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How Can Companies Capture Value From An Innovation? From Value Creation To Value Capture
Case Study: Uber

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Abstract

This thesis examines the value creation process and how companies can capture value that they created. It particularly analyses the opportunities a company has to capture value from an innovation. The ability to monetise innovations is crucial for companies and determines whether they can establish a sustainable business. This thesis first discusses previous research and connects theories to broaden and enhance their applicability. The main part is a case study on Uber, a ride-hailing company. In the case study, the company is thoroughly examined and theories which were discussed before are applied in order to expose how Uber creates and captures value. This thesis further highlights the importance of network effects in a competitive environment within the sharing economy. Although value creation and value capturing has extensively been discussed in prior research, this thesis contributes by applying traditional and recent theories to a rising startup that has received unprecedented funding from its investors. Understanding how Uber pursues its way to the top and how it captures value provides vital implications for other similar startups and helps them in their efforts to succeed. This thesis finds that Uber needs to focus on three aspects. Firstly, it needs to diversify its portfolio and offer more services. Secondly, it needs to develop a system that prevents drivers from using competing apps, which would realise network effects that lower prices and enable faster pickups. Thirdly, it needs to further innovate, especially in the field of autonomous driving.

Resumo

A presente pesquisa de mestrado analisa o processo de criação de valor pelas empresas e como elas capturam o valor que criam. Mais especificamente, investiga as oportunidades que uma empresa tem de capturar valor por meio de uma inovação. A habilidade de monetizar inovações é crucial para as empresas e determina se elas podem estabelecer negócios duradouros. Primeiramente, são apresentadas pesquisas anteriores e, em seguida, o autor as conecta para expandir e melhorar sua aplicabilidade. A parte principal é o estudo de caso sobre a Uber, uma empresa de tecnologia que oferece carona remunerada. Nele, a empresa é profundamente analisada e as teorias discutidas anteriormente, aplicadas para explicar como a Uber cria e captura valor. Esta tese reforça ainda a importância do efeito de rede no competitivo ambiente da economia compartilhada. Apesar de outras pesquisas já terem discutido extensamente geração e captura de valor, este trabalho contribui para aplicar teorias tradicionais e recentes a uma startup em ascensão, que recebeu aportes sem precedentes de seus investidores. Compreender como a Uber busca estar no topo e como ela captura valor tem impacto vital para ajudar outras startups similares a alcançarem o sucesso. O resultado desta pesquisa mostra que a Uber precisa focar em três aspectos. Em primeiro lugar, deve diversificar seu portfólio, oferecendo mais serviços. Em segundo, precisa desenvolver um sistema para evitar que os motoristas usem aplicativos concorrentes, de modo a alcançar o efeito de rede, que reduz os preços e possibilita buscar os passageiros mais rapidamente. Em terceiro lugar, verificou-se que a empresa necessita inovar, especialmente na área de carros autônomos.

List of Abbreviations

Abbreviations	Meaning
BBC	British Broadcasting Corporation
CEO	chief executive officer
e.g.	exempli gratia (for example)
et al.	et alii (and others)
GPS	Global Positioning System
i.e.	id est (that is)
OSHA	Occupational Safety and Health Administration
Q	(financial) quarter
R&D	research and development
UK	United Kingdom
US	United States
WTP	willingness to pay

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1. Introduction

1.1 Contextualization and Relevance of the Problem

In the contemporary world companies are more and more facing the challenge of shortened life cycles, imitation from cheap-labour countries, disruptive innovation and well-informed consumers. That said, capturing value from innovation is more difficult than it has been ever before. However, it has never been easier to build businesses and to create value for customers. Innovation and inventions today are all made in a technological context. Through technology, inventors are able to innovate with a low budget. Finding easier solutions with technology can disrupt long-established industries and force them to innovate or make them redundant. Yet, a business that only focuses on the creation of value and neglects the capturing of value will not be sustainable.

From the mid 1990's until the early 2000's, the so-called dot-com bubble showed exemplarily what happens when companies only focus on the value creation component and neglect the value capture one (Verdin and Tackx, 2015). These days, promising startups launched businesses, which certainly created value for its customers but could not monetise any of this value for themselves and eventually went bust. The newspaper industry still suffers from its "free of charge" culture because its actors did not foresee the trend from print towards online news. Today they are desperately trying to find ways to make consumers pay for online content (The Economist, 2009). Facebook, with more than 1.7 billion active monthly users, also creates value. Yet, shortly after its IPO, investors were in doubt about how and if Facebook was able to capture some of this created value (Michel, 2014; Statista, 2016). Finally, Amazon concludes this catalogue. Whereas it has undoubtedly been a value creator for its customers, it took eight years until Amazon generated its first profits and was able to capture value from its innovative solutions (Hawawini, Subramanian and Verdin, 2004).

The above list shows that both established companies and innovative startups are likewise concerned with the concepts of value creation and value capturing. While startups often have to find ways to capture value, established companies may need to innovate their services or products to create more value for their customers, or need to innovate in the way they capture value.

This thesis aims to examine how companies can capture value from an innovation. However, as stated above, the process of capturing value cannot be analysed on its own. It always needs to be connected to the process of value creation. The goal of this paper is to connect existing approaches on how companies can capture value and apply them to the company Uber.
It will be analysed how Uber creates value, if and how Uber differs from its competitors and how it currently captures value. Furthermore, this thesis will propose how Uber can capture value in the future. This comprehensive analysis aims to make Uber and its business model more transparent and indicates important lessons for future *unicorns*. Particularly, in the context of Silicon Valley's mentality, that only one company can win, Uber stands out as an exciting company, it is still fighting its way to the top.

1.2 Justification of the Theme Selection

Despite Uber often being a topic of conversation amongst the media and the market, to the author's best knowledge, the value creation and value capturing processes have not been subject to an exclusive case study. Besides, the selection of Uber, to identify how companies can capture value from innovation, has multiple other reasons.

Highly valued startups are generally a popular theme for theses or dissertations. Companies that are so popular that their names become verbs are even more worth investigating. "To uber" alongside with "to skype" and "to google" are some of the rare examples. In 2016, Uber is the world's most valuable startup in history, having a valuation of $68 billion (Sorkin, 2016). Since its inception in 2009, Uber has disrupted the taxi industry, changed urban transportation and invested heavily in self-driving cars. The company has further expanded into the delivery industry and tries to get a foot in the door of public transport. Thus, rather than only focusing on the traditional taxi industry, Uber aims to become the leading company in global personal mobility. Uber currently operates in more than 527 cities in 77 countries and has around 40 million monthly passengers worldwide (Kokalitcheva, 2016).

Furthermore, the case study on Uber was chosen because the company's strategies can be a trend setter for startups in the sharing economy or expose flaws, which should be avoided by other entrepreneurs. Many investors and entrepreneurs see Uber in a list with Facebook, Amazon and Google; companies which managed to become market leaders and which are

today almost monopolists in their core businesses. Although Uber carries an enormous valuation and managed to attract around $18 billion from investors, it still did not generate profits. It is also far from being without competitors. In fact, it faces competition on literally all levels of its operations. In the ride-hailing industry, traditional taxis and other tech companies such as Lyft compete against Uber. In the delivery industry, the company faces competition from established incumbents with great expertise. Finally, Uber's efforts in developing self-driving cars are challenged by the automotive industry and giants such as Google and Apple. Investors, nevertheless, trust Uber and pour money into it, believing that it ultimately finds it way to generate profits.

1.3 Structuring of the Paper

After the introduction, this thesis continues with an overview of the most important theories and models on value creation and value capturing. The section starts with defining the terms sharing economy and monopoly. Both terms are relevant for the understanding of the company Uber and its business model. The segment on monopolies also illustrates the Silicon Valley phenomenon "the winner takes it all" and gives some recent examples of tech companies that have found their way to the top. The main section of the literature review begins by defining the term *value* in the context of this thesis. It continues with developing a common understanding of value creation and distinguishes different actors for whom value can be created. The part pursues with defining value capture and outlines different methods on how companies can monetise the value they created. In this context, traditional as well as recent models are introduced. The literature review concludes with introducing the VC^2 framework which combines value creation and value capturing. This model acts as a positioner and aims to help companies to analyse their status quo (low or high value creation/value capture). It further gives some real life examples and exposes how companies have tried to improve their state.

The main segment is a comprehensive case study on the company Uber. It includes an introduction of Uber's services and sweeps the history of ride hailing. It subsequently discusses the regulatory and legal constraints of the business model. Uber's financial constitution is examined on the basis of leaked financial data in combination with official statements that were made by the company. Furthermore, the competitive environment is examined, focusing on other ride-hailing startups. The main part of the case study includes

both the process of how Uber creates and captures value. The part on how Uber captures value is divided in current strategies and possible future approaches. The case study concludes with positioning Uber in the VC^2 framework and linking the value creation and capturing part. The thesis concludes with a final overview of Uber's business model and how customers, drivers and the company itself creates and captures value. The final section also discusses how the case study on Uber contributes to further research as well as other startups in the shared economy.

2. Literature Review

The theoretical and literature section begins with an overview of the most important terms and defines them in the context of this paper. Whereas some terms may be perfectly familiar to the reader, others are used ambiguously and in fact opposing in academia. That is why a common understanding of these terms is necessary. Beside these clarifications, the section introduces selected frameworks and significant studies, which aim to point out substantive findings in the field of value creation and value capture.

2.1 Sharing Economy

The term sharing economy is frequently used in the context of this thesis, wherefore it is important to establish a common understanding of it. The Economist (2013) defines sharing economy as "the phenomenon in which people rent beds, cars, boats and other assets directly from each other, co-ordinated via the internet". Whereas all these things were possible before the era of the internet, technology, namely smartphones and big data have facilitated the process of matching owners and renters. In fact, today's technology enables scaling these activities and hence reduces transaction costs. Companies which operate in the sharing economy also benefit from the trend of people being more willing than ever to dismiss the idea of ownership and preferring "pay-per-use" and/or consider renting (Belk, 2014).

2.2 Monopolies in Modern Businesses

It is not at all obvious to include a subsection on monopolies into a thesis on a tech company that was founded in 2009. Rather, as today's view on business is characterised by its belief in competition, the reader could have expected a subsection on this matter. Each single business, however, can only survive when it is able to generate sound profits and outperforms and differentiates itself from its competitors. Every business and economics student studies in microeconomics that perfect competition has unrealistic assumptions and prevents companies from generating above-normal profits (Herriges, 2010). In fact, with perfect competition, companies operate at zero economic surpluses (Herriges, 2010). Thiel and Masters (2014) point out how much it matters whether a company operates in a highly competitive environment or whether a company acts (almost) as a monopolist. According to Thiel and Masters (2014), United States (US) airlines—which operate in an extremely competitive environment—generated, on average, 37 cents per passenger trip. In the same year, Google's margin was 100 times higher. Whereas Google would never consider itself as a monopolist, it is, nonetheless clear that it operates in a number of ways as one (Thiel and Masters, 2014). Hence, there are in fact strong reasons why companies want to operate in less competitive markets. Another reason which makes this subsection highly relevant, is the mentality of tech companies from Silicon Valley: the winner takes it all. This phenomenon can be explained twofold: in the Economist's (2016b) special report "In the shadow of giants", the author argues that tech companies have shifted the focus from the supply side, which traditionally focuses on production efficiencies, towards the demand side, which in this case focuses on networks effects. This trend can be seen in companies such as Facebook, Amazon or Airbnb. Companies can achieve a monopoly position when a network is necessary to use the product or service purposefully. In addition, switching costs should be high in order to avoid other products or services substituting the company's own product or service. A second reason concerns funding. Young companies are highly dependent on venture capital. Venture capitalists, however, are also aware of the trends explained above. Hence, they, too, minimise their risk and tend to invest in "the winner".

A Monopoly exists when there is only one single supplier for a service or product (Kreps, 1990). It is the exact opposite of perfect competition. As for any other company (except non-profits), monopolists aim to generate the highest possible earnings. Monopolists, however, face also constraints. On the one hand, the monopoly may face production constraints caused

by limitations in technology or by high prices for its inputs (Herriges, 2010). On the other hand, the monopoly always faces demand constraints. Although the monopoly can set the price for a product or service itself, the range is predetermined by the demand curve (Herriges, 2010). According to Kreps (1990), traditionally, there are three reasons for monopolies: (i) there may be legal barriers that hinder competitors from entry, (ii) the monopolist might hold a patent or other forms of intellectual property that is not accessible for competitors, and (iii) it may be illegal for competitors to enter (e.g., government monopoly). Firms, however, can also become a monopolist on their own and it brings many advantages for them. As the monopolist is the only product producer or service provider, it sees the linkage between price and quantity demand (Herriges, 2010). This enables the firm to choose the price-quantity combination which maximises the producer surplus the most. Whereas monopolist can charge every customer the same, it is also possible to price discriminate and charge customers different prices. According to Herriges (2010), monopolies do not discriminate customers based on prejudice, stereotypes or other immoral traits. Monopolies discriminate customers based on their willingness to pay for a product or service (Herriges, 2010).

If a company today aims to become a monopolist, there are some crucial things they need to pay attention to. Thiel and Masters (2014), for instance, suggest that companies should start in small markets because it is easier to dominate them. According to Thiel and Masters (2014), the ideal target market to become a monopolist is a small group of particular people concentrated together and served by few or no competitors. In Roger's (1962) classical model of *Diffusion of Innovations*, they would be called 'innovators'. From this point, companies are able to gain a large market share very fast. Facebook, for instance, started in a market of 12,000 people at Harvard University, and went from zero to 60% market share in 10 days (Thiel and Masters, 2014).

2.3 Value Creation

Value creation is one of the most important terms and concepts in strategic management. Searching the term on Google Scholar sums up to approximately 3.28 million results.

In most papers or studies, however, the term "value creation" is used without any further explanation. Value creation in e-business does not necessarily have the same meaning as in finance or strategy. In the context of this thesis, value creation is comprehensively examined with respect to the company Uber.

Bowman and Ambrosini (2000) differentiate between two forms of value: use value and exchange value. According to Bowman and Ambrosini (2000), "use value refers to the specific quality of a new job, task, product, or service as perceived by users in relation to their needs, such as the speed or quality of performance features of a new product or service." Use value, therefore, is subjective and is assessed during the decision making process at the point of purchase (of either the product or service) and is perceived by the customer. Exchange value, according to Bowman and Ambrosini (2000) refers to the price. It is the financial amount exchanged between companies and their customers or suppliers when use values are traded (Bowman and Ambrosini, 2003). Exchange value refers to the process of capturing value and is therefore explained in more detail in the subsection of *value capture*. Bowman and Ambrosini (2003) point out that value has a different meaning for different stakeholders. They are: the company itself, customers, employees, suppliers, investors and society. For customers, according to Bowman and Ambrosini (2003), value represents the traditional microeconomic view of the consumer surplus, i.e., the difference between the maximum price a consumer is willing to pay and the actual price they do pay. Put simply, the customer aims to maximise the 'value for money'. According to Lepak, Smith and Taylor (2007), the value for customers is created through inventions, innovations, research and development (R&D), knowledge transformation, structures and social conditions, incentives, selection and training (see appendix 1). Bowman and Ambrosini (2003) define value, per se, as measured in monetary terms. Lepak, Smith and Taylor (2007) emphasise the role of added service and utility in the creation of value. Whereas customers seek to optimise use value, suppliers focus on optimising the exchange value (Bowman and Ambrosini, 2003). Bowman and Ambrosini (2003) define that the use value, which is supplied by supplier of inert inputs, is fixed. The use value of the product is close to zero for suppliers. Screw suppliers, for instance, do not have any "personal" value in form of use value when producing screws. Optimising exchange value means capture as much value as possible. This can be achieved when the price for use value is optimised (this may be possible, for instance, when consumers perceive a higher value for a product or service).

Bowman and Ambrosini (2003) argue that employees can be seen as suppliers of human input. They supply use value—which is, as stated before, fixed—in the form of their capacity to work. Similar to ordinary suppliers, employees also aim to optimise their exchange value. According to Lepak Smith and Taylor (2007), the value for employees is created through knowledge creation, search, ability, motivation and training. Again, Bowman and Ambrosini (2003) focus on the monetary aspects, whereas Lepak, Smith and Taylor (2007) point out

softer aspects, which improve the relationship between the firms and their employees and make the jobs more fulfilling. Investors are also concerned with value. According to Bowman and Ambrosini (2003), investors aim to optimise the exchange value returned for the exchange value invested. Put simply, investors want to receive more money back than they invested in the company. Yet, they neither provide nor receive any use value (Bowman and Ambrosini, 2003). Nevertheless, investors may also be concerned about the use value. Companies will only be successful if customers and employees are satisfied— that is, optimising their use value and exchange value. Lastly, value can be created for the society generally. According to Lee, Peng and Barney (2007), innovation and new business formations, competition, capital investment and laws and regulations can create value for society. New and successful companies, for instance, create value in providing more jobs, tax revenues and through innovative and improved products or services higher living standards (Lee, Peng and Barney, 2007).

2.4 Value Capturing

According to Bowman and Ambrosini (2000), value capture is the realisation of exchange value. It is influenced by the bargaining power of sellers and buyers. While value creation says nothing about profits, value capture is the part where the firm needs to monetise the use value it created before. There are, in fact, different views on how and why companies are able to capture value. Conner (1991) argues that there are two ways companies can capture value: First, the product needs to be distinctive and must be attractive in both the way one can use the product and the price vis-à-vis substitutes. Second, if there is already an identical product in the market, the firm needs to offer the product at lower costs. Porter (1991) stresses the importance of resources that are unique to the company. He argues that these resources enable a firm to capture value. This concept emphasises the firms focus on its value chain and to perform a value chain analysis to define how to configure their primary and support activities and hence maximise and sustain their competitive advantages (Porter, 1985). While these views vary in their details, they have all in common the idea that companies need to have a differentiating factor, a competitive advantage, a Unique Selling Proposition (USP). Although the competitive advantage is pivotal, it is not sufficient to create value or have a unique service for the customers. In fact, companies need to innovate also in the way they capture value. Michel (2014) proposes different ways of how companies can innovate in the process of capturing value. He argues that companies have pivotal points that make it possible to

change the way value is captured. One aspect, according to Michel (2014), is changing the price mechanism. He proposes (i) value-based pricing, (ii) auctioning, (iii) demand-driven pricing, (iv) make your own price and (v) pay what you want. In the context of this thesis, value-based pricing and demand-driven pricing are interesting and relevant ways of capturing value. Firms which use value-based pricing do not set the price by calculating production costs or benchmarking with their competitor. They rather set prices due to the perceived use value of the customer and hence their willingness to pay the price. Haller and Gersappe (2014) argue that value-based pricing has a promising future. According to the authors, big data helps firms to deeply understand their customers, they only need to use the data appropriately. One way to leverage big data is during the segmentation process. Whereas companies traditionally segmented customers, for instance, on the basis of demography, psychology and geography, big data is able to detect transactional and behavioural information to define more sophisticated customer groups. These profound insights about their customers enable firms to learn which variables are perceived most important, improve them and ultimately price the product accordingly. Haller and Gersappe (2014) find that, if these procedures are executed properly, companies can expect to generate between 1% and 3% of revenues as incremental margin in using value-based pricing.

Demand-driven pricing, also called demand-based pricing, is another pricing strategy which takes more factors into account than only costs and competitors. As the name implies, demand-driven pricing takes volatility in demand into account and changes the price of a product or service with respect to these fluctuations. Companies can use real time data to change prices instantly or they can use forecast models, which rely on past experiences and data (Michel, 2014). A special form of demand-based pricing is *price skimming* (Dean, 1969). Price skimming can be of particular interest for companies that introduce new products and aim for high pricing and high profits in the early stages of marketing. In practice marketers set the price high when introducing the product and then subsequently lower the price until they reach the market price. This strategy is sometimes called riding the demand curve and aims to exploit a monopolistic and superior position in the market—before competitors enter the market and impact pricing. As value-based pricing—if executed properly—demand-driven pricing can maximise profitability, especially in peaks. Another form of demand-based pricing is *penetration pricing*. It is the opposite of price skimming and intends to penetrate the market with a product as impactful as possible, i.e., gaining a large share of the market in the beginning. Penetration pricing means introducing the product at a low price—often below market prices—until the product is established in the market. While the price is low the

company just stimulates and generates demand for the product. Later on the firm can incrementally increase the price until it reaches the market price (Dean, 1969). According to Dean (1969), there are four reasons that make firm choose this strategy: (i) when sales volume is very sensitive to price, (ii) when firms can exploit economies of scale and scope, (iii) when companies face strong potential competition and (iv) when there are no buyers willing to pay a higher price to obtain the newest product or service.

Michel (2014) also proposes bundling and unbundling within a category called 'changing the price carrier'. The author refers to the telecommunications industry and its approach to market the services bundled instead of pricing them separately. This form of pricing has two main advantages. First, it enables firms to provide solutions that appeal to different customer segments. Second, it prevents price wars, as it is more difficult to compare the different solutions one-by-one (Michel, 2014). According to Michel (2014), the airline industry represents the approach of unbundling. Initiated by low-cost airlines—by now also the established premium airlines—customers can choose themselves what service they want to use. Hence, today's low-cost fares often do not include any food or luggage allowance.

James, Leiblein and Lu (2013) distinguish four main methods within their framework on value capture (see appendix 2). They distinguish patents, secrecy, lead time and investment in complementary assets. A patent is the right to be the only one who can make, use, or sell an invention for a particular number of years (Cambridge Dictionary, 2016). According to Somaya (2003), patents represent well-known measures to prevent rivals from easily imitating or replicating valuable firm-specific services or products and hence preserve competitive advantages a firm owns. Despite their great potential, it is arguable whether to use patents as a value capture strategy. Somaya (2003) and Lanjouw and Schankerman (2001), stress that using patents can be extremely costly. Both filing the application and enforcing it entails substantial costs and does not guarantee that the innovation will capture any value. Companies which decide to patent should ideally have their own, specialised lawyers in order to be able to detect infringements and fight them effectively. However, even if a patent is granted, in some cases legal reinforcement remains weak and hence the protection may be ineffective (Cohen, Nelson and Walsh, 2000). Whether the protection is weak or strong depends mostly on the country where the patent is registered (James, Leiblein and Lu, 2013). Furthermore, firms need to keep in mind that the industry they are operating in also influences whether patents are an efficient way to protect their competitive advantages and to capture value. Generally speaking, it is worth considering to pursuit patents in industries with high R&D costs. That is, industries such as Medical Instruments, Biotech and Drugs and

Medicines. While a patent ought to protect ones own product or service, it also increases costs for competitors when they try to imitate them. Mansfield, Schwartz and Wagner (1981) find that using patents increased imitations costs for competitors by 30% in the pharmaceutical industry, by 10% in the chemical industry and by 7% in the electronics and machinery industry. Besides pursuing their own practical plans with the patent, firms can also capture value by licencing intellectual property to other firms. In sum, patents can have a tremendous impact on the value capture of companies, as it enables them to act—for a particular time—as a monopolist. Yet, firms need to consider the corresponding costs too. Secrecy, according to James, Leiblein and Lu (2013), is another approach firms can choose to capture value. Often companies consider either using patents or secrecy to monetise their innovations. James, Leiblein and Lu (2013) argue that it requires internal policies and procedures to confine the information flow within as well as outside the organisation. Yet, while these attempts increase competitors' imitation costs it entails substantial costs for the executing firm, too. Secrecy, in theory, seems to be a great method to capture value. It does not require any legal procedures and thus does not entail costs that are a natural by-product of patenting. Thus, companies could achieve a monopolistic position by exploiting their secretly developed competitive advantages. In practice however, secrecy is rather difficult to establish and to maintain. Mansfield (1985) finds that in spite of all efforts to maintain secrecy about R&D projects, on average, after 12 to 18 months in progress information tends to be leaked. Generally, at this stage projects are only half completed. Nevertheless, companies, particularly in industries that provide weak intellectual property protection, can benefit from the use of secrecy (Cohen et al., 2002; Zhao, 2006). It also matters whether a company innovates in a product or process (James, Leiblein and Lu, 2013). James, Leiblein and Lu (2013) argue that product innovations are not suitable for the approach of secrecy. Naturally, product innovations aim to increase the perceived quality of a product and want customers make to purchase it. However, in this case—where firms disclose their innovation to customers—competitors can likewise perceive the innovative developments and imitate the product. Process innovations, according to James, Leiblein and Lu (2013), are rather suitable in the context of secrecy. These kinds of innovations focus largely on efficiency and the reduction of production costs. Contrary to product innovations, which necessarily must disclose details, process innovations are usually in-house and concern proprietary elements of the value chain, such as manufacturing and assembly. That is why they are less likely to get leaked and hence secrecy can be an effective mechanism to capture value (James, Leiblein and Lu, 2013). Either way, firms need to think through the secrecy approach carefully. The literature provides a number of reasons against

secrecy. Bayus, Jain and Rao (2001), for instance, point out that market leaders can prevent competitors from entering through publicly disclosing new product innovations. Further, companies may want to encourage other firms to develop complementary products or technologies or they want to establish an industry/technological standard (Harhoff, Henkel and von Hippel, 2003; Dranove and Gandal, 2003).

James, Leiblein and Lu (2013) further mention the concept of lead time as a mechanism to capture value. Lieberman and Montgomery (1988), for instance, point out three primary sources for first-mover advantages: that is, the degree of technological leadership, the ability to pre-empt scarce assets and switching costs. Technological leadership may be achieved through learning curve advantages or the successful use of R&D and patenting (Lieberman and Montgomery, 1988). The pre-emption of scarce resources can be achieved through strategic purchases of raw materials, locations in key geographic regions or other input factors before competitors learn about them (Lieberman and Montgomery, 1988). Hence, superior information and advanced expertise are essential for first-mover adherents. Lastly, first-movers can create their own demand and build their customer base without competition. Later entrants need to convince customers to switch and use their products or services. These enticements can be very costly. Ideally, the first-mover has established a network, which makes it unfavourable and expensive to change the product or service due to high switching costs (Lieberman and Montgomery, 1988). Network effects emerge where current users of a service benefit when additional users adopt it (Klemperer, 2005). One way for firms to innovate faster than their competitors is through absorptive capacity. Cohen and Levinthal (1990) stress the significance of absorptive capacity and define it as the ability to assimilate and exploit external knowledge. Moreover it is the ability to evaluate and utilise this external knowledge and connect it to prior knowledge (Cohen and Levinthal, 1990). As a result, companies can generate first-mover and learning curve advantages. According to Tilton (1971), Allen (1977) and Mowery (1983) as cited by Cohen and Levinthal (1990), firms that conduct R&D themselves are also more capable in utilising external knowledge. Further, according to these findings absorptive capacity is sometimes acquired as a by-product of R&D activities. Cohen and Levinthal (1990) also cited Abernathy (1978) and Rosenberg (1982) who find that direct involvement in manufacturing also improves a company's ability to recognise and exploit significant information related to the production processes. Besides, firms also acquire absorptive capacity by investing in advanced technical training for their engineers (Cohen and Levinthal, 1990). In sum, it can be stated that lead time (reached through absorptive capacity) can particularly help R&D-focused companies to capture value

when they are first in the market. Lead time, in this sense, can also be connected to patents and secrecy since firms need to be able to manage their intellectual property efficient when they want to be the first mover.

Finally, James, Leiblein and Lu (2013) propose the investment in complementary assets as a mechanism how companies capture value from innovation. Particularly, if companies face technological discontinuity (paradigm shifts such as the shift from products to platforms) and other fundamental changes, owning complementary assets helps them to sustain competitive advantages (Rothaermel & Hill, 2005). These findings, however, do not generally state when firms should invest in complementary assets themselves. James, Leiblein and Lu (2013) suggest investing in complementary assets in two scenarios. First, if the necessary complementary assets are needed to establish the innovation in the market and cannot be accessed in the related markets. Second, if the environment displays weak appropriability, i.e., a weak protection of intellectual property, companies also need to assess whether it is better to invest in complementary assets and develop them internally or whether they should be purchased (Stanko, 2008; James, Leiblein and Lu, 2013). Ultimately, if weak appropriability is given and complementary assets are not accessible in the respective markets, investing in these assets can be a method to capture value.

2.5 The VC^2 Framework

This theoretical and literature section concludes with a model that emphasises the importance of both value creation and value capture and combines them into one single competitive advantage. Hawawini, Subramanian and Verdin (2004) delineate their VC^2 framework in a two-by-two matrix with value capturing on the horizontal axis and value creation on the vertical axis (see appendix 3). Logically, the authors distinguish between four different scenarios: (i) the dream scenario, where the company does not create value but captures significant value, (ii) the hell scenario, where value is neither created nor captured, (iii) the nightmare scenario, where companies create substantial value but cannot capture it, and (iv) the heaven scenario, where value is both created and captured substantially. While this model, first and foremost, is designed to guide existing firms how to escape the dilemma of the ‘hell’ and ‘nightmare’ scenario, it also provides some insights for startups and companies that aim to penetrate markets with new innovations. Hawawini, Subramanian and Verdin (2004) describe how PayPal, a leading payment service, could have moved away from the ‘hell’ scenario in its early stages. PayPal was launched in 1998 and grew straight into what was later

called the dotcom bubble. The fundamental problem of PayPal-like firms in those days was that they created value for their customers (use value) but were not able to capture anything of it. PayPal, however, is an exemplar of capturing value. They viewed the process of creating and capturing value not unilaterally but combined both dimensions. Whenever PayPal was able to capture value, they used some of it to improve its value proposition, thus increasing the value created for their customers. These incremental improvements (see appendix 4) led to continuous innovations and provided the company with competitive advantage and a dominant position in the market. Nickerson, Silverman and Zenger (2007) also acknowledge the importance of value creation. They stress that the creation process has to come first and that especially innovative companies must focus on delivering value before capturing it. Verdin and Tackx (2015), too, warn firms of focusing solely on the value capturing part; firms may risk ending up in 'the failure of success', where they do not create any additional value for their customers and eventually vanish from the market.

This thesis acknowledges that both dimensions—value creation and value capturing—are intrinsically tied to one another, yet reserves the right to both connect and disconnect them when necessary. The following case study examines Uber with great comprehension and examines how it creates and captures value. It applies the above theories where it is possible and compiles its own ideas and solutions where unique ways have been identified.

3. Methodology

This thesis applies the case study method to examine how companies capture value from innovation. Deriving from the literature, which has been outlined previously, the case study analyses and examines a real company and will connect theoretical frameworks of value capture with practical, real-life approaches.

3.1 Case Study Method

Zainal (2007) defines a case study as a study which analyses approaches and behaviours in "a small geographical area or [with] a very limited number of individuals." Thus, the case study approach enables researchers to dedicate their efforts towards one specifically defined field. This in-depth examination allows the author to develop answers to concrete and unique cases.
The literature distinguishes between different forms of case studies. According to Zainal (2007), researchers ought to choose between a single-case design, in which only one event is examined, and a multiple-case design. This thesis uses a single-case design.
Furthermore, researchers are required to decide on the category of the case study. Yin (1984) differentiates three different kinds of categories: (i) exploratory, (ii) descriptive and (iii) explanatory. While the overall thesis topic would require an exploratory case study, the actual case study on Uber is descriptive.
The specific research questions in this thesis are:

How does Uber create value?
How does Uber currently capture value?
- innovative or traditional?
- imitable?
How will Uber capture value in the future?
What are the core
Are there implications for other sharing economy startups?

There are both advantages and disadvantages in using the case study method.
Researchers benefit from analysing data in its actual context (Yin, 1984). In management studies, for instance, it is often important to focus on specific companies or industries to determine disruptive trends or strategies. In particular, market leaders are frequently examined because management scientists or competitors want to understand how they become first.
Uber, as the market leader in the tech-based on-demand taxi service, naturally represents such a company.
According to Zainal (2007), case studies also help to gain a more precise picture of real-life events because they try to elucidate complex situations that are not covered by experimental or survey research. In the context of strategic management, case studies not only point out

which strategies were used, but also why and how, which adds value for other decision makers.

Case studies, however, have some disadvantages too. Yin (1984) points out three: (i) lack of rigour, (ii) little basis for generalisation and (iii) often labelled as too long and difficult to conduct.

The second disadvantage (little basis of generalisation), at the same time, addresses the limitations of this thesis. As Uber has launched a new and innovative service, it will not be possible to derive all approaches to other companies. Especially the fact that Uber has almost no physical assets will make it impossible to apply its strategies to more traditional companies. Furthermore, different industries require different strategies to be successful. Different business models as well as different strategic approaches are needed throughout different companies and industries. Finally, some companies decide to only operate on the domestic market whilst others penetrate many markets (internationalisation).

Nevertheless, companies, especially tech-ones from Silicon Valley, tend to have in common that in one business only the *winner* survives. Thus, Uber's strategies can be highly relevant to other innovative startups.

3.2 Data Collection

In order to gain a comprehensive picture of the company, various secondary sources are used. They were obtained through several sources such as academic papers and newspaper articles. Furthermore, company publications and the company website were used. The author of this thesis is aware that this data/information of the company can be equivocal or biased. Yet, the conduction of a company case study would be impossible without these sources. The case study, therefore, is designed to be very precise and rigour and aims to expose supposedly biased statements.

3.3 Sources

In order to make the following case study more reader-friendly the source is not stated after every fact. The information on Uber is—if not stated otherwise—from http://uber.com and http://newsroom.uber.com. Uber operates both websites. Thus, if information was likely to be coloured, additional sources were tried to found.

4. Case Study — Uber

4.1 The Company

Uber Technology Inc. (Uber) is an American-based transportation network company. The company is headquartered in San Francisco, California, USA, and was founded by Travis Kalanick, Alexander Hank and Garrett Camp in 2009, as UberCab.

Uber's core product is its mobile application (app), which is available for Apple iOs, Google's Android, and Microsoft's operating system. The app provides a platform where passengers and drivers *come* together. Its key purpose is to match these two groups. That is, passengers who request a ride on their devices are matched with nearby drivers. As the app uses the user's GPS coordinates, he or she is not required to know the pick-up location. In case the driver cannot locate the passenger, both sides are able to contact the other party—though the driver is never given the telephone number of the passenger directly. Once the driver has accepted a ride, the passenger can track *live* where the driver is and how long it takes until he or she will arrive. The payment is processed through the app as well. Passengers have to type in their credit card details upon registration. Thus, there is no need to pay cash at the end of the ride. After the ride, both sides (drivers and passengers) can provide feedback and evaluate each other privately on a scale from one to five.

On its fifth anniversary, Travis Kalanick, Uber's chief executive officer (CEO), proclaimed Uber's vision to be to aim for a smarter transportation with fewer cars and greater access; having cities with more space for housing, parks and schools rather than car parks (Kosoff, 2015).

4.2 Products/Services

Uber offers currently 13 variations of its ride hailing service. The most frequently used service is UberX. Launched in 2012, UberX offers a peer-to-peer service that matches private drivers with passengers using the Uber app. The service is designed for one to four passengers and is advertised as a cheaper alternative to normal taxis. UberPOOL is a more recent product. It aims to pick up multiple riders that head in the same direction. Passengers who request a ride on UberPOOL are entitled to bring one additional person. This service decreases fares vis-à-vis standard UberX-rates approximately by half. UberBLACK was the company's first service. It provides a professional driver in an upper class, black automobile

such as BMW 5 or 7-Series. This service, however, is also more expensive than rides with UberX. Uber offers more services, which simply differ in either the status and quality of the car or in how many people can be carried. These services are UberXL, UberXXL, UberSUV, UberLUX and UberBIKE.

UberWAV and UberASSIST are services especially tailored towards the needs of disabled people. UberWAV, for instance, provides the transportation of wheelchairs.

Particularly in countries where, due to regulations, UberX is not permitted, Uber now offers the service UberTAXI. This service matches passengers with ordinary taxis, which use the app. When using UberTAXI, passengers have to pay normal (local) taxi fares. Sometimes, in Berlin for example, the fare can be even higher due to credit card fees.

UberEATS is a different service and represents a shift towards the delivery service industry. Uber advertises the service as “Get the food you want, from the local restaurants you love, delivered at Uber speed”. The company collaborates with many restaurants in the cities where this service is available and claims to deliver the food on average, within 35 minutes. In three US cities—San Francisco, Chicago and New York—Uber also offers the service UberRUSH. This recently introduced service enables people to order anything from clothes to food to floristics. Customers only have to type in the pick-up location, the size of the parcel (small, medium, large) and the drop-off location. Once the package is on its way, customers can track in real-time where it is.

4.3 History

Uber and its business model are clearly part of the so-called sharing economy phenomenon. That is, in short, the trend of preferring the experience over ownership. In Uber’s case, people are more willing to pay drivers for rides rather than owning a car.

Whereas the term sharing economy was born in the mid-2000s, the idea of shared rides is not new. Almost 100 years ago, on 31 January 1915, the New York Times headlined:

“One of the most astonishing businesses, in point of speed of development, which this country has seen is that of the "jitney" bus or automobile which, almost in the twinkling of an eye has taken the West by storm and extended eastward as far as Baltimore” (The New York Times, 1915).

Jitneys, which were privately owned cars or buses and modified for passengers operated from around 1914 until 1919. They often took the same routes as buses or streetcars. Yet passengers were flexible about where to get on and off. Further, the ride for a jitney bus was significantly cheaper; while you paid $2.50 for a normal taxi, the same distance by jitney bus

would cost 5 cent (Chambliss, 2008). As soon as no regulation prohibited this kind of transportation it grew tremendously: In 1915, there were 50,000 rides per day in Seattle, 45,000 rides in Kansas and 150,000 rides in Los Angeles; in 2016 Uber undertook, on average, 157,000 rides per day in Los Angeles (TED, 2016).

4.4 Regulatory Problems and Legal Constraints

From the very beginning, Uber faced regulatory problems with the service it offered. When it launched its service in 2009 as UberCab, it was directly under scrutiny. The San Francisco Metro Transit Authority and the Public Utilities Commission of California raised the following issues short after its launch. First, Ubercab operates similar to a taxi company but does not possess a taxi license. Second, its cars do not have insurance equivalent to taxis' insurance. Third, Ubercab may threaten taxi dispatchers' way of operating. Limousines in American cities usually have to pre-book one hour in advance, by law, while only licensed cabs can pick someone up right away or got hailed. UberCab, however, picks people up right away without a taxi license (Siegler, 2010). Uber reacted very fast and changed its name from UberCab to Uber only one day after these legal issues were raised (Kolodny, 2010). Nevertheless, not all legal obstacles could be solved that fast. In fact, Uber has built a reputation for entering markets even illegally to gain market share as fast as possible (Suich, 2016). Whereas Uber indeed gained market share due to this rigorous approach, regulators deprecate it. Uber is able to operate like this because—unlike many of its competitors—it has the financial resources to fight lawsuits and other decrees. The taxi business in many cities and countries is highly regulated. Taxi companies are obligated to have—besides the taxi license—a so-called medallion (Kramer and Krueger, 2016). Medallions are limited licenses which restrict the number of taxis that are allowed to operate in a given district. This practice, particularly justifies the, in some cases, artificially high fares, which occur due to limited supply (Kramer and Krueger, 2016). Taxi drivers and incumbent taxi companies claim that Uber, at its core, is a taxi company and hence has to follow the above rules. In many countries, the taxi lobby managed to convince politicians that Uber de facto operates illegally so that its service got prohibited. This is problematic, as there are some very lucrative and dense areas in countries such as Germany, Italy and Spain where UberX is not allowed (The Economist, 2016a).

Uber also encounters problems in countries where it is permitted. On New Year's Eve in 2013, Sophia Liu, a six-year-old girl was hit and killed by an Uber driver in a San Francisco

cross-walk (Levine, 2015). While the case has been settled in 2015, it raised the question of accountability of companies such as Uber.

This criticism goes hand in hand with claims that Uber actually employs its drivers. Whereas Uber considers its drivers as partners and independent contractors who are self-employed, Uber drivers in the United Kingdom (UK) and the US have filed lawsuits, claiming that they are de facto employed by Uber (British Broadcasting Corporation (BBC), 2016; Scheiber, 2016).

As Uber is heavily investing in autonomous driving and self-driving cars, regulations in these fields will be pivotal for its future performance as well. While it is far from clear how governments around the globe will position themselves vis-à-vis this technology, the Obama administration supports the development and testing of these trends strongly (Kang, 2016). Also Germany, where the automobile industry is traditionally strong, has declared to support automakers in their efforts (The Guardian, 2016).

4.5 Financial Figures

In 2016, Uber still remains a private company. Thus, the firm does not have to report its financials quarterly. Neither is there an audited financial statement available. Nevertheless, it is possible to derive a sound image of Uber's financials from various leaked data and from data about its several investors.

According to the Economist (2016a), Uber carries a valuation of nearly $70 billion. This extraordinary valuation makes it worth more than General Motors ($55.45 billion) and Ford ($55.56 billion) (Chen, 2015; Kapitall, 2015). Uber has attracted a sum of $18 billion in equity and debt (The Economist, 2016a). Crunchbase (2016e), an online publisher of technology industry news, tracked 14 funding rounds in which Uber raised a total of $11.46 billion. In June 2016, Uber received its single biggest investment from Saudi Arabia's sovereign wealth fund, of $3.5 billion (Satariano, 2016). Other famous investors include Google Ventures, which in 2013 in the third funding round invested $258 million and Black Rock, which invested in the fourth funding round. As a result, Uber raised $1.4 billion. Besides, Uber is also funded through debt. It holds $1.15 billion in debt from Morgan Stanley and $1.6 billion from Goldman Sachs (Crunchbase, 2016e). Raising so much money prior to an IPO is unprecedented Even the most successful, recent tech companies could not raise as much when going public. When Amazon went public in 1997 it held a valuation of $500

million and could raise $54 million from its IPO (Blodget, 2015). Facebook, which held a $100 billion valuation, raised $16 billion (Blodget, 2015; Rusli and Eavis, 2012).

In sum, Uber is profusely equipped with capital, which ought to help its global expansion as well as to promote its brand.

Uber's bookings have developed extremely positively throughout the last two years. While in 2014 bookings amounted to $2.93 billion, in the first half of 2015 they grew to $3.63 billion (Solomon, 2016a). In 2016, they were $3.8 billion and $5 billion respectively in the first quarter (Q1) and Q2 (Newcomer, 2016b). However, the company did not only grow substantially. It also accumulated great losses. As outlined in the expenses and revenues sheet (see appendix 5), although revenues grew from $104 million in 2013, to more than $100 million only after the second quarter in 2014, losses also accelerated. Whereas Uber had already lost more than $56 million in 2013, it accumulated losses of $160 million after Q2 in 2014. Another leaked file shows Uber's quarterly profits and losses in 2012 as well as for Q1 and Q2 of 2013. In 2012, Uber's losses were $20.4 million; from Q1 2012 until Q2 2013, quarterly losses more than doubled from $3.5 million to $8.1 million (see appendix 6). The trend to generate losses did not stop in the first half of 2016. According to McAlone and Hartmans (2016), Uber lost $1.27 billion in Q1 ($520 million) and Q2 ($750 million) of 2016. Promotions and price cuts as well as other marketing and sales activities are major cost blocks. As outlined in appendix 5, total costs and expenditures had already risen by more than 60% from 2013 to mid-2014. According to Mcqueeney (2016), this trend continued, resulting in costs for promotions and price cuts from $57.3 million in 2014 to $72 million in the first six months of 2015. In the same period, sales and marketing costs grew from $264 million to $295 million (Mcqueeney, 2016). Despite these increasing costs, Uber was able to significantly bolster its cash. From 2013 to Q2 2014, it increased from $236 million to $1,161 billion (see appendix 7). From the end of 2014 to mid-2015 it further increased from $1.96 billion to $4.15 billion (Solomon, 2016a).

4.6 Competitors

Uber faces competition from many sides. Naturally, it is competing against the industry it disrupts—the taxi industry. In the field of self-driving cars and autonomous driving it competes with traditional carmakers as well as tech companies such as Google, Facebook and Amazon. This section, however, focuses on competitors in Uber's current core business, the ride-hailing industry.

In various markets Uber faces different competitors. The most significant ones are undoubtedly Lyft, Ola, Grab and Didi Chuxing (see overview in appendix 8).

Uber's major competitor in the US is Lyft. Lyft was founded in 2012, and offered an UberX-like service at a time when Uber only started with its initial service UberBLACK (Suich, 2016). Other than Uber, Lyft focuses solely on the US market. It operates in 200 cities and carries a valuation of $5.5 billion (Suich, 2016). According to Crunchbase (2016c), Lyft raised $2.01 billion in nine funding rounds. Among its investors is the Venture Capital firm Andreessen Horowitz, which invested $60 million. In December 2015, Lyft also partnered up with General Motors, which invested $1 billion. This partnership mainly focuses on the research and development of self-driving cars and its linkage to the ride-hailing industry. Whereas Uber had about $10.8 billion of gross bookings in 2015, Lyft, at the same time, had about $1 billion (Suich, 2016). Lyft tries hard to gain market share from Uber. If a driver promotes Lyft and *hires* a new driver, both receive $750 (Newcomer, 2016a). It also runs many promotions, which are costly. Yet, Lyft promised its investors that it would not exceed $50 million of losses per month (Newcomer, 2016a). Bill Gurley, a board member of Uber, acknowledges that Lyft's 'price war is bad for business' (Newcomer, 2016a).

Another competitor, which operates in a very large and promising market is Ola. Ola is an Indian-based ride-hailing company that was founded in 2010. It is currently valued at $5 billion and has raised $1.23 billion in eight funding rounds (Kashyap, 2016; Crunchbase, 2016d). It is the leader on the Indian market with 70% market share and a total number of 450,000 drivers (Kashyap, 2016). With Uber entering India, Ola decided to lower its prices drastically in order to prevent access (Mundy, 2016). Like Uber, Ola has still lost money. In 2015, it had a net loss of $7.96 billion on revenues of $4.21 billion (Kashyap, 2016).

Until August 2016, Uber operated in China under its branch Uber China. On August, 1' however, Uber ended a tough price war with Didi Chuxing, the local ride-hailing company, who by now, has almost 99% market share in China, and made a deal with it (Li, 2016). Before, Uber had reportedly lost $1 billion a year in China due to extreme competition (Clover and Hook, 2016). Didi Chuxing acquired Uber China for $7 billion in stocks and it invests $1 billion in Uber's global company (Newcomer and Wang, 2016). Didi Chuxing operates in 400 Chinese cities and has more than 300 million users. According to Crunchbase (2016a), Didi Chuxing raised $7.44 billion in seven funding rounds. Among its investors were companies such as Alibaba and Apple, the latter alone invested $4.5 billion (Crunchbase, 2016a).

Grab is Uber's main competitor in Southeast Asia. The company is headquartered in Singapore and was founded 2012. According to Crunchbase (2016b), the company could raise $1.43 billion in six funding rounds. The company operates in Singapore, Indonesia, the Philippines, Malaysia, Thailand and Vietnam (Nusca, 2016). In 2016, 200,000 private drivers used the firm's application (Nusca, 2016).

In December 2015, Lyft, Grab and Ola formed a global ride-hail alliance which allows Lyft users to hail rides from Didi Chuxing, Ola, or Grab in the regions in which they operate and vice versa (Bhuiyan, 2016).

4.7 How does Uber Create Value?

Uber is an example of a two-sided network. According to Eisenmann, Parker and Alstyne (2006), two-sided networks differ significantly from traditional value chains. Whereas in traditional chains, value moves from the left (cost side) to the right (revenue side), in two-sided networks costs and revenues are both to the left and to the right because the network has a distinct group of users on each side (Eisenmann, Parker and Alstyne, 2006). Uber's current business model incorporates such a network through passengers and drivers. As a result, within this system, Uber creates, first and foremost, value for the abovementioned groups. In the simplest way, Uber creates value in bringing these two groups together. On the one hand, there are passengers who are willing to pay for a ride and seek an alternative to taxis. On the other, there are drivers offering rides to make money. Yet, there are more ways Uber creates value.

As previously discussed, the taxi business is highly regulated and requires drivers to acquire expensive medallions in order to legally carry passengers (Kramer and Krueger, 2016). In the cases where drivers do not own the medallion themselves, they need to lease it. In Chicago, it can cost up to $707 per week to lease a taxi medallion (The City of Chicago, 2012). Additionally, many drivers also have to rent the taxis themselves, as they do not own one. According to Tobias (2011), renting a cab costs from $75 to $100 per day. Thus, taxi drivers who neither own an own taxi nor own a medallion have to spend an enormous amount of money before ever hitting the road. The renting costs do not cover the fuel either (Tobias, 2011). In fact, only a few drivers own their own medallion. According to Badger (2014), only 25% of the medallions belong to single drivers. However, the top two percent of medallions owners control 41% of the total. The artificial scarcity of available medallions makes it almost impossible for individuals to purchase them: In 2014, one medallion cost $1 million in

New York, $700,000 in Boston, $400,000 in Philadelphia and $300,000 in Miami (Badger, 2014). All these costs naturally lower the drivers' salaries and force them to work longer hours until they eventually reach break-even and begin to earn money. Another problem, pointed out by Tobias (2011), is the use of credit cards and their associated costs. According to Tobias (2011), cab drivers are charged the fees when customers use credit cards. In many cases, taxi companies charge significantly higher fees to their drivers than payments actually costs. Furthermore, the drivers often receive the money only after three weeks (Tobias, 2011). Uber drivers do not face these prior costs. Firstly, they do not have to acquire a medallion. Secondly, they do not have to drive a taxi but can drive any car—their own one or a leased one. Thirdly, Uber drivers are not employed by Uber but work as independent contractors (partners), thus deciding themselves how long they want to work, or if at all. As outlined in section 2.3, suppliers of human inputs (e.g., employees) aim to optimise the exchange value received for the use value supplied (Bowman and Ambrosini, 2003). With Uber, drivers keep 80% of the fare charged, while 20% go to Uber (see next section for detailed description). Uber drivers do not have to pay for the use of credit cards it is already included in the share Uber receives. According to Davidson (2015), Uber drivers earn more than their counterparts in the taxi industry, which supports the conjecture that Uber drivers maximise their exchange value in rather driving for Uber than a taxi company. Yet, as Uber drivers are not employed they are not entitled to sick pay, holidays or other employees' rights. Hence potential drivers have to outweigh the costs and benefits and have to check whether they maximise their overall exchange value. Whether it is beneficiary to drive for Uber largely depends on the conditions and regulations of the local taxi industry.

Uber's service, however, creates also non-financial value for drivers. According to the Occupational Safety and Health Administration (OSHA) (2010), taxi drivers are over 20 times more likely to be murdered on the job than other workers. The OSHA (2010) points out four risk factors that increase the possibility for violence against taxi driver: (i) carrying cash (making them targets for robbery), (ii) being alone in isolated areas, (iii) driving at night and in poorly lit settings, (iv) driving in high-crime areas and (v) chauffeuring people under the influence of alcohol. Uber makes the drivers' lives safer in three ways. First, the payment is processed through credit cards so that drivers are not required to carry any cash with them. Furthermore, as drivers are not using taxicabs, the cars do not differ from private ones. Both aspects reduce the risk of robbery. Lastly, Uber tracks its drivers by GPS so that the cars can be located quickly in the case of emergency. In fact, Uber offers a 'rapid response' team 24/7

to its drivers. Moreover, the drivers do not pick up anonymous persons. Every passenger needs to have an Uber profile with his or her credit card details attached. Drivers also see the passenger's rating beforehand.

As stated above, in the simplest way, Uber creates value for passengers is by matching them with drivers so that they get a ride. In section 2.3, it has been outlined that customers aim to optimise the ratio of use value acquired for the exchange value paid (Bowman and Ambrosini, 2003). This optimisation refers to the consumer surplus, the ratio economists use to examine whether additional welfare is generated. Cohen et al. (2016) estimate that in 2015 the UberX service generated $2.9 billion in consumer surplus in the four US cities Chicago, Los Angeles, New York and San Francisco. For each dollar spent by passengers, approximately $1.60 of consumer surplus was generated (Cohen et al., 2016). This surplus could be generated because Uber offers a significantly cheaper alternative to traditional taxis (The Economist, 2015). Passengers also benefit from the instant feedback they provide after the ride. Uber drivers, unlike traditional cabbies, are evaluated after each ride and hence hold a satisfaction rating. According to Roa (2016), Uber monitors drivers by smartphone technology such as gyrometers and GPS data. With the help of big data, Uber can review passenger complains, for instance whether a driver actually accelerated too fast and broke too hard. After these checks Uber then provides feedback to the driver or makes sure that the driver's rating is not affected when there has been no proof (Roa, 2016). In fact, Uber bans drivers when strong evidence from repeatedly negative ratings supports that drivers are not suitable to carry other people. By contrast, cities and courts in the US failed to discipline/penalise taxi drivers for reckless driving or physical assaults (Meisner, Dizikes, and Mahr, 2011; Dizikes, Meisner, and Mahr, 2011). According to ABC Inc (2014), it is also common practice that taxi drivers refuse to accept credit cards and hence require people to take cash with them. Uber passengers do not have to discuss any payment matters with the drivers. The payment is processed through credit card and in the case of complaints they contact Uber directly. Uber also tries to prevent drivers discriminating between passengers because of their race or gender. When drivers accept a ride request from Uber users, they only see their names and their Uber rating. Drivers do not know the gender or destination nor do they see a picture of the passengers. This practice further aims to ensure that drivers serve all neighbourhoods, which is a problem with traditional taxis, which often refuse to drive into low-income neighbourhoods (McArdle, 2015). While Uber, according to McArdle (2015), reduced discrimination against black or poor people, Ge et al. (2016) found that there is still racial and gender discrimination. According to Ge et al. (2016), black riders waited on

average 30% longer for an UberX. Drivers discriminate passengers by whether their name sounds “distinctively black” (Ge et al., 2016).

Uber also creates value for people who usually cannot use normal taxis or face obstacles when booking them. Particularly disabled people or people who need assistance are often dependent on government transport (Disability.gov, 2016). Uber started to launch UberASSIST and UberACCESS in some cities to overcome these problems and provide rides to these groups as well. Drivers who provide these services are specifically trained in assisting people with accessibility needs and own cars which allow the transport of wheelchairs.

As stated earlier, new and successful entrepreneurial ventures may also create value for society. Objective criteria are, for example, that companies provide more jobs, generate tax revenues and provide a superior, better service than the status quo (Lee, Peng and Barney, 2007). Although Uber does not employ its drivers directly, it offers people a platform to make a living with it. In 2015, the company more than doubled the people who were providing rides on its platform from 160,000 to 400,000 in the US. Worldwide there were 1 million drivers for Uber in 2015 (Lazo, 2015). However, although Uber is providing ‘jobs’, it has so far failed to contribute to society by paying the substantial taxes it owes. For one, this is due to a complex tax scheme the company uses to avoid taxation; another reason is that Uber overall looses money (Bowers, 2016). Yet, there are non-financial factors that are beneficial for society. Uber’s service UberPOOL, for instance, has great potential to reshape how transport works especially in big cities. Pooling together passengers who head in the same direction reduces cars and hence CO2 emissions (Huet, 2015b). In 2015, about 674,000 miles were not driven per month in San Francisco because passengers decided to use UberPOOL instead of UberX (Huet, 2015b). Naturally, fewer cars and miles also reduce the amount of CO2 emissions and hence also improve environmental conditions in cities.

4.8 Value Capture

The following section on *value capture* is divided into two subsections. The first subsection analyses Uber’s revenue streams and how it currently captures value. This analysis also examines whether Uber’s current approaches result in competitive advantages vis-à-vis its competitors and hence ensures future success. The second subsection discusses options how

Uber can capture value in the future. Both current services and forthcoming ones will be reviewed and value capture strategies that were discussed in section 2.4 will be applied.

4.8.1 How does Uber currently Capture Value?

First and foremost, Uber generates revenues through a traditional commission-based scheme. For every ride a driver provides, Uber keeps 20%; the remaining 80% goes directly to the driver. In 2015, Uber started to test a new model that takes more commissions from drivers in San Francisco (Buet, 2015a). In this new model, newly signed up drivers keep 70% for their first 20 trips, 75% on trips 21 to 40 and the original 80% on every trip after 40 (Huet, 2015a). This model aims to encourage drivers to work more and to accept more rides. This exchange is the only one between Uber and its drivers because they are not employed by Uber and hence only receive money when they complete rides. They neither receive a fixed income nor other employee benefits from Uber.

Generally speaking, Uber's fares are identically calculated as traditional taxi fares. As with traditional taxis, Uber also has a base or minimum fare. This fare holds up to a certain distance, afterwards the fare is calculated dependent on both time and distance as with a taximeter.

Uber's pricing, however, is more complex and diverse than that of traditional taxi companies. As mentioned in section 2.4, companies can capture value in changing the price mechanism. Uber uses different methods to adjust pricing towards the specific needs as well as specific external circumstances. One way how Uber changes the pricing mechanism is through value-based pricing. Uber offers different services to different customer groups for different prices. As outlined earlier, beside the main service UberX, the company has many more services in its portfolio. Customers, who for instance want to be driven in a luxury, black sedan, choose UberBLACK. Others who are seeking a ride in an SUV request a ride on UberSUV. These services offer customers a superior service in terms of vehicle requirements and drivers are typically dressed up in a suit or similar clothing. While there is objectively no additional use value generated (passengers are driven to the requested destination, as with UberX), customers are willing to pay higher prices because they perceive the use value to be higher due to extra services. In Rio de Janeiro rides from Copacabana to the International Airport ranged from approximately R$37 (UberPOOL) to R$44 (UberX) to R$60 (UberBLACK). Thus customers who decide to prefer UberBLACK to UberX have to pay around 30% more for the ride. In Los Angeles the pricing is clearly stated on Uber's local website:

	UberX	**UberBLACK**
Base Fare	$0	$8
Per Minute	$0.15	$0.45
Per Mile	$0.90	$3.55
Minimum Fare	$5.15	$15

Figure 1: Price difference between UberX and UberBLACK

Source: Uber

Another method where Uber changes the price mechanism is through demand-driven pricing. Uber's demand-driven pricing is called *surge pricing*. It is an algorithm that lets the fares automatically increase when the demand for rides is higher than the supply of drivers in an area. Uber's surge pricing happens usually at peak times in the morning and evening, typically during rush hours when people commute between their homes and the work place. Passengers are notified before requesting the Uber that the fare increased due to increased demand and have to accept/confirm the updated fare manually to prevent passengers from unintentionally paying higher fares for their rides. Further, they can be notified when surge pricing is over or goes down. Surge pricing was introduced by Uber to manage demand and supply problems accompanied with the fact that the company does not employ its drivers. Uber drivers are independent workers who decide themselves when and how long they want to work. Hence, they need to be incentivised to accept rides in peak times where they would probably not work. The increased fares offer drivers the opportunity to earn more while providing the same service. Surge pricing makes Uber's share of the commission also grow as prices rise while the commission of 20% stays stable. While this item makes Uber capture more value and motivates drivers to work during peak times or in areas with high demand, it potentially also scares customers away because of non-transparent pricing. Dholakia (2015) suggests communicating the benefits of surge pricing directly with the customer and notifying him or her at the end of the ride how much time he or she saved by using it. However, if communicated appropriately demand-driven pricing can significantly increase Uber's revenues.

As other tech companies, Uber, too, seeks to protect its intellectual property through patents. Currently, the company holds more than 19 patents. Among its patents there is 'Determining a

location related to on-demand services through use of portable computing devices' and Uber's surge pricing algorithm 'enabling a user to verify a price change for an on-demand system' (Fresh Patents, 2013; Solomon, 2016b). Uber also bought patents from Microsoft's *deCarta* to develop its own maps (so far it uses Google Maps) (Solomon, 2016b). Thus, while Uber—as any other company—cannot acquire a patent for its business model, it aims to protect its innovations through patenting and acquires those that facilitate developing new products and services. Especially Uber's efforts to develop and improve the maps used by the platform has potential to increase the use value of the customer and has potential for a competitive advantage. Having superior maps, which are tailored for ride-hailing services can improve the user experience and is likely to make people chose Uber instead of competitors. As outlined by James, Leiblein and Lu (2013), using patents helps to prevent other companies from entering the market because it makes it more expensive. Further, competitors may be sued because of patent infringements, which requires them to have experienced lawyers (James, Leiblein and Lu, 2013).

As mentioned before, the Silicon Valley mentally of 'the winner takes it all' makes Uber strive to become the leading and monopolistic transport service. In these efforts, Uber has to defeat many opponents who want a slice of the pie. Traditional taxis are natural competitors and can only be defeated with lower prices and better services. Furthermore, Uber's services are very similar to products of other "tech" competitors. Hence, it has to attract more drivers and passengers to achieve network effects that prevent both groups from changing to another company. Customers, as outlined before, aim to maximise their use value. When the provided service is alike, the use value can be maximised through lower prices or through the maximising of the perceived use value through easier access and availability. Network effects can increase the use value, for instance when passengers who request a ride are faster matched with a driver (explained in more detail in section 4.2.8). Uber approaches these problems with penetration pricing. Following Dean (1969), using penetration pricing can be essential as Uber faces strong competition and operates in a market where customers would decrease their use value when paying higher prices. Uber needs to attract the mass market and set the prices low enough to discourage other companies from entering the market. However, this approach strengthens only one side of the network (the passenger side). As Uber is a commission-based business, Uber drivers would earn more money if prices were higher. Therefore, in order to incentivise drivers to only operate with Uber the firm has launched promotions where drivers receive benefits if they accept to provide a certain amount of rides. Hence, it is not possible and lucrative to use a rival's product. In August 2016, for instance, Uber launched a

promotion in which drivers received $500 if they accepted a certain number of rides per week (Bogage, 2016). Uber also launched promotions which target directly driver's of competing services, promising them a $500 signing bonus after completing 20 rides (Campbell, 2015).
Absorptive capacity, as stated in section 2.4, is another possible method for companies to capture value. According to Vinding (2006), one way companies can increase their absorptive capacity is due to effective human resource management, i.e., hiring excellent employees. Uber's hiring strategy strives to hire employees from tier 1 universities and highly reputable prior employers. In 2015, Uber hired a number of senior employees from Goldman Sachs as well as Goldman's technology investment group (Oran and Somerville, 2015). Other firms Uber is hiring from are technology companies such as Twitter, Oracle and Intel (Oran and Somerville, 2015). With these highly experienced employees, Uber bids fair to grow further and strengthen corporate development.
Uber also does what James et al., 2013 call 'investing in complementary assets'. In August 2016, Uber announced that it had bought Otto, a technology company, which develops self-driving trucks (D'Onfro and Hartmans, 2016). Otto's expertise further supplements Uber's know-how in the field of autonomous driving (see next subsection). Although all the above aspects outline promising ways of how Uber can capture value, the company yet has to develop a competitive advantage vis-à-vis its competitors.

4.8.2 How will Uber Capture Value in the Future?

Until now, Uber's main business remains a ride-hailing service, which relies on human drivers and passengers who choose its service as an alternative to traditional taxis. Travis Kalanick, however, has repeatedly stated that Uber thinks broader—it aims to change the way of transportation (Kosoff, 2015). One innovative solution for transportation is autonomous driving. Uber partners with the Carnegie Mellon University to increase its expertise in self-driving cars (The Economist, 2016a). If Uber eventually decides to abandon its drivers and uses self-driving cars instead it would change the entire current business model and hence the way it captures value. So far, Uber does not own cars itself, which keeps costs low. Replacing drivers and their cars with autonomous vehicles would require Uber to own and hence invest heavily in its own fleet. Furthermore, Uber would compete with different companies than only ride-hailing firms. If Uber decides to take the path of autonomous driving, it needs to find ways to unwind the higher costs. With respect to the development of these cars, Uber can try to patent parts of its R&D outcomes. Furthermore, partnerships with automotive

companies are possible, especially taking into consideration that competitors such as Lyft are already working together with big carmakers (e.g., General Motors). Lead time, i.e., to be faster than the competitors, will be key for Uber's success. Once a competitor has a fleet on the road, customers would probably not change to Uber. The key to success will be to enhance its existing network and simultaneously develop driverless cars.

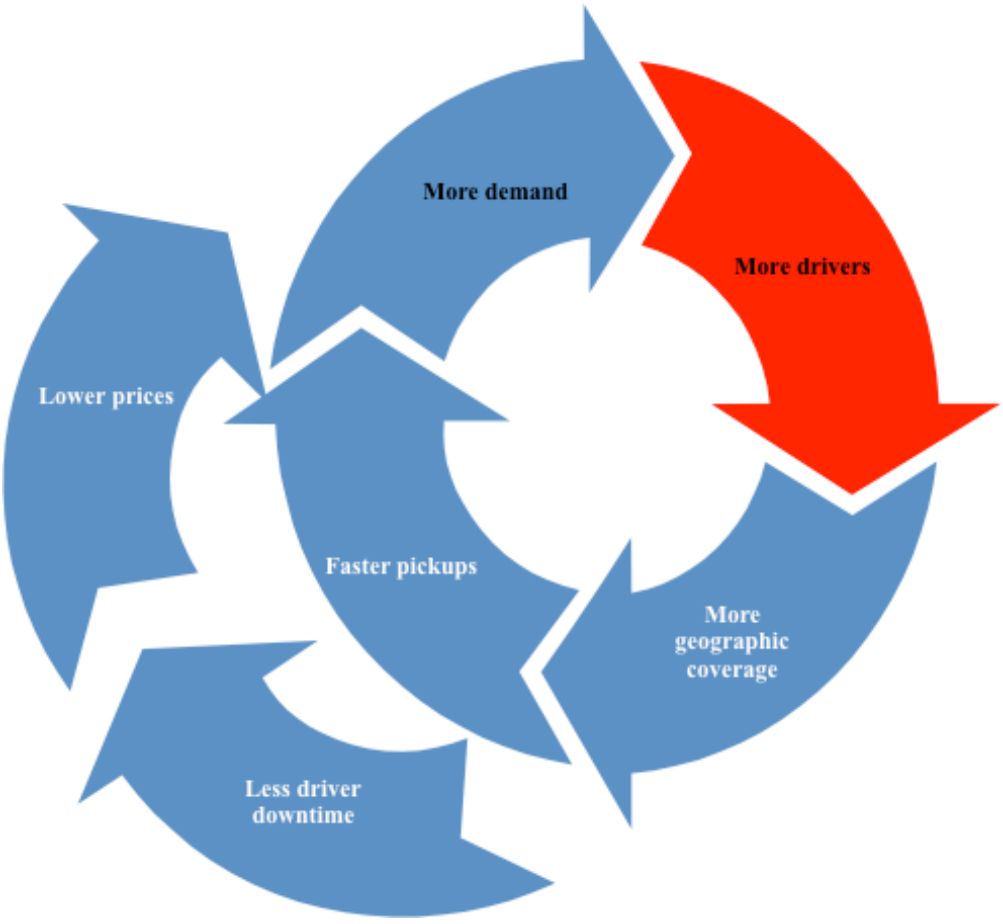

Figure 2: Realising network effects

As outlined in the above Figure 2, attracting more drivers is crucial for Uber. More drivers mean more geographic coverage, which leads to faster pickups and ultimately to more demand because the value that is created increases. At the same time, more geographic coverage also leads to less driver downtime, which leads to lower prices and hence also stimulates demand. Less driver downtime further means that drivers are able to earn more because they can conduct more rides. In spite of Uber's existing efforts to realise network effects, getting more drivers, who exclusively drive for Uber, will be the crucial point of the firm's ultimate success. Furthermore, Uber needs to become a brand that has customers trust. If Uber can convince passengers that its rating system is superior to competitors' systems and

at the same time provide lower prices, customers will abandon competing services and solely use Uber.

Particularly, hiring good employees and investing heavily in R&D is likely to make a difference. While self-driving cars entail risks such as higher costs and fewer revenues, it also offers opportunities. If courts decided that Uber had to employ its drivers, it is likely to be cheaper in the long run to invest in a fleet, rather than paying its drivers employee benefits.

Whereas Uber entered markets without respecting regulations which were in place in the past, it could gain competitive advantages in the field of autonomous driving if it worked together with governments and law makers. Uber has already achieved arrangements with cities in which its services supplement the present public transport (Hook, 2016). In Summit, a town in New Jersey, US, Uber was hired to provide free rides for commuters to and from its railway station (Hook, 2016). Similar deals could strengthen its position especially in rural areas where its services are rare. In addition, these government partnerships would offer a new revenue stream for Uber. According to the Economist (2016a), the taxi market is only a small business ($100 billion) compared to the global market for personal mobility ($10 trillion). Thus, Uber needs to seek ways to adjust its business model into all fields of transportation. Whereas it only started to operate in the delivery business, this could be a major part of Uber's future revenues. Specifically in countries where—due to laws and regulations—the taxi-like services are prohibited. This field promises many opportunities, from the already piloting food delivery services to a literally all-items on-demand service, which delivers clothes, groceries and so forth. Partnerships with Amazon or the integration into other platforms or marketplaces need to be developed to become a top deliverer. All these changes could be integrated soon, as existing drivers are able to conduct these services. Parcel deliveries could be even pooled with passengers and hence extent UberPOOL.

UberPOOL will play a crucial role in Uber's plan to revolutionise how people move in cities. As previously stated, Uber's vision is a smarter transportation with fewer cars on the streets. The firm's ultimate vision is a world in which car ownership is not necessary anymore because it is cheaper to use its on-demand services. Wheeland (2016) finds that car-sharing services have already significantly influenced the way of transportation as well as city planning in America. Parking ratios for new residential projects have been eliminated and 93 cities in the US currently consider eliminating parking minimum requirements (Wheeland, 2016). UberPOOL offers a solution to customers seeking cheap taxi-like services and at the same time to drivers. While passengers only pay a fraction compared to traditional taxis, drivers can make a living as they drive more than one passenger.

Finally, Uber can pave the way for capturing value in the future in further investing in complementary assets. Companies of interest may be other startups that have expertise in autonomous driving or hold patents in this field or companies that have expertise and knowledge in logistics or transportation. As Uber strives to be the number one player in transportation and it faces strong competition, Uber should invest in these companies holding assets it cannot develop fast itself.

4.9 Uber's Positioning in the VC^2 Framework

Hawawini, Subramanian and Verdin (2004) understand competitive advantages in terms of value creation and value capturing. As outlined in the previous sections, Uber clearly creates value to its customers and drivers respectively. However, as outlined in the section on its financial data, Uber failed to generate sustainable profits so far. Applying Hawawini, Subramanian and Verdin (2004) 'VC^2 Framework' on Uber, shows that it is still in the so-called *nightmare* scenario (see appendix 3). This position is characterised by creating high value to its customers but not being able to capture enough of it. Many innovative companies are stuck in this position in the early stages before they can finally cash in on their efforts. Whereas there is no easy answer for Uber on how to finally work its way to the upper right of the matrix ('heaven') (see appendix 3), Lepak, Smith and Taylor (2007) propose network effects, unique experiences and tacit knowledge to capture value. Uber's current strategy of penetration pricing may attract enough customers and hence create a broad network basis. However, Uber's next step should emphasise on the switching costs. Right now, it is very easy for both sites—drivers and passengers—to use competing services. While the company cannot forbid passengers to use other apps, Uber needs to find a solution to prevent drivers to use competing services. If Uber is able to attract substantially more drivers than its competitors, customers will not use other services because the network is not big enough. Ultimately, Uber can solve this problem when it introduces self-driving cars. Having great network effects and possibly partnerships with the government may pave its way towards the unchallenged market leader for transportation. With regard to self-driving vehicles, Uber should follow the approach of Thiel and Masters (2014), and start in a small market and aim to dominate it. The truck market could prove itself favourable to start with. Uber acquired knowledge and expertise from its purchase of Otto. Uber tested one truck already successfully on a highway in the US and should focus to dominate this market at an early stage. Having achieved that, Uber could continue its efforts focussing on busses, cars and trains.

5. Discussion and Conclusion

5.1 Uber — Value Capturing in a Competitive Landscape

As the case study outlines, Uber creates value for both actors of the two-sided network and ideally can also capture some of the created value for itself. As depicted in Figure 3, the value creation and capturing process starts with the customer's willingness to pay (WTP). If the price is below the customer's WTP, (monetary) value has been created for him or her. The perceived value which is created depends also on the actual service and the competitors' prices. In the case of Uber, surge pricing influences the extent of value created. Drivers rake in the price minus the commission which goes to Uber. Additional costs occur because of car insurance, fuel and wear. Finally, Uber receives between 20% to 30% commission for each ride. As with the created value of the customer, drivers' and Uber's earnings are dependent on surge pricing. Both receive more money when demand for rides exceeds supply of drivers, causing prices to rise.

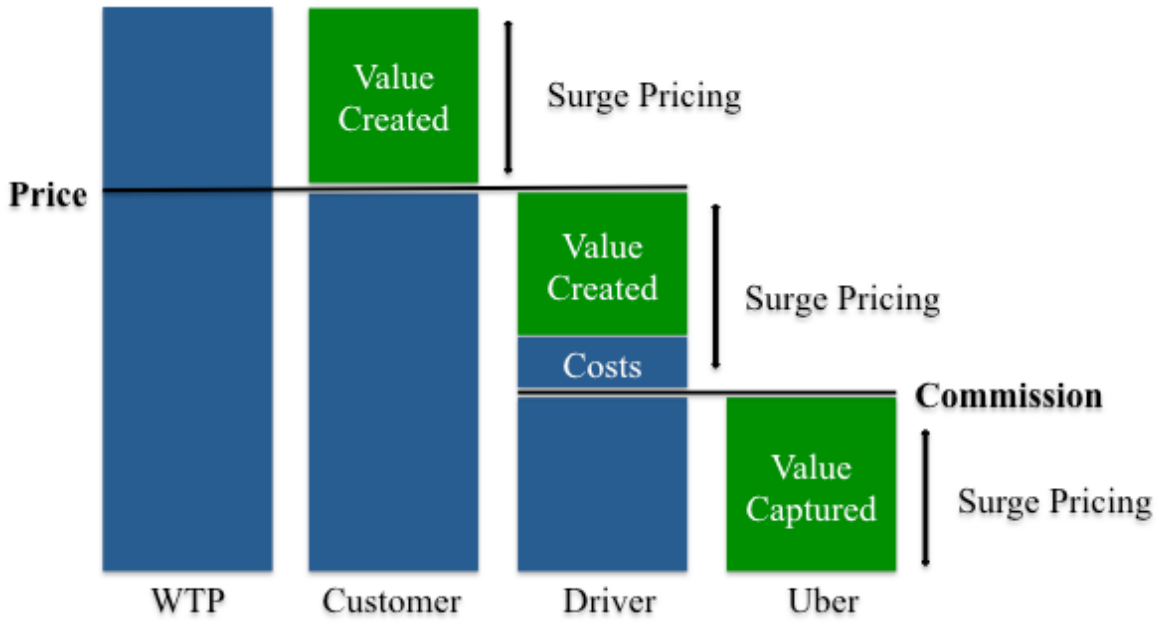

Figure 3: Uber's value creation and value capture model

The value capture model is extremely effective as Uber's business model relies on an asset-light approach. As the company does not own its own fleet or hire drivers as employees, it manages to keep operating costs low. Uber's model is very similar to the commission-based scheme of Airbnb, another sharing economy marketplace and homestay network that enables

people to list or rent short-term property, with the difference that Airbnb charges fees to both hosts and travellers. Both companies have a business model that requires a solid foundation of users (hosts/travellers and drivers/passengers) which increases the benefits of using the services due to network effects. Uber's services, however, can still be copied easier. Airbnb managed to create a differentiating factor in co-operating with professional photographers. Their photos are not only well made but also owned by the photographers so that hosts are not allowed to use them on competitors' platforms. Uber's most important approach towards a 'protected' network will be a mechanism that prevents its drivers from using competing products. Passengers want to maximise their use value. If Uber and its competitors have alike prices, availability plays the biggest role in the transportation industry. Establishing the network is a necessary but not sufficient method to win the competition. As regulatory disputes with many governments about the taxi service will not soon disappear, Uber needs to innovate horizontally and find other actors to match its drivers with. Delivery services and public transport are only the beginning in a contest to become the world's most significant transportation company. Acquiring knowledge, hiring the right people and researching in autonomous driving will be Uber's best bet for the future. Furthermore, Uber needs to start lobbying in this matter because it will be almost impossible to go ruthlessly into new markets (as it did in the past) with self-driving cars.

There are two other aspects which will be crucial to Uber and its way to generate sustainable profits. The first aspects concerns Uber's pricing strategy. Uber currently sets its prices so low that it needs to subsidise the drivers both to attract them and to ensure that they can make a living with it. However, this is not a strategy for the future but can only be used to outrival its competitors. If Uber ultimately achieves its goal and becomes a monopoly-like actor, it has to find a pricing strategy that satisfies both sites—drivers and passengers. The second crucial part will be the company's transition from human-driven transportation to autonomous driving. It will not only have to deal with regulators and abandon its drivers but also has to invest in a fleet, which is likely to decrease the margin of its business, as it will involves costs.

5.2 Contribution to Academia and Startups

The above thesis contributes in several ways to existing theory of strategic management, specifically to the processes of value creation and value capturing. The first contribution is the comprehensive literature review which includes both traditional and recent theories. It further connects these theories with concepts such as monopolies, the sharing economy and finally tech companies. The thesis's ultimate contribution is the application of the above-mentioned theories on one single company. In line with previous research, it outlines the importance of companies needing to address both value creation and value capturing in order to remain a successful player in business. Furthermore, the thesis contributes in providing a comprehensive case study on Uber, focussing on the company's services, their value to customers and challenges to monetise these values. It connects how Uber creates value with Bowman and Ambrosini's (2000) definition of value and Lepak, Smith and Taylor's (2007) ideas of the process of value creation. Their different approaches, namely measuring value in monetary terms or perceived value, highlight possibilities for Uber's market research on which factors are higher valued by the customers. Opportunities for future research are also given for Uber's process of capturing value. Firstly, continuative research can be conducted on Uber's pricing strategy, especially with regards to profitability. It can be examined whether Uber's extensive use of penetration pricing is able to outrival its competitors and whether it is possible to adjust prices later without scaring away passengers. Secondly, researchers have the opportunity to examine whether strong network effects can be established and which measures are successful to ensure high switching costs that prevent passengers from using competing services. Finally, this thesis leaves opportunity for future research with regards to the "the winner takes it all" phenomenon. While this thesis reasonable assumed that Uber operates in a market which fits in that phenomenon, further research can be conducted on which factors make a market fit into this category and how whether there is a general recommendation to become this winner.

This thesis further contributes to startups, especially these ones that operate in the sharing economy. For one, it exposes the different actors to which a company's products or services create value. This contribution enables young companies to rethink its environment and whether they serve all possible actors. Further, it outlines how startups can disrupt established industries—in fact industries that are tightly regulated and almost monopolistic—in providing added value. The example of Uber also shows that firms need to develop strategies that focus on the bigger picture. While Uber is by many seen as a taxi company, it works hard to create a

portfolio that serves all possible opportunities of transport. Startups need this mind-set to enhance the value creation process. This thesis, further, emphasises the necessity of a company's ability to capture value in order to maintain a sustainable business. Particularly the section on value capture provides guidance on how companies can monetise their innovations. The case study, specifically, points out aspects that are relevant to the sharing economy. In this context, companies operate as intermediaries and need to establish strong networks to differentiate itself from competitors. The case on Uber emphasises this aspect with great comprehension and points out that establishing these networks and the accompanied high switching costs are the vital part to enable the value capture process. This thesis also points out that disruptive solutions may violate established law. Companies need to be prepared for legal disputes and have to budget resources for court proceedings. Lastly, the thesis discusses the great efforts that are necessary to dominate an industry in which it is difficult to protect intellectual property and the need of great financial resources.

Whereas the case study on Uber contributes to both academia and startups, it naturally has its limitations. Its primary limitations lie in the nature of the research method itself. The case study is conducted on the company Uber, at a certain point in its *cycle*. That is why there is no easy answer for other startups in telling them to just follow the path of Uber. The external environment of the specific industry as well as the point in time influence decisions that are to be taken. Even companies operating in the sharing economy cannot blindly follow Uber and assume that success will come on its own. As much as external factors, the company's brand image and whether it is a first mover influences its path.

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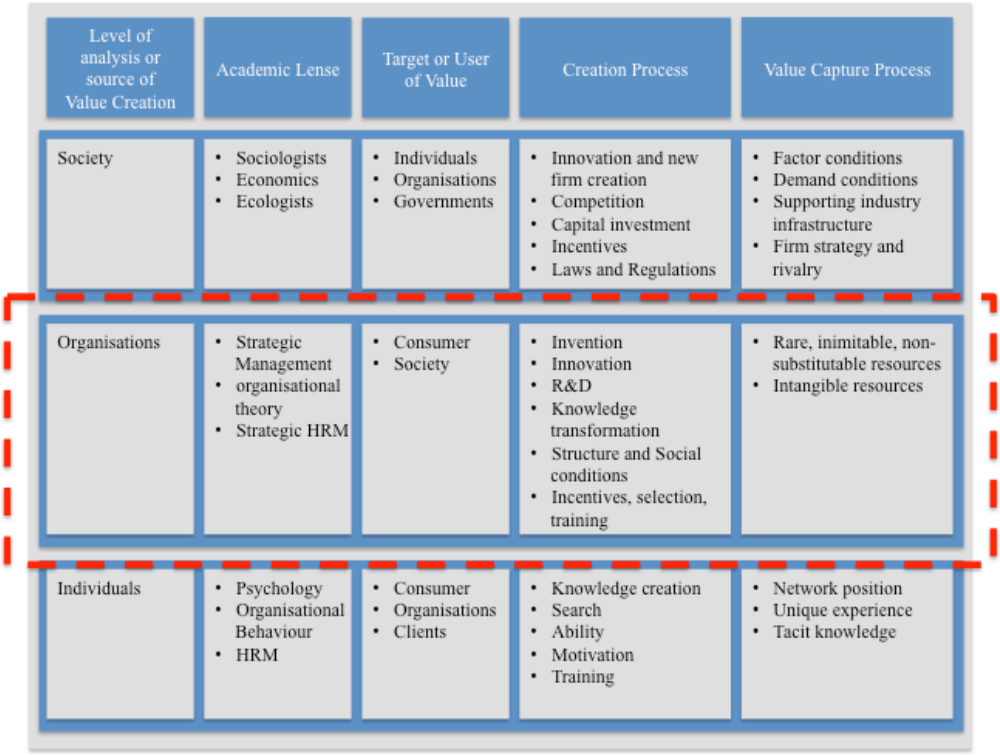
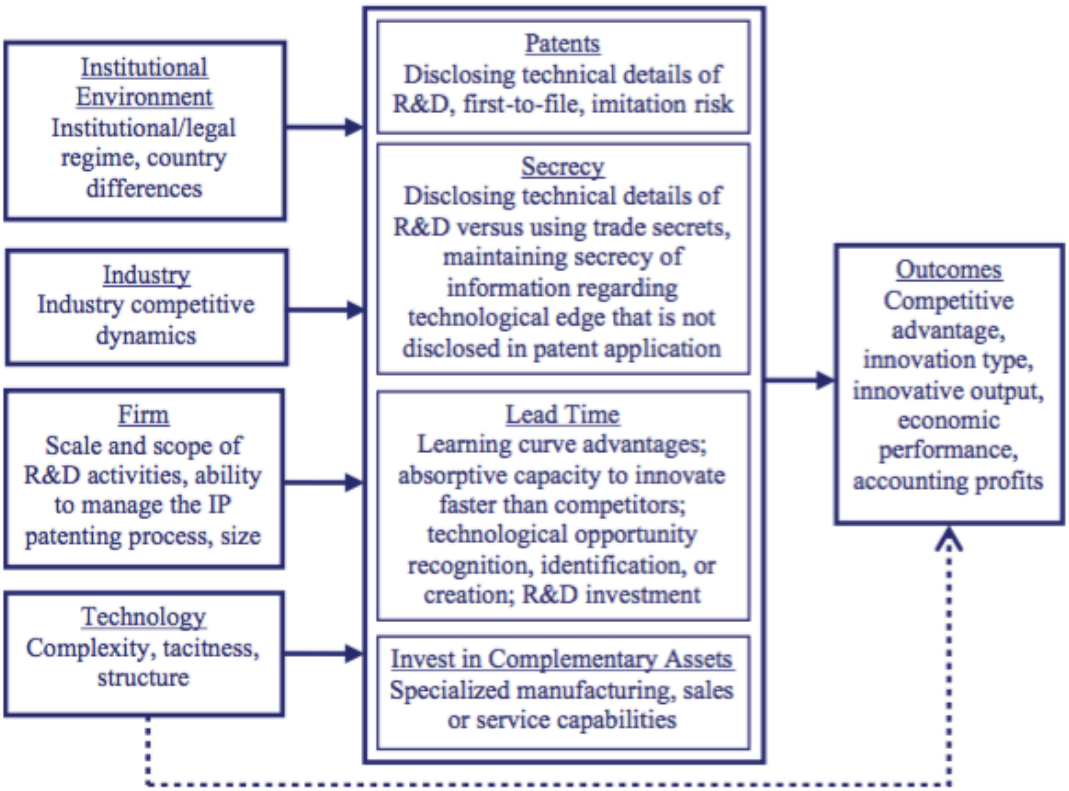
7. Appendices



Level of analysis or source of Value Creation	Academic Lense	Target or User of Value	Creation Process	Value Capture Process
Society	• Sociologists • Economics • Ecologists	• Individuals • Organisations • Governments	• Innovation and new firm creation • Competition • Capital investment • Incentives • Laws and Regulations	• Factor conditions • Demand conditions • Supporting industry infrastructure • Firm strategy and rivalry
Organisations	• Strategic Management • organisational theory • Strategic HRM	• Consumer • Society	• Invention • Innovation • R&D • Knowledge transformation • Structure and Social conditions • Incentives, selection, training	• Rare, inimitable, non-substitutable resources • Intangible resources
Individuals	• Psychology • Organisational Behaviour • HRM	• Consumer • Organisations • Clients	• Knowledge creation • Search • Ability • Motivation • Training	• Network position • Unique experience • Tacit knowledge

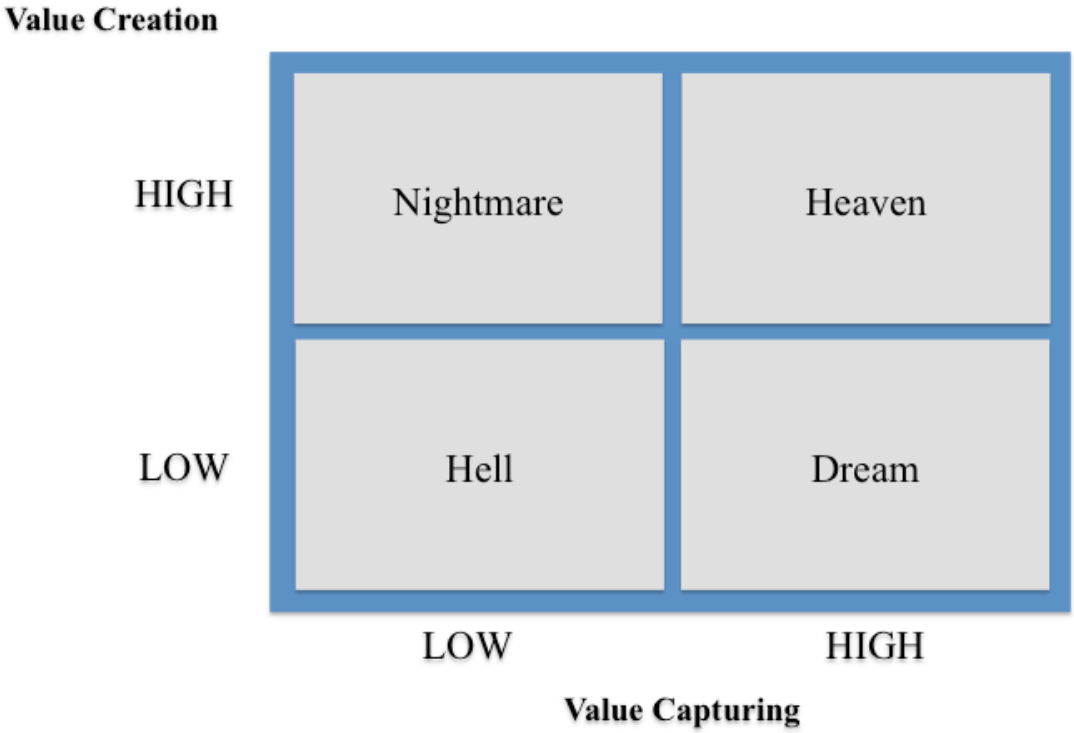
Appendix 1: Value Creation and Value Capture Process

Source: Lepak, Smith and Taylor, 2007



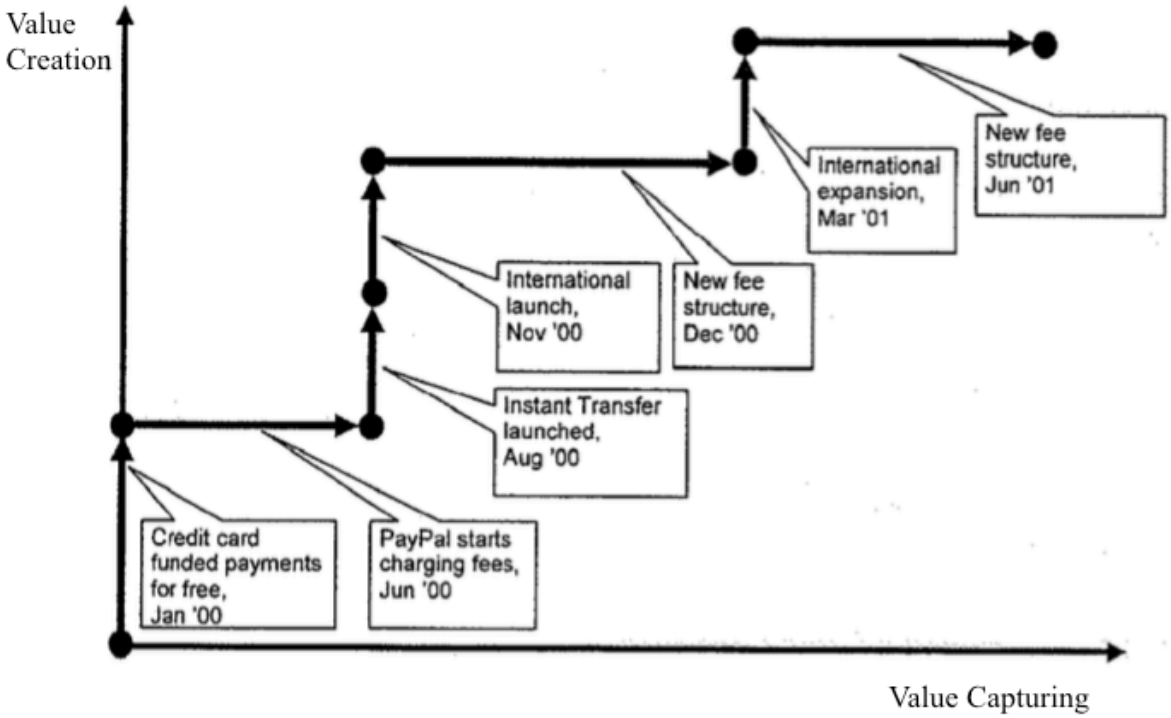
Appendix 2: Methods of Capturing Value

Source: James, Leiblein and Lu, 2013



Appendix 3: VC² Framework

Source: Hawawini, Subramanian and Verdin, 2004



Appendix 4: PayPal's Approach Towards Value Creation and Value Capturing

Source: Hawawini, Subramanian and Verdin, 2004

(in thousands)	2013 (Unaudited)	Q1 2014 (Unaudited)	Q2 2014 (Unaudited)
Net Revenue	$104,405	$45,641	$56,999
Costs and Expenses			
Cost of Revenue	51,869	22,212	32,325
Operations and Support	41,931	18,091	16,710
Sales and Marketing	34,189	32,371	41,466
Research and Development	13,457	7,988	12,262
General and Administrative	17,668	15,563	59,381
Depreciation and Amortization	1,970	1,070	1,678
Total Costs and Expenses	161,084	97,295	163,822
Loss from Operations	(56,679)	(51,654)	(106,823)
Other Income (Expenses)	149	(631)	(2,004)
Provision from Income taxes	-	-	-
Net Loss	(56,530)	(52,285)	(108,827)

Appendix 5: Expenses

Source: Biddle, 2015

Profit & Loss

(All in $ in '000s)	Q1 '12	Q2 '12	Q3 '12	Q4 '12	Q1 '13	Q2 '13
Net Revenue	**1,442**	**2,130**	**4,310**	**8,263**	**12,994**	**19,331**
Cost of Sales	2,291	2,494	4,178	5,702	8,815	10,514
Gross Margin	(849)	(364)	132	2,561	4,180	8,818
Operating Expenses						
Ops	1,228	1,963	2,742	4,314	5,911	8,395
R&D	553	624	797	1,786	1,609	2,224
Quality	133	263	301	503	420	535
S&M	88	250	237	248	264	459
G&A	564	793	979	1,793	2,048	3,323
Total Opex	2,565	3,892	5,058	8,644	10,252	14,936
Other expenses (income)	99	96	566	977	1,256	2,017
EBIT	**(3,514)**	**(4,352)**	**(5,492)**	**(7,060)**	**(7,329)**	**(8,135)**

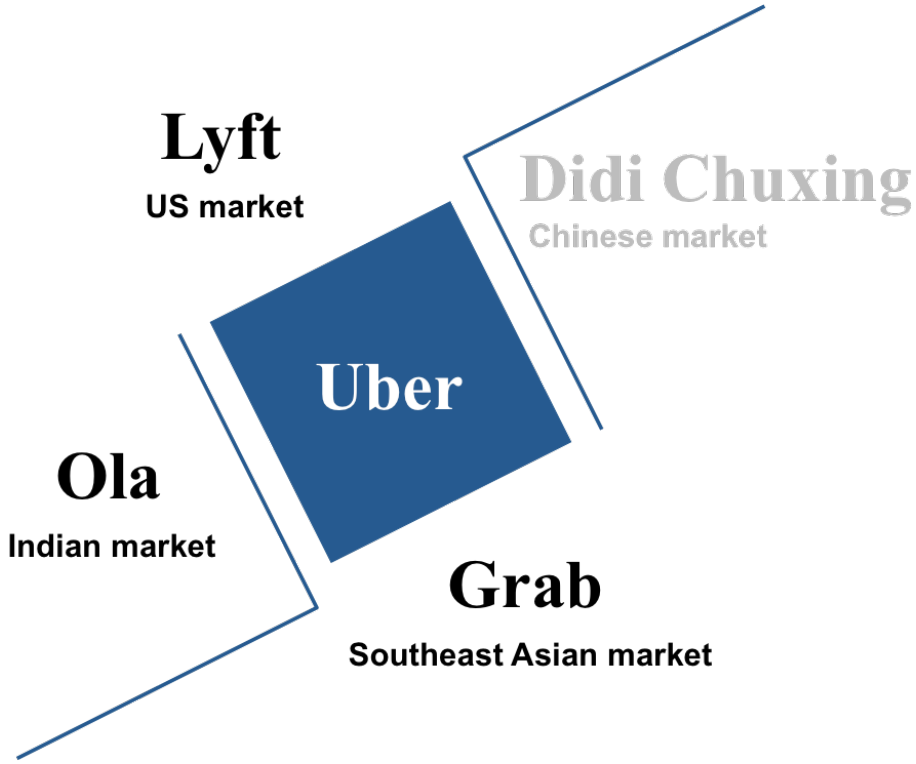
Appendix 6: P&L

Source: Biddle, 2015

(in thousands)	Q2 2014 (Unaudited)	2013 (Unaudited)
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	1,161,922	236,291
Account receivables	21,436	12,614
Prepaid expenses and other current assets	16,930	7,267
Total current assets	1,200,287	256,173
PROPERTY AND EQUIPMENT - Net	54,004	9,383
Restricted Cash	26,094	10,010
Other Assets	4,350	1,679
TOTAL ASSETS	1,284,735	277,245
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	55,472	11,298
Accrued liabilities	38,071	16,178
Other current liabilities	20,913	13,534
Total current liabilities	114,406	41,010
Long Term Liabilities	12,395	6,760
TOTAL LIABILITIES	126,801	47,770
STOCKHOLDERS' EQUITY:		
Preferred stock	1,501,701	318,769
Additional paid-in capital	5,768	4,564
Accumulated Other Comprehensive (Loss) Income	(991)	(157)
Accumulated Deficit	(348,544)	(93,728)
Total stockholders' equity	1,157,934	229,475
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	**1,284,735**	**277,245**

Appendix 7: Balance Sheet

Source: Biddle, 2015



Appendix 8: Uber's Competitors