this to maintain the installed base (Kasana & Chaudhary, 2014).

When a new entrant chooses to compete on the basis of price, prices can still be a barrier for consumers and sellers to switch to a new platform, because the supply and demand of a service or product on this platform are still low, preventing suppliers or buyers from choosing to switch purely because of price (Caillaud & Jullien, 2003). Therefore, an entrant, has to ensure that there is enough traffic on the platform, in addition to a good price, to be able to meet supply and demand.

2.9 Identifying the growth strategy

To gain better insight in a market, where a company should focus on, it must first be determined which growth strategy should be used. When a company wants to use the already collected user data in a new market, the company should focus on a new service in its present market. The Ansoff Matrix can be used to link a strategy how an existing company can best enter a new market with a new service, and is a frequently used in decision making about strategies when a company wants to expand to a different market (Hussain, Khattak, Rizwan, & Latif, 2013). Ansoff (1957) concluded that a company must frequently grow and change in order to innovate and create competitive advantage (Meldrum & McDonald, 1995).

The Ansoff's matrix is made up out of four growth strategies for: market penetration, market development, product development and diversification. Figure 4 shows the Ansoff's matrix. A distinction can be made between the following variants: selling existent products on present markets, extend the existent products on emerging markets, develop new products on existing markets, develop new products on emerging markets (Loredana, 2017).

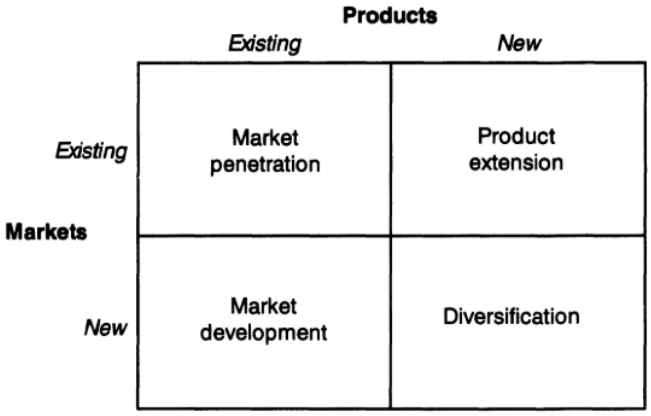

Figure 4. The Ansoff's matrix (Meldrum & McDonald, 1995)

When a Stuvia wants to expand from the student market to another market on the basis of user generated data, it changes the way it works enormously. Stuvia is involved in the contemporary work of facilitating an online platform, then keeping this platform running ensuring that the site works optimally is important. Because a new service has to be offered, it can be concluded that Stuvia is expanding into a new market and not the existing market. The way Stuvia wants to achieve this is not through a existing product or service, but through a new service. In addition to offering a platform where students can find each other for the purchase and sale of study material, Stuvia wants to offer an extra service that

increases the value of the platform. The Ansoff's matrix in Figure 4, with the two given distributions, the growth strategy belongs to the market development in which the company finds itself. If Stuvia wants to penetrate a new market by means of a new service, it may reduce the number of growth strategies the company can follow to use the opportunities while entering the new market. The preferred growth strategy associated with the two above distributions is the diversification strategy.

Diversification strategies help a company achieve better performance together with risk reduction, and lead to the expansion of the company's business by expanding to new markets and adding new services, creating more value for new customers. When a company succeeds in leveraging user-generated data, new opportunities arise that change the image of a company that previously had the characteristics of a "traditional factor- and investment-driven entity" to one that is driven by innovation (Cincera & Ravet, 2014). Dhir and Dhir (2015) describe four different types of diversification: concentric diversification, horizontal diversification, vertical diversification and diversification by conglomerates. A company uses the concentric diversification strategy when, in addition to using a product or service in one market, it uses exactly the same product or service in another market. One of the advantages of this is that production can be scaled up leading to the reduction of costs that directly affect a company's profits (Kim, Hong, Kwon, & Lee, 2017). A good example are sugar producers in Kenya (Wilfred et al., 2014). These producers expanded to a different market with the same product, this leads to an increase in production, with more revenues (Wilfred, et al., 2014).

Horizontal diversification is described by Wu and Ma (2018) with Apple's MacBook Air as the example. The MacBook Air descends from a "normal" laptop, but the MacBook Air is lighter, smaller and has a sleeker design than the conventional laptop. Horizontal diversification strategy is used when a company does not produce one type of product, but also a product that is in line with the same product. This strategy gives companies the opportunity to expand their product portfolio. In the example of Apple, the horizontal diversification strategy is used to offer the Apple users an alternative to the conventional PC. The MacBook Air also addresses a new target group that may care more about appearance and portability. The success of a a company that uses this strategy depends on the loyalty of the existing customer base. The danger with this strategy is that a company's customer base can move away from a brand if the customer base does not support the company's image when the product portfolio changes. In the case of Apple, users may not be happy with the "hip" look of the new products in the product portfolio, but care more about functionality and technological features of a product. This would allow users to switch to another brand that does meet these characteristics (Wu & Ma, 2018).

Block et al. (2015) mention a different diversification strategy, i.e. vertical diversification. With this strategy, a company focuses on suppliers and customers. The transaction cost of a product is taken into account in this strategy. These costs are lower when the product is produced internally rather than by an external manufacturer. For example, when a company that produces clothes opens its own shop to sell its clothes, it leads to more value for the company. There are no costs to be made by producing the

clothing through other channels, as these are produced by the company itself (Block, Henkel, Schweisfurth, & Stiegler, 2016).

The fourth type of diversification strategy -by now obsolete- is conglomerate diversification. Pinheiro et al. (2021) indicate that this strategy is used when companies, in addition to the current core business, also offer products or services that bear no similarities to the current product portfolio. When a company uses this strategy, a whole new user base is addressed. Therefore, this diversification strategy is seen as the riskiest (Pinheiro, Hartmann, Boschma, & Hidalgo, 2021). Amazon uses this strategy: originally Amazon was an online platform, but over the years it also focused on the grocery industry. It started focusing on this in addition to the current core business because Amazon took over Wholefoods (Phillips-Connolly & Connolly, 2017).

To find out which kind of diversification applies to a company like Stuvia, the underlying triggers that can exert force on the decision-making process must be examined. Dhir and Dhir (2015) have identified various triggers that lead to a kind of diversification strategy. These triggers and decision influencers are shown in Figure 5.

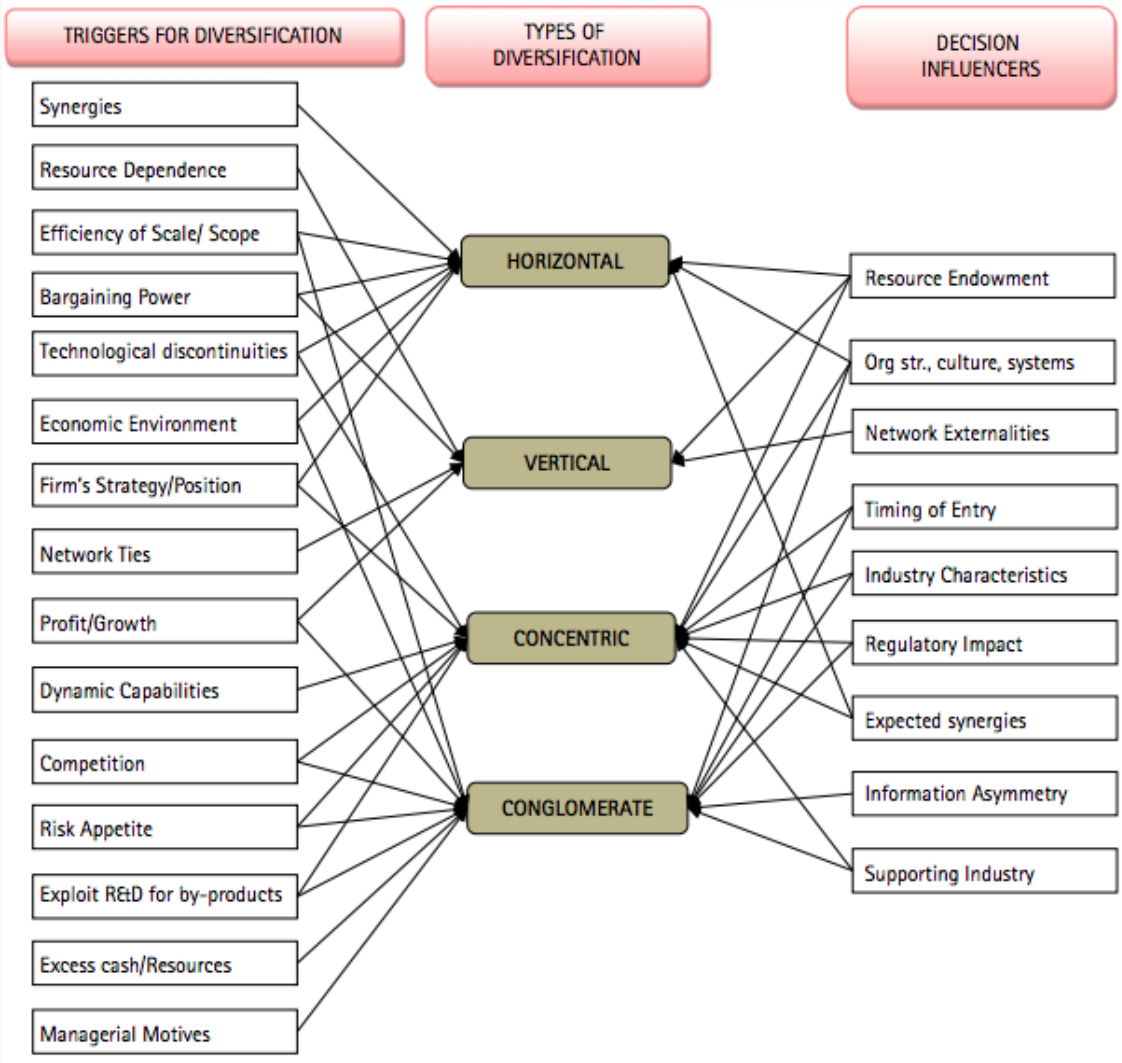

Figure 5. Types of diversification: triggers and decision influencers **(Dhir & Dhir, 2015)**

Since 2010, Stuvia has been building a platform that ensures that users can buy and sell study-related content as easily as possible. Over the years, due to the enormous activity on the website, an enormous amount of information has been obtained about several characteristics of the users of the platform. This information can be seen as an additional resource with which Stuvia can stay ahead of the competition in today's market. The way Stuvia converts this information to offer an extra service in addition to the current activities of the company, can lead to new opportunities for the company**.** To find out which of the four diversification strategies can be used best by Stuvia, it is necessary to look at the triggers of Dhir and Dhir (2015). Those triggers could lead to a certain diversification strategy.

The triggers defined by Dhir and Dhir (2015) (Figure 5) can determine which diversification strategy can best be used. Because a platform that has access to user generated data that is not efficiently used for commercial purposes, this data can be regarded as redundant resources that could be leveraged in the present economic environment. In a market where platform competition is high, it is necessary to look for ways to create more value for the user, so that users are less likely to use other platforms. Money and time must therefore be invested in R&D for by-services in the service portfolio, to avoid platform competition. Another reason for leveraging the user generated data is that a different flow of revenue can be created with more profit. Because the user-generated data can be seen as an excess resource that is not used optimally, this is a great way to create more value for the user in the form of a new service, together with a solution how this data can be applied in a different market, while it does not get in the way of the current core business.

When the decision influencers (Figure 5) want to apply conglomerate diversification, the following aspects must be taken into account in the decision-making process: the timing of entry, the characteristics of the entered industry, the impact of the regulation and the lack of available information and the supporting industry. Research should pay attention to external triggers such as: demographic changes, resources dependence, regulation and network ties (Dhir & Dhir, 2015). Research should also investigate internal triggers as: excess resources, the company's strategy and position, and synergies.

2.10 Conclusions

Various aspects have been examined that are essential to successfully make the transition from a two-sided market to a multi-sided market. A two-sided platform makes it possible to connect products or services to third parties and to increase their use (Boudreau, 2011). This type of platform serves as an intermediate between these two parties. A triangular relationship is then created between these parties (Eckhardt et al., 2018). A decade ago, marketplaces became a common two-sided platform. Gawer (2009) states that two-sided platforms cannot be seen as a platform that values innovation. Since, more and more two-sided platforms became online. Tadelis (2016) claims that the success of an online platform depends partly on the platform's reputation and feedback systems, the most important aspect of a good working feedback system is to contribute new buyers with information about the past behaviour of a

seller. This promotes integrity in an online marketplace and increases the efficiency of an online platform because the irritation caused by asymmetric information is less (Tadelis, 2016). Lerner (2014) and Gong et al. (2020) added that an online platform can also be used for other purposes in addition to acting as a mediator between two parties. An important aspect for online platforms is the number of people or participants who use your product or service and thereby improve the value of a good or service. This is known as network effects, which contribute to platform competition in online markets (Cusumano, 2010). If an online platform with characteristics of a two-sided market is successful, where network effects are positive, a two-sided platform can alter into a multi-sided platform. Alaimo et al. (2020) indicate that platforms from a two-sided market, with the correct use of underlying user data, can focus on complementarities and then expand to a multi-sided market. This means that the transition can be made from platform to a service ecosystem. This service ecosystem then increases relationships between different companies which eventually leads to platform innovation (Alaimo et al., 2020). In recent years, companies have increasingly used their platforms online, specifically, platforms in the two-sided market. However, platforms are looking for innovation to increase the value of the user, to enable companies to find new revenues and more profit. Different ways can companies find an additional revenue stream in addition to their current core business through data. Analyzing and mapping the data at their disposal is one of the ways through which a company can succeed in changing a two-sided platform into a multi-sided platform that creates more user value. Since, this allows the value for both the demand side and the platform provider, multi-sided platforms can enable competitive advantage over other companies.

Platform innovation plays a major role in the use of leveraging user generated data. When this leverage of user generated data is done in the right way, a different market can be entered on the basis of this data. One of the ways by which this occur is that platforms better map the data they have at their disposal, while the relationship with the users increases. When a platform succeeds in achieving this, it must look for a dedicated application to leverage the data in the right manner (Trabucchi & Buganza, 2020). Trabucchi et al. (2017) find that merging data obtained in two-sided markets and penetrating a new market will play an important role in developing new business models (Trabucchi et al., 2017). Olejnik et al. (2013) describe a mechanism that compares different user profiles and can distinguish which profile contains more economic value than the other (Olejnik et al., 2013). Several aspects contribute to the right strategy to make this a success. Real-time bidding of advertising (RBA) is a mechanism where advertisers can determine value based on an impression to a user who sees the ad. Bid Optimization (BO), Key Performance Indicator (KPI), cost-per-click (CPC), Demand-side Platform (DSP), click-through rate (CTR) and the conversion rate (CVR) are aspects that allow advertisers to adapt their future strategies for an online campaign (Mehta et al., 2020; Yakovleva et al., 2019; Yang et al., 2019). Different markets can be entered on the basis of user generated data, also the advertising market.

Advertising to users increases the exposure of companies. Recruitment has not yet been investigated, but can be grouped under the advertising market.

Platform competition leads to the competitive advantages which must be achieved by the appropriate growth strategy. One of the aspects influencing platform competition is network effects. Since marketplaces are online platforms, where many users provide interactions and transactions, more users would attract other users (Alt & Zimmermann, 2019). Another reason why platform competition is increasing is that it is easy for users to switch to another platform. The attempt to increase cross-network benefits for consumers can contribute to enhancing this. (geef de refernties ipv *certain* empirical studies) emphasize that multiple platforms fail to maintain the largest market share in a market where new entrants are emerging. As these platforms are located in a market where WTA is a characteristic of a multi-sided-market, the validity is not fully founded. Market leadership does not depend on focusing on users and sellers as resources, but platform competition is fuelled by platform differentiation (Cennamo, 2021). Competitive advantage leads to the right growth strategy. which van be determined with the Ansoff's Matrix which is a frequently used to analyse strategies when a company wants to expand to a different market (Hussain et al., 2013). From this analysis it can be concluded that Stuvia must use the diversification strategy to achieve the right growth.

Dhir and Dhir (2015) describe four different types of diversification (Dhir & Dhir, 2015). To find out which kind of diversification applies to Stuvia, the underlying triggers that can exert force on the decision-making process are examined. Bsed on the triggers of Dhir and Dhir (year) Stuvia is most similar to Conglomerate diversification. While applying this strategy, the following aspects must be taken into account: the timing of entry, the characteristics of the entered industry, the impact of the regulation and the lack of available information are important to include in the decision-making process. However, there is no literature on how these strategies can be applied for user data entering the recruitment market. Also, the conglomerate diversification strategy has not yet described for obtaining competitive advantage using user generated data entering the recruitment market.

Chapter 3. Competitive landscape of Stuvia

In this chapter the unit of analysis is explained. In addition to this description of the unit of analysis, a stakeholder analysis was performed to provide a clearer picture of the environment in which the expansion of Stuvia takes place. Chapter 4 describes the relationship between Stuvia and recruitment companies. This shows how Stuvia wants to use the interest from the recruitment market to generate more utility for its users in addition to commercial purposes.

3.1 Competitive landscape

Stuvia is a digital marketplace for students who buy and sell study materials, examples of which are: summaries, lecture notes, essays and cases. A company that owns a widely used platform is Stuvia. Stuvia is a company that acts as an intermediate between two people who can fulfil each other's needs by using the digital platform of Stuvia. Due to the large number of users and the amount of data that Stuvia has from its users, Stuvia wants to expand their core-business. Stuvia has access to data from more than 1 million students in the Netherlands. Stuvia wants to use this data to enter a different market where platform competition is high and where they have a weaker position than the incumbents in this market. The purpose of this research is to assess a deeper understanding of the relationship between conglomerate diversification strategies and how Stuvia can achieve this. Also, this study tries to map whether by entering the recruitment market, collaborations can arise between established companies, which can ultimately lead to a conceptual guideline that is generalizable for other countries like Stuvia, that have excess user data to their disposal.

3.2 Stakeholder Analysis

In order to gain more insights about the stakeholders in addition to the theoretical background of this research, this part of Chapter 3 takes a closer look at the stakeholders of Stuvia when entering the recruitment market. “A stakeholder analysis is an approach, a tool or set of tools for generating knowledge about actors – individuals and organizations – so as to understand their behaviour, intentions, inter-relations and interests; and for assessing the influence and resources they bring to bear on decision-making or implementation processes” (Varvasoszky & Brugha, 2000, p. 338).

3.2.1 Stuvia

According to Gopalia (2012) companies have difficulties reaching college students. This is often related to students having limited contact with companies seeking new employees and insufficient information that students have about the job and organizational characteristics when they make the job choice decision. Therefore, Stuvia has initiated a new strategy. Since the company is in contact with students, due to their platform. Stuvia can, in addition to offering its current service, also increase the utility for its users entering the recruitment market, and thereby ensure that an extra service is offered, namely potential jobs or internships. Therefore, Stuvia has a high interest in expanding to the recruitment market

or to create a recruitment platform itself. However, their power is relatively low. Since, the incumbent and new entrant companies have a higher experience in the market.

3.2.2 Incumbents recruitment companies

Incumbent recruitment companies in this study include established companies that carry out both internal and external recruitment. Internal recruitment means that companies have access to a recruitment branch that has to fill vacancies for one specific company (usually themselves). Examples in this study of internal recruitment companies are: PwC, Deloitte, KPMG and EY. External recruiting means that companies try to fill vacancies and placements for companies other than themselves. These are usually recruitment agencies that take on the recruitment on behalf of other companies. Filling vacancies is therefore outsourced to these companies. Examples in this study are: Page Personnel, Ambitious People, Progressive and Hays. These are often companies that have years of experience in finding the right person with the competencies that a company is looking for. The reason that companies hire external companies may be to be able to continue to focus more on the core business of a company. The process for filling a vacancy or attracting a potential candidate can take up a lot of time and money. The most important thing to attract the right person as a company is because nowadays it is extremely important to hire in the "best" candidates for your company. Today's competition is based on having the best people working for you. Nowadays, personnel are seen as an important resource for a company (Brandão, Silva, & dos Santos, 2019).

3.2.3 Users

Within a peer-to-peer marketplace system like Stuvia, the users are the stakeholders who are expected to generate and sell their content. The data obtained from a student's preferences, field of study a person is in, student's place of residence, university or college, school year and a particular student's gender can be used in the recruitment market. Making the users an important participant, since this is where the user profiles are determined. These profiles can be extremely important for recruitment agencies and companies looking for a particular student.

3.2.4 Ministry of Justice and Security: The Dutch Data Protection Authority|

The government is the highest authority in The Netherlands. The Dutch government includes different forms of Ministries, such as the Ministry of Infrastructure & Environment, and the Ministry of Economics. In addition, the Dutch government includes the Ministry of Justice and Security which includes the Dutch Data Protection Authority (DDPA). The latter ministry is responsible for ensuring that companies handle the data obtained from its users properly. As of May 25, 2018, the General Data Protection Regulation (GDPR) applies. Then the same privacy legislation applies throughout the EU. For all – large and small – organizations that process personal data, including banks and other online services (Breitbarth, 2018).

A brief summary of what this GDPR says is that personal data will only be processed and used in accordance with the law. It must be fair and transparent for the data subject (that is, the person whose personal data is processed) how and why the personal data is processed. Personal data may only be collected for a legitimate purpose. That purpose must be well-defined and expressly defined in advance. The purpose for which an organization will process the personal data must be compatible with the purpose for which the personal data was collected. Does an organization or person process personal data? In that case, the person whose personal data are processed must in any case be aware of the identity of the organization or person processing these personal data (the so-called controller) and of the purpose of the data processing (Strycharz, Ausloos, & Helberger, 2020). In order to properly use the data obtained from Stuvia against the law, it is extremely important to consider how this data can be used in another market. Several aspects come into play here.

Because Stuvia first showed the characteristics of a peer-to-peer market, in which students are both the provider of content and also the buyer of this content, it is shown in Figure 6 that Stuvia is moving from a P2P-market, also known as a two-sided market, to a multi-sided market. This is the case when they succeed in taking all of the above-mentioned stakeholders into account. The laws and regulations of the Ministry of Justice and Security must be enforced while obtaining the available data. Users need to gain the confidence that their data is in good hands. And it must be looked at how the data obtained can be of added value for the internal or external recruitment parties.

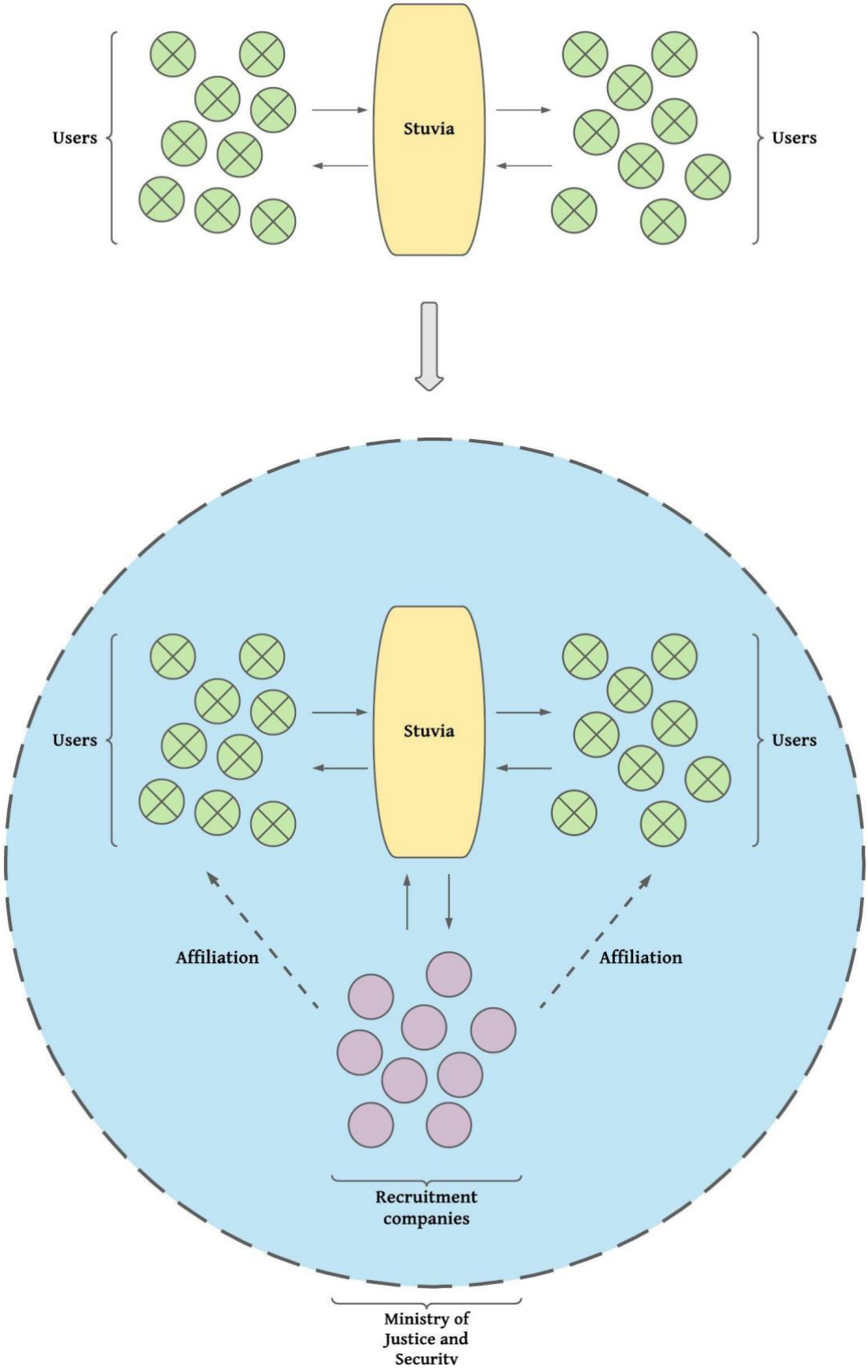

Figure 6. Change from Stuvia from P2P-market to multi-sided market, made in Lucidchart

Chapter 4. Methodological Chapter

The methodological chapter discusses in more detail which research methods are used in this research. Section 4.1 explains which research approach has been used with regard to the research. After this has been clearly explained, the grounded theory protocol is discussed in more detail. This is done in section 4.2. Next, the way of data processing is defined. In section 4.3 it is determined how data in this study is selected, collected, treated and analysed. It also explains how this data is stored and managed.

4.1 Research Approach

To get answers on the research questions that are mentioned in section 1.4, a distinctive research approach needs to be used. One of the strategies is that some theoretical development needs to be done, before starting with the qualitative research. Therefore, the empirical research comes after the theoretical chapter (Cennamo & Santolo, 2010). The theoretical part consists of a literature review that answers research questions 1, 2 and 3. After the theoretical part, theory building is built up from grounded theory in the empirical research of this study. An advantage of grounded theory is that the researcher can identify the situated nature of knowledge, as well as the contingent nature of practice (Thornberg, 2012). Because this study is built to orientate in an exploratory way, and there is no empirical test to determine whether the steps presented in the guideline are correct, grounded theory was used in this study. Studies using this research method usually make the first step towards conceptual thinking and are often used in qualitative research (Khan, 2014). During this research, work is done on theory building in which social and political aspects are included in the research.

This research aims to provide companies a guideline in how to expand to make the transition to a multi-sided market and how to efficiently use their user-generated data whereby, an additional revenue stream can be created. Also, entering a new market could potentially create synergies, whereby established companies and the newcoming company can create more value together. How these companies can work together and how a collaborative economy can arise can also be of added value for the literature. This knowledge gap should contribute to the literature and should be generalizable for companies that have access to large amounts of user data and want to leverage it in a new market. There needs to be a deeper understanding of the relationship between conglomerate diversification stratagies and how a company achieve this. This theory can then be used for the grounded theory building that will be done in the empirical part and that answers research questions 4 and 5.

The empirical research consists of interviews that generates in-dept knowledge to determine the requirements to enter the recruitment market as a new entrant. After the interviews have been removed among various stakeholders from the recruitment market, several analytical categories have emerged on the topics that come up. After these categories have been determined, the answers of the different answers are analysed. From this it can be determined how these categories are related to each other. Subsequently, a theoretical model can be drawn from these connections, which is put forward in this

research as the guideline that can be generalized for other companies that struggle with the same problem as Stuvia (Chong & Yeo, 2015). The interviews with several stakeholders mainly rely on non-numerical data and are therefore not quantitative (Bhattacherjee, 2012). This non-numerical data can then be used to gain insights about various processes necessary to achieve the main goal, namely to enter the recruitment market. In order to obtain data in a systematic manner and to show the path and actions taken during this thesis, a qualitative research flowchart is given that serves as a clear visual representation from the beginning to the end of the research process. The flow diagram of the detailed research process is visualised in Figure 7.

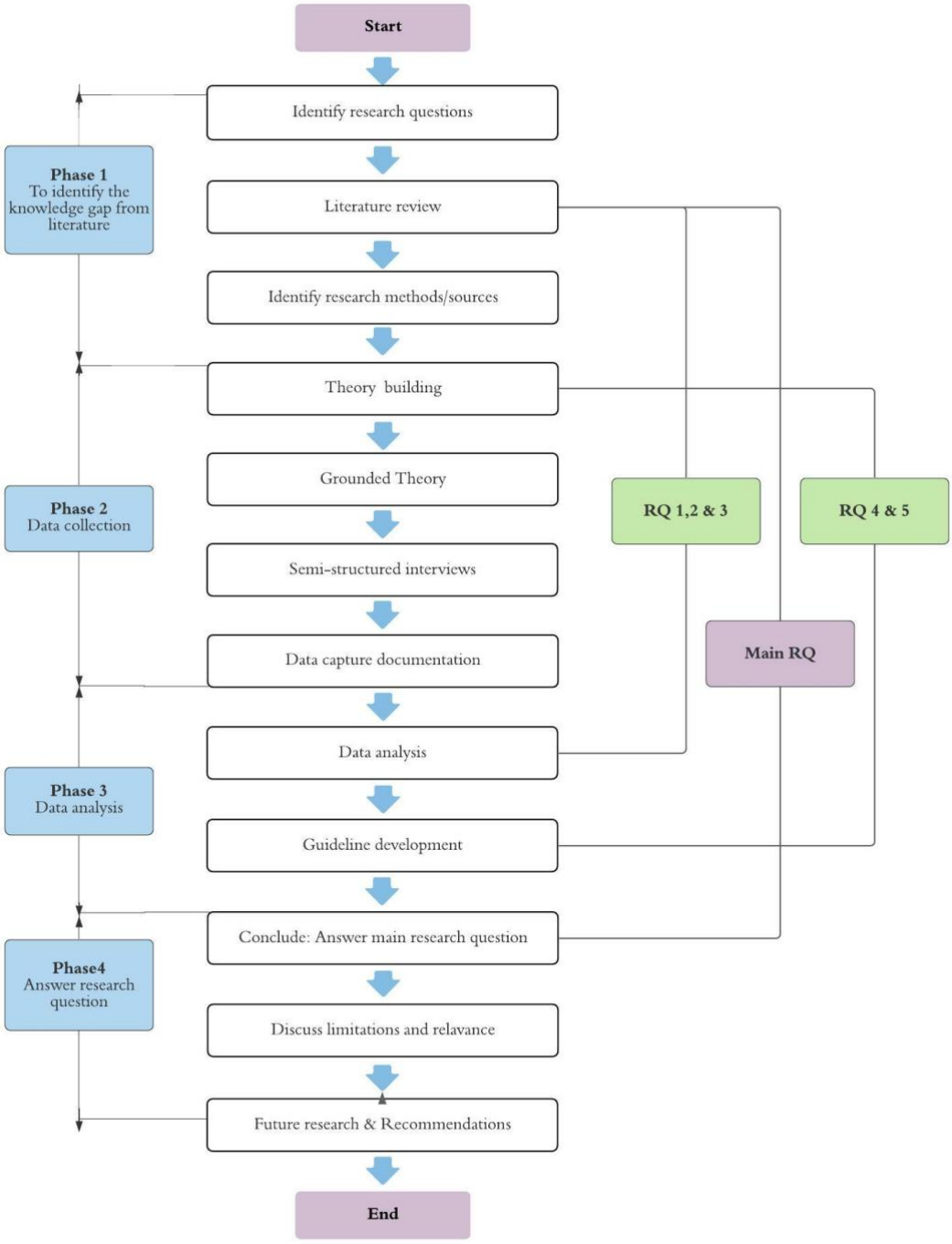

Figure 7. Research flow diagram (made in Lucid chart)

4.2 Grounded Theory Protocol

Thornberg (2012) conclude in the literature that a grounded theory study is a prevailing and commonly used research methodology used to determine practical theory through the systematic analysis of data patterns 'grounded' within certain problems (Thornberg, 2012). A grounded theory research is a detailed analysis of a problem in a real-life setting over a period of time whereby exploratory theory has been researched. In this research the collection of data is done using a combination of interviews, observations, and a literature review in articles and other scientific documents. "The grounded theory is using principles to understand and explore a socially-based organizational problem where a theory is discovered, constructed, and grounded within empirical data to explain what is occurring within the research field" (Chong & Yeo, 2015). According to Bhattacherjee (2012), the strength of grounded theory lies in the further look at cultural and political considerations of the problem mentioned in addition to the social and technical aspects (Bhattacherjee, 2012).

4.2.1 Defining the unit of analysis

To conduct convenient research, it is of high importance to examine what theory needs to be researched and resolve what the unit of analysis is to determine this theory. In order to answer multiple research questions that lead to the main research question, it is necessary to find out what kind of unit of analysis this grounded theory research contains. According to Khan (2014), the researcher looks at a situation where developing a theory is grounded in data from the field of participants and is based on the views of these stakeholders (Khan, 2014). In this study, the unit of analysis is studying a process of platform development expansion of the current core-business of Stuvia. To find out what the unit of analysis is of this research, Chapter 3 provides a stakeholder analysis of the recruitment market. As Neuman (2014) points out in his literature, the unit of analysis is important to gain insights about certain concepts and to measure observations that contribute to the outcome of the research. Neumann adds that the unit of analysis can consist of organisations, groups and individuals (Neuman, 2014). In this research, connections are made between organisations, government agencies and the users, who are all part of the recruitment market. After this unit of analysis has been established, the method of data collection can be examined.

4.2.2 Type of grounded theory

In order to find out which type of grounded theory is used in this research; an analysis was first made of which types of grounded theory are present. There are mainly a few main types of grounded theory. The first type of grounded theory that emerged in this analysis is the Classical grounded theory of Glaser and Straus from 1967. They were the discoverers of this research method and proclaimed that analysing certain data could lead to the emergence of new theories during exploring the world. However, Glaser and Straus were convinced that it was important to be biased as little as possible prior to the research, so their recommendation was that no literature should be consulted before the research, in order to avoid

the bias of the researcher (G. L. Evans, 2013). A few years later in 1990, Straus and Corbin devised the Modified grounded theory (MGS), also known as Straussian grounded theory. They stated, however, that it is important to conduct a literature study prior to the research in order to obtain certain prior knowledge. However, this research method was designed to minimize the influence of the researcher's interpretations on the results. It is therefore extremely important at MGS that the results arise from systematically coded data, which are analysed in three coding phases: open coding, axial coding and selective coding. The aim of MGS is therefore to develop a theory that is linked to evidence from certain phenomena that are comparable. As a result, the results obtained from MGS can be generalized to other similar aspects (Thornberg, 2012). Because many researchers believe that the results of a study do not only depend on the data, but also on the interpretation of the researcher, Charmaz came up with a new type of grounded theory in 2006, namely the Constructvist grounded theory (CGT). In CGT it is important that researchers can apply their own interpretation to the measured data of a study. In this kind of grounded theory, it is important that the observations made are analysed and interpreted by the researcher. The understanding of the researcher is decisive for the results of the research (Glaser, 2007). Compared to MGS, the coding phases in CGT are not limited to three phases of coding the data. In CGT, the coding stages at the beginning of the study are more open to interpretation after a preliminary literature search has taken place. After the acquired basic knowledge about the researched subject, codes are determined that the researcher thinks are important for the research. Subsequently, in the empirical part of the research, the results arising from the observations from the interviews are examined. Then it is checked which codes during the open phase, which were established by the researcher for the empirical part, are still relevant for the research after the interview. After this, an implication of the obtained results is built, whereby connections are drawn between the obtained results and a theory is created that is grounded from the investigated problem. The type of CGT was used in this research because in my opinion it is important that the interpretation of the researcher is taken into account when analysing the data that should lead to the results of this research. This brings us to the next topic of the research method in which the data selection is dealt with in section 4.3.

4.3 Data Selection

This part of the study takes a closer look at the strategy used to obtain various data. It is also explained how the data obtained from interviews and from the literature is analysed.

4.3.1 Data Selection

An important aspect and trademark of grounded theory research is that various data sources are used, which is a strategy that also complements data credibility. These data sources can include; participant-observation, documentation, direct observations, archival records, physical artefacts, and interviews (Yin, 2013). In grounded theory, data obtained from above sources are then combined instead of handled one by one. “Therefore, each data source can be seen as one piece of the “puzzle” with each piece

contributing to the researcher's understanding of the whole phenomenon. This convergence adds strength to the findings as the various strands of data are braided together to promote a greater understanding of the case" (Baxter & Jack, 2008, p.554). Because the amount of data available is enormous, it is very plausible for researchers to collect as much data as possible. However, there is a downside to this. According to Baxter, processing this large amount of data requires skills to properly manage and analyse it (Baxter & Jack, 2008).

4.3.2 Data Collection

As determined in section 4.3.1 there a multiple data sources that can be used for research. Yin (2013) discovers three pillars for data collection. Yin explains that it is important for the reliability of a study that it is extremely important that multiple forms of sources are used. Different opinions of scientists should therefore increase the reliability. It is also stated in his literature that maintaining the grounded theory database and the chain of evidence are important principles that a study must comply with. When these aspects are all properly stored, the current situation of a case can be used in further research (Yin, 2013). The data used in this research is based on documentation from previous studies and interviews with various stakeholders who influence the broadening of Stuvia's core business. What is important during the data collection of the grounded theory research method is that before collecting the data, several sources are already analysed. This was done in the form of a literature study. This happens because it is important that the process of data collection and analysis runs parallel to each other. This makes theoretical sampling possible. Theoretical sampling is used in this research to build on theories already known in the existing literature (Japhet & Usman, 2013). This makes it possible to set up codes before the interviews that can be asked for during the interview. This is important in this research in order to establish connections between categories that can be used in the intended guideline after the interviews. Therefore, the theoretical sampling in this study raises questions and highlights gaps in the existing literature and reveals what needs to be explored in this study (Soklaridis, 2009).

An important source of information in this research is the interviews that are conducted with various stakeholders. These interviews will provide in-depth information regarding this research. In order to link the data collection with the research questions, an overview of the type of information, the sources, and methods per research question is given in Table. 2.

Research question	**Information**	**Sources**	**Methods**
1. *What is the current state of the literature on two-sided platforms towards multi-sided platforms?*	Data & Explicit knowledge	Documents	Content analysis
2. *What is the current state of the literature on entering the advertising market based on existing user generated data?*	Data & Explicit knowledge	Documents	Content analysis

3. *What is the current state of the literature on how to create competitive advantages and which growth strategy to use while entering a new market?*	Data & Explicit knowledge	Documents	Content analysis
4. *Which conglomerate diversification strategy can Stuvia use to apply user generated data in a recruitment market?*	Knowledge & Implicit/ Tacit knowledge	Experts	Content analysis Questioning
5. *What are the directions for Stuvia to collaborate with established names in the recruitment market by creating an additional revenue stream?*	Knowledge & Implicit/Tacit knowledge	Experts	Content analysis Questioning

Table 2. Data collection per research question

The primary means of data collection for this qualitative research are interviews. According to Bhattacherjee (2012), it is important that an interview protocol is drawn up before the interviews are conducted (Bhattacherjee, 2012). The interviews are conducted in a semi-structured way where the questions are open-ended. This way of interviewing ensures that various questions can be asked during the interview and that a discussion can arise. The questions asked have been drawn up to provide answers to research questions 4 and 5. This results in exclusion of questions about which data is important for entering the recruitment market. These answers mainly come from the interviews with companies based in the recruitment market. In this study, a distinction was made between companies that recruit for other companies, i.e. recruitment companies that work externally for other companies, and companies that take on internal recruitment to fill vacancies within the company.

Answering the question on which strategy is most suitable when entering the recruitment market, should be obtained mainly from interviews with internal experts of Stuvia and also from the interviews of the established companies in the recruitment market. Because privacy concerns and the legislation regarding this problem must also come to the fore in this research, therefore interviews are conducted with users and the government. The way in which all interviewees are approached is through different channels. These channels include LinkedIn and company websites. In addition to this, the closing question of each interview focused on using a snowball approach to ensure that more respondents were found. In the closing question, the interviewee was asked whether the interviewee knew any other experts or articles that should be consulted, which should broaden the research. A list of interviewees is given in Appendix 3. This table also states which stakeholder this company aligns itself with. Sixteen interviews were conducted and were taken place online using Zoom, Microsoft Teams or Google Meet and were audio-recorded using the Dictaphone application of Apple.

4.3.3 Interviews companies in the recruitment market

To fulfill to this knowledge gap that came up from the literature review, this study derives three growth diversification strategies based on leveraging user data to enter the recruitment market. To generate in-depth knowledge, this research will conduct qualitative research with experts in the recruitment sector

and the data sector. The interviews will provide knowledge on how companies can analyze and map their data. It can then be determined whether a third side can be added to a two-sided platform based on this data. Also, the derived strategies will be discussed and in-depht knowledge will be generated on where these strategies will enable entrants to gain a partnership with the established companies in the recruitment sector. Additonally, the interview will discuss the opportunities and barriers for creating an competitive advantage.

The purpose of the interviews with the internal expert of Stuvia, the internal and external recruitment companies and the data experts is to find out how the data that Stuvia has at its disposal can be optimally used in the recruitment market. All these stakeholders must contribute to the knowledge to see how Stuvia's user data can be leveraged in the recruitment market. Looking at the literature review, three types of conglomerate diversification strategies have been formulated that Stuvia can use to enter the recruitment market, namely:

1. Stuvia can choose to work directly with a company. In this collaboration, Stuvia keeps the available data for itself, but ensures that companies can use this data for a certain fee. Companies can approach Stuvia to perform a "search" for a specific student. This strategy does not involve established names from the recruitment market but companies that do the recruitment themselves. Three major companies doing this will be interviewed.
2. The second strategy of Stuvia is that they can also ensure that the available data can be used by a third party, namely a recruitment agency located in the recruitment market. Stuvia then chooses to sell the user data to such a company. With this, Stuvia will hand over the data as user profiles.
3. The third strategy that Stuvia can apply is to set up its own recruitment branch. Based on the available data, this branch can proactively look for companies that are seen as potential employers for a particular student and vice versa. This strategy is the most work because it actually requires hiring "recruiters" to do this work.

Appendix 4 shows an overview of the interviewees and the focus of the interviews on which strategy and which data is intended to be captured.

4.3.4 Data Analysis

In order to carry out a qualitative study of grounded theory, a lot of time was spent in the first phase of the research in analysing data from the existing literature. From this, various themes and main topics were subsequently written that were thought to be important for the research. This made it possible to examine which topics needed further investigation during the empirical interviews with stakeholders from the recruitment market. After that, the interviews were conducted. During the interviews, all obtained qualitative data is recorded. The audio recordings of the interviews, recorded with Apple's Dictaphone application, are first transcribed and then analysed. The analysis is performed on a coding program called Atlas.ti. This program makes it possible to create codes and sub-codes for words topics

mentioned in the interview. Because the constructivist grounded theory was chosen as the research method in this research, various topics were devised before the empirical research and after the literature study that should provide answers to the research questions. Devising and determining codes that have emerged from the literature research is done in the first phase of the research, in which "Open" coding takes place. Open coding takes place to give meaning to the concepts that emerged from the literature study prior to the interviews. No connections have yet been drawn between the different codes. Open coding includes labelling topics, developing categories based on their properties and dimensions (Khandkar, 2009). After the open coding phase, the interviews are conducted and the results resulting from these interviews are examined. Links are made between the codes that have been drawn up in the open coding phase and are subsequently analysed in the "Process" coding phase after all the interviews. In the process coding phase, all the results of the interviews are related to each other and key insights are determined that should answer the research question. Topics that are coded in this phase of the research, come from the research questions and ensure that it is possible to find out for each interviewee what has been said about that particular topic. Insights about experiences and motivation are better explained as a result. In order to work systematically, in this research codes have been created in Atlas.ti to make a subdivision per important aspect that can easily be retrieved in the coding program. Figure 8 shows the codes used in this study, which were created during the open coding phase.

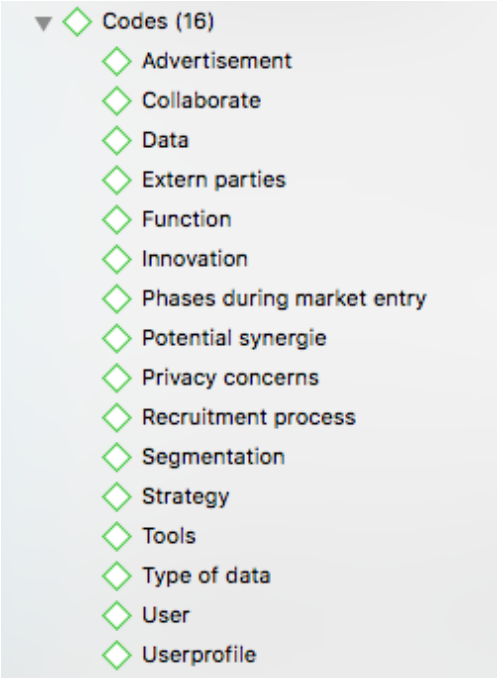

Figure 8. Codes in Atlas.ti during open coding phase

To ensure that all interviewees remain anonymous, the statements, transcripts and other associated data are kept anonymous. The reason that this is done in this research is because it is in line with the data management and ethics policy that is enforced by the TPM Delft University of Technology.

4.3.5 Validity and Reliability of the research

As Yin (2013) explains, four concepts are important for ensuring that a study conforms to a logical set of statements. Yin distinguishes between trustworthiness, credibility, confirmability, and data dependability of your research, to test whether a research conforms to a logical set of statements (Yin, 2013). To ensure that a researcher looks at a subject objectively, it is important that several sources of evidence are used for the literature review. This ensures that low construct validity can be prevented. In addition to this, Yin claims that there can only be internal validity in explanatory research. Since this research is not explanatory but exploratory, it is not present. Internal validity has to do with causal relationships between studies (Yin, 2013). In addition to internal validity, it is also necessary to examine whether there is any question of external validity. External validity means that the results of one study can be generalized to other studies (Yin, 2013). Since this research is based on constructivist grounded theory, it can be concluded that research can be generalized to other companies like Stuvia. The last aspect that Yin mentions and enriches is reliability. This can be used to see if the results would be the same in the future if the same procedures were used. This can be increased in any study if all protocols related to documentation are properly stored in a database. Because this research has the characteristics of an exploratory study, in which a case is cited that is applicable to several companies, it can be concluded that this research has a high degree of validity, reliability and replicability.

Chapter 5. Grounded theory results

Like the research described in section 4.1, research questions 4 and 5 are answered on the basis of interviews. This is done on the basis of interviews with different types of respondents from the environment of the recruitment market. These respondents are divided over various stakeholders, mentioned in section 3.2, who participate in the recruitment market. An overview of the interviewees is shown in Appendix 2. On the basis of the literature and the research questions mentioned in section 1.4, an attempt was made to collect results in the field of the diversification strategy by means of an interview guideline. In order to answer sub-question 4, it is first necessary to examine the thoughts of different actors in the field of leveraging user generated data. Following this, we can look at the biggest barriers that come with choosing a strategy to enter the recruitment market when leveraging user data. By including these two aspects in the choice of a strategy, it is then possible to see which strategy can be used by proportional companies such as Stuvia that have access to excess user data. When the view of different stakeholders is included in the decision-making process which strategy is best to apply of the three strategies mentioned in section 4.3.3, a guideline can be outlined, in which the phases of entering a new market are given. The guideline contains actions that provide handles to create additional revenue streams in addition to the core business of a company and increase the value of the user.

Which conglomerate diversification strategy can Stuvia use to apply user generated data in a recruitment market?

5.1 Leveraging user generated data

To find out how the user data can best be used in a new market, we first looked at how Stuvia as a company looks at the development and broadening of the current core business, vis-à-vis the recruitment market, by means of the available user data. The owner of Stuvia (Respondent 1) finds it extremely important that the user is aware of this when applying user data in another market. When this transition is made to the recruitment market, he finds it important that the user of Stuvia is not hindered in the buying behaviour of the current platform. It is therefore important that only the graduating user comes into contact with any recruitment activities. In addition to this, other users of the platform can also use these activities. It is then only necessary that this is indicated by this person. This can be done, for example, by means of an automatic e-mail in which the user indicates that he or she is open to an internship or a beginner position. If this is the case, according to Respondent 1, it is important that the data should be carefully mapped out. His opinion on this was as follows:

"The moment we build these tools, we will of course look at what kind of meta data a recruitment company finds important and collects. The moment someone says from their profile on Stuvia: "Hey, I'm graduating and I'm on looking for a nice job." Then the first question is what kind of job, in which field, and based on that we can look for the match with a recruiter. We are always working on a match during the transaction in our current core-business. When someone is about to graduate and is looking for a job, you also have to look for a match for the right recruiter. So, I think we will have to look at what information is needed from such a person, in order to make a good estimate for the next steps." (Respondent 1)

Looking at the above quote, various actors in the recruitment market were asked which information is essential when looking at the data that can be retrieved from the users of Stuvia. These interviewees mainly work at companies that carry out internal recruitment for the company. Think of companies such as PwC, Deloitte and KPMG. But also, recruitment parties that carry out recruitment externally and try to fill a vacancy for companies other than themselves. Examples include: Page Personnel, Ambitious People and Progressive. The most pivotal results that emerged from these interviews come from the following quotes:

"Of course, it is important for us to know what phase of the study someone is in. Is it a first-year bachelor student or is the student working on the final phase of a master? That makes a significant difference. Also, the background of a student, so HBO, bachelor or WO, bachelor, HBO Master or WO Master is a difference. Another aspect that we don't look at so much is region. Jobs are increasingly location independent. However, there are certain business units that do depend on this. Then it is of course important where a student comes from. Besides these aspects, gender is not what we target at. We do want to have as diverse workforce as possible. So that may mean that you have to put in a little more effort. for example, if you are talking about ICT, fewer women than men study in that field, but we do strive to be a good reflection of society within our company, so gender is more important here. If you're running an ad campaign you know you're going to target more women." (Respondent 4)

"The most important information about a potential placement for us as a large company, which wants to be an example for other companies, is, for example, the background of a student. In addition to the background of a student, it is of course important what someone has studied, what work experience this person has had and what gender this person is. Gender diversity and cultural diversity is something that is high on our agenda." (Respondent 3)

"One of the most important aspects of what we look at as a recruitment company, within the fields we serve, it is important that if they want to leave a company and are looking for a new challenge. If this is the case, we want to are aware that this person is looking for a new job, so that we can respond to this with the vacancies that we have at our disposal. It is therefore very nice if we have his/her resume with this." (Respondent 6)

In order to give a brief summary of the various aspects that are important for the recruitment process and that were discussed in the interviews, it is necessary to look at the possibilities that Stuvia has to map the data at their disposal as clearly as possible. Available data to Stuvia that correspond to the information mentioned from the interviews are: Study background, field of study, year of study, university or high school, age and gender. All these aspects are mentioned by the respondents from the recruitment market. However, there are also plenty of areas where the user-generated data cannot get a hold on. Information that cannot be retrieved are the lists of grades, interests in addition to his or her study, the resume, additional activities, the origin and the availability for a possible job or internship of a student. In order to make the expansion towards the recruitment market a success, Stuvia should therefore be able to identify these features of a student. As Respondent 7 rightly pointed out, the data for the recruitment market is extremely linked to personal data. Before you can use the data of an individualistic person, you as a company need permission for this. An important aspect of this is that after the consent of such a person, various laws and regulations must be adhered to. This brings the research to the next topic: Privacy concerns.

5.2 Privacy concerns

If we now look more closely at the privacy concerns that the storage of user data entails, we looked at companies in the recruitment market that have to do with sharing privacy-sensitive information. What was discussed in almost every interview is the law and regulations that have recently changed. Since 2018, the same privacy legislation applies throughout the European Union: The General Data Protection Regulation (GDPR). Respondent 3 indicates in the interview that, for example, sharing a resume was previously done via email, but that this is now out of the question. Now everything has to be stored in a special place with all kinds of requirements and rules attached to it. He does add that if the potential candidate for a position gives permission for this, this is possible. Respondent 4 adds that when an individual's information is shared, there are all kinds of other snags in addition to consent.

"If a company you want to share or store profiles of individuals and therefore want to use them for other commercial purposes, you have to take into account other rules and requirements in addition to the permission of this person. However, this is much less on an aggregated level. An example of this is that as a company I don't say: I want to reach Pietje who is a woman or Pietje who is a man of 22 from Amsterdam, with that study and that background. But then you say no, I just want the entire group of students in Amsterdam within a certain field and then it is possible. Then you are not connected to one specific person, but you go more towards advertising on a whole group of people." (Respondent 4)

Respondent 6 adds that this can be prevented by requesting permission in advance when creating a user profile, which takes into account all the laws and regulations stated in the GDPR. Because GDPR was discussed in more detail in each interview, an interview was also held with a person from the Dutch Data Protection Authority. Respondent 9 indicated that under the GDPR regulations, an organization carries more obligations and responsibility, because every time an organization chooses to process personal data, the privacy of the user concerned is being violated, this information is exchanged. or is saved. That is why a company only processes personal data if the practice offers no other choice. This is the case if a company cannot pursue the goal, they have without storing this information.

"Under the General Data Protection Regulation (GDPR), a company like Stuvia has more obligations when processing personal data. The GDPR places more emphasis on the responsibility of you as an organization to show that you comply to the legislation. As a company, you must be able to demonstrate and prove that you as a company have acted in the right way with regard to the GDPR. Under the GDPR, the following will change for organizations such as Stuvia: you no longer need to report the process of personal data collection to the Dutch Data Protection Authority, you may be required to perform a Data protection impact assessment (DPIA) and you may be required to appoint a data protection officer (DPO).” (Respondent 9)

Respondent 9 adds that the permission obtained must be able to be demonstrated by companies that want to use this stored data. In addition, the GDPR law also creates rights for the user. People must be able to choose, in addition to giving consent, that they can withdraw this consent. Upon acceptance of this law, the users of an online platform have the right to delete the personal data at any time. It is also linked to this that all organizations that use this data must be informed that this is the case. These companies must therefore proceed to delete the personal data. These rights also include the right to data

portability. This gives people the space to receive the personal data in a standard format. This allows a person, for example, to easily pass on the data to other organizations or sites that have the same purpose as the organization whose personal data has been withdrawn. One reason for this may be that the person in question would rather have another company reap the benefits.

To provide a brief summary of the bases attached to this law and regulation, Respondent 9 refers to 6 foundations that must be met by organizations that want to use personal data. In addition to the fact that an organization or company has a good reason to use personal data, one of the following requirements must be met:

1. *The organization has permission from the person whose personal data is.*
2. *It is necessary to process data to perform an agreement.*
3. *It is necessary to process data because you are legally obliged to do so.*
4. *It is necessary to process data to protect vital interests.*
5. *It is necessary to process data to perform a task of public interest or public authority.*
6. *It is necessary to process data to represent your legitimate interest.*

(Respondent 9)

As an organisation, it must itself be determined which of the principles is met. This responsibility rests with the company in question. The Dutch Data Protection Authority cannot advise the company in this regard. Respondent 8 indicates, however, that it is quite easy to circumvent the GDPR. By processing one of the above principles in the privacy statement, the person in question gives the right to the organization to use his or her data for commercial purposes or third parties. However, he does add that the use of personal data in another market may harm the users who use the current core business of the platform.

"I do think that the intention of the platform, that you have to research that very carefully and that a large part of the research must really be on those 1.5 million users which strategy fits best with this expansion using user generated data. What would be the detraction of the number of users if you tinker with the intent of the current platform? How many users will still be part of the installed user base of the platform when an extra function is brought to the current core business?" (Respondent 8)

Observing the above, GDPR is an important aspect to consider when choosing the right conglomerate diversification strategy. As Respondent 8 indicates in the interview, in addition to processing the GDPR, the strength of the current core business must also be preserved. Which facets are important in maintaining the installed base of Stuvia must be taken into account when choosing the right growth strategy.

5.3 The right conglomerate diversification strategy

To see which growth strategy can best be applied in a new market by means of a new service, the literature has shown that conglomerate diversification is applicable to the company Stuvia. Because the growth strategy should not negatively influence the current core business, this strategy must be in line with Stuvia's DNA.

"I would choose what is closest to the DNA of the company in order to ultimately ensure that the strategy continues to work in the long term. That you don't try too quickly or go for something that might seem to pay off the most in the short term, but which in the long term is still too far removed from Stuvia's DNA and which may therefore not be tenable in the longer term." (Respondent 4)

In order to use the right strategy that not only positively influences the value of the user of Stuvia in the short term, but also in the longer-term Respondent 1 says that the value should not only be increased for the user, but also that the relationship must be strengthened. Respondent 1 adds that Stuvia wants to expand in several areas. Tools must be built that improve the learning process for students and young professionals. Expansion abroad is also on Stuvia's agenda.

"I personally would love it if we could strengthen and broaden the relationship with our users. So, a user who is in their third year may want to move on to an internship that can help them further in their career or someone who is ready to graduate, looking for a job. And if someone then actively says: "Okay, I'm looking, these are my wishes", so that it really happens from the user's perspective. That we then create some kind of database, where companies can search or, on the other hand, that those companies can approach people for a certain fixed fee. In my opinion, this is the most scalable and that as long as we act from a user profile where someone is really active and is looking for a beginner position or internship, that this doesn't cause any interference with Stuvia's current core business. As a result, we automatically know that our users are not just approached by recruiters that do not want too." (Respondent 1)

"Almost every Dutch student knows Stuvia. The relationship between the users and the platform is therefore of great importance for the success of the new service. For example, when a student has been using the current platform for 5 years and is about to start a professional career, this new service can serve as a springboard to great potential jobs. Offering high-quality companies to the user who has been using the platform for a longer period of time is of course much more successful than a recruitment company that approaches a pool of students cold. This is, of course, an assumption I make and should be tested in the near future." (Respondent 1)

In all interviews with companies based in the recruitment market, the strategies mentioned in section 4.3.3 were put forward. What was very remarkable is that almost every company has a different vision on the three strategies mentioned. Respondent 3 stated in the interview that strategy 2, buying user profiles, best suits the recruitment market. The reason he gave for this was that attracting students nowadays happens through the collaborations with study associations and that this goes quite smoothly, since many students want to start at a corporate. However, he added that reaching students with a certain user profile, who are known to be difficult to find, can be of added value here. If we look at certain niches within the working area of large corporates, it can be concluded that, for example, in the field of ICT there is a great shortage of potential students who want to work in this department. When companies can come into contact with this type of student on the basis of a user profile, this can be of added value for companies.

Respondent 2 agrees with this statement and adds that it is extremely important that a company succeeds in including the right laws and regulations in this strategy. If this is the case, then strategy 2 is also a relatively lower investment than strategy 3, where an entire recruitment branch must be set up next to the current core business. As a company, you run less risk by investing time and money in training staff yourself, because this does not have to happen because other companies take care of the recruitment part through these user profiles. If this is a success and the data is properly mapped into high-quality user profiles, you can always switch to setting up your own recruitment branch. This can then happen in phase 2, for example. Respondent 1, however, completely excludes strategy 3. What he always looks at when Stuvia innovates is whether the innovation is scalable or not. Hiring recruiters and training them themselves, while Stuvia actually has no experience in this.

"That seems like a no go to me, even though it could really work and I also hear other companies around me that are in the student market that are doing it very successfully, I don't think it's something we as a company So I would go for strategy 1." (Respondent 1)

Respondent 4, however, would go for an intermediate variant between strategy 1 and 2. He emphasizes the interest that a potential placement must have for a certain vacancy.

"It doesn't make much sense to buy a whole box of user profiles, because people must also be interested in you, so to speak. If you buy a whole box full of profiles, then you also buy a whole box with profiles that may are not interested in your company. And that is just a shame. As a result, you spend extra time and effort selecting the "correct" user profiles, rather than focusing on only the profiles that are interested in a possible placement at your company." (Respondent 4)

Respondent 4 adds that the intermediate variant in which a collaboration arises between Stuvia and the company in question, the company can serve specific expressions to that target group in a very segmented manner. Whether that is a message, a banner or a video, at least you know as a company that the message can be tailored very specifically to the recipient. On the basis of this, you as a company can invite people to, for example, an event or something similar. He further explains that in general, a job isn't a “carton of butter you buy in the supermarket". The choice for a beginner position or internship is something that people think carefully about and therefore also entails a somewhat longer decision phase. It is important that people are included in what you as a company do and have to offer. When students are eventually used to these expressions of a company, the match between a potential placement and the company can actually get off the ground.

A train of thought that is in line with this way of thinking, on the three strategies given, came from Respondent 8. He claimed that strategy 1, in which you work together as a company and ensure exposure among a certain target group for companies that are looking for potential students, best suits the recruitment market.

"This data is extremely relevant and interesting for parties that are trying to attract young talent. The only thing you have to take into account is the approach or design of the expansion of the Stuvia. All major parties that are looking for the right student, actually want to get to a candidate as early as possible. Actually, as a company you want someone to tell you in kindergarten that they want to work for you. Providing early exposure of this company among the students and the job opportunities that a company has to offer, can be expanded, for example, through advertising" (Respondent 8)

In addition to these arguments, he indicated that many companies that currently leverage user data use advertising on the website as an additional source of income. Many companies place advertisements in certain places on the site and sell this place in subscription form to companies that want to advertise to the users of this site. Advertisers can use this to segment a certain user. This also creates other challenges because advertising to a specific user is a different sport, says Respondent 8. Many companies have separate teams that enable segmentation of advertisements.

What are the directions for Stuvia to collaborate with established names in the recruitment market by creating an additional revenue stream?

5.4 Directions guideline

Due to all the interviews held with the stakeholders from the recruitment market, this section of the research provides an answer to sub-question 5. A guideline is drawn up for companies that want to enter the recruitment market on the basis of user generated data from students. In the process coding phase, all the results of the interviews that are related to each other and contain key insights about the process of the development of the new service are linked together. All the information obtained from the interviews is divided into the three phases mentioned above. This guideline focuses on three phases that should lead to companies being able to create additional revenues in addition to their core business. Therefore, the phases that are highlighted in this guideline are: the mapping phase, the delineation phase and the execution phase. These three phases are drawn from the interviews, in which the development of a new service is central. In the first phase, the mapping phase, we look at the opportunities and resources that a company has on the basis of its user data and which barriers are present during the development phase. Mapping of data, the regulations according to this data and the user's perspectives are explained. The decision-making process that emerges from the conglomerate strategy, answered in section 5.3, is important at this stage. The mapping phase sets the context by looking at all the variables from the social, economic and political settings while entering the new market. In phase 2, the delineation phase, it is mapped out which variables are important for embedding as a company in the recruitment market. Finally, in phase 3, the execution phase, it is discussed how the intended service should be monitored and how different activities can lead to collaboration between established names in the recruitment market.

5.4.1 Phase 1: Mapping phase

In the initial phase, the social, economic and political aspects are placed in context. This allows to demonstrate the various barriers that must be exposed before the delineation phase in order to ultimately lead to a successful new service.

5.4.1.1 Mapping data

To find out what is important in the initial process of broadening Stuvia's current core business, it is important to look at what data they are dealing with. Respondent 1 stated in his interviews that Stuvia initially believed that the more data they collected, the more they knew about the user and that they could eventually use this data for other commercial purposes. However, they noticed that in the beginning of their existence this was very distracting and that they did not need as much information from the users as they first thought. After this, Stuvia started looking at the essential aspects that are important to increase the process and service for the user. In order to offer the right content and find the match, between content and the potential user, Stuvia actually had no personal information such as

telephone numbers or bank account numbers. After correctly mapping all available data, they managed to make the funnel, from visiting the website and ultimately buying certain content, as small as possible. Mapping the essential data such as the institution at which someone studies, the study that the person is following, knowing the subject and which courses they may still take in the future, Stuvia can find the match between student and the content that is available. This makes the platform beneficial for the user and, as a platform, you ensure a better user experience so that the user keeps coming back to the platform.

"What we have done here in the first years of Stuvia awaits us at the beginning of the process if we want to enter the new market. Correctly mapping all available data and which data is important in recruitment market is something we should be doing first." (Respondent 1)

The above quote was supplemented by Respondent 2. He stated during the interview that there is a big barrier that Stuvia would encounter in the beginning of switching to a new market, that a lot of time is needed in giving structure to the available data.

"All the data that Stuvia uses in its current core business is used differently than the application for the recruitment market. There should be a big clean-up in which data can and cannot be used in this market." (Respondent 2)

In order to delineate a clear picture of all intended data that is needed to enter the recruitment market, the actors from the recruitment market were asked which data they consider significant in the recruitment process. In order to provide a clear overview of the data that must be mapped in order to match a potential candidate and the open vacancy, an overview of the intended data is shown in Table 4. Interviews with respondents 1 and 2 provided insight into whether this data is available on Stuvia. Table 4 shows what the important aspects are in the recruitment process and whether the available data from Stuvia has access to this data.

Required data	**Availability**
Graduate	√
Which study obtained	√
Which institution	√
Work experience	x
Gender	√
Diverse background	x
Incentive	x
Capacities	x
Personality	x
Discipline	√
Residence	√
Grades	x

Table 4. Important data for matching during the recruitment process and availability on Stuvia

In order to get a better picture of the recruitment process and what the companies find meaningful when looking at a potential candidate, the required data has been used to determine how these data can best

be related to each other. When looking at the way of recruitment, there is not a big difference between the recruitment parties that carry out the recruitment externally, for companies that outsource this, and the parties that do this for internal use. Both companies try to fill a specific vacancy and look for a certain match that stems from the wishes of the company. Certain skills and capacities are associated with a vacancy. From here, a pool of students is looked at, that matches these requirements and has these qualities. Respondent 7 indicates that the process starts with making the candidate available. The moment this happens, the candidate's wishes are actually looked at and when he or she would prefer to start. After the potential placement indicates these preferences, the recruiter will look for a match between the available vacancies and the wishes of the candidate. After this match has been made between the candidate and the vacancy, personal interviews will be discussed, which must, for example, show motivation and assessments that can demonstrate that a candidate has certain skills. Respondent 8 adds that the recruitment process actually starts before the student has graduated. During the orientation process for graduation, students are already looking for potential companies for the future.

"Candidates, for example, can often be found on orienting websites in their second year of study. And when the graduation moment approaches on job boards. By analysing their behaviour, it can already be determined what kind of person you are dealing with. You can use this person as a company. for example, advertise and ensure that you stand out for such a candidate." (respondent 8)

He adds to the above quote that the behaviour in terms of search terms and the characteristics of this person can contribute to a user profile. These user profiles can make predictions for possible next steps for the professional career of such a student. At the moment it is the job of recruiters to get in touch through these user profiles in order to fill a vacancy. Respondent 4 adds that the more you know about this user, the better you can perform the segmentation against this person. The better this is done, the better you can tailor the message to the recipient. The better that message is tailored to who reads it, the greater the chance that someone will also respond positively to this vacancy.

5.4.1.2 Regulations

Another important aspect that must be taken into account in the mapping phase is the regulations relating to the storage and retention of personal data. The regulation that influences this, and which has already emerged in the investigation, is the General Data Protection Regulation (GDPR). The GDPR ensures that personal data is protected. Since this is strictly enforced, this regulation must be taken into account when mapping the available data. In the interview with respondent 9, clear steps emerged that a company must take to comply with these laws and regulations. The first step that you as a company must comply with is checking which personal data you store and what the reason is why you process this data. The interviewee indicated that it is extremely important that you only store information when there is absolutely no other option. So not with the point of view that it might be used in the future. In addition to this necessity, the amount of data should be as small as possible. For example, if you want to save someone's study background in the recruitment process, you do not need someone's date of birth, for

example. Step two that must be met is that as a company you have 1 separate basis for each goal for that goal. These six principles are stated in section 5.2. Step three that must be met as a company is that you must be able to demonstrate which data is stored. Examples of this are: email data, names, ages, etc. This must be stored in the processing register. The fourth step that must be followed has to do with securing the database in which this data is stored. The use of a third party responsible for this can be a solution. If there is a data breach, this must be reported immediately to the Dutch Data Protection Authority. In some cases, this must be reported to the persons whose data has been leaked. The last step, step five, ensures that your company already has to take privacy rights into account. Every person whose personal data you store as a company has the right to inspect what happens with this data. If this is provided to a third party, this must also be indicated.

5.4.1.3 Users

Following the above section, 5.4.1.2, privacy is linked to laws and regulations that must protect the personal data. Privacy is thereby seen as a fundamental human right that must ensure that the user is protected against misuse of his or her personal data. To find out how the current Stuvia user views the leverage of their user data, interviews were held with five types of students. One of the introductory questions of the interview was whether the user aspires to work a job after his or her studies in the same field as the study being followed. Four out of five students answered this question positively. Respondent 12 did not yet know what the next steps are in the future career. However, this person did not rule out the possibility that he might choose a job that matched his studies. This question had to be answered, in order to see whether the available data that Stuvia has can be applied to the potential vacancies. Remarkably, each student responded positively when asked at the beginning of the interview whether he or she was open to a potential job after graduation using Stuvia's current platform. Respondent 11 said that many students are unsure about the next steps in their career. When companies contact the student, this can be expanded in the orientation period after their studies, in order to see all the possibilities, the labour market has to offer. Respondent 14 added that she cared about what kind of companies would approach her and what information these companies would know about her prior to the contact. Respondent 13 agreed, adding that Stuvia's openness could be very helpful in leveraging user data. If it were made clear which data is stored by Stuvia and how a user profile is created, the user can indicate whether he or she is open to a possible job.

For the interview, a number of subjects were included that were asked about in every interview. These aspects are shown in Table 5. To provide a clear overview of the topics discussed during these interviews and what these topics entail, a subject description has been added to the table. Also, an indication per user is given, whether this aspect was important to the user or not. High interest indicates that the user finds the aspect very important, low indicates that the user does not attach great importance to the aspect and medium indicates that the user does not really have an opinion about this subject.

Subject	Subject description	Respon-dent 11	Respon-dent 12	Respon-dent 13	Respon-dent 14	Respon-dent 15
Privacy related subject						
User preferences	Preferences that can indicate which data can and cannot be used	High	High	High	High	High
User behaviour	Clarity of how behaviour is tracked online	Medium	High	Medium	High	High
Leveraging risk	Clarity of the risks associated with the use and storage of the data	Low	Low	Medium	Medium	Medium
Data storage	The way the data is stored and for how long	Medium	Medium	Medium	Medium	High
Vacancy related subject						
Matching	That the right vacancy is linked to a specific user profile	High	High	High	High	High
Company Size	That a distinction is made between large corporates, start-ups and everything in between	Medium	Low	Medium	High	High
Entry difficulty	That the difficulty of entry is taken into account when matching	Medium	Medium	High	Low	Medium
Segmented ads	That an advertisement fits well with the user profile	High	Medium	High	Medium	High
Job description	A clear overview of what the job entails, the salary, growth possibilities etc.	High	High	High	High	High
Accessibility of the office	That a vacancy is matched close to residence	High	Medium	Low	Medium	Low

Note: Looking at the topics covered during the interviews with the students, the response of the interviewee on each aspect was considered, and was graded from low to high in terms of the answers given according to their preferences mentioned for the purpose of privacy related and vacancy related subject

Table 5. Topics that emerged in the interviews and the degree of interest associated with them per interviewee

It can be concluded from Table 5 that when it comes to privacy, Stuvia users are generally on the same page. All five interviewees find it extremely important to be able to determine for themselves what their preferences are when it comes to leveraging the user data. Three out of five respondents also indicated that they find it important that the platform makes it clear how their online behaviour is monitored on the website. The other two topics about the risks of storing and processing user data and how this data is stored are seen as less important. It can also be seen from Table 5 that when it comes to the content of the vacancy in question, opinions are more divided than the privacy part of the interview. Except in the areas of Matching and Job Description, all users find it important that the most suitable job is linked to their user profile and that there is a clear description of the relevant job.

5.4.2 Phase 2: Delineation phase

In the delineation phase, the variables mentioned in the mapping phase are brought together to create the design of the new service. In the delineation phase, the social, economic, technological and political aspects are brought together. The aspects that are subjective are classified under the soft variables. The aspects that are objective are grouped under the hard variables. The decision variables can then arise from the soft and hard variables taken together. Those variables than should lead to the execution phase.

5.4.2.1 Soft variables

The soft variables in the delineation phase are linked to relationships between different actors participating in the recruitment market. On the one hand, the demand for data that the recruitment market needs and on the other hand, the available data that can be leveraged. When there is a balance between these two variables, the decision-making process can begin. In order to properly interpret this, it is important that the information about the recruiter market is clearly presented. Another soft variable mentioned by Respondent 5 is the norms that the users carry with them. When a user uses the Stuvia platform to buy or sell study material, this does not mean that this user is also open to consent to an invasion of his or her privacy for a possible next step in his or her career. These standards can be changed if a user is aware of how his or her data is leveraged. Another way these norms can be changed is if Stuvia tries to transform the marketing of the entire company. For example, Stuvia is now known as a student platform that students can use to buy and sell study materials. If Stuvia succeeds in changing the image of the company as a student platform that, in addition to this core business, also serves as a springboard for your professional career, then the user knows beforehand what kind of company they are dealing with. This also ensures that the standards of the user change.

5.4.2.2 Hard variables

The hard variables in the delineation phase are linked to objective non-measurable variables in which, for example, legislation and regulations are stated. The GDPR discussed is an example of this. The company in question must comply with this, if the new service wants to have a chance to succeed. This hard variable is often associated with the development of certain products or services. Without proper regulatory processing, a company cannot take advantage of this expansion of its product portfolio. As Respondent 7 mentioned, there is no escaping the need for online services such as Stuvia to correctly inform the user of the data usage. If this is not the case, the new service has no chance to be successful. When all soft and hard variables are aligned, i.e. when the laws and regulations have been incorporated in both the question of processing user data by the recruitment parties that have to use it. And the correct mapping of this data, by an online platform such as Stuvia, on the basis of this legislation, then the right choices can be made about how the new service should be marketed.

5.4.2.3 Decision variables

When the soft and hard variables are in balance, the decision variables must be preserved. Decision variables that emerge in the delineation phase is the conservation of resources. As Respondent 5 points out in the interview, the flow of usage profiles has to be kept up-to-date time and again in order to match the demand of the recruitment market. On the other hand, there should also be enough vacancies available for the persons who are looking for a job after their studies or internships during their studies. When one of the two fails, the new service is doomed to fail. The communication between supply and demand, of potential jobs and user profiles that have to fill these vacancies, must go well. When this is the case, predictions can be made by actors in the recruitment market that ultimately lead to the correct execution of the new service.

5.4.3 Phase 3: Execution phase

After the delineation phase is over and the service is up and running, the service must be kept running. The execution phase starts with soft variables that ensure that the cooperation between the recruitment parties and Stuvia runs smoothly. One of the soft variables that must be maintained is collaboration. Respondent 2 zoomed in on this in more detail during the interview. One of the actors that ensures that the service can be kept running is a company that takes care of the storage of the available data. This data must be stored under the laws and regulations stated in the GDPR.

"We currently use a host provider. In our case it is one of the largest cloud providers in the world. They manage databases in 8 different regions of the world. in our region, where we. Our data is stored in Ireland. The reason This is because you want the database to be located as close as possible to the country you are running in. The reason for this is that your website will load faster. Since there is no such database available in the Netherlands, we have chosen Ireland, this is relatively "close to" the Netherlands." (Respondent 2)

Another soft variable that is discussed is investing in the new service. When the new service has its first collaborations, reinvestment can optimize the operation of the new service. One way to improve the service is to increase its visibility. As Respondent 7 pointed out in the interview, the name of the company is extremely important during the acquisition of new customers. Name recognition can strengthen the customer base on both sides. This has a direct effect on each other. The more companies offer vacancies via the platform, the more potential placements will use the platform. Brand awareness can be created by partnering with big successful names in the job market or by increasing marketing budgets.

"The sooner you succeed in increasing brand awareness, the larger the sales market becomes. It is important that parallel to creating brand awareness, the platform works efficiently. So, when the matching takes place accurately, the more vacancies are filled and the bigger the new service gets." (Respondent 7)

When the platform succeeds in attracting big names from the job market and performing the right placement of candidates through the right matching, the soft variables will take place organically. The reason this happened is because more and more actors are starting to feel involved in this market. So,

there will be more and more stakeholders who want to influence the recruitment market, says Respondent 7.

After the soft variables have been achieved, the hard variables will take over in the execution phase. It is important here that the bond between the users is increased. After-treatment service is important here for companies that try to fill vacancies, but it is also important that the people who are approached for a possible job whether this job actually suits them, Respondent 6 adds. Respondent 5 adds that monitoring statistics about, for example, an advertising campaign is important to keep advertisers interested. When this service is performed properly, companies will stay on board for longer.

The final set of variables of the execution phase are the improvement variables. These are the variables that ensure that the entire process is evaluated. From here, the shortcomings can be brought back to the phase in which the new service will go through the cycle again. Respondent 8 indicates in the interview that it is important that shortcomings are made visible. When this is the case, you can continue to innovate as a platform. This can be done on the basis of new features of the service and the optimization of the matching process.

5.5 Challenges

Several challenges emerged from the interviews. The raised challenges that the respondents maintained in the interviews can be divided into three topics. Namely, one of the challenges is the limitations of the new service that are caused by the stricter laws and regulations. Another challenge mentioned in several interviews is the loss of users who use the current core business of the company. And the last challenge indicated in multiple interviews is finding the right revenue model for the new service.

5.5.1 Limitations caused by legislation

Respondent 9 claimed that due to the different laws and regulations included in the GDPR, it is a major challenge to keep the technology developing in addition to matching this legislation. He claimed in his interview that several factors would be negatively affected by these laws. Namely, before all the steps mentioned in section 5.4.1.2 have been completed, this takes a considerable amount of time. Once this has been arranged, it must be continuously monitored whether the GDPR still applies and updated if the purposes of a particular aspect in the storage of personal data change. When the platform succeeds in optimizing the service when it comes to, for example, an algorithm in the system that can read the user profiles more accurately and make predictions, then it must immediately be checked whether the laws and regulations are still being complied with. This remains a continuous process, with technological development of the service being suppressed.

5.5.2 Losing the existing userbase

Another challenge that emerges from an interview is the challenge that Respondent 8 cites. He indicates that users use a platform with a certain intention. When noise arises because another service is

introduced, it can negatively affect the existing user base. This could lead to the platform's core business eventually leading to the new service. Respondent 1 agrees with this. He states that the new service should only offer as an additional service to the current core business. This, incidentally, is something that is in line with each other, he claims. Should it be the case that the new service is correctly positioned for the current core business of a company, this will lead to the current user base being given more tools than before. If we look at what both Respondent 1 and Respondent 8 say, it can be concluded that both interviewees find the way of implementation important. The right strategy associated with this should ensure that the current user does not see the new service as a bottleneck, but rather as an addition to the platform. The existing user base is the largest source of income for the company. If the choice is made to pay more attention to the additional revenue stream, this can result in a user base that switches to a platform that offers a similar service.

5.5.1 Finding the right revenue model

Another challenge that comes with tapping into a new market on the basis of a new service is finding the right revenue model. Respondent 16 indicates that choosing the right price for the service is of enormous importance when looking at the recruitment market. Many online platforms that serve as a career platform, where jobs and internships are offered, only try to bring in companies that are well-positioned in the labor market. These companies can, for example, advertise via this platform for a fixed amount per month or year, in the form of a subscription. Pricing for this service must be done optimally. In that case, the company pays a fixed fee for a longer period of time and, for example, receives exposure among the seeking student in return and tries to increase brand awareness.

"The subscription costs that a company pays for placing content on your platform can be based on the costs of maintaining the platform. For example, how many man-hours you need as a company to keep the platform running. This should also be included in the fixed fee." (respondent 16)

Respondent 16 adds that determining this price is a difficult task because, in addition to maintaining the platform, there are also costs involved when the platform tries to innovate. Investigating what the price is, for example how you should fine-tune the algorithm in the future to optimize the platform, is very difficult to determine. To set a fair price for the fixed fee, which is not too high so as to deter businesses, yet is high enough to both make a profit and support the maintenance of the platform, is a challenge for most platforms. Respondent 18 has a completely different view of the revenue model of an online platform. He argues that, especially in the recruitment market, the price of placing a potential candidate should not be via a subscription form. But through an agreed committee, when a vacancy is filled. He indicates in the interview that a subscription only works when, for example, running an advertising campaign on a website. In this case, companies pay for the number of clicks and the exposure of a particular advertisement. Because the recruitment market is mainly about filling a vacancy and not just the visibility of an advertisement, an agreed commission for placing a candidate is a better revenue model for a platform that takes care of this. However, he adds that determining this commission is a

difficult task. So, a value must be given to filling a vacancy. The price can depend on the position, but also the scarcity of this employee.

"Determining the price for filling a certain vacancy is very complicated. For example, if you as a company are looking for a person that very few people are specialized in, you pay a higher price for this than when you fill a position for which a large majority of people can be found." (Respondent 18)

5.6 Conclusions

To determine which conglomerate strategy Stuvia should adopt in the recruitment market, a determination of different thoughts from actors in the recruitment market is made. To answer this question, the biggest barriers that come with choosing a strategy to enter the recruitment market are exposed. In order to give a conclusion of the various aspects that are important for the recruitment process, it is necessary to look at the possibilities that Stuvia has to map the data at their disposal as clearly as possible. However, there are also plenty of areas where the user-generated data cannot get a hold on. In order to make the expansion towards the recruitment market, Stuvia should be able to identify these features of a student first. However, this data is linked to personal data. This personal data entails several privacy concerns. These privacy concerns must be countered by the law and regulations that have recently been changed. Since 2018, there has been the same law and regulations with regard to personal data throughout Europe, namely: The General Data Protection Regulation (GDPR). This is an important aspect to consider when adopting the right conglomerate strategy. In order to see which strategy can best be used, 3 strategies (mentioned in section 3.3.4) have been devised that have subsequently been tested among the actors in the recruitment market. What was remarkable is that almost every company has a different vision on the three strategies mentioned. What can be concluded from these interviews is that the strategy that best suits the expansion into a new market is highly dependent on the situation on what vacancy needs to be filled. A combination of strategy 1 and 2, in which a collaboration is created between companies and the recruitment market where the right candidate can be found through user profiles is what is intended. The leverage of user data can be perfectly applied during the segmentation on a certain user by using advertising. It is extremely important that by entering a new market, the current core business should not be harmed and the DNA of the company should remain the same.

To find out which direction Stuvia should go in creating an additional revenue stream, the steps that need to be taken during the entire process have been researched. The phases that are highlighted in this guideline are: the mapping phase, the delineation phase and the execution phase. In order to provide a clear overview of the data that must be mapped, an overview of the intended data is created. It can be concluded from this overview that multiple data cannot be extracted from the available user data. This missing data must therefore be retrieved in a different way. Another important aspect that must be taken into account is the regulations relating to the storage and retention of personal data. The regulation that influences this is the General Data Protection Regulation (GDPR). In addition to these aspects

mentioned above, an examination of the interests from these users is given. Preferences that can indicate which data can and cannot be used and clarity of how behaviour is tracked online is most important to users. In addition to this, when it comes to the vacancy in question, the user finds it important that the matching takes place properly and that the job description is well presented. All of the above aspects when it comes to mapping data must be taken into account during this phase of service development.

In the delineation phase, the social, economic, technological and political aspects are brought together. Several variables can be extracted from the interviews. These are subdivided into soft, hard and decision variables. The soft variables are linked to the demand for data that the recruitment market needs and on the other hand, the available data that can be leveraged. Another soft variable mentioned are the norms that the users carry with them. Both variables must be included during the delineation phase. The hard variables in the delineation phase are linked to the legislation. When the soft and hard variables are combined, the decision variables can be preserved. The decision variables are the conservation of resources. When the above variables are correctly completed in the delineation phase, you can proceed to the execution phase.

After the delineation phase is over and the service is up and running, the service must be kept running. The execution phase starts with soft variables that ensure that the cooperation between the recruitment parties and Stuvia runs smoothly. Another soft variable is investing in the new service to optimize the operation. After the soft variables have been achieved, the hard variables will take over. After-treatment service and monitoring statistics are the hard variables. The final set of variables of the execution phase are the improvement variables. These variables ensure that the entire process is evaluated. From here, the shortcomings can be brought back to the mapping phase.

Several challenges emerged from the interviews. Namely, one of the challenges is the limitations of the new service that are caused by the stricter laws and regulations. Another challenge mentioned in several interviews is the loss of users who use the current core business of the company. The last challenge indicated in multiple interviews is finding the right revenue model for the new service. These challenges must be overcome in order to maintain the process of developing the new service and ultimately keeping this service running.

Chapter 6. Guideline development

Enough information has been obtained from the interviews with the actors from the recruitment market and the analysis of the grounded theory building regarding the process of Stuvia that can be converted into a guideline. This guideline should provide a step-by-step plan for companies that have access to redundant user data and want to use it to generate additional income in addition to the current core business. By combining both information from labour market actors and information from the current literature, an explanation can be given how various factors contribute to the emergence of new services and how to keep them running. The guideline describes 3 phases, namely:

1. Mapping phase: In this phase, the opportunities and resources of the company are mapped. Hereby an overview of the initial circumstances can be given.
2. Delineation phase: In this phase, the variables are presented in which the design of the new service is central.
3. Execution phase: In this phase the variables are revealed that must ensure that the new service is implemented and the operation is monitored.

Figure 9 shows the three phases above. It also lists the variables that are important to the decision-making process and the direction of pathway.

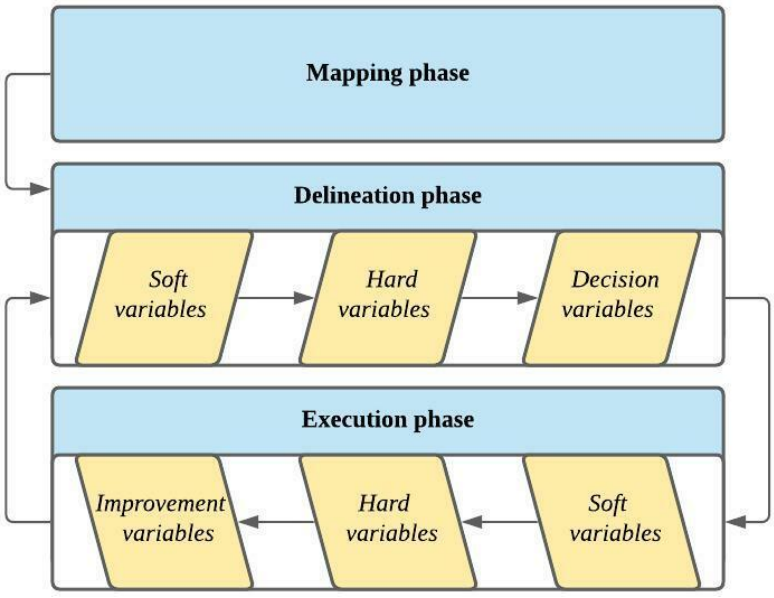

Figure 9. Visualization guideline with relevant pathways and variables

The improvement variables are the last step in the guideline, where the evaluation from the execution phase goes back to the delineation phase. This step enables innovation of the new service. All information with room for improvement is picked up again from the delineation phase, so that the new service is optimized. This cycle is a continuous process. A guideline can be drawn up from the results of section 5.4 in which a clear representation is given of the variables and how the phases are related to each other. Table 6 visualizes which variables emerge during the delineation and the execution phase.

Phase	Variables	Description
Delineation phase	Soft variables	- Relationship between actors - Norms of users - Information regarding recruitment market
	Hard variables	- Legislation and regulation
	Decision variables	- Retain resources
Execution phase	Soft variables	- Cooperation between parties - Investing in optimization
	Hard variables	- Monitoring process - After treatment service
	Improvement variables	- Evaluation back to delineation phase

Table 6. Description of the variables in the delineation and the execution phase

To extend Figure 9, the variables from Table 6 have been added to the guideline. In addition to adding the variables, Figure 10 includes the various aspects that are important in the mapping phase during the first phase of developing the new service. The most important aspects that must be included in the decision process during this phase, which can then move on to the delineation phase, are the results from section 5.4.1. First, in the mapping phase, the available data must first be looked at and whether this corresponds to the demand from the market that must be entered. If this is not the case, ways must be devised how this data can still be obtained from the users. One way this can happen is that during the registration of the current core business, certain information that is still missing must be requested from the user. When the user data required by the market to be entered has been obtained, user profiles can be compiled that can then be matched with the demand from the market to be entered.

After these user profiles have been compiled, the GDPR steps must be followed in order to meet the requirements of the law. These steps are listed in section 5.4.1.2. After taking into account the steps that must be followed to comply with the GDPR, the view of the users towards the use and storage of data was looked at. These results are stated in section 5.4.1.3. Preferences that can indicate which data can and cannot be used and the way the data is stored and for how long, were considered most important. These aspects must be processed during the mapping phase.

Because the grounded theory building is related to entering the recruitment market, we also looked at what the user finds most important about the relevant vacancy. The user finds it important that the matching takes place properly and that the job description is well presented. For the matching, it is important that enough data is available. All of the above aspects have been incorporated in Figure 10, where a clear representation of the guideline is given. Figure 10 also shows in which stage of the development of the new service the process is located. The stages are divided into three stages, namely: the service design stage (shown in the red box), the implementation stage (shown in the purple box) and the innovation stage (shown in the green box).

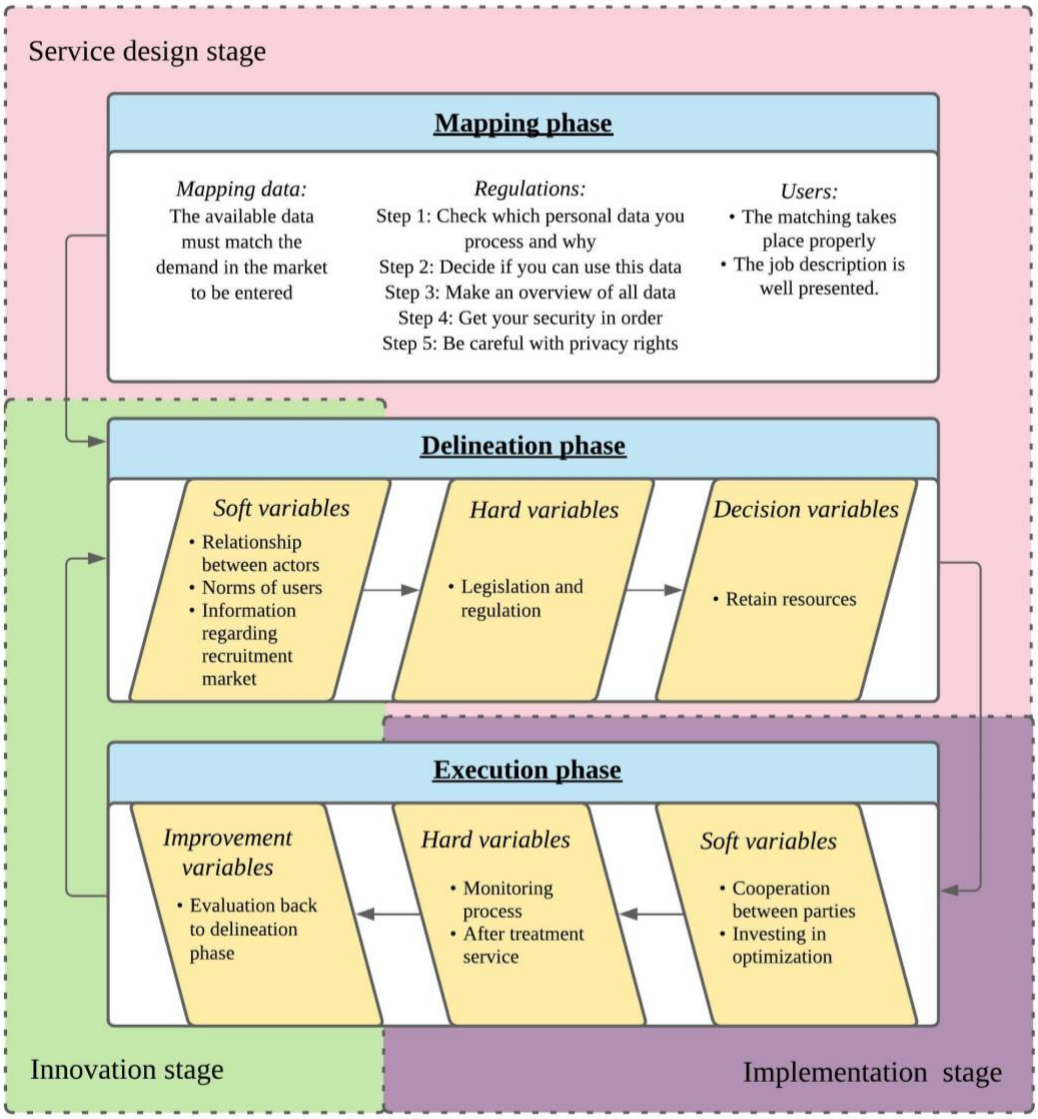

Figure 10. Visualization guideline arising from the results of the research

The purpose of the guideline from Figure 10 is to provide tools for developing and maintaining a new service. The most important variables that occur in the process are shown and the pathways indicate the order in which the phases occur. Ultimately, companies that have access to redundant user data can use this guideline to incorporate into their business operations and choose the right strategy when entering a different market. As can be seen in Figure 10, the three stages are overlapped by three stages, namely: Service design stage, implementation stage and the innovation stage. In order to properly implement the development of the new service, all steps in the service design stage must first be taken into account. After these steps have been completed, the implementation stage is transferred. In this internship it is important that the service is kept running and that it is checked whether the operation of the service is running correctly. When enough information has been gathered about the service, the transition is made to the innovation stage. In this internship it is important that the improvements of the service come to light and are then tested, in order to ultimately lead to optimization of the service. The end result of this internship is that going through this cycle over and over again leads to innovation.

Chapter 7. Discussion and limitations

This section will impose the discussion for the purpose of this research. In order to carry out this as well as possible, the results of the empirical research and the underlying methodology were critically examined. This section critically examines two aspects, namely: Elaborating on the findings by putting them into a broader contextual perspective and by discussing the methodological approach of conducting independent research. Each discussion point, takes into account the implications they have to answer the research questions. Finally, this section looks at the added value of this research. Whereby, Academic and Societal relevance is described in more detail.

7.1 Discussion

In this research, the right strategy for entering a different market based on the available user data of an online platform is examined. In addition to this, a guideline has been drawn that should lead to a well-functioning service in a different market. The key point in achieving a successful continuation in a different market is matching the GDPR on the one hand and keeping the user satisfied on the other. Comprehensively, the findings of this study imply that online platforms, where user data is stored and delivered, are at odds with existing laws and regulations. The logical association with this implication is that the recent GDPR is slowing down the process of broadening the current core business into a new market. It can be seen in the available literature that researchers have looked at solutions in which privacy concerns regarding personal data can be countered by placing the responsibility for user data with the users themselves. In the literature it is argued that individuals have no control over their own data. The study of Janssen et. al. (2020) provides a solution to this problem. They provide Personal Data Stores (PDS) as a solution tool. This tool can be used to keep the monitoring and management of data in the hands of the user, and thus create opportunities for the user to use this data for own commercial purposes (Janssen, Cobbe, Norval, & Singh, 2020). Looking at this solution, conflicts arise with the guideline developed in this study. The reason for this is that a large part of the mapping phase consists of arranging the user data in certain user profiles. The more the platform knows about the user, the better the matching becomes between the user and, in this study, the open vacancy. PDS therefore conflict with the determined guideline. The reason for this is that if the users all choose to make as little data available as possible, the service is less able to perform the matching because too little data is known. Therefore, the results of this research, in which the guideline tries to best apply the process of leveraging data, conflicts with solutions like the PDS. The guideline contains the aspects in which the platform processes the data of the users in such a way that both the GDPR and the privacy concerns of the users are taken into account. Therefore, in this guideline there is no room for a tool like PDS. This section was created to discuss such contradictions, as they are important in the broader theoretical and social perspective in the expanding process of an online platform, through the use of leveraging user generated data.

Another aspect that emerged in the current literature is the decision influencers mentioned by Dhir & Dhir (2015) in their study, see Figure 5. They argue that while applying conglomerate diversification, the following aspects must be taken into account. Namely: the timing of entry, the characteristics of the entered industry, the impact of the regulation, the lack of available information and the supporting industry are important to include in the decision-making process (Dhir & Dhir, 2015). The results of my study show that Dhir & Dhir's model, in which the decision influencers are given per diversification strategy, is incomplete. Therefore, there is a lack of information in the model of which a diversification strategy should be chosen and which aspects are considered important in the decision-making process. More specifically, which decision influencers are important if it is decided to enter a different market by means of existing data is missing. In the guideline obtained during this study, in the innovation stage during the execution phase, the evaluation of the service is highlighted as an important aspect that influences the decision-making process. This aspect that has emerged in the obtained guideline of this research must be added to the model of Dhir & Dhir to complete their model. The moment of evaluation is an important aspect that must be included in the decision-making process and is missing in Dhir & Dhir's model. This the optimization of the new service and ensures is extremely important for platform innovation to enter a new market. Without evaluating the conglomerate diversification strategy, the new product or service added to a company's product portfolio has little chance of success.

Furthermore, when looking at the literature of Tadelis (2016), he concludes that the sales of an online platform depend on the reputation of the company, with feedback systems mainly improving the reputation of an online platform (Tadelis, 2016). However, this study points out that this is not the single most important factor that is important to the success of a company. The results of this study show that the communication towards the users counts much more heavily than this reputation and that a well-functioning matching of certain products or services is even more important in this respect. If these two aspects are optimized to the extreme where matching happens perfectly, then feedback systems would no longer be needed.

During the interviews, the concept of leveraging user data was examined. However, the results that came to light that are important in the development phase of a new service based on this data conflict with users' preferences. Namely, actors from the recruitment market indicated that the more data available from the user, the better the matching is between the user and the product you want to offer. This is also a requirement in the guideline that emerged from this research. However, when looking at the preferences of the users, the amount of personal data that is stored is often stopped on the grounds of privacy. As emerged from the interviews, users want to know which data is stored and want to control how this data is used. If all users choose to disclose as little of their personal data as possible because the new laws and regulations make this possible, this ensures that the matching process is stopped. This leads to a shortcoming of the guideline obtained from this study.

Another example that emerged from the interviews, when looking at this study, which conflicts with the development of the new service. Then the users who mainly use the Stuvia platform are generally students who are trying to pass their exams during their studies. The vast majority of these students are in the early years of their studies. If you compare this with the data required for matching with a particular vacancy offered by the actors from the recruitment market, this does not match the data required for this matching. The recruitment market is looking for the graduating student who is looking for a job. These are often students in the last year of their studies. These students are often busy finishing their thesis and not passing their exam. Since the vast majority of Stuvia's users use the platform with a completely different intention, namely to pass a course or exam, the question is whether students who are actually looking for a job or entry-level position come into contact with this vacancy at all. To reach students who are orientating towards, for example, an entry-level position, more specific knowledge is required than all the data available to Stuvia. It is therefore necessary that during the process, how the right student who is looking for a job, is looked at how this student can be reached on the platform.

7.2 Academic relevance

This research contributes to both value for academics and practitioners and therefore has societal and academic relevance in science. Plenty of information could be gathered from the literature review when it comes to two-sided markets, but less information was available about making the transition to a multi-sided market. There is a lack of knowledge about how to initiate this transition and how to increase user value. By increasing the value of the users, companies are able to find new revenues and thus create more profit. This study contributes to how to fill this knowledge gap by looking at how leveraging user data can turn a two-sided market into a multi-sided market and thereby create an additional revenue stream. This study also mapped out which laws and regulations affect the storage and use of personal data for third parties and commercial purposes. Together with the correct mapping of the available user data, a guideline could be produced that can lead to more value for both companies and their users.

When looking globally at all interviews and broadening to a different market on the basis of user data, and what emerged in the literature on this subject, little is known about aspects related to the leverage of user data and the regulation that plays an enormous role here. Due to the recently changed laws and regulations regarding this subject, many interviewees knew little or not how this works. There is also little information available in the literature on this subject. This study therefore serves to provide practitioners from the recruitment market with knowledge of how, on the basis of user data and the correct application of the GDPR regulations, they can enter a different market without the user having a bad feeling about this. This research also serves to fill the knowledge gap in the current literature by contributing in the form of a guideline in which innovation and the development of such a service are central. Thus, the main contributions of this study are: 1) The development of a guideline on how companies can leverage their available data in another market, taking into account the laws and regulations along with the preferences of the users, 2) Make the right choice in diversification strategy

when expanding to a different market, 3) How best to continue the collaboration with companies in the recruitment market, 4) How a two-sided platform can make the transition to a multi-sided platform based on the available data and finally, 5) How an online platform ensures that, in addition to the current core business, it can succeed in creating an additional revenue stream based on the available data.

7.3 Societal relevance

In addition to contributing to the academic literature, the obtained guideline of this study indirectly adds value for the users of online platforms, thereby contributing to societal relevance. This research corresponds to the curriculum of the master's degree in Management of Technology at TU Delft, which focuses on the development of a new service. This service must make a technological contribution to society and thus respond to market demand. The master's program involves understanding how technologies work and how they can add value to both companies and society. Looking at the grounded theory building conducted during this research, it can be concluded that this is in line with these aspects. The guideline that could be concluded from the results can be applied by multiple actors who have access to redundant user data and offers tools for generating an additional revenue stream based on this data. This research can therefore be used as a step-by-step plan for similar companies.

Chapter 8. Conclusions, relevance, recommendations and reflection

The conclusion is presented in the final chapter of this study. To answer the main research question, the sub-questions are first answered. These sub-questions should contribute to answering the main question. In addition to answering the research questions, the limitations of this research are included in this chapter. Therefore, future researchers can take these limitations into account in future research. When the research questions have been answered and the limitations have been identified, the managerial recommendations can be displayed. In addition to these recommendations, the managerial relevance of this research can be demonstrated. These two aspects should contribute to what this research actually imparts to practice. Additionally, this research, like other scientific studies, has limitations. These limitations are related to the extent to which the research was conducted. This has mainly to do with the research methodology of this thesis. Finally, the recommendations for future research are discussed. During this research, several aspects came to light about which experts have little or no knowledge. Also, several gaps have been recognized in the current literature that can be investigated in the near future.

8.1 Answer to the research questions

1. ***What is the current state of the literature how two-sided platforms transition towards a multi-sided platform market?***

In order to answer the first sub-question, various aspects have been examined in the literature that are essential to change from a two-sided market to a multi-sided market. The literature indicates that a two-sided platform makes it possible to connect products or services to third parties and to increase their use (Boudreau, 2011). The platform serves as an intermediate between these two parties. A triangular relationship is then created between these parties (Eckhardt et al., 2018). A decade ago, marketplaces have become a common two-sided platform in the digital era. Gawer (2009) stated in her literature that two-sided platforms, cannot be seen as a platform that values innovation (Gawer, 2009). After this period, more and more two-sided platforms became online. Tadelis (2016) claimed that the success of an online platform depends partly on the platform's reputation and feedback systems, the most important aspect of a good working feedback system is to contribute new buyers with information about the past behaviour of a seller. This will promote integrity in an online marketplace and increases the efficiency of an online platform because the irritation caused by asymmetric information is less (Tadelis, 2016). To this, Lerner (2014) and Gong et al. (2020) added that an online platform can also be used for other purposes in addition to acting as a mediator between two parties. (Gong et al., 2020; Lerner, 2014). An important aspect for online platforms is the number of people or participants who use your product or service and thereby improve the value of a good or service. This phenomenon is known in the literature as network effects. Cusumano also declares that network effects contribute to platform competition in online markets (Cusumano, 2010). Looking at the success of an online platform that has the

characteristics of a two-sided market, where network effects are positive, a two-sided platform can make an alteration to a multi-sided platform. Alaimo et. al. (2020) indicate in their most recent study that platforms from a two-sided market, with the correct use of underlying user data, can focus on complementarities and then expand to a multi-sided market. This means that the transition has been made from platform to a service ecosystem. This service ecosystem then increases relationships between different companies which eventually lead to platform innovation (Alaimo et al., 2020). In the recent years, companies have increased the use of their platforms online. Specifically, platforms in the two-sided market. However, companies are looking for innovation to increase the value of the user. By increasing the value of the users, companies are able to find new revenues and thus create more profit. Therefore, researchers discuss different ways how companies can find an additional revenue stream in addition to their current core business through data. The importance of analysing and mapping the data they have at their disposal is one of these ways through which a company can succeed in changing a two-sided platform to a multi-sided platform that creates more user value. Since, this allows the value for both the demand side and the platform provider, multi-sided platforms can enable competitive advantage towards other companies.

2. ***What is the current state of the literature on entering a different market based on existing user generated data to create additional revenue streams?***

This answer to the first sub-question forms a relevant bridge to sub-question 2. Namely platform innovation plays a major role in the use of leveraging user generated data to enter a different market. One of the ways by which this occur is that platforms better map the data they have at their disposal, while the relationship with the users increases. When a platform succeeds in achieving this, it must look for a dedicated application to leverage the data in the right manner (Trabucchi & Buganza, 2020). Trabucchi et. al. (2017) add to this, that merging data obtained in two-sided markets and penetrating a new market, will play an important role in developing new business models (Trabucchi et al., 2017). Olejnik et al. describes a significant mechanism that compares different user profiles and can distinguish which profile contains more economic value than the other (Olejnik et al., 2013). Several aspects contribute to the right strategy to make this a success. The concept of Real-time bidding of advertising (RBA) is reflected in the current literature as a mechanism where advertisers can determine value based on an impression to a user who sees the ad. Bid Optimization (BO), Key Performance Indicator (KPI), cost-per-click (CPC), Demand-side Platform (DSP), click-through rate (CTR) and the conversion rate (CVR) are aspects that allow advertisers to adapt their future strategies for an online campaign (Mehta et al., 2020; Yakovleva et al., 2019; Yang et al., 2019). It can be found from the current literature that different markets can be entered on the basis of user generated data. One possible market that can be entered is the advertising market. However, researchers often focus on advertising to users thereby increasing the exposure of companies for an advertiser. The field of recruitment has not yet been investigated. The recruitment market can be grouped under the advertising market.

3. *What is the current state of the literature on how to create competitive advantages and which growth strategy to use while entering a new market?*

In order to answer sub-question 3, three aspects that all influence each other must be examined. The literature review focuses on platform competition that leads to the right competitive advantages and these competitive advantages must be achieved by the appropriate growth strategy. One of the aspects influencing platform competition is network effects. Network effects is the amount of interaction between users, when the buying behaviour of a particular user influences the buying behaviour of another user. Since marketplaces are online platforms, where many users provide interactions and transactions, more users would attract other users (Alt & Zimmermann, 2019). Another reason why platform competition is increasing is that it is easy for users to switch to another platform. The attempt to increase cross-network benefits for consumers can contribute to enhancing this. Certain empirical studies emphasize that multiple platforms fail to maintain the largest market share in a market where new entrants are emerging. The fact that these platforms are located in a market where WTA is a characteristic of a multi-sided-market, indicates that the validity is not fully founded. Many scientists who support this argument, explain that market leadership does not depend on focusing on users and sellers as resources, but that platform competition is fuelled by platform differentiation (Cennamo, 2021). When examining how these incumbents can be dismantled by new providers, further research needs to be done on how competitive advantages with respect to incumbents could be reached. Competitive advantage leads to the right growth strategy. An analysis that can help to determine the right growth strategy is Ansoff's Matrix. Ansoff's Matrix is a frequently used analysis for decision making about strategies when a company wants to expand to a different market (Hussain et al., 2013). From this analysis it can be concluded that Stuvia must use the diversification strategy to achieve the right growth.

4. *Which conglomerate diversification strategy can Stuvia use to apply user generated data in a recruitment market?*

To determine which conglomerate strategy Stuvia should adopt in the recruitment market, a determination of different thoughts from actors in the recruitment market is made. To answer this question, the biggest barriers that come with choosing a strategy to enter the recruitment market are exposed. In order to give a conclusion of the various aspects that are important for the recruitment process, it is necessary to look at the possibilities that Stuvia has to map the data at their disposal as clearly as possible. However, there are also plenty of areas where the user-generated data cannot get a hold on. In order to make the expansion towards the recruitment market, Stuvia should be able to identify these features of a student first. However, this data is linked to personal data. This personal data entails several privacy concerns. These privacy concerns must be countered by the law and regulations that have recently been changed. Since 2018, there has been the same law and regulations with regard to personal data throughout Europe, namely: The General Data Protection Regulation (GDPR). This is an important aspect to consider when adopting the right conglomerate strategy. In order to see which

strategy can best be used, 3 strategies (mentioned in section 3.3.4) have been devised that have subsequently been tested among the actors in the recruitment market. What was remarkable is that almost every company has a different vision on the three strategies mentioned. What can be concluded from these interviews is that the strategy that best suits the expansion into a new market is highly dependent on the situation on what vacancy needs to be filled. A combination of strategy 1 and 2, in which a collaboration is created between companies and the recruitment market where the right candidate can be found through user profiles is what is intended. The leverage of user data can be perfectly applied during the segmentation on a certain user by using advertising. It is extremely important that by entering a new market, the current core business should not be harmed and the DNA of the company should remain the same.

5. ***What are the directions for Stuvia to collaborate with established names in the recruitment market by creating an additional revenue stream?***

To find out which direction Stuvia should go in creating an additional revenue stream, the steps that need to be taken during the entire process have been researched. The phases that are highlighted in this guideline are: the mapping phase, the delineation phase and the execution phase. In order to provide a clear overview of the data that must be mapped, an overview of the intended data is created. It can be concluded from this overview that multiple data cannot be extracted from the available user data. This missing data must therefore be retrieved in a different way. Another important aspect that must be taken into account is the regulations relating to the storage and retention of personal data. The regulation that influences this is the General Data Protection Regulation (GDPR). In addition to these aspects mentioned above, an examination of the interests from these users is given. Preferences that can indicate which data can and cannot be used and clarity of how behaviour is tracked online is most important to users. In addition to this, when it comes to the vacancy in question, the user finds it important that the matching takes place properly and that the job description is well presented. All of the above aspects when it comes to mapping data must be taken into account during this phase of service development.

In the delineation phase, the social, economic, technological and political aspects are brought together. Several variables can be extracted from the interviews. These are subdivided into soft, hard and decision variables. The soft variables are linked to the demand for data that the recruitment market needs and on the other hand, the available data that can be leveraged. Another soft variable mentioned are the norms that the users carry with them. Both variables must be included during the delineation phase. The hard variables in the delineation phase are linked to the legislation. When the soft and hard variables are combined, the decision variables can be preserved. The decision variables are the conservation of resources. When the above variables are correctly completed in the delineation phase, you can proceed to the execution phase.

After the delineation phase is over and the service is up and running, the service must be kept running. The execution phase starts with soft variables that ensure that the cooperation between the recruitment parties and Stuvia runs smoothly. Another soft variable is investing in the new service to optimize the operation. After the soft variables have been achieved, the hard variables will take over. After-treatment service and monitoring statistics are the hard variables. The final set of variables of the execution phase are the improvement variables. These variables ensure that the entire process is evaluated. From here, the shortcomings can be brought back to the mapping phase.

The five sub-questions above have been formulated to answer the main research question. Each sub-question contributes to answering this question. The research goal of this study is to find out how Stuvia can enter another market based on their available user data in order to generate additional income in addition to their current core business. In line with this research objective, the main research question is described as follows:

How can Stuvia leverage user-generated data to enter a different market using an appropriate growth strategy to create competitive advantages towards or collaborate with the incumbents in this market?

To answer the main research question, we first look at how Stuvia should leverage its user data. The guideline that has arisen from the results in chapter 6, visualized in Figure 10, can provide guidelines for this in the principles. This guideline can be used by Stuvia in order to achieve the stated objectives of this research. If we look at the mapping phase in this guideline, it can be concluded that while mapping its data, Stuvia takes into account the demands of both actors, but must also take into account the regulation regarding the GDPR. In order to meet the demand from both the users of the platform and the recruitment parties, we looked at which data is missing from both sides. Many specific personal data must be retrieved in order to lead to a properly functioning service. If Stuvia succeeds in achieving this, expanding the platform on the basis of the user data can be of added value for both the user and the companies that have difficulty reaching the right potential candidate. To determine which conglomerate strategy Stuvia should adopt in the recruitment market while entering this market, a determination of different thoughts from actors in the recruitment market is made. It emerged that the strategy to be applied when expanding into a new market is a combination of two of the three strategies that were central to this research. This combination means that Stuvia must first convert the available data into usable user profiles that correspond to the demand from the recruitment market. Subsequently, segmentation targeting to this person allows matching between the person and, for example, a certain vacancy, based on advertisements. When this process is properly mapped and what the behaviour of the user is during the orientation process to a new job, the matching becomes more and more accurate. The only caveat that Stuvia should keep in mind when implementing this strategy is that Stuvia takes into account the current DNA of the company. Students should see the new service as an addition to the current service offered by Stuvia. When this is done accurately, the user base will be preserved and a competitive advantage will arise over other platforms. The reason this happens is because the network

effects of the platform increase which ensure that more and more users start using the platform. Marketing activities can also reinforce this. When looking at the guideline in figure 10, in addition to reinvesting marketing activities and investing in the optimization of the service, there must be a phase of evaluation of what works and what does not work well between the collaboration of the new service. As a result, the service is tested time and again for its operation, which ultimately leads to innovation in which the matching keeps getting better.

8.2 Limitations of research

The vast majority of academic studies have limitations when it comes to research design. These limitations relate to whether the results of the study can be validated. This study also has its limitations. The first limitation of this study has to do with the design of the interviews. This influences the external validity of the research results. This kind of validity has to do with whether the research conducted is generalizable. Looking at the interviews in this study, it can be concluded that all actors interviewed are established and originate from the Netherlands. This indicates that only the Dutch way of thinking about this problem has been taken into account. Users of online platforms abroad may think very differently about this issue. A second aspect that has to do with the same limitation is that all literature from the literature review comes from all over the world. It is therefore stated here that all knowledge worldwide contains the same standards and value, while this is contrary to the above. The obtained guideline also contains the laws and regulations that are applicable in the European federal states. This indicates that this guideline cannot be generalized to the rest of the world. Therefore, this study is limited to the European Union. Another limitation of this study is related to the sample size of the interviewed users. Five students were interviewed in this study. These results of the interviews may not be generalizable to the almost million registered students in the Netherlands. The sample size is very small when compared to the total population of students. Also, when looking at the sample profile of these users, it can be concluded that all the gene interviewed students are highly educated. Perhaps the results of the interviews would contain different outcomes if students with a lower education level were also interviewed. Another limitation that emerged from this study is that not all stakeholders were included in this study. For example, insights from competitors or programmers are no longer taken. It was not possible to get these parties to speak. Therefore, this affects the representativeness of the survey. As a final limitation of the study, the data collection tools used during this study are discussed in more detail. During the empirical research, 16 respondents were interviewed. The analysis of all results was done using a coding program. Because all results were analysed by only one researcher, this study is limited. During the processing of these results and the coding of the interviews, only one perspective was included in the processing. In the current literature, this phenomenon is referred to as interpretivism and is a common problem in subjective qualitative studies.

8.3 Managerial relevance

In order to indicate the managerial relevance of this research, it is important to examine which academic knowledge from this research can be used by managers. How these managers can leverage this knowledge to achieve business goals is important here. One of the most important results of this research has to do with the processing of user generated data. When looking at this topic and how it is applied in practice, it can be seen that often managers are more focused on the business side of a company than the technical side of a company. Simply because they do not have the technical knowledge in-house. Since these managers have to run the company, the technological side will always come second because there is admittedly a lack of knowledge about this subject. Since the user generated data has to be mapped in a certain way and this is mainly driven by technologies, it is important that the manager grows in this in terms of understanding and his technical skills. Nowadays, the translation is often made by data scientists who are employed by a specific company. These data specialists have advanced skills when it comes to data storage and its application. However, these specialists lack the commercial knowledge to properly convert this data into the market. A major barrier that needs to be overcome is that the gap between the commercial application of data and the underlying data itself will be brought closer together. When this barrier is overcome, the business needs and goals will also be achieved sooner. The resulting guideline developed in this research can help to bring the data specialists and the managers together, by creating a better understanding between the commercial and technical knowledge.

Another outcome of this research that is important for the practice and the development of the new service is that the extreme process of data storage and the way in which processing this data can contribute to innovations is quite unclear in businesses nowadays. Special experts are needed who can understand, configure and manage this data. It is therefore necessary that a company such as Stuvia can properly manage the user generated data in order to master the monitoring and testing of data in addition to developing the new service. If not, the new service is doomed to fail. This is detrimental to the optimization of the new service and to maintaining the collaboration between the actors from the market that entered and Stuvia. Because the guideline obtained from this research offers a company a guideline on how a new service can broaden the current core business, this research contributes to potential growth opportunities for companies that have access to excess data.

Finally, the decision-making process regarding the application of user-generated data has an impact on the entire business operations of a company. In general, during decision making, there are shortcomings in managing this data and not in the technology itself. It is therefore necessary for Stuvia to use tools that enable the management of this data between different layers in the company to stimulate organizational operations. When the acquired guideline provides clarity about which phase the new service is in and what actions need to be taken, managing the new service can be done better alongside the current core business.

8.4 Managerial recommendations

Managerial recommendations involve using the established guideline and the strategies resulting from this research. When looking at the total process from the mapping phase to the execution phase, the wishes of the user are always taken into account in all phases. So, it is extremely important that the user's preferences are taken into account throughout the entire process. Feedback can make the difference here. When the users are seen as the most important resource, the platform will also attract new users. Ultimately, this in turn has a positive effect on the functioning of the new service, as the service improves when more data is available. In addition to measuring the user's preferences widely, it is also extremely important that advertisers are kept informed of all kinds of decisive results that have been achieved in reaching the right user. Communication is key in the process of retaining different actors. When this is taken into account, the success of the new service is considerably higher. After the mapping phase, it is important that managers continue to focus on the cyclical interaction between the delineation phase and the execution phase. When the monitoring and evaluation is done repetitiveness in the correct way, the optimization of the new service is accelerated and the success of this service towards the market to be entered is significantly increased. In the coming years, Stuvia should, in addition to facilitating a platform with which to trade its materials, also serve as a platform where the user is provided with handles for the rest of his professional career. To achieve this, the platform should not only focus on the current core business, but also look for alternatives that allow the platform to grow. In such a situation, the triggers emerge that should lead to one of the four types of diversification strategies. Conglomerate diversification may be in order if profit, growth, platform competition, R&D, excess resources and managerial motives are the triggers.

8.5 Recommendations for future research

Based on the results of this study, it is now explained in more detail what future research should focus on in order to further investigate the topic of this thesis. A recommendation for further research could be that the research is more generalizable by interviewing actors from different disciplines. Think of users of different ages and stakeholders from other industries. If this is investigated, a guideline can be drawn up that is more generalizable to other online platforms. When looking at the obtained guideline that this research offers, further research can also be done on the improvement variables. It is possible to investigate in more depth which factors influence the innovation process. When looking at the growth strategy that has emerged from the results of the empirical research, researchers also need further research into the causal relationship between the chosen growth strategy and the actual performance of a company. So, if multiple strategies are chosen, which strategy would have the most positive effect on a company's financial performance. What could also be explored in the future is how the growth strategy, while entering another market, is at the expense of a company's current core business. Thus, a company's current core business is positively or negatively affected by entering another market. Another important aspect that emerged in this study is the regulations for the storage and use of personal data. Future

research should look at the influences that laws and regulations have on the process of segmenting ads and matching certain user profiles with certain ads. It can also be examined whether it is possible to view regulations on the basis of this law in which the user can view the financial value of their data. Furthermore, when looking at the user, it can be investigated how user behaviour is influenced positively or negatively by tracking online behaviour. So, whether or not the user would use the site differently when he or she realizes that his behaviour is being tracked.

8.6 Reflection

When looking at the whole picture of the intended and realized aspects of this research, there is an actual difference between these two aspects when looking at what was intended before the research and what actually emerged during the research. A reflection is carried out on three parts of this study, namely: reflection on the literature review, the research methods and the research results. First, a closer look at the theory used in this research is done. If we look at the extent to which the literature review in Chapter 2 should provide an answer to the first three sub-research questions, it can be concluded that the current literature that has been achieved has been used in an orienting way in this study and should contribute to the introduction of the empirical study. However, it was intended during this phase of the research to discover connections that would answer these sub questions. However, the theories and concepts that emerged during the literature review did not unambiguously complement the academic literature. The reason for this is that during the initial phase of the research, the sub-questions that were supposed to answer the main research question were actually too broad. As a result, the answers to these questions were regarded as preliminary to the sub-questions that have become obsolete in the empirical research. What could have remedied this is that in the initial phase of the research, a theoretical framework could have been chosen, which was further developed in this research. This would make the theory more useful for this study. The concepts that were treated in the literature review and that were linked were first defined and then linked to the sub-questions of this study. The assumption that the transition from a two-sided market to a multi-sided market is the same as the transition from the student market to the recruitment market is not well founded.

Reflecting on the research method used in this study, it can be said that during the open coding phase of the grounded theory research method, the focus of the research was too broad. As a result, an enormous amount of literature was analysed during the initial phase of the research that was not relevant to the research after all. This could have been prevented by initially looking very broadly at the main research question, but by zooming in at the same time convergently where the problem definition of this research lay. During the initial phase of this study, finding the actual theoretical contribution was a difficult process. This could have helped to distinguish the main issues from the side issues during the literature study. A second aspect that was encountered during this study is that a wide range of topics were discussed during the first interviews that were considered superfluous in the later interviews. This took an enormous amount of time during the transcribing and analysis of the data.

If the results of this study and the process towards empirical research are reflected afterwards, it can be assumed that the researcher had more practical than theoretical glasses on during the entire process. During the beginning of the process, Stuvia's opinions were included in the research and the main question was often too practical, while the approach must be largely academic. In my opinion, the results of the research are not ground-breaking in terms of academic contribution, but they can form a good starting point for follow-up research, in which the given guideline can be tested and expanded.

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Appendices

Appendix 1 Interviewguide: Internal recruitment companies & External recruitment companies

Deze vragenlijst heeft als doel inzicht te verkrijgen in de belangrijkste aspecten rondom het verbreden naar de recruitmentmarkt en informatie te vergaren over de strategieën die hierbij komen kijken.

1. Kunt u kort omschrijven wat uw functie is?
2. Indien van toepassing, kunt u een korte omschrijving geven van een project waar u bij betrokken bent?
3. Hoe ziet de manier van werken eruit van een gemiddelde recruiter binnen uw bedrijf?
4. Welke tools worden er gebruikt binnen uw bedrijf?
5. Proberen jullie als bedrijf te innoveren in de manier van recruiten?
6. Werken jullie als bedrijf samen met andere externe partijen?
7. Adverteren jullie via onlinekanalen op potentiele werknemers? Zo ja, watvoor kanalen zijn dit?
8. Wat onderscheidt jullie bedrijf met andere recruitmentpartijen?
9. Wat zijn belangrijke aspecten waarnaar gekeken wordt binnen de selectie van een potentiele plaatsing van een werkgever?
10. Wat zou een goede mogelijke strategie zijn om de recruitment markt te betreden?
11. *Zoals net toegelicht wil Stuvia zich gaan uitbreiden naar de recruitmentmarkt, dit kan aan de hand van 3 soorten strategieën, namelijk:*
    - *Samenwerking met recruitmentpartijen aan de hand van de data waar zij over beschikken*
    - *Het verkopen van potentiele gebruikersprofielen zelf gemaakt door Stuvia.*
    - *Het toevoegen van een eigen recruitment-tak binnen Stuvia en zo zelf de recruitment markt betreden aan de hand van eigen recruiters.*

    Hypothetisch gezien als jullie zouden samenwerken met een bedrijf zoals Stuvia, welke strategie past dan het best bij uw bedrijf als er gekeken wordt naar de volgende strategieën die Stuvia kan hanteren?
12. Welke data is van belang om de recruitment markt te betreden?
13. Welke stappen en stadia in het proces denken jullie dat belangrijk tijdens het betreden van de recruitment markt?
14. Watvoor data is voor u als bedrijf van toegevoegde waarde als er gekeken wordt naar de data beschikbaar van Stuvia?
15. Wat zijn de barrières om de data te delen tussen verschillende stakeholders?
16. Hebben jullie in de hedendaagse werkzaamheden vaak te maken met privacygevoelige informatie? Zo ja, hoe gaan jullie hiermee om?
17. Heeft u als laatste vraag nog suggesties met betrekking tot het benaderen van andere (praktijk) experts voor meer relevante informatie of eventueel relevante documenten?

Appendix 2 Interviewguide: Internal experts Stuvia

Deze vragenlijst heeft als doel inzicht te verkrijgen in de belangrijkste aspecten rondom het de datacollectie binnen Stuvia en informatie te vergaren over de strategieën die hierbij komen kijken.

1. Kunt u kort omschrijven wat uw functie is?
2. Indien van toepassing, kunt u een korte omschrijving geven van een project waar u bij betrokken bent?
3. Hoe ziet de manier van werken eruit van een gemiddelde programmeur binnen Stuvia?
4. Hebben jullie in de hedendaagse werkzaamheden vaak te maken met privacygevoelige informatie? Zo ja, hoe gaan jullie hiermee om?
5. Geven de gebruikers van Stuvia toestemming dat de data verkregen uit hun preferences, gebruikt mag worden voor commerciële doeleinden?
6. Welke tools worden er gebruikt binnen Stuvia als het gaat om het opslaan van data en hoe gaat dit in z'n werk?
7. Proberen jullie als bedrijf te innoveren in de manier van hoe het platform werkt voor de gebruikers? En hoe zit dit met de manier van datacollectie? Wat voor stagerien hanteren uw bedrijf voor platform optimalisatie. Wat voor stategien voor data?
8. Werken jullie als bedrijf samen met andere externe partijen als het gaat om data sharing? Zo ja, watvoor kanalen zijn dit?
9. Hoe optimaliseert u, uw platform om platform competition te vermijden?
10. *Zoals toegelicht wil Stuvia zich gaan uitbreiden naar een andere markt aan de hand van de verkregen data, de markt die naar mijn mening slim is om te betreden is de recruitmentmarkt, dit kan aan de hand van 3 soorten strategieën, namelijk:*
    - *Samenwerking met recruitmentpartijen aan de hand van de data waar zij over beschikken*
    - *Het verkopen van potentiele gebruikersprofielen zelf gemaakt door Stuvia.*
    - *Het toevoegen van een eigen recruitment-tak binnen Stuvia en zo zelf de recruitment markt betreden aan de hand van eigen recruiters.*

    Watvoor strategie denk jij dat het slimst is om te gebruiken tijdens het betreden van de recruitmentmarkt?
11. Welke data is volgens jou van belang om de recruitment markt te betreden?
12. Welke stappen en stadia in het proces denken jullie dat belangrijk tijdens het betreden van de recruitment markt?
13. Wat zijn de barrières om de verkregen data te delen tussen verschillende stakeholders? Is dit puur privacy of heeft het te maken met andere barrières?
14. Heeft u als laatste vraag nog suggesties met betrekking tot het benaderen van andere (praktijk) experts voor meer relevante informatie of eventueel relevante documenten?

Appendix 3 List of Interviewees

Number of interviews	Company	Interviewee	Interview type
	Internal experts researched company		
1.	*Stuvia*	Owner	Videocall (via Zoom)
2.	*Stuvia*	Programmer	Videocall (via Google Meet)
	Internal recruitment companies		
3.	*International accounting and tax consultant company*	Senior Recruiter	Videocall (via Google Meet)
4.	*International accountancy and consultancy firm*	HR Manager	Videocall (via MS Teams)
5.	*International accountancy and consultancy firm*	Campus recruiter	Videocall (via Google Meet)
	External recruitment companies		
6.	*Recruitment agency for temporary and permanent vacancies*	Senior Recruiter	Videocall (via MS Teams)
7.	*International Specialist Recruitment Agency*	Managing Director	Videocall (via Zoom)
8.	*Highly rated IT recruitment company*	Senior Recruiter	Videocall (via Google Meet)
	Users		
9.	*Student*	Bachelor Student	Videocall (via Google Meet)
10. .	*Student*	Master student	Videocall (via Google Meet)
11.	*Student*	Master student	Videocall (via Google Meet)
12.	*Student*	Bachelor Student	Videocall (via Zoom)
13.	*Student*	Master student	Videocall (via Google Meet)
	Government		
14.	*Ministry of Justice and Security*	Spokesman	Videocall (via MS Teams)
	Data Experts		
15.	*Technology company in the Dutch recruitment market*	Senior Account Manager	Videocall (via Google Meet)
16.	*Innovative online career network platform*	Senior Manager	Videocall (via Zoom)

Appendix 4 Interviews and focus of the interviews

# of interviews	Interviews	Data usage	Strategy 1	Strategy 2	Strategy 3
	Researched company				
1	*Owner*	x	-	-	x
2	*Programmer*	x	-	-	-
	Internal recruitment companies				
3	*Senior Recruiter*	x	x	-	-
4	*HR Manager*	x	x	-	-
5	*Campus recruiter*	x	x	-	-
	External recruitment companies				
6	*Senior Recruiter*	x	-	x	-
7	*Managing director*	x	-	x	-
8	*Senior Recruiter*	x	-	x	-
	Users				
9	*Student*	x	x	x	-
10	*Student*	x	x	x	-
11	*Student*	x	x	x	-
12	*Student*	x	x	x	-
13	*Student*	x	x	x	-
	Government				
14	*Spokesman*	x	x	x	x
	Data Experts				
15	*Senior Account Manager*	x	x	x	-
16	*Senior manager*	x	x	x	-