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Enabling The Sharing Economy:
What can Blockchain contribute to the online Home-sharing platforms?

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Abstract:	

The rise of the sharing economy during the past decade has been a transformative player in different industries. The home-sharing marketplace is one of the major phenomena of sharing economy that relies heavily on technology to connect landlords and tenants. This digital marketplace has affected travel and tourism and has created an innovative archetype that has been adopted by society very quickly. Companies like Airbnb, and Onefinestay among others have shaped this novel paradigm and changed consumers' lifestyle. Contrary to the past, people are now able to stay at a stranger's place accepting a new business model that has made their life more advantageous. However, these home-sharing corporations are currently facing significant challenges primarily related to an unequal distribution of the value generated in the platform. The framework designed in this paper entails three stages. Firstly, it enables us to sort out these challenges. Secondly, it identifies the key prospects of Blockchain for the home-sharing platforms. Thirdly, it analyses the issues of decentralisation and what holds the future of Blockchain for the industry. This organising framework connects the findings to the three research questions that tackle the objectives this study addresses.

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INNEHÅLL / CONTENT

1- INTRODUCTION

1.1: Problem statement

The growth of sharing economy is considered as one of the most important economic developments over the past decade (Frenken, 2017). After the Great Recession that began in 2008 in the United States, a full-on economic breakdown influenced different aspects of the global economy in a very short period of time. The economic ruins of this financial crisis generated new models for making money. By the end of 2008, the home-sharing platform Airbnb has already made waves as one of the dominant home-sharing platforms.

A few years later, the sharing economy made steps forward and emerged as an urban phenomenon with services that are used to strengthen local communities and consumers. The key part of the sharing economy is shifting from producing, selling and buying new goods towards an economy that emphasises on lending, exchange, hiring, recycling and sharing of goods (Nylund, 2015). As such, new home-sharing platforms emerged and relied on technology to connect the owners and the demanders.

The sharing economy business model depends on huge amounts of personal and payment information, location tracking and other sensitive data. However, scholars argue that a set of significant concerns overwhelmed the industry during the last few years and prevented a real adoption of the sharing economy owing to an inequitable distribution of the value. Most of the concerns have mainly been raised about platforms' hierarchy and censorship, no peer-to-peer connection between suppliers and demanders, safety, data security and privacy among others. That being so, these platforms should still face these challenges and evolve in a way that equally shares the value for a better sharing economy.

After the emergence of Blockchain as a digital ledger running across decentralised networks, this technology pointed the entire digital economy towards the Internet of Value that enables people to exchange different assets, while the first version of the internet permitted people to directly send information to each other (Casey & Vigna, 2018).

Traditionally, making the payments has been done digitally or through currency transfers that demand financial transactions or using bank services (Yli-Huumo et al, 2016). Such currency transactions are usually controlled and additional fees from the credit card company are taken into account.

 Consequently, the Blockchain is perceived as a promising technology in the sharing economy sector because it is secured and reliable. Moreover, this new technology is waving with insights that help in solving the relevant issue and new platforms are increasingly growing in the home-sharing industry.

1.2: Aim and Rationale

The present research tackles three main objectives:

The first objective stated for this paper is to explore the major issues in the business model of home-sharing platforms, bearing in mind the fact that value generated by the crowd is not equally doled out with the relevant parts.

The second objective is to sort out the possibilities that Blockchain can offer to the home sharing, what it means for the rental market and how it can give rise to this industry.

It has been said that decentralisation is on the way to disrupt the whole sharing economy and will dramatically improve it. To prove or deny this statement, a third objective set in this thesis is to explore what Blockchain holds for the future of sharing economy.

1.3: Research questions

In this thesis, three questions have been formulated to reach the objectives stated above:

1- What are the key challenges in centralised home-sharing platforms?

2- What the online home-sharing platforms can benefit from Blockchain?

3- Can Blockchain hold the future of sharing economy?

1.4: Methodology

For the purpose of this research, qualitative structured interviews have been conducted involving six interviewees from different countries in the world.

The first three interviewees represent decentralised platforms:

1- Jon Chou (San Francisco, USA), Co-founder & CEO of Bee Token & Beenest (Blockchain home-sharing marketplace).

2- Nevena Petrova (Bulgaria), Head of Business Development at LockTrip (Blockchain shared economy platform for hotel booking & vacation rental network)

3- Markus Weigl (Germany), Sale Project Manager and responsible for Business Development at Slock.it (bringing Blockchain into the physical world).

The last three interviewees are Blockchain experts who approach technology from the marketing, media and socio-cultural perspectives. They have been included in this study for analysing the implementation of Blockchain in the home-sharing industry from diverse perspectives.

As a student of Media Management programme, these interviews help me achieve the goals of my multidisciplinary programme based essentially on economics, technology and culture. These perspectives are respectively presented by:

4- Daniel Sieberg (United States), Blockchain specialist in technology and media, co-founder of Civil, former Google spokesperson, science and technology journalist for ABC News, CBS News, CNN and the Vancouver Sun among others.

5- Walid Al-Saqaf (Sweden), a researcher in Blockchain use cases in media and journalism at Södertörn University in Stockholm. He also serves as a senior lecturer in media technology and journalism.

6- Agnieszka Pokrywka (Finland), Blockchain specialist in art and technology, co-founder of Biathlon toolkit, a platform to help in running decentralised culture spaces.

The interviewees have provided all the relevant information about the purpose of this research. The structured interviews method has been selected as a strategy to answer the research questions. This method helps closely understand the essential hurdles in centralised home-sharing platforms, the benefits of implementing Blockchain and the future of decentralisation in the industry.

In the theoretical part, there are three sections: the sharing economy as an experimental sector, an epitome of centralised home-sharing platforms and the Blockchain technology.

Concerning the literature, the theoretical part is based on a dearth of fresh academic studies analysing principally the conceptual and connotative meanings of the sharing economy, its affordances as a digital business and the assumptions made by the initial promoters of the sharing economy.

The theoretical part contains researches analysing some of the biggest centralised home-sharing platforms, such as Airbnb, Couchsurfing and Onefinestay.

In the empirical part, research data is based on the interviews. The answers helped in sorting out the first research question and the major issues that centralised platforms are currently facing in the industry. The second research question was empirically tackled by giving close insights into different protocols used in some Blockchain platforms in addition to different solutions suggested for better implementation of Blockchain in the sharing economy sector. Besides, the obstacles of decentralisation have also been evoked in this part which cleared up a deeper overview of Blockchain hurdles and the future of decentralisation.

In the discussion part, the findings provided genuine perspectives about the future of Blockchain in the industry. They also gave a positive overview of how decentralisation will affect home-sharing platforms considering at the same time possible issues that may occur in the future.

Finally, the conclusion sorted out an accurate glimpse of how Blockchain will approach the sharing economy sector in the future. On the basis of these results, this research constitutes an essential research material for future relevant studies.

2- THEORETICAL PART

2.1. Sharing Economy

In this section, the sharing economy is firstly categorised as being a theoretical concept. Afterwards, the ''technology'' in the sharing economy is defined through interactions with human's strategies and goals. Finally, the section highlights the concept of the Sharing Economy Manifesto which can be seen as the current neoliberal capture of this sector.

The sharing economy as a concept still raises controversial comments. The first thoughts to cross while highlighting the word ''sharing'' are ''non-commercial'', ''social'' and ''exchange'' (Zhuikova, 2017).

Sharing economy works as an ''umbrella concept'' that gathers different sorts of traditional and recent types of economic activities and their relevant connotations used in academic researches (Heinrichs, 2013). Specifically, the big interest that has been raised by the sharing economy during the last few years explains the significant extension of this phenomenon in society.

Though sharing economy is officially most used, the sharing economy is also introduced as collaborative consumption, and access-based consumption (Codagnone & Martens, 2016). It is worth mentioning that the sharing economy also includes services that are not necessarily involved in the money transaction. Some home-sharing platforms such as Couchsurfing and GuestToGuest offer rental services for free. However, these companies still keep the middleman specificity and own the users' data.

Sharing Economy
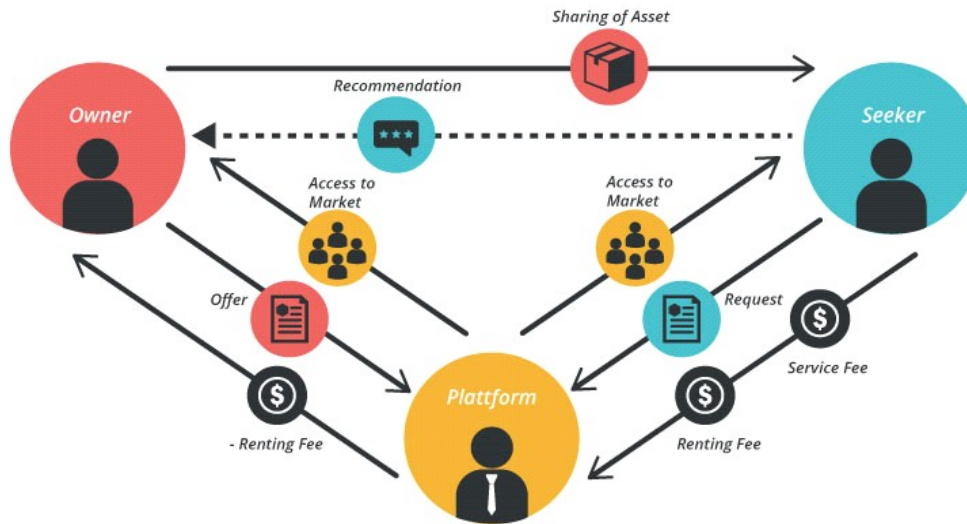
Business Model **Toolbox**

Figure (1): On sharing economy platforms users share goods or services among each other. As shown in the figure, home-sharing platforms like Airbnb serve as intermediaries to connect hosts (owners) and tenants (seekers) to share accommodations (assets). In centralised sharing economy business model owners and seekers cannot communicate outside of the platform.

2.1.1 The landscape of the sharing economy: conceptual and connotative hurdles

Scholars admit that it is not easy to set up an entire connotation with clear limits to the sharing economy. In fact, this concept has been explained in different ways by scholars and has been introduced as platform capitalism, on-demand or gig economy, collaborative consumption, gift economy, peer-to-peer economy and access economy (Acquier et al, 2017). Acquier et al (2017) categorised the nature of the sharing economy as a theoretical concept into three parts:

***a-** The sharing economy as an umbrella concept*

It can be perceived as a large connotation used to incorporate and value a set of various aspects (Hirsch & Levin, 1999). Scholars conceptualised the sharing economy in different noteworthy varieties applying many theories and boundaries such as marketing, consumer behaviour, sociology, geography, anthropology, management, innovation and law. (Acquier et al, 2017).

***b-** The sharing economy as an essentially contested concept*

''Essentially contested concepts'' is a notion called by Gallie (1956) pertaining to notions such as democracy in political science. Although sharing has a positive meaning and has been viewed as a considered fulfilment, many scholars oppose the real sort of sharing and the appropriate application of the term sharing economy.

For Gallie (1956), researchers don't need to agree on standard concepts, but they must notice their own experimental and ''conceptual basis and bias''. Gallie (1956) proposed to build an organising framework that accounts for the sharing economy's complex nature without ignoring the ideological disputes at play in the field.

***c-** Defining or mapping the sharing economy*

Acquier et al (2017) thought that the presented contested and umbrella nature of the sharing economy can lead to an endless dispute about how one should introduce it. Thus, they concluded that rather than searching new descriptions the sharing economy is in need of an organising framework that allows mapping its perspectives. (Acquier et al, 2017).

2.1.2 Affordances of sharing economy technology and digital platforms

Sutherland & Jarrahi (2018) endeavoured to display technology in the sharing economy by specifying its evolution from interplays with human's strategies and purposes.

They identified six affordances in the sharing economy as follows:

a- Generating flexibility

It means the capacity of the sharing economy platform to produce flexibility for the members of the platform.

b- Match-making

Researchers state that the sustainability of sharing networks is based on the existence of coordinating online platform, i.e. platforms mostly presented as models of the sharing economy.

c- Extending reach

Since the fundamental issue in the market and business is the sharing economy platforms' scaling and reach, extending reach points the bottom of entrance afforded by a sharing economy platform in the concept of scale and large extent (Cusumano,2014).

d- Managing transactions

The assumption of any sharing economy platform is perceived as a workspace for a special benefit in the ''micro-tasking'' meaning and tasks should be performed within a webpage.

e- Trust building

According to Kim et al (2015), effectuating purchases on online platforms empowers users to develop and enlarge cooperations over limited and unknown connections where distrust occurs as a significant barrier.

f- Facilitating collectivism

Sharing economy platforms provide a space for community interactions and sharing in larger social movements. Sharing economy middlemen enable to generate new profiles (users), help them connect with each other and promote trust and cooperation (Moser et al, 2017).

2.1.3 The Sharing Economy Manifesto and the Neoliberal Collision

Morozov (2013) described the form how the sharing economy increases the worst excesses of the prevailing business model as neoliberalism on steroids. Besides, researchers like Kenney, Zysman, Langley and Leyshon compared the concept of the sharing economy with platform capitalism (Murillo et al, 2017).

It has been said that any revolution needs its ''manifesto'' (Biggley, 2010). Murillo et al (2017) put the sharing economy manifesto to the test and identified the discussion that has emerged from the dispute between the SE manifesto, the SE's pledge of social growth, and platform capitalist systems running under the emblem of the SE. They looked at the platform as a technological and corporate mechanism at the hub of critical analysis of the sharing economy. According to their findings, the sharing economy should not be regarded as a trend against acquired interests that face the wish and attention of the individuals; rather it should be considered as a replacement of them. Similarly, one should not point a new class of empowered people making extra money; rather one should point to the ways for a business model (Murillo et al, 2017).

Murillo et al (2017) believed that protecting the sharing economy as upheld by its primary supporters imposes a political and academic dispute. As such, they yearned to a future for the sharing economy in the type of open and various ecosystems as suggested by Sundararajan (2016). In the same way, they considered Belk's statement (2014, P 16) with reference to the use of money, selfish motivations, expectations of interchange and feeling of community that becomes significant and prominent system to be openly debated, accepted or denied.

Murillo et al (2017) concluded their research by addressing an ideal model of sharing economy in society reacting to Schor's statement that aims at building a tendency to provide a new rule designed for society (Schor, 2014). Hence, the solution can be perceived in the beginning by divulging the underlying political-ideological exchange (De Grave, 2016), then

signposting some tracks or suggestions to explicate the scene.

Additionally, it could be regarded as a continuity of economic, institutional and politico-ideological parts with the large ambitions of the Sharing Economy Manifesto. That is a setting where the current stresses around the sharing economy need to be closely approached, human's expectations should be restricted and we realise what can be seen as the contemporary neoliberal appropriation of the SE (Morozov, 2013).

Contrary to different claims around the sharing economy as a contradictory connotation, the viewpoints stated above set out to unravel the controversies of this phenomenon, and likewise, constitute an introduction to the major challenges that the home-sharing industry as a pioneering part of the sharing economy faces.

2.2. Home Sharing

The home sharing section contains an introduction to the industry, followed by insights into three centralised platforms; Airbnb, Couchsurfing and Onefinestay.

2.2.1 History

It has been said that home sharing is not a new idea since hospitality is an old tradition in history. The initial accommodations date back to religious practices as offering hospitality to travellers was the main part of Christianity's duties (Zhuikova, 2017). This certainly highlights the role of monasteries and churches in turning into spaces to host and feed travellers.

So far, it is worth mentioning that religious accommodation was not relevant to any business until 1282 when it was suggested for the first time by the association of innkeepers in Florence, Italy (Zhuikova, 2017). Later on, it was spread even abroad in Europe. During the 16th century, the hotel industry improved in terms of services and design. The French Hotel de Henri IV that was built in 1788 is also a noteworthy case to accentuate the

hotel industry for being the best one in Europe in that era (Zhuikova, 2017).

With the emergence of the Digital Era that is characterised by technological changes, the sharing economy boosts the empowerment of civil society which is being created by digitalisation and the network society (Faehnle et al, 2016).

Home sharing is one of the most vital industries of the sharing economy. At most, it offers the owners the possibility to share some of the benefits of property ownership by shifting some burdens of the property. Platforms like HomeAway, Hostaway and Airbnb are operating in the same sense by enabling the hosts to make some profit using their proprieties.

2.2.2 Centralised home-sharing platforms

In this subsection, an overview of three centralised home-sharing platforms (Airbnb, Couchsurfing and Onefinestay) is briefly presented on the basis of recent academic findings. Insights into these centralised platforms are based on research statements.

It has been said that online accommodation platforms are major contributor to the tourism industry, continuously growing up and making waves. Corporations like Airbnb, HomeAway, Tripadvisor and Hostway are similarly boosting the industry, but each platform has its features (Zhuikova, 2017).

Sundararajan (2016) categorised the home-sharing platforms according to the features and the ways how they operate in the market. He classified Couchsurfing, Airbnb and Onefinestay utilising the spectrum in gift-economy and market-economy. Couchsurfing offers free services and there are no fees between the host and the traveller (gift-economy end). Unlike Couchsurfing where social motivation is an impulse to get in touch with people, Airbnb's hosts are motivated to make some profit using their ownership. Onefinestay is in the market-economy end of the spectrum

having leisure accommodation and considers luxury hotels more competitive than online rental platforms (Sundararajan, 2016).

2.2.2.1 Airbnb in big cities: Business versus genuine sharing economy

Airbnb was co-founded in 2008 by Brian Chesky and Joe Gebbia after they had turned their house into bed and breakfast in San Francisco's industrial designer event in October 2007. During that event, Airbnb founders hosted guests on air mattresses at their apartment, while the hotel rooms were all booked on the event website (Lappalainen, 2018). Later on, Chesky said that he didn't expect that he would get into a new economy (Geron, 2013, 2).

Gyódi thought that commercial offers constitute meaningful portions of the Airbnb accommodations which reduce the supply of apartments for locals and offers gentrification. Based on his research exploring the features of Airbnb networks in the framework of the influence on inhabitants and the traditional hotel industry, the main distinction over the examined cities indicates that regulatory procedures matter and the sharing economy is at different points of evolution and development. (Gyódi, 2019).

The studies conducted by Arias-Sans and Quaglieri Domínguez (2016) and Schäfer and Braun (2016) for Barcelona and Berlin respectively proved that Airbnb listings are on way to be extremely intense in city centres and tourist regions. However, Gyódi (2019) thought that these studies were examined at the city area level, thus they contribute only to insufficient insights. Furthermore, the study conducted by Quattrone et al. (2016) about Airbnb listings in London confirmed that suburban districts are becoming more significant.

Although these comparable outcomes show that Airbnb is increasing some sharing economy values in rural areas, however focusing on big different cities proves that both Airbnb and traditional hotels are more competing for tourists over a broad spectrum of market parts, but the substitutability

of their proposals is compelled by their complementary connections in particular cities (Gyódi, 2019). In point of fact, this can be seen as a competition to gain money rather than distributing real sharing economy values. Additionally, Airbnb provides hosts in some cases with permanent rentals and provides professional assistance, which explains that these Airbnb listings should not be classified as a part of the sharing economy (Frenken and Schor, 2017).

2.2.2.2 Racial discrimination on Airbnb: Does it require a review policy?

Research states that a test has been carried out for racial discrimination facing proprietors on Airbnb.com, blending photos of all New York City hosts on Airbnb with their rental prices and data about the feature and the quality of the rentals. The findings indicate that non-block hosts charge almost 12% more than black hosts for comparable accommodation (Edelman & Luca, 2014).

These outcomes support that the data appearing on the platform could influence the equality in the community, and the spread of discrimination on centralised online marketplaces is a challenge threatening the social values of the community. The landlords probably cannot be controlled as the platform is encouraging the users to provide information about them. It seems that Airbnb's review policy encouraging hosts and guests to post public profiles - including their photos and names - is a salient feature although such review system not only builds trust but also discrimination (Edelman & Luca, 2014).

Per se, discrimination continues to be a meaningful policy matter varying from the workplace (Bertrand & Mullainathan, 2004) to the housing marketplace (Zhao et al 2006). Consequently, the growth of the online home-sharing industry should diminish the extent of differentiation.

2.2.2.3 Couchsurfing: Between community belonging and the social capital construct

As an online socio-cultural exchange community, Couchsurfing offers to the users the opportunity to organise voyage accommodations and plan meetings with each other through a social networking platform (Rosen et al, 2011). Hence, it endeavours to cooperate with network individuals, communities and places, build cultural interchanges, boost aggregate awareness, increase tolerance and promote cultural perception (Rosen et al, 2011).

Nevertheless, the members of Couchsurfing who have not personally met with each other don't necessarily share the same feeling of belonging to the community than those who have. That is to say, the sense of belonging is lower when there is not a high rate of positive experience and faith in the community (Rosen et al, 2011), which means this feature may call for a new assessment of how the globe became a small village and open to everyone (Wellman et al, 2003).

Therefore, the social capital construct is a key element in the sense of community on Couchsurfing platform. Light (2004) described the social capital construct as a combination of trust and available connections (relationships) in one's social network. Comparatively, Rohe (2004) stated how relationships guide to trust at the personal level and group act at the collective level. Social capital and trust are seen to be intrinsically connected and linked to each other (Cook, 2005), and communication technologies are essential elements to support the social capital construct. In fact, they promote the self-organising of online communities into groups, providing members the opportunity to get a feeling of belonging and interact with those who are geographically separated (Gilchrist, 2009; Sohn and Leckenby, 2007).

Consequently, it is essential to bear in mind that not all Couchsurfing members are creating community value. However, the members who have met others face-to-face or have been engaged in some community actions assume a powerful thought of community than others whose communication is limited to only online means (Rosen et al, 2011).

The feeling of belonging to Couchsurfing community is always restricted to the participation to community meetings, as a constituent boosting the powerful impression on a member's sense of belonging to the CouchSurfing community (Rosen et al, 2011).

2.2.2.4 Onfinestay: Is the luxury up to the product?

Onefinestay is an accommodation corporation and a new trend in both the *OPA and leisure hotel (Hoang & Fan, 2018). This corporation defines itself as "the world's first unhotel"(Ha, 2012).

The idea of establishing this corporation came after a visit that had led Onfinestay's former CEO Greg Marsh to Pisa in 2009. After his return to London, he believed that while traveling abroad, visitors could also stay at his empty flat and explore London. Thus, his flat was the first listing in the platform (Ha, 2012).

When the platform started in May 2010, it had only six homes listed. Just two years later, it announced a $12.2 million Series B funding round, directed by US venture capital firms (Ha, 2012)

Compared to hotels, both Onefinestay and Airbnb offer an area for kitchen, whereas Onefinestay and upscale hotels offer a luxury product (Hoang & Fan, 2018). Even if Onefinestay focuses on luxury products, it faces also significant challenges in the industry. Researches confirmed that the larger part of Onefinestay customers is satisfied with the services provided by the company, however it should further develop its reservation system and service recovery process to guarantee more satisfaction to the guests (Hoang & Fan, 2018).

Some travellers prefer Onefinestays over luxury hotels because they could be offered a complete luxurious flat instead of having just a room in a hotel. On the other hand, this luxury still lacks professionalism in a part that Onefinestay is supposed to create an entire real adventure for travellers (Hoang & Fan, 2018).

2.3. Blockchain technology

This section will present the foundations of Blockchain, smart contracts and Ethereum.

It is essential to emphasise that this present research is going to focus mostly on the possibilities that Blockchain can offer to the home-sharing marketplace. Nevertheless, this paper is not going to analyse the algorithms and other technical depths of this technology, rather it will gain a basic understanding of its underlying mechanisms.

One novelty of Blockchain in the rental industry is that it is still a fresh topic and needs more practical findings through case studies analytics. The primary purpose is then to explore what Blockchain means for home sharing.

2.3.2 Background:

The foundations of Blockchain date back to 2008 when it was coined and conceptualised for the first time by Satoshi Nakamoto (Yli-Huumo et al, 2016). Its design was started by using the hashcash method to add blocks to the chain.

The Blockchain is a digital ledger shared across a decentralised network of independent computers working through algorithm run by different computers in the same network (Casey & Vigna, 2018). With this technology, the users trust the system of the public ledger that is embedded and stored on different decentralised nodes (Swan, 2015).

According to Iansiti and Lakhani (2017), Blockchain has five basic principles underlying the technology: distributed database, peer-to-peer transmission, transparency with pseudosymmetry, irreversibility of records and computational logic. Furthermore, it may be used not just for transactions but also as a registry and inventory system for the recording, tracking, monitoring and transacting of all assets (Swan, 2015).

So far, some industries and sectors started to be introduced as a proven

Blockchain such as the sharing economy among others. The main purpose of using Blockchain is its central properties that implement security, anonymity and data integrity externally of any third party entity in control of the transactions (Yli-Huumo et al, 2016).

2.3.2 Smart contracts and Ethereum

Smart contracts are a primary need to Ethereum for its functioning. Therefore, understanding it is important to comprehend how smart contracts are working.

A traditional sense of a contract means the agreement that could happen between two persons or more to do or not do specific work to exchange something else (Swan, 2015). The trust among the parties is essential to accomplish the task. Smart contract as a term was coined first time by the cryptographer and programmer Nick Szabo. It was presented as a transaction protocol that performs the terms of a contract (Mason, 2017).

Unlike the traditional contract, a smart contract is built into the Blockchain between two parties, where the computer code is the only executor of its terms. As such, it functions as an autonomous operator saved in the Blockchain, encoded as a component of a transaction that presents a contract to the Blockchain (Yli-Huumo et al, 2016).

Smart contract handles the same kind of agreements to fulfil a given task, but the need for one type of trust between the parties is removed (Swan, 2015), which explains why a smart contract is automatically defined and enforced by the code.

Swan (2015) thought that smart contracts are more than a simple buy/sell currency transaction as they may have more expanded instructions attached to them.

In order to implement a smart contract and use it genuinely, Ethereum has been reached as an efficient mechanism to execute it (Zreikat, 2017). Thus, Ethereum has made smart contracts a concrete reality.

SMART CONTRACT

PARTIES > SMART CONTRACT > EXECUTION

Figure (2): *As long as smart contracts exist on the Blockchain, anyone can programme the codes that self-executes without the need for intermediate parties (Wei, 2018)*

Ethereum was conceived as a project by the Russian-born Canadian whiz kid Vitalik Buterin. In December 2013, just after the release of his white paper, people got excited about his idea. Buterin's Ethereum project was recognised as the first renewable platform for developing decentralised applications (Casey & Vigna, 2018).

Ethereum has been introduced as an open-source, public, Blockchain-based distributed computing platform that provides a platform for smart contracts.

Swan (2015) defined it as a decentralised cryptocurrency platform and a programming language that runs smart contracts to build and publish distributed applications.

One of the pertinent specificities of Ethereum is enabling a mechanism to execute a programming task on each transaction (Besarabov & Kolev, 2018). As such, it offers more possibilities to use cases of Blockchain technology.

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3- EMPIRICAL PART

The empirical part addresses three main sections: challenges of centralised home-sharing platforms, prospects of Blockchain on online home-sharing platforms and the discussion section. The first two sections will approach the research questions on the basis of the interviews. The findings will be highlighted in the third section.

3.1 Challenges of centralised home-sharing platforms

Even though centralised home-sharing platforms offer notable advantages, they are still facing some criticisms primarily from the users' view. In this section, the first research question is approached and the challenges are categorised into three elements according to the interviews: the middleman issue and monopoly of managers, data security issue and lack of trust and finally the regulation issue and abuse by the tenants/hosts. The challenges are outlined in this section and highlighted again in the discussion section.

3.1.1 Middleman issue and monopoly of managers

Nevena Petrova (personal communication, March 3, 2019) stated that Airbnb-like networks seem to be decentralised but, in fact, they are only delivering such an impression to the host as directly confectioned with their guests. She further stressed that such an impression is not true because user's bookings are made through an infrastructure, hubs and software that belong to the company owning the platform. Besides, fees are charged by the same corporation. Primarily, Airbnb is making money from users' accommodations. Consequently, Petrova thought that this centralised market seems chaotic and generates an extremely unfit industry with an annual turnover of more than $700 billion and a growth rating of above

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10% per year. Thus, sharing economy platforms are investing in the real peer-to-peer value.

Petrova's opinion can be interestingly associated to Jon Chou's statement (personal communication, April 3, 2019) that while charging a high fee (15-20%) by a middleman in centralised platforms, offering the same services with no fees can truly be peer-to-peer instead.

The issue of the middleman in centralised marketplaces seems to be principally due to the fact that platforms are ultimately controlled by the company. Markus Weig (personal communication, March 18, 2019) started from the point that the central idea about all sharing platforms is their ownership of supply and demand. Home-sharing companies like Airbnb intensely depend on attracting more home providers to stay unbeaten corporation. Furthermore, Weig argued that the core business model of a private sharing accommodation is thinning due to an accelerating rush of professional lodging providers (e.g. hotels) to Airbnb. He followed up his argument emphasising that established home-sharing companies must reshape their profiles in the future.

On the other hand, Weig's statement could be thoroughly associated to Petrova's argument regarding the monopoly of the corporation that is linked to the value of the service and the relationship between the platform and the host as well. Petrova stated that without appending any value to the service that users are looking for, the centralised platforms will still have absolute power over the network. She illustrated an example that Airbnb does not make the rooms cleaner or the location of the property better. This could be interpreted only in one way: because the companies like Airbnb dictate their requirements to the hosts and see themselves as the unique part of the trust and a unique point of failure. Such a tendency places the hosts in a dependant and vulnerable status.

Petrova concluded her statement suggesting that the centre solution to encounter the middleman issue and monopoly of managers is to build the

market on top of Blockchain because this new technology guarantees unique competitive benefits and opportunities that didn't exist 12 years ago when the sharing economy emerged (more or less).

3.1.2 Data security issue and lack of trust

This subsection addresses the trust and data security issue on the current home-sharing platforms through three points: data privacy review policy, trust issue and the idea of the critical mass in the marketplace.

Agnieszka Pokrywka (personal communication, April 2, 2019) thought that maintaining trust by the home-sharing companies is a serious hurdle. Thereby, challenges are not only about securing a reliable exchange between a guest and a host but also about data privacy review policy.
Moreover, Pokrywka contemplated that data issue cases in a centralised marketplace effectively enabled the home-sharing corporations to create new mechanisms keeping an eye on these issues, however these solutions are limited. Pokrywka's statement is supported by Weig's argument (personal communication, March 18, 2019) that the security of users and data on the current home-sharing platforms are not leveraged in a decentralised system that is running on a Blockchain safe by design. Weig explained his argument that platforms still depend on central providers that can be hacked or broken down. Additionally, there is no Blockchain maintenance on these centralised platforms as the case is now with decentralised ones.

The trust issue is another case related to data security. Daniel Sieberg (personal communication, March 31, 2019) highlighted that trust in centralised platforms will always be the prominent challenge to be overcome - it's earned not bought and must be demonstrated over time to facilitate consumers with a possibility to comprehend the issues. He contended that any marketplace grapples with the "critical mass" idea that means trust can take some time to improve. Sieberg supported that home

sharing is a popular concept thanks to Airbnb, however not everyone is fascinated with the idea depending on the location, neighbourhood, environmental impact, etc.

As a solution to data and trust issue, Sieberg suggested that a decentralised solution would provide a system that guarantees to the users their privacy. He supported that consumers in decentralised home-sharing platforms expect their privacy and a high level of security - if their information is not the currency (e.g. ads, *CTR) then the data should be in service of providing better analytics, creating a shared currency if that is of value and new ways to build community.

3.1.3 Regulation issue and abuse by tenants/hosts

In this last subsection, two other issues are highlighted by Walid Al-Saqaf (personal communication, May 10, 2019) related to the abuse of users and tax report.

According to Al-Saqaf, the centralised sharing economy sector still needs to be regulated to avoid being messy vis-a-vis the regulation system throughout the world. He contemplated that reporting taxes and income from such businesses is not usually straightforward and could lead to an underground or black market.

Furthermore, Al-Saqaf considered that the abuse by the tenants or the hosts is also one of the biggest challenges around the industry. He deliberated that centralised home-sharing companies are still vulnerable at several levels linked to this issue. Abuse can be seen through different forms such as racial discrimination, harassments, etc. Therewith, the centralised platforms are then facing concerns with regards to significant review policies checking the abuses and recording them. Such an exploit is a challenge to be considered by decentralised home-sharing platforms.

Finally, the three above-mentioned challenges consistently prove that

centralised home-sharing platforms are rather in support of witnessing the Blockchain to face the issues stated in this section.

3.2 Prospects of Blockchain for online home-sharing platforms

In this section, the second research question is approached and the prospects of Blockchain on home-sharing platforms are categorised into five elements: peer-to-peer communication, reduction in commission fees, Blockchain networking services, leveraging data security and smart contracts. These prospects are discussed in this section and will be highlighted in the discussion.

3.2.1 Peer-to-peer communication

Petrova (personal communication, March 3rd, 2019) pointed out that since the ultimate goal of LockTrip platform is to hold straight integration with the hosts, the payments are directly made between the two parties (on the crypto level). However, if the guest chooses to make the payment using a credit card, it should then be handled by top-grade security and privacy payment processor, where users insert their details straight into the payment processor.

On the other hand, peer-to-peer communication is adopted on other platforms as a way to attract more users by using tokens. Jon Chou (personal communication, April 3, 2019) contended that the objective of decentralisation with Beenest is to make network truly peer-to-peer. The decentralised arbitration network on Beenest empowers users to act as judges and vote for what is right or wrong on the platform. Chou elucidated that on Beenest platform, the arbitration network is executed through Bee Protocols: *Payment,* to transfer and retain tokens until the realisation of service, *Arbitration,* to resolve conflicts, and *Reputation,* to handle reliability and reputation scores for all peer-to-peer organisations. Regarding this infrastructure, Chou revealed that it allows Beenest to save

on transaction fees and create a decentralised network. As such, the protocols will widespread the benefits by making the development cycle quicker, the integration costs reduced and network bootstrapping faster.
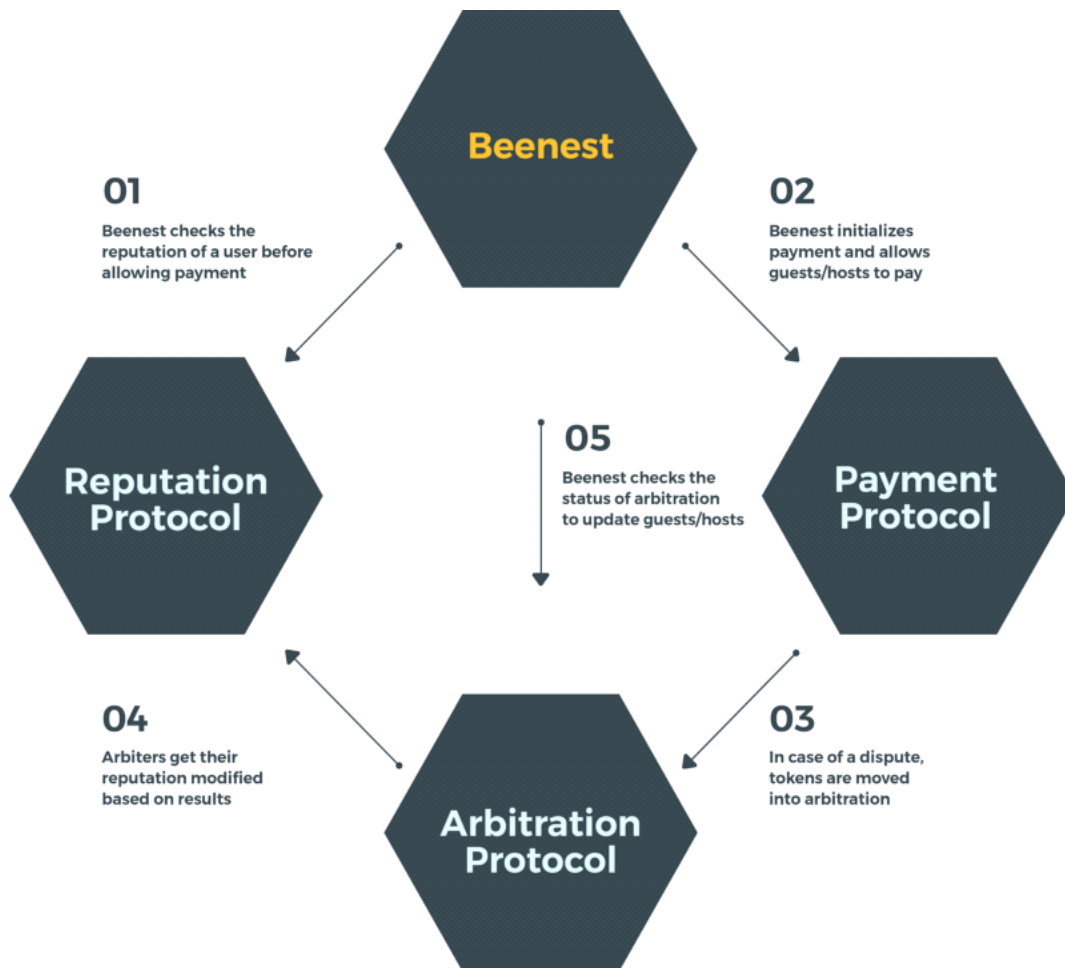

Figure (3): *Beenest's three protocols - the "P-A-R" protocols (Payment, Arbitration, and Reputation protocols) used in tandem help *dApps and 3rd parties to increase revenues, decrease costs and save time*

3.2.2 Distributed database

Offering a decentralised inventory is an essential challenge that Blockchain

platforms are confronting to differentiate them from centralised corporations. Petrova (personal communication, March 3, 2019) accentuated that the principal product of LockTrip is the distributed database, which inevitably necessitates a decentralised ecosystem to achieve its mission. As such, the platform could avoid jumping in a chaotic industry like the case of centralised platforms. Petrova mentioned that currently, more than 250 different companies are trying to inefficiently distribute the same inventory across the globe, whereas LockTrip is building an infrastructure every marketplace can trust without compromise.

3.2.3 Reduction in commission fees

With the emergence of rental decentralised companies, some platforms are continuously investing in reducing the commission fees and boosting a new trustable marketplace using Blockchain technology. Chou (personal communication, April 3, 2019) highlighted that Beenest charges 0% commission from hosts and guests for using its services. Eliminating such a monopolistic hurdle in the industry makes it possible for both hosts and tenants to communicate directly without paying any fees.

Likewise, Petrova (personal communication, March 3, 2019) highlighted that LockTrip is offering services at 0% commission intending to eliminate crucial obstacles in the current global travel and rental industry. Consequently, the platform doesn't gain profits. Petrova contended that LockTrip's goal doesn't aim to be a better Booking.com or Airbnb, it is rather a foundation model for the travel industry that focuses on the most modern sample of monetisation – freemium - just like the multi-billion dollar companies Google, Amazon, etc. operate.
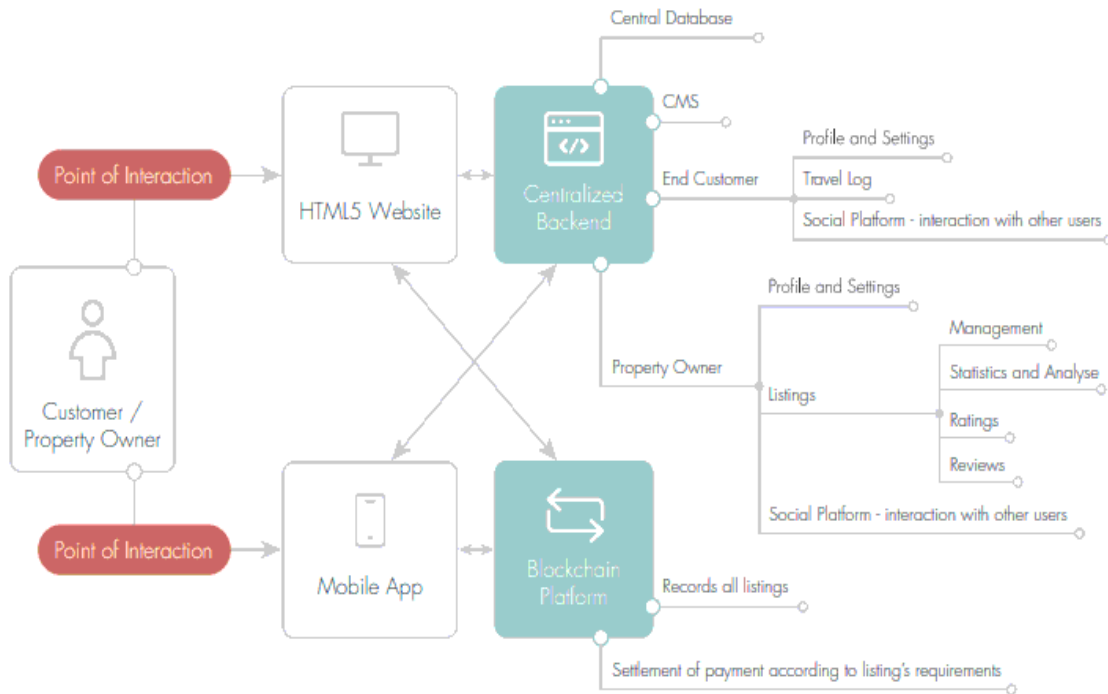
Figure (4): LockTrip system architecture consists of 3 layers:
1) **User Layer:** the customer can use different platforms to interact in the sharing process (web, mobile clients for Apple and Android smartphones and tablets).
2) **Centralised Backend Layer:** It holds the speculum database (pictures, videos, etc.) on LockTrip's servers. Transactions are managed on the Blockchain by using a generator of smart contracts.
3) **Decentralised Blockchain Layer:** using the Ethereum, LockTrip will keep an address book of all listings on the Blockchain.

3.2.4 Blockchain networking services

The prospect of networking on Blockchain platforms is a trend that aims at boosting powerful cooperation among different projects. This strategy has also been adopted by some decentralised platforms such as Slock.it which jointly works with apartment providers or e-bike manufacturers in nearly all cases the partners are interested in and whenever they receive an offer from the platform (M, Weig. personal communication, March 18, 2019).

Further, such dynamism of crypto projects is since decentralised platforms are using the Blockchain beyond simple payment mechanisms. For example, LockTrip aims at creating a truly decentralised and shared rental ecosystem that will disrupt the booking site industry and substitute the ineffective sharing networks (N, Petrova. personal communication, March 3, 2019). This perspective seems to attract more partners to cooperate rather than being involved in an open competition. Petrova contemplated that there are no other crypto projects that are currently competing with LockTrip, they instead can be clients provided with technology and know-how should they want to migrate/ improve their projects.

This trend is seemingly supported by many developers and other platforms' managers focusing on the cooperation and providing the service that is desired by the entity rather than competitive edge stringently for the technology. Sieberg (personal communication, March 31, 2019) also opined that targeting costumers in the decentralised home-sharing marketplace doesn't necessarily require keeping an eye on competitors and turn into a way for rivalry. He affirmed that it should instead work with partners and focus on technology to improve the quality of services. This is unquestionably a purpose for which Blockchain platforms are establishing a new decentralised business model.

3.2.5 Leveraging data security

Though the decentralisation is mostly seen as a priority to leverage more trust and data security, it has been said that security with decentralised networks is not that different than the security of the internet today.

According to Pokrywka (personal communication, April 2, 2019), decentralised platforms are in the right direction to build trust and provide solutions to centralised platforms because Blockchain could efficiently help build sustainable business in home-sharing industry by looking for a pattern where the resources and time invested have an immediate influence on

those inside and outside of the organisation. However, she pondered that investing resources and time necessitates a correct way to leverage the security of both users and data in any decentralised platform.

Petrova (personal communication, March 3, 2019) contended that Blockchain technology is beneficial for applications that want to withdraw from the system any need for trust in a third party because Blockchain applies shared ledger information through a peer-to-peer network that confirms information almost directly. Petrova's statement can be clearly seen in Al-Saqaf-s comment (personal communication, May 10, 2019) who confirmed that the original motivation of decentralisation emerged from the concern about the single point of failure scenario, where data could be stolen or manipulated without any permission or even without making the owners aware of it. Therefore, Al-Saqaf suggested that Blockchain has endeavoured to decrease this risk since such cases have regularly happened to data on big platforms like Facebook and iTunes, etc.

Furthermore, it is essential to mention that some Blockchain home-sharing platforms like Beenest are also using classical methods to build more trust next to decentralised mechanisms. According to Chou (personal communication, April 3, 2019), leveraging the security of both users and data on Beenest is done through traditional best practices along with transparency of the Blockchain by using tokens as an incentive. The shift of data is then much accessible and security-wise unmatched.

3.2.6 Smart contracts

Another prospect that is relevant to the key advantages of Blockchain technology is the shifting from the classical contracts to the smart ones. Thanks to the implementation of Blockchain solutions in decentralised home-sharing platforms, handing over the room-keys would not be needed (Weig, M. personal communication, March 18, 2019). Weig illustrated his statement with an example of Slock.it, where everyone can rent, pay and open an apartment immediately thanks to the platform's mechanism.

Furthermore, in case of any dispute from the provider or customer, the rules attached to the smart contract will help resolve the dispute since they adjust independent and autonomous.

The networking among projects is seen in establishing smart contracts as the security of data is also leveraged on LockTrip through a smart contract that has been established with an outside company.
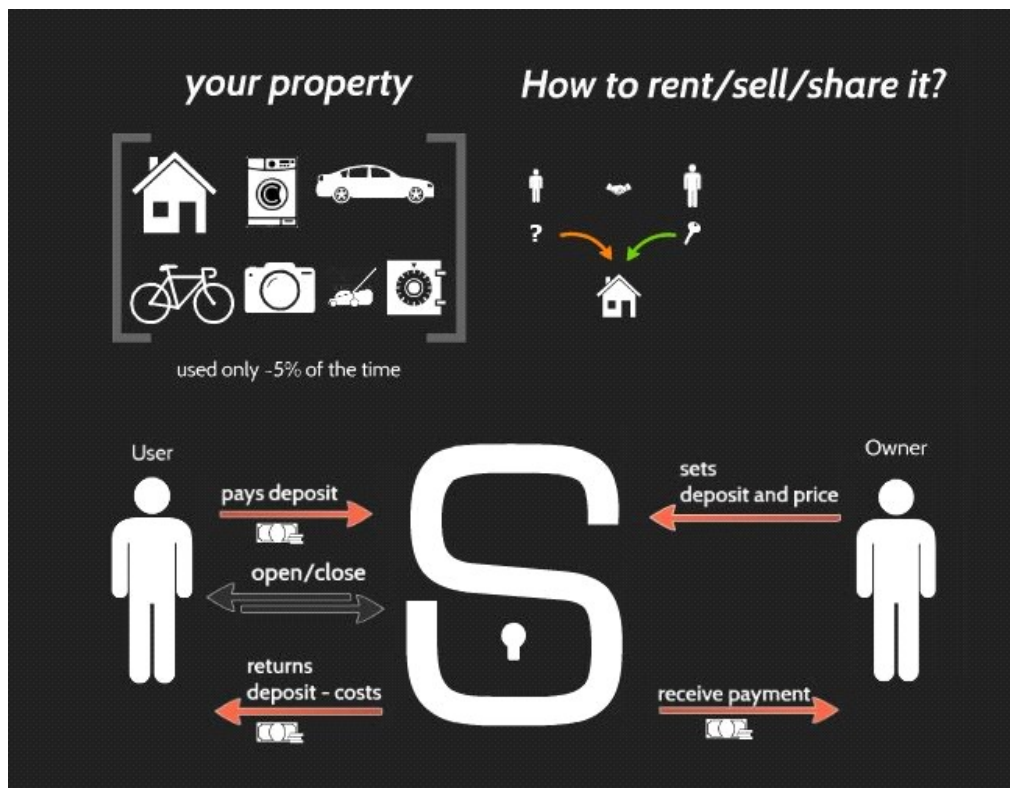

Figure (5): Nowadays, if someone owns an accommodation and wants to rent it, he/she should do it through Airbnb which charges 15 % as commission fees. With Slock.it platform, the tenants will no longer need to go through the same centralised process; they pay directly to the lock itself. The lock enters into a smart contract with the renter: "You leave a deposit, you pay X amount a day or a week and then when you leave, we'll give you back the deposit."

The money the tenant paid goes to the host who owns the property. As such, the tenants don't need Airbnb or other centralised platforms anymore because they save 15 % and the savings can be passed on **(Stephan Tual, founder at Slock.it).**

3.2.7 Solid client and detection of fake inventory

Among the sustainable solutions that Blockchain platforms are currently providing, some solutions are designed to attract more supply and demand. Additionally, some companies have already developed mechanisms to detect fake lists as the hurdle is now on centralised platforms.

Weig (personal communication, March 18, 2019) argued that using Slock.it-app, the user can simply detect, rent and open/close a room, an e-bike, a locker, a safe, etc. The core challenge of Slock.it is the same as every platform has: attracting enough supply and demand while performing a notable role of the enabler of the sharing world. Slock.it has developed a client that allows opening and closing everything shareable securely with connection to the internet. Weig stated the client as itself is the tiniest (size of a microcontroller) in the world, is running on every blockchain and can handle crypto transactions and can also pay other machines.

Weig's comment is seemingly linked to the database and the listing of the users. In fact, the database can also include fake listings necessitating powerful decentralised solutions. Petrova (personal communication, March 3, 2019) advocated that LockTrip owns a solution that the fake entries will immediately get a negative evaluation among the network of marketplaces and hence will not be considered. She mentioned that the marketplaces will be able to decide on the inventory they want to use and filter out inventory below a particular rating. Additionally, they can also mark them "new" on their marketplace or ask for verification, etc. Petrova stated that on the internet, there are some sites that businesses trust and others are not reliable. Businesses (marketplaces) are responsible to be conscious of such risks.

4- DISCUSSIONS

The following part discusses the Blockchain solutions to home-sharing platforms along with the hurdles of decentralisation. It also materialises all the parts of the study and adds concluding information where necessary. The challenges of centralised home-sharing platforms and key prospects of Blockchain are evaluated. It is inferred whether Blockchain technology can guarantee sustainable solutions to the hurdles previously mentioned or it is facing challenges, hence it is early to evoke the disruption of the entire home-sharing industry.

The interviews conducted with Nevena Petrova (LockTrip), Jon Chou (Beenest), Markus Weigl (Slock.it), Agnieszka Pokrywka, Walid Al-Saqaf and Daniel Sieberg support that centralised corporations are facing pivotal problems. Consequently, they confirm that Blockchain is waving with solutions. The robust argument of seeing the Blockchain bringing prospects to the existing home-sharing business model comes from both the fact that Blockchain has already been experienced in the industry and the active interaction of the users with Blockchain platforms. The assessment regarding the advantage of Blockchain has been proved in this study and empowered by key research features based on the theoretical part and interviews. The information drawn from both the theoretical and empirical parts is tangled with the interview findings that allow developing some fortified assumptions about the future of Blockchain in the industry and home-sharing platforms.

As a matter of fact, the dominance of the middleman and the monopoly of managers are not seen anymore on Blockchain platforms like LockTrip and Beenest. Peer-to-peer communication is provided and commission fees are removed thanks to their decentralised solutions. Designing such a novel type of supply which is much cheaper is an extremely significant alternative for Blockchain platforms instead of relying on head-to-head marketing

against the big centralised companies. Competing with big corporations like Airbnb seemingly doesn't work since they are strong and grounded with immense budgets. Consequent to decentralisation, transparency is guaranteed and there is no longer a need for operational profit seeing that services fees are reduced.

Notwithstanding their current dominance in the industry, centralised platforms are still struggling to come up with solutions with regards to the data security issue and lack of trust. Leveraging security must be executed in an accurate system that should be in service of providing beneficial analytics for better data security. Consequently, the Blockchain is effectively suggesting long-lasting solutions for data privacy.

The implementation of Blockchain in the industry supports the assumption that decentralised home-sharing platforms are transparent and security is one of their main features. As such, other Blockchain platforms could emerge in the industry and probably the current traditional corporations would also turn into decentralisation.

Furthermore, the hurdle of the abuse by tenants and hosts can be perceived as a result of the limitation of the centralised database system. The power of Blockchain technology and smart contracts can offer much more transparent authority to the users inside an accurately decentralised marketplace. Following the previous statements, the assumption that Blockchain has more advantages for the home-sharing marketplace is confirmed and supported on the basis of three main points. Firstly, interviewees established that centralised platforms are facing significant challenges in the industry and identified the most dominant ones: the middleman issue and the monopoly of managers, data security issue and lack of trust, regulation issue and abuse by tenants and hosts. Secondly, the interviewees sorted out the key prospects of Blockchain as a solution based

on experimental cases: peer-to-peer communication, distributed database, reduction in commission fees, Blockchain networking services, leveraging data security and smart contracts. Finally, successful cases are given through a multiple case-study including three decentralised platforms: LockTrip, Beenest, and Slock.it. As a result, these platforms prove the sustainability of decentralisation.

Per contra, as the interviewees mentioned hurdles even with decentralisation, could we assume that Blockchain is an absolute sustainable solution to the key challenges of the home-sharing industry?
The interviewees confessed that Blockchain platforms are also facing challenges at different levels. Therefore, the assumption that Blockchain will soon disrupt the existing centralised home-sharing platforms is not strengthened by compelling evidence for different arguments.
In this second perspective of this discussion, the hurdles of decentralised platforms are also mentioned.

The first challenge for Blockchain rental platforms is the competition with centralised home-sharing platforms. *OTA companies such as Booking.com, Expedia.com and Airbnb.com have already overwhelmed the market and are perceived as main competitors of LockTrip and Beenest. To differentiate from such big centralised corporations, LockTrip relies on Blockchain aspect and innovation, whereas Beenest is focusing on the cryptocurrency community as an efficient solution.

On the other hand, cryptocurrencies are currently facing the biggest concerns with scaling because the number of digital coins is increasing quickly, which made this growth complex and difficult. Besides, the research revealed that cryptocurrency doesn't always constitute an absolute solution for attracting a critical number of users to generate a viral business because it is still a crucial barrier being faced by decentralised platforms. Asserting the opposite can be perceived as a blurring statement and overdone because there is no guarantee that users will certainly opt for cryptocurrency option. Also, a question still arises as to why blockchain or

crypto when it could be done in other ways.

Additionally, there is another concern about decentralisation relevant to regulations. The regulation in decentralised marketplaces is substantially a slightly problematical issue as reporting taxes and incomes is not straightforward and lead to a clandestine or black market. It is essential to acknowledge that regulation issue and law-enforcement mechanisms that are already established for centralised corporations are tricky to implement in decentralised platforms. To be legally protected, *KYC mechanisms need to be in place somehow. Nevertheless, a question arises: how could one check the identity of the members? There would still be a necessity of government-backed documentation which is also an additional burden and a potential privacy concern. The regulation issue in decentralisation is essential because it can lead to cybersecurity issues and the lack of intrinsic value as well.

From another perspective, the monopoly in decentralisation is seen somewhat as a major issue in Blockchain ecosystems because there is an assumption that platforms are still working in a hierarchical structure. In fact, if decentralised platforms are still keeping an eye on the users, dictating the rules (vertically), transferring money and holding data of the users, it supports the impression that they are operating in a top-down economy instead of a truly decentralised marketplace.

The fourth hurdle of decentralisation is about the data entry and the database. Despite the efforts of Blockchain platforms to provide solutions with regards to the fake listing, the data entry is still seen as a pivotal hurdle in Blockchain home-sharing platforms, i.e. the oracles that serve the data directly to the Blockchain. For example, if the host or guest ends up inserting false information, it would not be easy to fix unless a gatekeeper is employed, which would overcome the intent of decentralisation in that case. Oracles (sensors, locks, etc.) are still exposed to misuse or failures.

The fifth issue to be addressed on Blockchain home-sharing platforms is the

technical level since the users expect strong parameters in ways that provide internal governance that can align the right people in service of a shared mission and a way to engage people around a shared intention. However, this is extremely dependent on a great team of developers and marketing people.

Moreover, the *UI constitutes a barrier in the home-sharing decentralised ecosystem, which should correctly be designed into information devices with which users may interact. The interviews in the present research revealed that such a technical barrier is crucial. For example, in a platform like Beenest, the UI is not as friendly and infrastructure is not as mature as that of centralised systems such as Amazon Web Services and banks, etc. The mission of UI developers seems to be more challenging as they should provide reliable UI solutions to the end platform's users in different contexts.

The last Blockchain issue tackled in this paper is the marketing level. In point of fact, the barrier in understanding and learning Blockchain mechanisms is still an obstacle being faced by decentralised home-sharing platforms. Users of Blockchain ecosystems still need more education and training, and the barriers to entry should definitely be lowered. Therefore, there always must be a significant reason to create a decentralised platform that should serve participants and not just creators.

Following the issues of decentralisation stated in this part, it seems it is early to assume that Blockchain is disrupting the existing centralised home-sharing corporations because they are still dominant in the marketplace with huge financial resources, millions of users and thousands of accommodations. On the other hand, the Blockchain technology is still growing, promising and continuously waving with more sustainable solutions to different problems. Blockchain solutions are tested and experimented and have proven the results, which means attracting more users could be just a question of time as long as Blockchain technology is rapidly developing.

5- CONCLUSION

The empirical part pointed out that the services provided by Blockchain home-sharing platforms such as LockTrip, Beneest and Slock.it endorse and support the adoption of the Blockchain in the industry. These companies have already experimented this technology and a positive upshot has been outlined. The findings of the present research confirm that a new decentralised business model is certainly growing and waving with new solutions.

Blockchain as a distributed public ledger is proved to be powerful and will hold the future of the entire sharing economy sector provided that decentralised platforms thoughtfully confront the hurdles stated in the discussion section. Getting rid of centralised systems seemingly needs to be carried out partially. Therefore, Blockchain platforms probably need for the time being some hybrid decentralised/centralised solutions. The implementation of Blockchain-based self-sovereign identity solutions could be advantageous. As such, some centralised services could help build security while still applying the effectiveness of Blockchain mechanisms. Yet there is a question of how that would work out in the real world.

Even though features of centralisation still exist in Blockchain home-sharing platforms, it is significant to admit that by the next coming years, the sharing economy will be at its zenith and Blockchain technology will impel this development which necessitates great teams able to overachieve the promises. There will be a continued improvement on the Blockchain infrastructure side. Also, Blockchain technology will most probably continue to transmit reliable technical achievement. The design of how home-sharing corporations will probably look like or function will even change during that time. At the adoption level, the home-sharing industry will witness more interoperability as various internal and private Blockchains locate more ways to connect. Currently, a fracturing of the centralised internet is emerging; it began as a decentralised network and can evoke all kinds of challenges from governance to security and sustainability.

The results of the present research revealed that more home-sharing

corporations will consider implementing Blockchain-based resolutions for some of the advantages they provide such as token-driven incentives, solid security, superior effectiveness and various benefits of automated transactions and decreasing fees. Nevertheless, this will improve over time but is not expected to attain mainstream levels. The stream towards decentralisation will continue to grow and be affected by different missteps of centralised systems. This trend will work as planned and, in some instances, will probably operate against the privacy and security of users.

The sharing economy sector is enabled by Blockchain technology and the world will witness the evolution of new businesses that adopt some parts of Blockchain to provide better services and products. The companies that maintain their traditional business models sticking to centralised platforms may be left out of the competition. Therefore, the sharing economy sector is expected to massively apply Blockchain solutions in the future even if the hype for the word "Blockchain" will certainly pass by the time. New decentralised platforms will be focusing on building great products and creating excellent marketing to provide the best solutions and dominate the market.

Finally, the decentralised, transparent and safe character of Blockchain is effectively bringing solutions and building more trust. Even if still there are challenges to fix with the decentralisation, Blockchain will make the difference in the future and boost the competition among the home-sharing companies. In fact, this is an obvious way of enabling the home-sharing marketplace, ultimately the whole sharing economy sector.

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BILAGOR/ APPENDICES:

A) Interview guidelines

Prologue

As previously mentioned in the methodology section, qualitative structured interviews were conducted in this study, and the group of interviewees was chosen taking into consideration their professional experience either in the sharing economy sector or in Blockchain technology. This exploratory approach sought to closely examine the experiences used in the field of home-sharing industry.

From the first three interviewees, Nevena Petrova, Jon Chou and Markus Weig, I was able to gain meaningful answers about their Blockchain projects (LockTrip, Beenest and Slock.it). The interviews specifically explored their motivation to build decentralised innovative platforms and how do they approach the peer-to-peer trust through their services. On the other hand, the answers from the last three interviewees, Daniel Sieberg, Walid Al-Saqaf and Agnieszka Pokrywka, helped get more profound insights into Blockchain in terms of marketing, media and socio-cultural point of views about implementing Blockchain in the online home-sharing industry. As a master student of Media Management programme which is a multidisciplinary field, it is essential for the author to analyse the topic from these different corners.

Bearing in mind the global scale nature of the present research, owing to the time difference between Finland and other countries, the interviews were conducted one by one in the form of email exchanges instead of live interviews. Besides, the professional status of the interviewees was also taken into consideration as they are busy and travelling most of the time. However, the author regularly followed discussions with the interviewees

via other emails in addition to online chat on Facebook and Linkedin. The chat discussions were followed up to clarify some statements or further explain technical connotations.

Focus

To emphasise what was stated in the aim and rationale section, the main focus of the present research is to identify the challenges that centralised home-sharing corporations are currently facing. Afterwards, Blockchain-based solutions were suggested to approach these obstacles. Conducting interviews with Blockchain experts was maintained to get more reliable results and to approach the theoretical part that is based on fresh studies about the sharing economy dealing with the most issues of the sector.

B) Interview questions

The interview questions listed below mostly focus on issues relevant to the research questions and the objectives of the topic. The interviewees were asked to identify the challenges they are tackling and suggest the solutions they are working on. The last four questions deal with the hurdles and the future of decentralised platforms to get deeper insights into the prospects of Blockchain.

It is necessary to underline that some interviewees who participated as Blockchain experts to approach the topic from marketing, media and cultural perspectives don't necessarily own/run Blockchain home-sharing platforms. However, they were included as they are operating in Blockchain multidisciplinary projects or focusing on multidisciplinary research topics.

1- Can you give a short introduction about yourself?

2- How and when did you hear about Blockchain technology for the first time?

3- What are the challenges (issues) that home-sharing companies are facing in a centralised marketplace?

4- Can you tell about your motivations behind your decentralised platform and what are your missions and challenges?

5- How do you leverage the security of both users and data in your platform?

6- Can you tell about your ways of encouraging users to participate more in your services?

7- How do you approach the peer-to-peer trust at your platform?

8- Can you describe the benefits of using Blockchain in the home-sharing market?

9- What are the main barriers that decentralised sharing economy platforms are facing?

10- What do you suggest as solutions to face these hurdles?

11- Who are your main competitors in the market and how do you differentiate your services from theirs?

12- What do you expect about the future of the decentralised sharing economy after 10 years?

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*LIST OF ABBREVIATIONS

CTR: Clickthrough rate

dApps: Decentralised Applications

OPA: Online peer-to-peer accommodation

OTA: Traditional online travel agencies

KYC: Know Your Customer

UI: User Interface