Digital Density and the Sharing Economy

A case study on the barriers and opportunities of digital sharing economy activities within Umeå

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Abstract

The digital sharing economy is becoming more and more of a necessity as the increase in urbanization means a greater need for resources. The sharing economy has only recently began to gain a lot of attention with actors from Airbnb and Uber taking over headlines and spreading across the world, but little is known about what type of impacts this phenomenon will have on society. While from another view some areas have seemed to be almost static when it comes to the adoption of such platforms. This study aims at revealing the barriers involved towards a digital sharing economy and what pathways and opportunities exist to overcome them. The qualitative case study focuses on the city of Umeå, known to be high in technical competency and world leading broadband, having almost no activity in the digital sharing economy. The study goes on to present the barriers, pathways, and opportunities related to the sharing economy and how they apply to the city of Umeå. Additionally the research reveals the ways the digital sharing economy can help a city increase their digital density as well as making it more attractive for those living and traveling through the area.

Keywords: Shared Economy, Digital Density, Urbanization, Digital Platforms, Collaborative Consumption, Collaborative Economy

1. Introduction

Sharing resources is not a new phenomenon (Kemp & Olson, 2015), but rather something mankind has always been doing. In a time of rapid technological development (Van de Ven, 2005), the penetration of mobile devices, Internet and the development of online platforms supporting sharing and collaboration of resources and content, is providing users new ways of consumption (Hamari et al., 2015). The term “sharing economy” is a very broad concept and lacks a clear and common definition and is sometimes referred to as collaborative consumption (Botsman & Rogers, 2010), access-based consumption (Bardhi & Eckhardt, 2012) or commercial sharing system (Lamberton & Rose, 2012). However, what is common among these terms is the emphasis on a more efficient use of slack resources and how collaborative forms of consumption has benefited both for the individual users and society as a whole. One can look upon the sharing economy as an umbrella concept that involves several ICT developments and technologies that endorses peer-to-peer sharing of goods and services through online platforms between individuals (Hamari, 2015). Even though the definition is not clear and the name may be debatable, the fact remains that the impact of the sharing economy is huge and the awareness is growing
every year. Airbnb hosts around 425,000 guests every night and 44% of US adults are familiar with the concept sharing economy (PWC, 2015). Recent studies show that around 25% of the population in UK has used Internet technologies to share assets or resources in 2014 (Stokes, Clarence, Anderson, & Rinne, 2014). With the growing awareness of the concept, it becomes clear that few industries and organizations are exempt from the potential impact and change the sharing economy will have on society (Belk, 2014).

The challenge all organizations and corporations are facing is how to cope with the importance of increasing the digital content within their products, services and processes. Sharing as a notion, and more effective use of resources is without a doubt something that all can agree is a positive phenomenon, both from a sustainable as well as an economical point of view. From the perspective of a city, it has been argued that it is crucial to design a city that is able to absorb, adapt and respond to changes (Desouza & Flanery, 2013) in order to cope with growing urbanization. All though Information communication technologies (ICT) are key drivers of smart city initiatives (Chourabi et al., 2012) and could potentially offer opportunities for the citizens, the impact of these proclaimed advantages are still unclear (Odendaal, 2003). In this paper we argue that digital sharing platforms is a way for cities to be more successful in their pursuit of a more attractive image. Digital sharing platforms could help build a city that isn’t only smart but also attractive. However the research on both the sharing economy and platforms has paid little attention to this challenge and further studies on how digital sharing platforms could be a way of increasing the density of digital content on a location. We will provide valuable insight on the barriers and opportunities related to the sharing economy in the context of a city to begin to tackle this challenge.

1.1 Problem

Regardless of where you are on earth society will change and look dramatically different in 15-20 years and the importance of increasing the digital content will be crucial. In many cases high growth cities often lead to an accelerated implementation and success for shared economy platforms. The issues arises that Umeå, Sweden’s fastest growing city has very low usage and few actors when looking at sharing economy platforms (VisitSweden, 2016). As already mentioned the sharing economy will have a huge impact on society and will provide opportunities to densify the digital content for locations or cities, while enhancing the attractiveness for individuals and organizations within the location. Digital density is the number of connections in an area by people, employees, companies and others to the Internet (Zamora, 2013). Based on this we investigate the barriers and pathways that are related to digital sharing platforms. We have formulated a research question that we built our study on:
What are the barriers related to the sharing economy in the context of a city and how can these be overcome?

1.2 Aim
The aim of this study is to unearth the barriers and challenges affiliated with the sharing economy platform environment in Umeå and how such an environment can impact the image of the city. We believe that by revealing the barriers and challenges that it will be easier to understand the factors involved and will also uncover potential opportunities or areas that are not being utilized that could better the image of Umeå.

In order to answer our research question and reach the aim of this project a case study will be done on the digital sharing economy environment in Umeå through a qualitative approach. On one hand this is a case of the illustration of the digital sharing economy within the context of a city and the ways the sharing economy could help drive a city towards becoming more attractive for those living and/or traveling through it. On the other hand it is a case of how digital sharing platforms play a role in the densification of the digital content of a city.

1.3 Delimitations
In our case study we have investigated the sharing environment of Umeå and interviewed different actors across various areas and sectors. We have also conducted a literature review on the research available on the sharing economy as well as platforms. Some limitations are present in both the case study and the related research section, in order to be able to answer our research question based on the aim we have with the paper.

In the case study we choose three major actors, the municipally of Umeå, businesses operating within Umeå and Umeå University, overlooking the individuals living in Umeå due to the fact that we are interesting in gaining a higher view from those actively responsible for driving the future growth of the city. This could be a limiting factor as it presents viewpoints from specific groups leaving out other areas.

2. Related Research
In this section related research to the sharing economy and digital platforms is presented.

2.1 The sharing economy
The shift from ownership to access is new in many areas but its important to remember that temporary access business models aren’t a new phenomenon but rather the core in business-to-consumer (B2C) services such as car renting and tool lending or business-to-business (B2B) services like outsourcing. These types of rental
business models are evolving because of two distinct trends (Dervojeda et al., 2013). The first is the technological advances that allow marketplaces and platforms to spread in ways not possible before, including the access and availability that has been made easier through the help of Internet and mobile technology. Streaming media services such as Netflix and Spotify are two examples of B2C-services where the customer gets access to movies, series and music on their mobile phone or computer. The second clear trend is the shift where companies start marketing individual’s own slack resources to other individuals instead of only their own companies’ resources. An online sharing platform allows the connection between a temporary need and someone with an unutilized asset and could potentially be used in any type of business or area.

The sharing economy is a broad term and lacks a common definition (Felländer, 2015, Hamari et al., 2015). The concept is sometimes referred to as collaborative economy (Botsman & Rogers, 2011), access-based consumption (Bardhi & Eckhardt, 2012) and product service systems (Mont, 2002). Regardless of the term, the mutual focus is however on collaborative use of slack and unutilized assets and services and how they can be used more efficient. In the wake of the 2008 financial crisis, the sharing economy was popularized by Botsmans and Rogers (2011) in their book Whats Mine Is Yours. The sharing economy, where access over ownership is praised, became an appealing alternative for consumers that during recent years have had increased concern over climate impact and social embeddedness of local consumption (Hamari et al., 2015). The collaborative consumption is according to Botsman and Rogers (2010) an economical model based on sharing, swapping, gifting, trading or renting assets or resources. Their definition is quite broad and mixes marketplace exchange, gift giving, and sharing. A more specific definition is given by Belk (2014) who describes it as: “Collaborative consumption is people coordinating the acquisition and distribution of a resource for a fee or other compensation” (Belk, 2014, p. 1597).

It is however important to understand the difference between collaborative consumption and sharing economy. The later and those described above contain the reinvention of traditional market behaviors such as renting, swapping, sharing and gifting, with the help of technological progress and scaling in a way that wasn’t possible before the Internet. The sharing economy is an economic system with emphasis on peer-to-peer exchange and sharing of slack and unutilized assets or services for free or for a fee. Felländer and her co-writers define the sharing economy as:

*The Sharing Economy comprises the peer-to-peer exchange of tangible and intangible slack (or potentially slack) resources, including information, in both global and local contexts. This mediated exchange tends to reduce users’ transaction costs by replacing third party intermediaries with digital platforms (Felländer et al., 2015, p. 19).*
With the use of mediated platforms the cost of ownership of a resource is lowered when sharing with others. Unutilized or unused assets have little or no value for the owner, and faced with the need of a resource, asset, or skill one must chose between buying/learning (acquiring) and renting/hiring (Kemp & Olson, 2015).

![Figure 1 - asset/skill ownership decision tree (Kemp & Olson, 2015)](image)

The acquisition of assets can be seen as inefficient in the long run while renting consistently can be considered as too expensive. The decision of renting or acquiring an asset or skill is illustrated in Figure 1. Acquiring an asset/skill and share it with others will create profit and reduce the ownership burden. Collaborative ways of consumption is often highlighted as a way to deal with societal problems, such as overconsumption, poverty and climate issues. There is however a lack of empirical evidence of understanding why people participate in the sharing economy (Hamari et al., 2015). A recent study with more than 90 000 individuals showed that convenience overtrumping both price and preference of access over ownership, was the number one reason why people choose to participate in the sharing economy (Felländer et al., 2015). It is also notable that sustainability and local connection are relatively low factors involved in the sharing economy.

There are three major market forces that drive the acceleration of the collaborative economy growth; societal, economical and technological drivers and as they progress, the trends will continue to expand (Owyang, 2014., Böckmann, 2014). Urbanization and the increasing densification of the population help smooth the friction of sharing since a greater amount of people means a larger potential network of unused assets with a constantly expanding need for them. The growing awareness of the environmental impact of our consumption is a societal driver that fuels the collaborative economy and are often associated with the collaborative way of thinking.
(Kramer, 2011). The need and curiosity of social interaction and communication is another societal driver that helps drive the trend of the collaborative economy.

Another factor that drives the sharing economy and the global recognition is the economical factors such as the increased sharing of idle inventory and unutilized assets, which give individuals the possibility to earn income and to a greater extent gain financial independence (Dillahunt & Malone, 2015). Digital sharing platforms and the digitalization of society encourages freelancing and micro-entrepreneurs in new ways while increasing financial flexibility. Another economical driver is the change of attitude where accessibility over ownership now increases, which is opening new markets focused on sharing of resources (Belk, 2014).

The final market force that drives the growth of the sharing economy are the technological drivers. The rise of social networks (Constantinides & Fountain, 2008), smartphone penetration and technology (Felländer et al., 2015) as well as payment systems (Böckmann, 2014), are technological factors that have enabled and driven the acceleration of the awareness of the sharing economy. Trust is a key principle for the collaborative economy to function (Botsman & Rogers, 2010) as well as the other factors such as social networks, reliable payment systems, and rating functions all contributing to people gaining more trust in sharing resources (Stene, 2014). The evolution of two-sided digital market platforms that support peer-to-peer communication are a core foundation for the sharing economy to function. (Derojeva et al., 2013, Felländer et al., 2015)

Sharing resources as mentioned earlier is something mankind has always been doing, but the sharing economy and the collaborative economy as a phenomenon was born during the Internet age (Belk, 2014). However the growing discourse of the sharing economy is still at an early stage and most of the research available to this point is considered futuristic. There is a lack of case studies towards digital sharing platforms and the potential impacts and challenges related to them, while existent research is silent on how the sharing economy could enhance the density of digital content for a specific location.

2.2 Digital platforms

The concept of platforms is very broad with diverse meanings and has gained attention in many different theoretical fields (Andersson et al., 2013). The term Platform has come to be related as a common design pattern, where a set of stable components supports variety and evolvability in a system (Baldwin and Woodard, 2009). Another definition of platforms is given by Tiwana et al. (2010) and is: the extensible codebase of a software-based system that provides core functionality shared by the modules that interoperate with it, and the interfaces through which they interoperate (Tiwana et al., 2010, p.675). The term platform is used in different ways, Thomas et al. (2014) conducted a literature review on the platform field and identified four distinct research streams (see Table 1): product family platforms
(Meyer & DeTore, 1999), organizational capability platforms (Eisenhardt & Martin, 2000; Teece, Pisano, & Shuen, 1997; Winter, 2003), market intermediary platforms (Armstrong, 2006; Rochet & Tirole, 2006), and technology system platforms (Cusumano, 2010; Cusumano & Gawer, 2002).

The predominant use of the term platforms is in the context of a product platform (Anderson et al., 2013, Gawer & Cusumano, 2002). Product platform is defined by Meyer and DeTore (1999) as: A common design rules and implemented subsystems and subsystem interfaces that form a common structure from which a stream of derivative products can be efficiently developed and produced. (Meyer & DeToro, 1999, p-65). In this research stream the term platform are described as a way for a new generation or group of products for a particular firm in order to gain market advantages.

In the second research stream, the organizational capability, platform is considered a structure that stores an organization’s capabilities and represents a collection of architecture of resources and capabilities that have been realized and deployed (Thomas et al., 2014). Technology doesn’t have a central role but competitive advantage is rather achieved by organizational capabilities and adaptation to environmental demands.

In the research stream, market intermediary, platform is referred to as characterize products, services, firms or institutions that mediate transaction between two or more groups of platform agents (Rochet and Tirole, 2003). The platform and the interchange between multiple markets create value for the platform owner (Armstrong, 2006).

The forth and final research stream identified by Thomas et al. (2014) is the technology system, which is the broadest and echoes the underlying theoretical logics of the previous three streams. The platform is looked upon as the hub of a technology system and could also be referred to as platform based ecosystem (Costis, 2016). Platforms and ecosystems are closely related (Holmström, 2013) and platform based software ecosystems are currently emerging as a dominant model for software services (Tirwana et al., 2010).

<table>
<thead>
<tr>
<th>Research Streams</th>
<th>Description</th>
<th>Key references</th>
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<tbody>
<tr>
<td>Product family platform</td>
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</tr>
<tr>
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| Market intermediary platforms | Platforms is referred to as characterize products, services, firms or institutions that mediate transaction between two or more groups of platform agents | Armstrong, 2006; Rochet & Tirole, 2006 |
| Technology system platforms | The platform is looked upon as the hub of a technology system and could also be referred to as platform based ecosystem | Cusumano, 2010; Cusumano & Gawer, 2002 |

Table 1. - Research streams in platform research

Platforms define the way in which software is produced, distributed and changing the business paradigms of the software industry as well as the industries in which the platforms are immersed (Holmström, 2013). Firm-centric digital platforms such as Amazon and Apple Appstore have enabled the increasing growth of e-commerce and have changed the way in which physical and digital goods are being sold and distributed (Anderson et al., 2013). Although the platform research is extent, and has attracted a lot of attention during the years, the research on digital platform is scant.

The discourse of digital platforms is the research streams within platform research that is in dire need of increased attention from scholars, due to its increasing importance in society. The heart of the sharing economy is the technological advances and the shift in consumer’s behavior towards sharing assets with strangers and fostering a sense of trust and willingness to collaborate, which was born out of the early peer-to-peer marketplace platforms such as eBay, Napster and Wikipedia (Kemp & Olson, 2015). Academic research in general on the sharing economy is very scarce (Böckmann, 2014) but the literature could be divided into several subdomains (Teubner, 2014): psychological basis of sharing and access contra ownership (Belk, 2010; Bardhi and Eckhardt, 2012), legal characteristics (Kassan & Orsi, 2012; Guttentag, 2013), peer-to-peer markets (Anderson et al., 2013; Slee, 2013) and finally literature regarding specific cases and services (Zervas et al., 2013). To our knowledge, there is a gap in platform literature when it comes to digital platforms as well as how the sharing economy could potentially be used to increase the density of the digital content of a specific area or location, which potentially could be a way for a city to be not only smart but also more attractive for individuals and organizations.
3. Research Methodology

In this section the research approach, case description, data collection, sampling techniques as well as the methodology used for the data analysis will be presented.

3.1 Research approach

The purpose of this thesis is to explore in depth the barriers and potential pathways that exist within Umeå around the digital sharing economy. As this research aims to find specific reasoning and understanding of details, it was decided that a qualitative strategy was the best way to look at the phenomenon occurring. Denzin and Lincon (2000) describe qualitative strategy as research that locates the observer in the world through methods such as interviews, conversations and other observing manners, in order to capture phenomena in its natural setting. This was optimal as the aim is not to come to a conclusion that is quantifiable or that is come to by using statistical methods but to gain an in depth understanding of the events that are occurring (Strauss and Corbin, 1998, p.11).

Furthermore as we wanted to find out why specific events are happening and how actors perceive these events, it was important to gather our own data. When going further into the research strategy a case study approach is used. Yin (1994) describes case study research as describing the phenomenon in its real life context when the division between the real life context and phenomenon is not clearly evident. This strategy was chosen not only because the study aims to describe this phenomenon but also as case studies have very little control over behavioral events and that the research has focus on specific events (Yin, 2009). Thus, a case study approach was relevant for this research when trying to look at the specific case of the digital sharing economy environment in Umeå.

3.2 Case Description

As previously mentioned the case is focused on Umeå and the activities of the digital sharing economy occurring from within it. We argue that Umeå is an interesting case being the twelfth largest city in Sweden with over 120,000 inhabitants and Sweden’s fastest growing city (Visit Sweden, 2016). Recently the sharing economy has shown a high level of growth across the world, but for Sweden it has seen less developed in many areas as well as more in others. Furthermore it has been suggested that the public sector has been pushing for sharing ideas and that policies in Sweden are ahead of the curve. Finally it is notable that Sweden has a high level of IT competency and has the potential to grow more in the sharing economy realm. (Felländer et al., 2015)

When it comes to the large actors in the sharing economy such as Uber, Airbnb, Car2Go, Kickstarter and others, many areas in Sweden have caught on, but Umeå has seen little activity in this area. Of the larger actors, Airbnb is the only to have some
light spread on the city, while other actors such as sunfleet car sharing has seen some attention. The peer-to-peer side of the sharing economy has not yet been noticed, but it has some actors such as baghitch or a local Umeå business delbar.se trying to get into the game. Being a city with a high level of IT competency, infrastructure, growth and over 30,000 students, the digital sharing economy environment would be expected to be at large, but is instead almost non-existent ("Fakta om kommunen - Umeå", 2016).

Thus the choice as Umeå as a case became more relevant as it represents something that is occurring that may or may not be similar to other locations and left us with the what and why is really happening in Umeå.

3.3 Data Collection and Sampling Technique

During the data collection phase and sampling phase of the research, many different techniques were used in order to provide stronger and more accurate data. The data collection consists of primary data through the use of semi-structured interviews done in a face-to-face manner. The use of semi structured interviews allow for more probing into specific questions as well as occasionally changing the order of the questions depending on the responses from the interviewee (Ritchie & Lewis, 2003, p.111). Furthermore, during the process of interviewing, questions not present on the interview guide were asked that could help further the discussion, making it more interactive as well as helping towards answering the research questions at hand. The interview guide was adjusted slightly from interview to interview depending on the job role the person had as well as new questions added in order to get better data saturation. The interviews were also followed up by phone or email when further questions or clarification was needed.

The use of face to face interviews was done at the interviewees place of work to be more convenient for them, but also allowed for more detailed information to be gained, by providing a more full account of the research and gathering data from expressions and surroundings, as well as being able to build a connection with the interviewees helping towards further sampling (Ritchie & Lewis, 2003, p.92).

In total there were 7 interviews, all of the interviews were recorded after gaining permission from the participants and explaining general ethical procedures. The interview subjects were gained first through purposive sampling by looking up individuals that fit specific criteria containing municipality and university actors that would be familiar with shared economy initiatives as well as building an image for Umeå. Furthermore other criteria contained subjects from the business side with the role of digital strategists as well as actors that influence sharing economy or digital platforms. The final criterion was that all subjects are within the Umeå area, as the case is specific to Umeå. This criteria was chosen to try and get a deeper knowledge of what is happening and find actors that are influential. This then evolved into snowballing with the same criteria, but by asking the interviewees who else they know
that may both fit the criteria and be interested in participating (Ritchie & Lewis, 2003, p.94). These types of purposive sampling allow for both easy and faster access to participants as well as securing subjects that have greater knowledge of the research area (Bryman, 2008). All interviewee’s job roles and duration of interviews are listed in Table 2. The interviews lasted between 36 minutes to an hour of recorded time as well as about 10 - 20 minutes of discussion before and after that were crucial to building connections with the interviewees as well as collecting further data that was not collected during the more formal session.

<table>
<thead>
<tr>
<th>Interviews</th>
<th>Job Role</th>
<th>Duration</th>
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<tbody>
<tr>
<td>Interviewee 1</td>
<td>IT Strategist</td>
<td>45 minutes</td>
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<tr>
<td>Interviewee 2</td>
<td>Marketing</td>
<td>36 minutes</td>
</tr>
<tr>
<td>Interviewee 3</td>
<td>VD Technology Company</td>
<td>60 minutes</td>
</tr>
<tr>
<td>Interviewee 4</td>
<td>IT Strategist</td>
<td>45 minutes</td>
</tr>
<tr>
<td>Interviewee 5</td>
<td>Digital Strategist</td>
<td>55 minutes</td>
</tr>
<tr>
<td>Interviewee 6</td>
<td>Communications</td>
<td>40 minutes</td>
</tr>
<tr>
<td>Interviewee 7</td>
<td>Co-founder/CFO sharing platform</td>
<td>60 minutes</td>
</tr>
</tbody>
</table>

*Table 2 – Job Roles and Interview Duration*

3.4 Data Analysis

For the data analysis the tradition of grounded theory was adopted in order to provide a deeper analysis to the research questions presented (Bryant, 2009). Grounded theory allows for a more unique analysis as the data collection process and analysis occur simultaneously (Giske et al., 2007). After the data was collected, in the form of recorded interviews, they were then transcribed and translated into English including time stamps to be able to go back and check both versions. The analysis process occurred directly after transcription and consisted of open coding after the very first interview was completed, followed by a focused coding and the generation of key categories (Charmaz, 2001). Alongside grounded theory an inductive approach was used allowing the research to be driven by the data. After every interview was completed and analyzed using the grounded theory process, the interview guide (Appendix 1) was updated and adjusted in order to gather more data on the key categories previously found and in order to get closer to theoretical saturation (Strauss and Corbin, 1990).
The decision to use grounded theory came as the digital sharing economy and its connection to transforming a location has little to no research done, and this method provides for flexibility while also letting the data direct the research. Furthermore the method let the research have more flexibility as simultaneous analysis and collection not only leads the research but also pulls out important areas and fosters creativity in digging into what is truly happening. In areas where there is not simultaneous data collection and analysis the level of detail and creativity can be lost and the amount of data may be far less for the same amount of interview time spent.

4. Results

In this section, the empirical results found in the case study and interviews are presented. A distinction is made between the barriers related to the sharing economy and towards the pathways and opportunities presented.

4.1 Barriers of the sharing economy in Umeå

Trust can come in many different forms, and according to all respondents in the case study it seems to be a major component and a key aspect in the sharing economy in order to make it function. Trust between individuals seems to be a condition for the sharing economy to exist at all. As respondent one is highlighting when elaborating on the sharing economy and why people choose to participate in sharing economy activities or not:

“For me, the sharing economy all boils down to trust. And in a world with low trust it becomes harder.” (Respondent 1)

On the same topic, respondent four, talks about the challenges related to sharing goods and facilities. They also expresses the emphasize of trust in order for the sharing economy to work but also the ability to control and monitor the exchange of goods. For example when someone has borrowed a municipality owned building they must have the ability to contact someone responsible for the temporary access if something has gone missing or has been destroyed. This goes hand in hand with a later statement from the respondent who really sees the potential of all the unutilized facilities that the municipality provides. Schools and sports facilities are two examples of assets that are being unused more than they are being used. The issue the municipality is facing is that some people working at the locations are unwilling within their job role to take responsibility outside of their working hours and put restrictions towards letting someone else gain access to the facilities outside normal hours. It’s not the principal of a school or a gym teacher that owns the particular facility, even though respondent four understands the challenges related with trust, if say for example something would go missing the next work day. That does not however change the fact that the facilities are unutilized and free most of it’s lifetime. Another
aspect one thought to touch upon is a common discussion about the risk contra responsibility aspects when exchanging goods, using someone else’s asset or riding in someone else’s car. Respondent three explains this:

“But really I could, but I’m not really interested in money in that way, I rather lend out the cabin in the mountain, trailer or snowmobile...If I receive payment for lending out the snowmobile and someone borrows it and kills themself on it, it’s my responsibility. But if I just lend it out the risk is on them.” (Respondent 3)

This is connected with one of the respondents unwillingness to trust ride sharing services and cant understand how anyone could choose to jump into a car with a complete stranger. The sharing economy is build upon trust and the willingness of individuals to trust one and each other but the question regarding responsibility goes hand in hand with trust. Respondent one describes the personal relation to uber taxi.

“Personally? I would never in my life go in an uber taxi. Never in my life! I trust in 2 or 3 taxi companies. It´s like, put myself in a car with someone else, are you completely crazy!? It can be any crazy person at all!” (Respondent 1)

The quote above highlights how the unknown and lack of control can be a barrier of trust but there are also respondents talking about the possibilities the sharing economy and digital sharing platforms actually can provide options to solve these type of challenges. Respondent three explains how digital services has helped companies front themselves as trustworthy, where there is a rating-system and the fact that money transactions are handled through an application or platform are two major components for its success.

“I think trust for what I have ordered for all the digital services has gone up. If I take a private taxi or rent a cabin from someone. I think they have added a lot. It’s almost that you trust more in Uber then a regular taxi company. At least against a half known smaller taxi company.” (Respondent 3)

Trust on a personal side is one aspect while trust on a company or organization side may differ for the same person. Furthermore local municipalities may have laws and regulations but when it comes to the private and company side, some decide to adapt their own policies towards digital sharing platforms. The same respondent that said that you almost trust more in Uber than a regular taxi discussed later that when traveling on business that employees have to follow certain policies. Their employees are bound to choose between two or three major taxi companies and can only stay with a certain hotel chain. This is based in the responsibility questions touched upon earlier, highlighting the complex aspect of trust.
Another area that is a major component and key aspect for the sharing economy to function are the numerous rules and regulations, some of which may make it easier, but many more that hinder the spread of a sharing economy. When it comes to a municipality, generally their actions are chosen for reasons to promote wellbeing and growth among other things within the sector, but as respondent three highlights:

“For a municipality it is very hard to promote something that is built on a tax-free movement... and for them to promote things like Airbnb could go against what a municipality should deal with, a municipality wants to have its tax revenue because that’s how it can grow, so these digital sharing platforms could be a contradiction to that.” (Respondent 3)

As many of the respondents pointed out, the sharing economy a lot of times is built from a point that people can rent equipment from their neighbors privately or through a sharing platform instead of going to a rental store that has to pay taxes and follow certain regulations that the government enforces. Both the completely tax-free method of loaning and renting out privately and the digital version where taxes may be collected somewhere in the world, cause some sort of revenue loss to a city. Another issue that arises when using such a platform is that a percentage of the sale is usually lost going back to the platform owner, which more often then not is a large company that is not local. Respondent two and others highlight:

“If everyone starts using these digital sharing platforms for renting equipment, taking a taxi, or all the millions of sharing economy services and the things coming up, that those companies take 10-15-20-30 percent, and that money all disappears from the north, impacting the local economy.” (Respondent 2)

This means that a certain percentage of the transactions and flow of money are leaving the city, region or even the country, meaning that there is not just a loss in money leaving the region and money not going to local stores or service providers, but also that the tax that could have been earned from those gains is lost. Some of the respondents explain that the loss of tax and the impact on local companies are major reasons strict restrictions and laws exist towards such digital sharing platforms. Respondent one explains:

“I am a little afraid that there will be more and more depletion of local actors and businesses and in the end it will be franchises under the big actors that take over and all the money will be sent to tax paradises not staying in Sweden or even Europe.” (Respondent 1)

Here respondent one goes on to discuss that even with the restrictions and laws in place that the big platforms find their ways around the restrictions and it is more a matter of time. The respondents explained that at the same time that local
municipalities and governments have trouble promoting the digital sharing environment, local businesses are getting taken over by such platforms causing them to also push for harsher regulations that in turn will help their businesses.

When discussing the public entity, whether including the region, municipality, university, tax authority and other governmental entities, the respondents discussed how the politics, culture, resources and pace impact the move towards a digital sharing environment, whether it be an internal or external move. When going towards a new initiative it usually comes down to the politics and where the politicians stand when spending money or distributing resources. As respondents one and four said:

“To get any initiative started then it needs to go up to the politicians and it gets passed around and often not something they prioritize…the look at it more as a cost then anything else…really it requires that they give out the initiative.” (Respondent 1)

“It is really slow to get things to happen… many steps and people to go through and rules/laws.” (Respondent 4)

Here the respondents showed how the many processes and actors within cause there to be countless barriers in order to drive an initiative towards a digital sharing platform. These actions cause things to take a substantial amount of time for something to get from start to finish when comparing to a business or private party. The respondents explained that the laws and regulations are even stronger for them at times, causing things to take even longer to finish. Respondent two stated:

“Twenty years is very short for a big solution.” (Respondent 2)

The culture of public entities is very different from that of the private sector. How long initiatives take as well as the general process of change is very different in the public sector in comparison to the private, as respondent five explains:

“The willingness to change is a lot less in the public sector in comparison to private and companies. If you are a prime minister or municipality director it is not the same as being a CEO at a company and handling quarter reports etc... That we see as a big challenge.” (Respondent 5)

The respondent went on to explain that companies or a CEO have the ability to make a change in the path they are going and are more likely to dare to make risks in order to reap the benefits. While public entities are always in the light and constrained and are less likely take large risks with taxpayer money. This is part of the reason many platforms in the public sector are far behind as well as why the development often takes more time. Thus 20 years for a municipality or government may seem like no time at all, while for a company it could be a lifetime or they may not even be around anymore. Furthermore when achievements happen in the public
sector they are often long-lived and too much hype and attention are given to them. Respondent five states:

“For the politicians what is digitalization? Many are very content that we have successfully gotten broadband to the level it is and think they have done their job.” (Respondent 5)

When pushing for new digital platforms and initiatives the success of broadband is often looked at as the end of the road and that the further digitalization will be solved on its own. Finally when looking at sharing resources internally or between other public entities there is often the question of who owns what? Respondent one and four explain:

“When it comes to schools, it has gotten a little better, but it is that the principle always believes that is it their school. “It is my school and therefore I am not letting anyone else in there”. “(Respondent 1)

“It is the school themselves that don’t want to share their unused resources, and no one else should come in and set requirements for them.”(Respondent 4)

The respondents go on to explain that although the resources within the public entities are all bought by taxes and in turn should be shared if not in use, that there is still a sense of ownership in many of the areas making it difficult to build up a platform to better make use of underused resources.

The awareness of what the sharing economy means is increasing, but the concept was not household for all of the respondents when discussed during the interviews. Some were familiar with the term, others had searched the term online before the interview, and some had no real association with the concept until we touched upon it during the interviews. Even though some respondents had tried to acquire further information on the subject it was still not crystal clear what the sharing economy actually is. This lack of awareness and clear understanding of the concept could be seen as a barrier towards a wide penetration of the sharing economy in a city. The notion of sharing is of course nothing new, as one of the respondent pointed out and continued with explaining that Umeå has a long tradition of sharing and organizing such as flea markets, clothing libraries, and others without digital technology. The sharing economy is however an economic system based on sharing assets or services where digital technologies are an essential factor for scaling and growth, which were not possible before. Another aspect of awareness, which digital technology has great potential to help cope with, is how to display and connect individuals and help raise awareness of all the unutilized assets available in a specific location. Respondent four discusses the fact that many citizens in Umeå have no idea what facilities are vacant and available to rent.
“Many citizens in Umeå do not know that the facilities are empty. And that is something we definitely have to solve. That is also one political aim: that we should increase the use of our facilities. Just that we close our schools during summer. Why? Well, that’s because we always have done so.” (Respondent 4)

Another aspect that may hinder a more effective penetration of the sharing economy and is related to the unawareness in the society is the catch 22 challenge, with the need of an established and dense network in order for the sharing economy to function frictionless. However in order to acquire a big network you need many active actors within the network. And since it’s vital that the network of actors and assets are rich and dense these challenges are hard to cope with. Both respondent one, four and seven pointed out that Umeå as a city is relatively small area and that may be a challenge and a barrier for digital sharing platforms to choose to establish in Umeå. A small market will hinder the development of a sharing environment and looking at the major international actors in the sharing economy such as Uber, Airbnb and various other sharing platforms, the market is rather scant. Respondent three pinpointed this, and the personal challenge with acquiring a specific resource at a certain time, which ultimately drove him to buy that specific resource to avoid having spent time chasing that resource during the times he actually needed it.

“Then you cant get one either, and then the rest of the year there is plenty and when you need them there is none, and in the end it comes down to “time is money”. I cant keep going around like this, should I take off work in the middle of the week to loan/rent a trailer to drive off my stuff, it costs me a half afternoon free from work, so f*** it, I bought a trailer.” (Respondent 3)

As well as proving the importance of a big network in order to get a hold of the specific asset when needed, the respondent continued explaining that he had no interest in sharing due to the fact that it was associated with time-consuming tasks. Respondent two also highlighted the personal situation as a factor of why they didn’t participate in any sharing activities:

“Do I go crazy for “klädbiblioteket” no I don’t think so! I have my favorite clothes that I want myself...I have a certain situation that I don’t really need to do that, I can sell on second hand and so on, that is completely ok.” (Respondent 2)

The necessity of not having to participate in the sharing economy is a barrier that has to be overcome, but it can be hard to identify and communicate the incentives for some individuals to do so. As pointed out above, the personal situation could mean that some individuals don’t need to participate for financial reasons and one of the respondents claimed that Umeå as a city has rather low unemployment rates relative
to other larger cities in Sweden and that would lower the incentive for people to participate in the sharing economy in Umeå.

As a final barrier for the sharing economy to function smoothly within the context of a city, the fact that people in general are reluctant to change and often do things as they always have done, is a major challenge. Almost all respondents touch upon this subject and two of the respondents explained that they would rather use hotels.com when booking an accommodation when traveling rather than one of the new digital sharing platforms, just because they are used to it and have positive experiences from it. These factors don’t only apply to the personal side, but as mentioned earlier, organizations and companies also struggle with the challenges of culture and doing things like they always have. Respondent four touched upon how schools and municipalities are slow to adopting change, while both respondent five and six describe the challenges for larger organizations to pivot and adopt changes due to the complex nature of the organization.

4.2 Pathways and Opportunities

The section above revealed the respondents insights regarding the barriers of the sharing economy in Umeå. Overcoming those barriers could potentially lead towards various opportunities and pathways towards further developing the digital content and promoting Umeå as a place to be. Beyond those, this section focuses on additional pathways and opportunities for Umeå not mentioned in the section above.

Västerbotten has for a long time been not only best in Sweden, but also world leading when it comes to high speed Internet and access for its citizens. Almost all respondents highlighted the importance of this successful initiative and acknowledged this as one major factor for the growth Umeå has had the past couple of years. Umeå as a city is working towards the image of a modern IT-city, which is partly built on the argument of the access to a world class Internet as well as the close relation with the university. The importance of a well function digital infrastructure is thus not only a precondition but also an opportunity for Umeå to increase the digital content in the area. Respondent four explained this:

“Used to say we have built 8 lane motorways to tie together municipalities in Västerbotten with broadband but we still bike on them, and we need to start using them more. That is a big challenge and I still think that it still hasn’t come long enough.” (Respondent 4)

Another strong argument for Umeå’s steady growth and precondition for an increasing positive image of Umeå is as mention earlier, the University. It’s establishment in Umeå 50 years ago has been crucial for the positive development Umeå has had and this is acknowledged from all of the respondents. The university not only provides the business sector with new competence it also attracts new young people to the area, which may stay in Umeå after they completed their studies. Both
respondent four and seven expressed how the young generation growing up and start working also makes new demands on digital services and products. As the smartphone usage is high and access to Internet overall is very good in Umeå, the market for new or not yet established digital sharing platforms is open for the taking.

One of the respondents elaborated on the rich culture existing in Umeå where trying new things and willing to take risks are a unique factor for Umeå. The social capital, which refers to network of people and grade of trust you may have towards people, in Sweden and particularly in Umeå is very high. This culture is also a factor that works to Umeå’s advantage when it comes to adopting new digital sharing services. Umeå’s politicians are, according to respondent two, very keen on investing in culture while another respondent acknowledged the Politian’s aim on recreational activities and the importance of using facilities more efficiently.

While many respondents discussed the barriers to having a digital sharing economy included the need to think locally and sustain internal growth, they also explained how it could be used towards building a tighter community and answering the problem of taxes and money flowing outwards. In line with the culture, one thing the municipality has already been working towards and thinking of is a local digital sharing platform so that individuals and organizations can gain access to vacant buildings through an app called fritidsappen. As respondent four states:

“Today for an event you need to make many calls to book the location, people, police etc., but what we would like is all of this to be synced in one platform on your mobile device.” (Respondent 4)

The respondents mentioned that the fritidsappen is just the start but the potential for sharing more than just vacant building is very large, and within local thinking to make things in Umeå much easier to access and coordinate.

The respondents also mentioned other local ideas arising, such as companies like delbar.se and versafit where peer-to-peer sharing and the sharing of various sports activities and training centers are available. Such local ideas and companies arising will help keep taxes and money flows local, instead of large actors coming in and taking over. Respondent three describes:

“I would rather pay more money to support local actors... Another option is some sort of local franchising of these sharing economy platforms so that more taxes and flow of money stay here.” (Respondent 3)

Others went on to describe that some sort of franchising or local entrepreneur is needed to drive the growth of such platforms through marketing it, but also making it match the local culture and mindset.
Finally, when it comes to local thinking, multiple respondents described that the use of open data has a large potential, to see what is important locally and what resources are lacking. Respondent four states:

“It is invaluable. We have so much damn data in this municipality that we do not take advantage of. To be able to develop a sharing economy, among other things.” (Respondent 4)

The respondents went on to say that the uses of having this open data are endless, although currently it is difficult to gain access and they are trying to find ways of releasing the data and finding out the best way to do so.

5. Discussion

In this section we will discuss the results from the study and relate them with the related research presented in chapter two, in order to answer the research question: What are the barriers related to the sharing economy in the context of a city and how can these be overcome?

Sharing as a notion is a phenomenon that all can relate to and most can agree as something positive. The term sharing economy is gaining more attention both in a practical manner as well as by scholars, however there are still barriers to overcome for the concept to really be household in society. We found several barriers associated with the emergence of the sharing economy in Umeå that are specific due to the cultural and geographical aspects of Umeå. Studying the barriers and opportunities for the sharing economy in the context of a city is of great importance since existing research has highlighted that one of the biggest limitations of sharing economy research is the lack of literature, particularly in regards to value creation (Böckmann, 2014). Furthermore we argue that by increasing the digital sharing environment in Umeå that not only will the digital content increase, but it will help build the smart city and create an overall better image for those visiting and living in the city.

The question will be answered starting with the barriers, as these barriers lead into pathways on how to overcome them. Furthermore, we discuss how our findings contribute to research as well as the potential limitations of the research and future research.

5.1. Barriers

The barriers we identified that need to be overcome in order for the sharing economy to function frictionless in Umeå are: trust, rules and regulations, level of awareness, network issues, necessity and change. The specific barriers we identified in our case study of Umeå may not seem unique by the general nature of the key barriers, but the culture and geographical aspects cause these barriers to impact Umeå in a way that
may only be comparable to other cities with a similar culture, geographical aspects and size.

In relation to existent research, this paper confirms the results of Botsman & Rogers (2010) who highlight the importance of trust as a key principle for the sharing economy to function. Trust is the heart of the sharing economy and the barrier of trust is crucial to overcome for the success of the sharing economy in Umeå.

Rules and Regulations have become a highly charged topic in the sharing economy literature, whether it protects the participants or restrains the affected companies (Hartl et al., 2015). There are examples of areas that actively support certain sharing initiatives while there are many examples of cities that have taken action towards digital platforms. Umeå is no exception, but they are also affected by the rules and regulation that exist for Sweden as a whole. At the moment many of those regulations have a negative influence on the sharing economy and could be seen as reasons why the Swedish market as a whole for various sharing economy goods and services is less developed than elsewhere in Europe but that the public sector in Sweden is ahead of the curve (Felländer et al., 2015). Municipalities struggle with the challenge of on the one hand promoting wellbeing and growth but on the other hand having trouble promoting a sharing platform that is built upon a tax-free movement. Our findings shows that Umeå's politicians are in a sense very keen on increasing the usage of the facilities and are aware of the potential in all the unutilized resources available on the municipality level but may not see any reason to promote external solutions. As respondents mentioned, the issue remains that many politician are satisfied with what has been done in terms of broadband and fiber access within the city and believe either that the digital side is finished there or that they have done their job. They may have ongoing initiatives towards the notion of sharing, and many initiatives are starting to work around the old model of procurement and skipping the various approval processes, but politics remain one of the reasons sharing initiatives could continue to take more time. Therefore there is still much that could be done both internally and externally from a municipality standpoint.

Even though the awareness of the sharing economy is growing, there is still a general lack of knowledge towards the term in Umeå. Our findings are in line with other research on the sharing economy, which state that the overall awareness and understanding of the concept are in general low (Burnett, 2014). This unawareness of the concept serves as a barrier for the sharing economy to really gain attention from the majority. It is also worth mentioning that the the terminology of the sharing economy is not household and people may not consider themselves part of the sharing economy while borrowing their neighbors goods or sharing a car ride even though they basically are participants of the sharing economy.

Literature on the sharing economy argues that the increasing urbanization and densification of the population helps smooth the friction of the sharing economy (Owyang, 2014) and as mentioned, the general awareness of the sharing economy in Umeå is still low, leading to the fact that Umeå also needs to cope with the challenges
related with a small network and market. The density of products or services offered in a digital sharing platform has to be dense enough so that people actually get what they want when they need it. Even though Umeå is one of the fastest growing cities in Sweden, our finding shows that Umeå’s market is still relatively small, resulting in this as a barrier for the sharing economy.

Another barrier for the sharing economy in Umeå we identified are the aspects related to having a necessity. In the sharing economy literature it’s been argued that cost is one of the critical factors motivating people to participant (Böckmann, 2014). However, according to our findings, there was a lack of need to participate in the sharing economy due to private reasons such as financial and convenience. Another reason we identified that the necessity to participate in the sharing economy in Umeå isn’t that high is due to the fact that there is one of the lowest unemployment rates in the country, which may result in a lower need of part time, extra jobs, or income from renting out resources.

The final barrier we identified, the reluctance to changing habits and the way one is used to doing certain things, exist within some sectors and are a barrier for the sharing economy in Umeå, where as other sectors are less sensitive to these types of issues. Accommodations are one example of a sector we have identified in our findings that show difficulty in changing these types of patterns. Another example is that complex organizations such as a university or a municipal tend to, due to the way they are managed, have a hard time being early adopters of new trends and it is rather the private users or the commercial actors that start using things, which later turn to standards.

However, one of the greatest challenges when discussing the obstacles associated with a sharing economy, concern the fact that all barriers are so closely related and intertwined to each other. This intertwined relationship means that in order to overcome one barrier often means the need to overcome other barriers at the same time. It can be seen that the opportunities presented create a pathway possible of reducing the impact the various barriers have on the digital sharing environment.

5.2 Pathways and Opportunities

The current case presented in Umeå reveals that the use of digital sharing platforms is almost non-existent, making it even more important to find ways to change this. The first step in finding pathways and opportunities related to the digital sharing economy is finding ways to overcome the described barriers above, many of which are intertwined and are already opportunities waiting to be utilized. The main pathways and opportunities include; infrastructure, culture, local thinking, and open data.

Many of the barriers presented exist due to either the lack of effort to overcome them or the disregard to notice their existence. Areas such as rules and regulations and awareness can be seen as tightly intertwined. The responses from respondents
revealed that often times rules and regulations had to do with politicians or others involved in creating such rules and regulations as having a low level of awareness or IT competence when it comes to sharing economy in general, as well as how it can positively impact society. Thus it can be seen that creating awareness on the phenomenon can also help overcome such of rules and regulations.

The infrastructure in Umeå is often seen as being world class with about 78% of the population having access to at least 100mbps internet speeds, but still is an area that is being underutilized and not taken full advantage of. Böckmann (2014), Felländer et al. (2015) and Constantinides & Fountain (2008) all describe things such as digital social networks, smartphones, payment systems and other platforms that rely on having a good connection to the internet as things that have enabled the acceleration of the sharing economy. The combination of having this precondition that is unutilized is in itself a huge opportunity for the digital sharing economy to grow as well as help the digital content in Umeå increase.

Umeå itself presents itself as having a culture with a young generation, a tech city with a high digital competence, sustainability thinking, and the willingness to try new things. These are the main areas respondents described when they described Umeå, some of which Owyang (2014) Böckmann (2014) and Porter & Kramer (2011) describe as key market forces driving the sharing economy and yet it is almost non-existent. The culture in Umeå represents a prime opportunity for a digital sharing economy that is described by both respondents and literature. The fact that many citizens are willing to try new things also helps fight the barrier of change. Some of the respondents did admit having trouble changing certain ways of doing things, such as booking housing, but on the same note almost all of the respondents admitted they have used some sort of digital sharing platform in their personal life, showing a willingness to try new things. One thing to take into consideration is the lack of major international actors in the northern part of Sweden, which absent certainly affects people’s opinion towards some digital platforms. Another factor is the difference between the personal and business point of view is the fact that one is more likely to try new things and trust digital platforms in your private life while on from a business point of view you are keener on trusting major actors in the field rather than a digital platform. Furthermore when looking back to the barrier of trust, building trust is also an important factor as respondents mentioned being in the county with the lowest crime rate in Sweden can mean the ability to have more trust towards others. Although some respondents saw trust as a hard factor when it came to the digital sharing environment, others believed that digital platforms provide more ways to check on people and thus able to hold them more responsible if anything were to happen.

Another large opportunity and pathway towards a digital sharing economy and in line with the culture of Umeå is due to the local thinking. In the sharing economy literature its been argued that convenience is the number one reason why people participated in the sharing economy while sustainability and local connection are
relatively low factors (Felländer et al., 2015). Our findings show the contrary, we see
local consideration and mindset as an important aspect in Umeå. Many respondents
described that they see Umeå as a city where people like to choose local things and
want to support the local shops and see that the money and taxes also stay locally.
These results are in line with Hamaris et al.’s (2015) study of participation in a digital
sharing platform, which provides a better understanding on why people choose to
participate in the sharing economy. Their result does however show that the
participation is motivated by several factors such as sustainability, social and
economic gains but they also showed that sustainability might only be an important
factor for people who already believe that ecological consumption is important. Umeå
has a history of sustainability and a progressive mentality, which combined with the
rich tech culture are possible pathways for Umeå to take advantage of. Furthermore,
as sharing economies require a network of many users to function seamlessly, the
combination of using this local thinking can make it easier to build user ship of local
platforms faster. We see this as a major opportunity for local actors working on the
idea of starting their sharing platforms here, such as delbar.se, Versafit and Umeå
municipality. Having local actors will also be a way to gain more awareness around
what the digital sharing economy is and make it easier for other actors to join.

Another pathway to a more effective digital sharing economy that we were able to
find is the usage of Open Data. This area was one that a majority of respondents
discussed as having endless potential. We argue that but gaining access to open data,
a digital sharing economy can be more effective in taking advantage of the resources
that individuals, companies, and organizations need the most available when they
need them.

Through our research we were also able to find that the increase of digital sharing
platforms in Umeå would mean more individuals connected to resources closer to
them as well as connected to each other. This build up of a larger network is directly
connected with the idea of increasing the digital density in a city where more people,
companies and platforms are connected to the internet providing content to each
other. Furthermore in doing so is not only creating opportunities for future digital
content and a smart city but also making it easier for others to join such a market
making it more attractive from both an internal and external perspective. Thus we
argue that an increasing number of digital sharing platforms will successively help
each other, and by increasing the digital content more people will be aware of the
potential in the unutilized assets in their vicinity and thus further expanding the
network.

Finally all of this together shows that digital sharing platforms offer major
opportunities for cities to increase their digital content. We argue that the notion of a
rich digital density is a concept cities should strive for in order to present itself as not
only smart but attractive. With the digital density we mean the amount of digital
content in a specific area and the number of users connected to that content through
the Internet. Increasing this digital density would mean faster information on
resource availability, a larger database of open data, and a path to faster digital developments, all leading to the exponential and further growth of this digital density, creating a more efficient and effective local environment. Digital transformation of businesses is something we have seen for a long time but a digital transformation on a city level is a crucial aspect for a city's growth. Against Belks (2014) attention that few industries are exempt from the potential disruptive impact of the sharing economy, we argue that it's not only industries but also cities that will see major change in the future and it would be folly not to adapt the new collaborative ways of consuming and sharing assets.

6. Conclusion and Suggestions for Future Research

The aim of our thesis was to investigate the barriers and challenges related to digital sharing platforms in the context of a city and provide pathways or suggestions on how to overcome them. The research question our study is structured around is: What are the barriers related to the sharing economy in the context of a city and how can these be overcome? In order to answer the research question we conducted a case study on the sharing economy environment in Umeå. As a concluding answer on our research question we argue that there are certain barriers for the sharing economy in order for it to function frictionless in Umeå. The barriers we identified in our thesis are: trust, rules and regulations, awareness, network capability, necessity and reluctance towards change. These barriers may hinder the penetration of the sharing economy in Umeå and we argue that by highlighting them it will be easier to understand the potential pathways and opportunities we present in our thesis. According to us, Umeå's main pathways and opportunities include infrastructure, culture, local thinking and open data. The presence of digital sharing platforms is almost non-existent in Umeå even though they possess great opportunities to adapt this new trend due to their image as a tech city, high digital competence and culture. As a final note we argue that the sharing economy and digital sharing platforms have great potential in increasing the digital density of a city and thus making it not only smart but also more attractive for individuals and organizations. We argue that our study contributes with valuable knowledge in both platform- as well as sharing economy literature on the topic of digital sharing platforms and their impact in the context of a city.

The finding we present does however suffer from some limitations when we only investigated three major actors, responsible for driving the growth of the city: the municipally of Umeå, businesses operating in Umeå and Umeå University, which means that we overlook other individuals living in Umeå. Hence we believe that additional studies on barriers with a wider demographical spread of the respondents
would be interesting to gain even greater knowledge of barriers. Further avenues for future studies could also be on the impacts digital sharing platforms in the context of cities of different sizes to obtain further information regarding the role of digital platforms in society.

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Appendix 1: Interview Guide

Questions for the interviews

Presentation av examensarbetet


• How can digital shared economy help build the image of a county?
• What are the barriers to overcome

Inspelning av intervjuer

Är det okej om vi spelar in ljud under intervjun?
Inspelningar kommer att transkriberas.
Inspelningar kommer endast att vara tillgängliga för oss.
Inspelningar kommer att raderas från samtliga enheter senast 8 juni
Namn på intervjupersoner kommer ej lämnas ut.
Frågor innan vi börjar?

Personliga

• Namn
• Organisatorisk roll (ansvarsområden)
• Hur många år har du varit på den här rollen?
• Kan du beskriva dina huvuduppgifter? Kort om organisationen

Strategier/digitalisering/benchmarking

Vi vet att det digitala innehållet kommer öka inom i princip alla områden, våra städer, lokaler, tjänster, skola, omsorg etc. Vi kommer inte känna igenom Umeå om t.ex. 10 eller 20 år. Har ni strategier och kan ni hantera för att analysera vad som händer runt omkring i världen. För det finns hur många som helst som också ha i uppdrag att göra sin plats mer attraktiv.

• Hur ser du på ditt uppdrag?
Appendix 1: Interview Guide

- Hur ser du på utmaningen med globaliseringen, urbaniseringen, digitaliseringen?
- Hur arbetar ni för att få mer digitalt innehåll i era tjänster, produkter, processer?
  - Har ni strategier för att detta?
- När det kommer till benchmarking mot andra i sverige/omvärlden
  - Har du koll på hur andra med samma uppdrag jobbar?
- Hur skulle du beskriva er IT-strategi?
- Vilka område tror du har påverkat mest när det kommer till att skapa värde och ligger till grund för att företag och individer ska etablera sig och komma till Umeå?
- Varför tror du att Umeå har sådan stor tillväxt?
- Umeå frontar sig som en IT-stad. Hur kommer det sig att Umeå blivit en IT-stad?
  - Vad har kommunen gjort för att stödja detta?
  - Märker ni av det på något sätt?

What is the reasoning behind your companies being in Umeå?

Personal or business etc

Delningsekonomi -


Vi har sett i våra studier att delningsekonomin har fått oerhört lite uppmärksamhet just för att användas för att göra en specifik plats mer attraktiv. Vi tror att delningsekonomin har stor potential att förändra samhället och hjälpa till att öka det som vi pratade om tidigare, det digitala innehållet. De platser som gör det bäst att ha ett tätt innehåll kommer sticka ut i mängden och bli mest intressant för folk.

- Är du bekant med begreppet delningsekonomin och vad betyder det för dig?
- Har du använt något form av digitala delningsplattform i ditt privata liv? Om ja, vilka?
- Har ni några projekt/initiativ igång som är kopplad till delningsekonomin?
  - Vilka utmaningar finns kopplat till detta?
- Om inte. Hur skulle ett sådant upplägg kunna användas i er organisation?
- Känner du till exempel på delningsekonomi-projekt inom organisationer?
- Vet du om Umeå på något sätt arbetar aktivt för att främja organisationer som använder affärsmodeller baserad på delningsekonomin?
- Vilka företag/organisationer finns det idag i Umeå som du känner till?
  - Finns det restriktioner eller dylikt?
  - Undersöker ni eventuella möjligheter/utmaningar kopplat till delningsekonomin?
- Vilka för- och nackdelar ser du med delningsekonomin?
  - Vilka utmaningar kan kopplas till delningsekonomin?
- Varför tror du tjänster som Uber och andra delningsplattformar inte är så etablerade i Umeå?
- Om du tänker fritt och leker med tanken. Hur skulle delningsekonomin kunna användas av Umeå för att öka sitt digitala innehåll?
  - Hur kan digitala strategier hjälpa tror du att göra umeå mer attraktivt?
  - Hur skulle delningsekonomin kunna användas av Umeå för att bilden av Umeå ska bli mer attraktiv?
Appendix 1: Interview Guide

- Hur ser umeå ut om 20 år tror du?
  - Hur mycket tror du att kommunen kan driva det framåt?
  - Om man tänker sig ett sätt att fånga alla vertikala (tematiska) tjänster/produkter som finns i ett horisontell integration av alla. Vad tror du man måste tänka på för att lyckas?

Avslutande

- Är det något du känner att vi missat som du vill utveckla ytterligare?
- Har du förslag på någon som du tycker vi ska prata om gällande detta?
- Kan vi eventuellt återkomma om det är några ytterligare funderingar eller om vi ska klargöra något?

- Trust
- Local Thinking
- Hard to get hold on
- Sharing cost
- Sustainability
- Legal/regulations
- Risk- Self responsible
- Chose what you are custom to
- Change