

VALUE CREATING FACTORS IN SHARING ECONOMY PLATFORM BUSINESSES

Comparative study in determining the value creating factors in sharing economy platform businesses in the hospitality and ride-hailing industries

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Abstract

Sharing economy in 2022 is more relevant than ever, when the world is recovering from a once in a lifetime pandemic that shut down most global commerce for nearly two years. Almost overnight, the world went from global supply chains and production optimization to local production and resourcing. Even now, after more than two years since the pandemic started, global supply chains are still suffering from production disruptions and scarcity of resources. Limitless quantitative easing combined with supply chain issues have skyrocketed inflation up to a level not seen in the 21st century, while cheap interest rate fueled lending has increased the level of debt to new global heights, making interest rate hikes difficult. With global travel almost all but eliminated, the travel and hospitality industries as well as ride-hailing industries suffered immensely for two years. Now, with the world opening, shortages in building materials and vehicle production have made the rebound difficult for traditional companies. Luckily the new sharing economy platform companies within these industries have shown incredible resilience and adaptability, and this resilience has allowed them to bounce back much quicker than their traditional competitors.

The purpose of this thesis is to find out what are the factors behind sharing economy platform businesses that allow them to thrive in today's competitive landscape and ensure a durable, competitive advantage. The study is composed of a theoretical and empirical part, where two industries (hospitality and ride-hailing) are analyzed and compared with each other. In the ride-hailing industry there are two companies, Uber Technologies and Lyft, and in the hospitality industries there are Airbnb, Booking Holdings, Expedia Group, TripAdvisor and Trip.com. Earlier research on this area has yielded some ideas of which factors seem to have a positive impact on value creation, but there is a serious gap in empirical evidence that would support their views. This thesis attempts to close this gap by taking an in-depth look at different value driving factors and testing their effect on revenue generation by running a series of regressions on different variables. The study relies on the assumption that market efficiency theories hold true and that the value of a business is all its future cash flows to shareholders discounted to today with the appropriate discount rate.

Findings are mixed in this research, supporting some of the value creating factors found in academic research. There are three main value driving factors within the sharing economy platform businesses: attracting a network of users and incentivizing them, incremental improvements to the platform and saturating the market. Some of the factors seem to have a bigger impact than others and show a higher correlation, however, proving a conclusive causation between factors and value proved to be impractical. This thesis also argues that there are no major differences between platform businesses and any other business when it comes to sustained success. Platform companies also have to build a rational business model that is protected against outside threats and manage them in a way that is intelligent, focused on the long-term and offer products that bring true value to the participants. The findings of this thesis shed some light on the intricate nature of platform value, which as a concept is not well understood in the current theoretical grounding.

Keywords sharing economy, platform business, platform economics, information economy, valuation, finance

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1 Introduction

The purpose of this master's thesis is to find out what are the value driving factors that create a durable competitive advantage for sharing economy platform businesses. This is a question that has not been adequately answered in previous research and is closely related to topics within platform economics (Rochet and Tirole, 2003), information system sciences (Hanseth and Lyytinen, 2010) and various fields of finance, both in corporate finance (Damodaran, 2012; Fama and French, 1993; Friedman, 1970) and in behavioral finance. This thesis has implications both for academic and practitioners in determining the long-term competitive advantages of platform businesses, which coincide with the long-term competitive advantages of traditional companies with some industry specific adjustments. This thesis is composed of a theoretical part and an empirical part, where additional research questions and hypothesis are formulated based on the existing research. These are then tested through statistical methods and the findings are discussed after that.

Both academics and practitioners have tried to come up with answers for predicting the future success of companies in general, trying to find out which companies are going to be more valuable in the future than they are now. Academic researchers such as Eugene Fama and Paul A. Samuelson argued on market efficiency, while Harry Markowitz revolutionized the way professional investment managers create and manage their portfolios. Benjamin Graham and David Dodd argued against the aforementioned academics and concluded that markets are poor at predicting or determining the true value of assets and better frameworks are needed for proper capital allocation, a framework called value investing that has a strong base of followers today. Philip Fisher and Thomas Rowe Price Jr. are successful practitioners in the field of investment management and have outlined what they think are value creating factors in business based on both the academic and practitioner's research from before (Fisher, 2007).

1.1 Sharing economy

Sharing economy as a concept has a long and varied history and technically is one of the oldest forms of trade (Sundararajan, 2016; Belk, 2014), starting from the markets and bazaars of old. There are many definitions on what exactly is sharing economy, but the concept still varies and goes by many names (Kataja, 2019). In essence, sharing economy is a system built around shared resources, where various individual participants provide or use

resources that are provided or used by other participants in a network of resources. It includes the shared creation, production, trade and distribution of consumable goods and services (Hamari, et. al., 2016; Laurell and Sandström, 2017). Although sharing economy as a concept is not new, recent advances in the last decade or so have enabled new companies to be formed around sharing economy, providing platforms that leverage two-sided network effects in their operations and disrupt the traditional competitors in the market (Eisenmann, Parker and Van Alstyne, 2006).

In this thesis two industries within the sharing platform segments are under scrutiny. Under inspection are the hospitality and the ride-hailing industries mainly in the US market, however, the results of this thesis are valid in any open market-based economy. The reason why the US market is so crucially important is because that's where most of these companies in these industries are founded and it's where they get most of their revenue from (Annual report, Airbnb, Booking Holdings, Expedia Group, Uber, Lyft, 2021). The hospitality industry used to be consolidated by a few large hotel chains that offer rooms and accompanying services for guests that were travelling around the world. There are five large hotel chains in the US that control almost half of the industry; these are Hilton, Marriott, Intercontinental, Starwood and Wyndham (Wilson et. al., 2015). The rest are considerably smaller and have no real market power. The consolidation of the hotel industry has been ruthless in the past decades according to the CEO of Hilton Hotels, Chris Nassetta and it's not disruptors like Airbnb that pose the biggest threat, but rather platforms like Meta or Google, who can direct customers to and away from hotels in favor of their own competing operations (2015). Although the capital structure of hotels is objectively worse than with platform businesses that enable people to use their existing assets more effectively, most hotels are franchising chains which in itself is a model of a platform business (Constantiou et. al., 2016).

Ride-hailing industry is relatively new and practically didn't exist before the arrival of Uber Technologies (Chan and Shaheen, 2012). Uber created a platform for travel that was previously occupied by various taxi, limousine, food delivery and other transportation, delivery and logistics companies. The industry up to this day is very much a duopoly, since there are two companies that have saturated 99% of the market (Salas, 2021). These two companies are Uber with roughly two-thirds of the market, and Lyft with the remaining one third (Salas, 2021). Ride-hailing is one of the most successful forms of sharing economy, since especially in the US, almost everyone above the age of 16 owns a car and almost every car is underutilized. Competing for transportation with Uber and Lyft are other

transportation modes, such as walking, cycling or using other form of man powered vehicle, taxis, private cars and public transportation (Mihlfeld and Associates, 2018). Unless a person is located in a major city, public transportation is rarely an option in the US, the cities are not designed for anything with less than four wheels (Martinez, 2015) and taxi companies are expensive to operate. Ride-hailing has been quickly gaining popularity and market share as a cheap alternative to all aforementioned modes of transport (Salas, 2021).

There are clear benefits to sharing economy platform businesses, but there are also some drawbacks, and both are explored throughout this thesis in trying to answer the research problem. The model for sharing economy platforms have attracted a large number of both new players to the market as well as changed the business model of many incumbent players, such as taxi firms and hotel chains (Barr, 2016). Part of the attraction for sharing economy platforms is the low cost in scaling, since platform companies do not own the assets their customers use, nor are they responsible for upkeep or any other asset-derived cost (BearingPoint, 2021). Platform companies are one of the best forms of business if they are set up right, and to answer whether they are created, branded and managed correctly is in the focus of this thesis.

1.2 Research Problem

The main research question under scrutiny in this thesis is 'What are the key value drivers in sharing economy platform businesses and how to determine long-term competitive advantages of market participants?'. Previous research on the topic has been scarce and narrowly focused on a specific trait or area, such as the evolution of sharing platforms (Gansky, 2010) or how platforms attract a large customer base (Evans, 2003; Rochet and Tirole, 2003). Frameworks on the initial success of platform businesses have also been studied (Constantinou et. al., 2016; Kataja, 2019.), and these studies are of great use in determining which factors are relevant for the survivability and value increasing factors of platform businesses. Besides just focusing on Platform Economics, Information Infrastructure theory (Hanseth and Lyytinen, 2010) and Platform Strategy (Eisenmann et. al., 2006), the thesis also borrows from financial theories, such as Valuation theories (Damodaran, 2012; Fama and French, 1993; Friedman, 1970), theories on Capital Flows and Asset Pricing (Traynor, 1961; Sharpe, 1964; Lintner, 1965; Mossin, 1966) as well as views from various practitioners.

To answer the main research problem of finding out the value creating factors of platform businesses, additional research questions are formulated. Due to the ambiguity in

research regarding most aspects of platform businesses, ranging from definition to purpose, this thesis has a structure of moving from wide umbrella topics to narrowly formulated hypothesis. First thing that needs to be done is to identify the gaps in the research itself, both from the realms of corporate finance and information science. When it comes to value factors on the corporate finance side, a heavy emphasis is placed on Stephen A. Ross and his Arbitrage Pricing Theory (1976). In the theory, Ross argues that changes in asset prices are best explained by changes in different value factors, and that educated investment professionals will utilize arbitration to eventually find a price equilibrium for any given asset. This thesis relies heavily on the assumption that there are value factors that create or destroy value in companies and that these factors can be distinguished, and their effects can be quantifiably measured. To find out what these factors are, additional research questions are formulated:

1. What value driving qualities successful companies have that are common amongst them?
2. What gives platform businesses in the ride-hailing and hospitality industries a competitive advantage over their traditional counterparts?
3. How to identify the common qualities among sharing economy platform businesses that will give them a durable competitive advantage over their competitors?

With the help of these research questions, the research problem will be answered and some value creating factors will be identified and their impact is measured. With the insights from this thesis, both academics and practitioners can use them as a base and further investigate them to widen our understanding of platform businesses.

1.3 Research methodology

There are several platform companies working within sharing economy, and there are many factors affecting their valuation and growth prospects. To keep the research at a manageable level a total of seven publicly traded, US stock market listed companies are selected. Five of these are from the travel and hospitality industry and two from the ride-hailing industry. The thesis is divided into two parts, the first being a theoretical part, in which different theories on the topic are explained in a literature review. In the theoretical part of the thesis the main research questions are also answered based on previous academic and practitioner research

and tests. Once comprehensive research has been conducted, hypothesis is formulated in an effort to answer the research problem.

In the second part of the thesis, secondary data is collected from public sources and data from them is pooled in a separate database so that it can be easily analyzed. This is why the companies under analysis are public, so gathering, comparing and analyzing the data can be done. Most important measurable value factors that create a competitive advantage for platform businesses in the sharing economy are listed and tested for their significance on revenue generation. Revenue growth and generation is a different measure of value than is normally used, since the norm is to look at market capitalization, but since there are so many factors affecting market capitalization of a business and so many of these factors are out of hands for the management, revenue growth is more likely going to be a more accurate measurement (Fernando, 2022). The effect of the most important value creating characteristics on revenue growth is analyzed with statistical tests and the results are explained in the *Findings* section.

As mentioned before, there are some assumptions and limitations to be considered. First, the amount of data on financial performance and operational costs of the companies is in some cases limited. The United States Securities and Exchange Commission (SEC) requires public companies under the United States Generally Accepted Accounting Principles (US GAAP) to report on financial performance quarterly in a quarterly report (10Q), as well as a more comprehensive report on financial performance on an annual basis in a 10K report. Every stock market listed company in the United States must report two years of past financial performance before listing on the public market. This has given a challenge in collecting data from public sources, since some of these companies have IPO'd very recently and don't disclose their revenue, cost or other financial metrics from a longer period. To find sufficient data, some tertiary sources have to be used and cross evaluated with other tertiary sources to check their accuracy. Statista, Yahoo Finance and MacroTrends are useful tools to find cohesive and useful data and are used for the purposes of this master's thesis.

Second consideration when writing this thesis is the Covid-19 global outbreak, henceforth referred simply as the "pandemic". Revenue growth is never just dependent on the decisions of management teams but are also subject to certain micro- and macroeconomic trends and conditions (Fernando, 2022). With the shock that the pandemic created on the economy, the restrictions on travel and business in general and the overall drop in spending caused all of the companies under analysis to suffer a drop in revenue

(Annual report, Airbnb, Booking Holdings, Expedia Group, TripAdvisor, Trip.com, Uber and Lyft, 2020). The drop in revenue has a direct effect on the profitability of the companies, as well as on their investments into sales and marketing, as well as on R&D. Due to the pandemic's shock effect to the global economy, it skews the results of the regressions and makes drawing conclusions more difficult. The time frame from which the data was collected was 5 years in most cases, of which 2 years are affected by the pandemic, meaning that 40% of the datapoints are measured during a time of economic extremality. Nevertheless, the pandemic also shows the adaptability and resilience that platform businesses can have if managed correctly. This is apparent in some of the companies' rebound in 2021 compared to 2020 and illustrates a key point on the survivability and long-term success of these companies. It's therefore decided that the crisis years of 2020 and 2021 are included in the analysis.

2 Literature review

In this section the previous research and literature on the topic is summarized and analyzed both from the academic and practitioners' side. The literature review is going to follow a top-down structure where different topics within value creation, platform value, economic value and so on are looked at and narrowed down to individual platform companies within the sharing economy. The amount of literature on these topics is vast, however, not much of it is directly related to the topics of this thesis. On the platform side, most famous academics are Eisenmann, Parker, Van Alstyne and other researchers who collaborate with them, while researchers such as Evans, Rochet and Tirole have focused on sharing economy platforms themselves. In the information economy side, there is Hanseth and Lyytinen and on the practitioner side are economists and investors such as Dodd, Graham, Buffett and Lynch to name a few. This is a topic that is still very new and new information changes the views and opinions that previous researchers have, which makes it especially interesting to research and which also makes this thesis relevant.

2.1 Theories on business value

Both in the academic world as well as in the practitioner world there has been much discussion around what is the purpose of a company. The prevailing academic view since the 1970's is something called the Friedman doctrine formulated by Milton Friedman (Smith, 2003). In Friedman's publication from the 70's, he said "the social responsibility of business is to increase shareholder profits" (Friedman, 1970). This view is somewhat outdated and countered by practitioners hailing People, Profit and Planet as the guiding factors of business (Elkington, 2018) and should therefore not be taken as gospel. The Friedman doctrine sounds blunt and unsustainable, which is why Friedman stressed in his research that companies need to maximize profits while staying within the lines of the rules of "the game" (Friedman, 1970). The game, in this case, means that companies cannot profit by fraudulent means that stiffen competition nor can they break the law in pursuing profits (Friedman, 1970). This gives some moral limitations for corporate executives who loudly claim that they are there only to maximize profits.

In a competing bid for the Friedman doctrine, a contrasting theory of why companies exist formed in the 1960's, when US pension funds grew a conscience and started to invest in socially responsible companies (Roberts, 1958). This movement, which is now known as the ESG movement, changed the perception that people have on companies. It's generally

accepted among practitioners that a company's purpose is not just shareholder maximization as first proposed by Friedman, but to take into consideration the environmental, social and corporate governance aspects of business life (Chung and Michaels, 2019). The argument is that shareholders care about other things besides just profits and this is a factor that companies should take into consideration also in their daily operations. In academic circles, Oliver Hart and Luigi Zingales counter argued Friedman's theory by stating that companies should maximize shareholder welfare and not shareholder profits (Hart and Zingales, 2017). In their essay they stated that prosocial shareholders should be able to decide on corporate policies and when doing so, the end result is that they do not maximize market value, but rather shareholder welfare, which is different (Hart and Zingales, 2017). There is empirical evidence backing the ESG agenda, since in recent years ESG funds were both outperforming and attracting more investment than traditional counterparts (Morningstar, 2021).

Modern Portfolio Theory (MPT) and the Efficient Market Hypothesis (EMH) are two influential theories within finance. MPT was originally outlined by Harry Markowitz in his book *Portfolio Selection* (1952) where he suggested that investors get to build their ideal portfolios by choice of mean and variance of the portfolio's assets, or risk and return (Markowitz, 1968). In his noble price winning theory, he further elaborated that investment professionals should build their portfolios that maximizes the investor's mean variance preference, and that these portfolios are found on the efficient frontier (Markowitz, 1968). The key takeaway from the theory is that investors cannot select characteristics that are unique to the asset but have to consider how securities co-moved with other securities. It is therefore possible to construct a portfolio that has less variance, but a same expected return as another portfolio with higher variance (Markowitz, 1952).

Efficient market hypothesis (EMH) is the prevailing theoretical framework in corporate finance (although heavily disputed) and claims that capital markets are efficient and the only thing changing publicly traded asset's prices is new information entering the market (Fama, 1970). Pioneered by Nobel prize winner Eugene Fama based on previous research by Bachselier, Mandelbrot and Samuelson (1900, 1963, 2015), the EMH states that asset prices reflect all the available information in the market, and investors cannot outperform the market on the basis of technical or fundamental analysis (Fama, 1970). According to the theory, there are three forms of market efficiency: weak, semistrong and strong (Fama, 1970). In their weak form, markets reflect all past information, which makes technical analysis irrelevant in terms of outperforming the market. In semistrong form, markets reflect all past and current information, which makes fundamental analysis

irrelevant in terms of outperforming the market. In strong form, markets reflect all past, current and private information, which makes insider trading impossible to creating abnormal profits. The only way to outperform the wider market according to EMH would be by luck (Schwert, 2003).

The two theories, MPT and EMH, go hand in hand and argue that investors' skill is not a factor in picking a winning portfolio. What matters are the prevailing economic conditions, the security's relation to other securities and an abundant pool of professional money managers who constantly evaluate the prices of securities by means of technical and fundamental analysis and who will consistently make sure arbitrage cannot be exploited (Fama, 1970; Schwert, 2003). Several academics and practitioners disagree with both EMH and MPT and the evidence against them is mounting (Basu, 1977; Rosenberg, 1985). Especially successful practitioners have identified some key metrics of successful companies that they follow before making an investment decision. Philip Fisher, the father of growth investing, had a list of 15 metrics that companies had to fulfill before qualifying as investment worthy and Charlie Munger, Berkshire Hathaway's co-chairman, had a list that consisted of four key metrics when evaluating investments, as he told in a BBC interview in 2012.

2.2 Valuating a business

One of the more frequent questions in corporate finance is 'How do you calculate the value of a business?' and the answer to this is both complicated and interesting and under heavy dispute (Graham, 2003; Fisher 1996; Town, 2007). There are several valuation techniques that will give analysts a range where the company should be priced at. In financial valuation the focus is heavily on numbers, while in more holistic valuation methods the company's management, products, competitive positioning, future prospects and risks and financial performance is evaluated and an objective price can be set on the company as a whole (Hayes and Kindness, 2022). Different methods for valuation can be for example market capitalization-based method, which is the easiest and most straight forward valuation method, since it just means that you take the number of shares of the company and multiply it with the price of one share (Fidelity Fund, 2022). In a Times Revenue Method, a stream of revenues from a pre-determined period are taken and an industry multiplier is applied to find out whether a company is over or undervalued (Hayes, 2022). Earnings multiplier valuation works in a similar manner, but instead of revenue streams the analyst takes an earnings multiplier, such as earnings to price or earnings to book value, and discounts it

against a current interest rate to get a more accurate and fair valuation (Kenton, 2021). Liquidation value comes from a company's balance sheet and determines how much the company is worth today if all its assets are sold and all its liabilities are paid off (Banton, 2020). Among these various valuation methods there are some that are a bit more sophisticated than the aforementioned basic techniques.

Discounted cashflow method takes a company's future cashflows and discounts them with an appropriate discount rate to today. The growth in cashflow is usually estimated based on previous cashflows and the overall market situation at the time of the analysis. Forecasts are generally made up to 5 years, after which a perpetual growth rate of the overall economy is added (Fernando, 2022). The basic formula for discounted cashflow is:

$$DCF = \frac{CF_1}{1+r^1} + \frac{CF_2}{1+r^2} + \frac{CF_n}{1+r^n}$$

where:

CF = cashflow for a given year

r = discount rate

The r or discount rate can be the prevailing interest rate, but in a more sophisticated and accurate analysis it represents the required rate of return for the investor (Fernando, 2022). It can be estimated through the Capital Pricing Model (CAPM for short) and it consists of two parts; the cost of equity and the cost of debt (Chen, 2021). Cost of debt is an easy measure and quite literally means the market price of a short-term bond (Hayes, 2022). It's the return demanded by a lender and is sometimes described as "cost of money" in economic terms (Hayes, 2022). Cost of equity is a more abstract concept and means the rate of return that an investor is demanding for an equity investment. The formula for CAPM is:

$$CAPM(\text{Cost of equity}) = R_f + \beta(R_m - R_f)$$

where:

R_f = risk free rate of return (most commonly a 10-year US treasury bond yield)

β = estimation of risk

R_m = market rate of return

The overall cost of capital would be formed on the basis of the weighted average cost of capital (WACC), so the cost of debt and equity (Seth, 2022). WACC measures the cost of borrowing for a company. It's the investor's return on a specific company and includes both debt and equity financing (Seth, 2022). The formula for WACC is:

$$\left(\frac{E}{V} \times Re\right) + \left(\frac{D}{V} \times Rd \times (1 - Tc)\right)$$

where:

E = market value of equity

D = market value of debt

V = E + D

Re = cost of equity

Rd = cost of debt

Tc = corporate tax rate

The Arbitrage pricing theory (APT) was first introduced in the mid- 70's and is considered to be a advanced version of CAPM (Costagliola, Hayes and Scott, 2020). It was introduced by economist Stephen A. Ross and states that an asset's returns can be predicted by a linear relationship between expected return and a number of factors that a company can control (Ross, 1976). The model is a multi-factor asset pricing model, which means that multiple factors have an effect on the price of an asset. The formula for APT is:

$$E(R)_i = E(R)_z + (E(I) - E(R)_z) \times \beta_n$$

where:

E(R)_I = Expected return

R_z = Risk free rate

β_n = Sensitivity of price

E_i = Risk premium for *i*

While the CAPM assumes that markets are efficient all the time (Chen, 2021), the APT makes the assumption that markets are not efficient all the time and therefore assets can be occasionally mispriced (Ross, 1976). This view contradicts the view of Eugene Fama, who argued that markets are efficient and abnormal returns cannot be achieved consistently (Fama and French, 1993), but market inefficiency does coincide with most practitioners views as well as with the views of the founders of value investing, Benjamin Graham and David Dodd (2003). There is ample empirical evidence against Efficient Market Hypothesis on the academic side (Basu, 1977; Rosenberg, 1985) and on the practitioners' side (Buffett, 1984; Town, 2007), that the EMH can be rejected. While APT is arguably a better, more flexible way of pricing assets, it is also more complicated than CAPM and therefore gets less attention in both academia and with practitioners (Hayes and Scott, 2020). Due to the several factors that the model analyses instead of just one factor in CAPM, the model is also

easier to get wrong and is sometimes not a practical tool. When trying to determine the true value of a business, several schools of thought have emerged. The two most famous schools are value investors and growth investors, which are looked at next.

2.3 Value Investing and Growth Investing

In the professional investing world, there are two broad categories investors like to divide companies in: growth and value firms (Cussen, 2022). Value firms are generally accepted to be established and proven businesses whose primary objective is to create welfare to shareholders as argued by Hart and Zingales (2017) and not necessarily invest in unproven technologies or methods to grow rapidly. Instead, they are companies with well performing operations that offer predictable cash flows to the investors and create process improvements rather than product improvements. Due to the predictability and ‘safeness’ of such companies, they tend to trade with low price to earnings multiples, high book to market multiples and have low amounts of debt compared to their assets. Growth companies on the other hand are companies with exceptional growth prospects as judged by the market. There is a lot more uncertainty around growth companies which makes them riskier, but the payoff can also be higher (Hayes, 2022). It’s not uncommon in this day and age to see companies that have never turned a profit to be the most valuable company in their respective industry (NASDAQ, 2022). These ‘success stories’ as they often are described in the media, have tapped into the imagination of the public and are capitalizing on investors who are willing to take on more risk in fear of missing out to the competition (Hayes, 2022).

Besides the obvious differences between value and growth investors, at the end of the day they are looking for the same thing: where to get the best return for their investments? This is an intriguing question that has been researched time and time again by both academics and practitioners, and a question that is also relevant in this thesis. When trying to answer the research question of which factors are value creating in platform businesses, there is a need to look at how value is created in business in general.

When asking the question of what the value of a company is, the answer is quite simple: calculate all the cash the business generates to its owners for its remaining life and discount the cash back to present with the appropriate discount rate (Buffett, W. 1999). The number that the investor comes to is the intrinsic value of the business. Then comes the tricky part: how does one know what the future cashflows are going to be?

2.3.1 Value Investing approach

Value investing was first invented and formulated by Benjamin Graham, an American economist who together with David Dodd outlined the framework for what value investing is and how to detect value in companies. (Graham, 1996). The researchers explained the difference between investments and gambling, outlining that an investment operation promises "safety of principal and a satisfactory return" (Graham, 2003). Any investment that does not promise safety of principal and a satisfactory return does not qualify as an investment, but a speculative bet that is not different from gambling (Graham, 2003). Graham also emphasized the importance of thorough analysis when making an investment decision and outlined many frameworks of what should be considered before an investment operation is committed. The learnings from Graham and Dodd have been advocated by numerous investment professionals, chief among them Warren Buffett, who famously said that if you are going to read only one book about investing, it should be *The Intelligent Investor* (Buffett's Annual Letter to Shareholders, 2013).

Value investing in itself is a concept that has no clear definition; however, it is generally accepted in the literature that value investing is a style of investing that tries to buy assets that are trading below their intrinsic value (Berger and Curry, 2022; Graham and Dodd, 2008; Hayes et. al., 2022). The intrinsic value is a concept that is as vague as the concept of value investing, but generally it means the "true" value of an asset (Hayes, 2022). The premise of value investing relies on the Modern Portfolio Theory and Efficient Market Hypothesis to be wrong, which they are, meaning that unlike Fama and French suggested, markets are not always efficient and do not always price assets correctly (Graham, 2003; Town, 2007). This allows investors to buy assets that are trading below their intrinsic value and make excess profits, as they are commonly measured by alpha (Anderson, Chen and Li, 2022; Downey and Scott, 2021).

The way to find out if a company trades below its intrinsic value can be done through careful analysis of the company's key figures, products, innovation, longevity, culture and other traits, as well as management competence, competitors and the overall economic landscape (Graham, 2003; Fisher, 1996). In an interview by BBC in 2012, Charlie Munger outlined his and Buffett's investment philosophy by saying that they always look for companies that they can understand, that have a durable competitive advantage, that have a management in place with a lot of integrity and talent and finally, that the company is priced "fairly" (BBC, 2012). Peter Lynch, a famous fund manager who also consistently

outperforms the market indexes, wrote in his book *One Up On Wall Street* that he prefers businesses that are so simple an idiot can run them, because one day one will (1989).

2.3.2 Growth Investing approach

Growth investing is often seen as the polar opposite to value investing, but in several papers (Annual Letter to Shareholders, Berkshire Hathaway, 1992) it's seen as the other side of the same coin, with Warren Buffett saying that value investing and growth investing are "joined at the hip" (1992). This style of investing was pioneered by Philip Fisher, an American investor and one of only three investment teachers of Stanford, who wrote a book on growth investing already in 1958. In his book, Fisher looked at some of the factors that give investors a framework for forecasting success in start-up and growth companies (1958). This method of his is called scuttlebutt. Scuttlebutt as a phrase refers to gossip or rumors and is quite descriptive of the method used in determining if a company is worth investing in or not. In this method an investor would talk to many industry professionals in different companies and educates himself to be an expert in one or more industries. Once sufficient knowledge is acquired, the investor would then move on to answer a list of fifteen questions laid out by Fisher (Fisher 1996). The questions investors need to ask before making an investment decision are:

1. Does the company offer products and services that have the potential for a sizable increase in future revenues?
2. Does the company have sufficient R&D and opportunity to expand their offering in the future?
3. How effective is the R&D?
4. Is the sales team of the company overperforming?
5. Is the margin for profit above average?
6. What is the company doing to improve its profit margin?
7. How are the people working for the company been taken care of?
8. How are the relations within the executive branch?
9. Is the management structure rigid?
10. How good are the cost controlling and analysis structures?
11. Is the company overperforming related to industry peers?
12. Is the company thinking long term or short term?
13. How is the company financed now and in the foreseeable future?

14. How is the management communicating in good times and in bad times?
15. Does the management have integrity?

All these points that Fisher makes in his book *Common Stocks and Uncommon Profits* (1996) are meant to help investors choose the right companies to put their money in, and at first glance they seem quite specific in nature. If looked at them in a broader sense, it can be deduced into Charlie Munger's three out of four points, with only the price of an asset missing from the checklist (2012):

1. Do you understand the business? (Fisher's points 2, 3, 7, 10 and 13)
2. Does the company have a durable competitive advantage? (Fisher's points 1, 4, 5, 11 and 12)
3. Does the management have integrity and talent? (Fisher's points 6, 8, 9, 14 and 15)

What is not relevant in Fisher's version of growth investing is the price you pay for the company, which is also in line with what most other growth investors think (Segal, 2021). In growth investing the hypothesis is that a disruptive new company will take over and saturate the market quickly, meaning that the growth in revenue and profits is going to justify almost any price (Fisher, 1996). In 1990 and the dawn of the internet, any company that had the word "IT" or "internet" was considered by the market as the new market leader in whatever industry they operated in and thus was priced extremely high (Graham and Dodd, 2003). Yahoo reached an all-time high of \$110 billion, making it the most valuable company in the world at the time and a symbol of the dot-com tech bubble (Udland, 2016). Even if the company didn't go bankrupt and disappear after the dot-com bubble like so many of its counterparts, its stock price has still not recovered from the crisis (NASDAQ, 2022).

Growth investing is therefore seen as riskier than value investing, because even if disruptive companies have the advantage at first, it's very difficult to see which disruptive company is going to survive and win a prominent place in the market (Segal, 2021). On the academic side there are very few scholars that have taken a good look at what makes individual disruptive companies succeed in the market, mainly because of accredited academics and Nobel prize winners such as Fama and French, Samuelson, Modigliani and Miller and the like do not think that it's possible to predict success due to markets being

efficient and investors being rational. So, if a hypothesis is to be made, then the only place to look for it is the practitioner's side. This thesis seeks for knowledge that can be learned from active investors that have done well for themselves like Peter Lynch, David Dodd, Benjamin Graham, Warren Buffett, Thomas Rowe Price Jr., Bill Ackman, and the like.

2.4 Indicators of successful companies

After looking at several different methods of valuing a company and which qualities a company should have in order for it to be a wonderful business, it would now be useful to look at previous research on the indicators of successful companies and answer the research question 1, which is " *What value driving qualities successful companies have that are common amongst them?* ". It is already established in previous literature that the value creating factors that determine the success of a company work across all industries, so not just in the platform economy or in the two industries within the sharing economy that are looked at in this thesis. When it comes to finding indicators of successful companies in traditional industries (excluding platform businesses), we can find more literature that suits our purposes. Johnson and Soenen did a study on 478 companies and identified some key metrics which can indicate future success of companies, such as efficient working capital management and a degree of uniqueness in their business operating models (Johnson and Soenen, 2003). They ranked the companies based on their Jensen's alpha, Sharpe Ratio and EVA while looking at 10 different metrics that could have an effect on the company's outperformance. In other academic literature much emphasis is placed on leadership or management aspects and the effect proper soft skills have on business success (Chin, 2022). Researchers such as Conger (1988), Fombrun and Van Riel (2004) have looked at successful companies and determined that there are a set of business decisions behind the success and by replicating these decisions over and over again, new successful companies can emerge.

There are several other common qualities when looking at successful companies, including brand and products. These qualities can create a "moat" around the business and protect it from outside attacks, e.g., protect it from competition. Berkshire Hathaway's co-chairman and founder Warren Buffett famously says on his annual letters to shareholders that he wants his company to be a fortress that can withstand anything (Berkshire Hathaway Annual Letter to Shareholders, 2019). There are several moats that companies can create to protect themselves, but the five most important ones as defined by Wallstreet Investor and author of Rule 1 Investing Philip Town are brand, intellectual property, toll bridge or regional monopoly, switching cost and price (2007). Brand is quite self-explanatory; it's

how the company and its products are received by the general public. If a company has a strong brand, then other factors relating to purchasing are less relevant (Todor, 2014). Any car can get a person from a to b, but if they want to arrive in style, they buy a Mercedes or a BMW. Any wristwatch can tell the time, but if a person wants to show off their wealth in the process, they're going to buy a Rolex or a Patek Philippe. Brands are incredible and one of marketing's most influential and successful ideas (Todor, 2014).

Intellectual property, or corporate secrets, are one of the strongest and most sought after moats a company can have. If a company can manufacture a product or deliver a service that no other company can, it has a strong competitive advantage over its competition. Intellectual property are secrets that are protected by law for a period of time, while trade secrets are property that is never made available to the outside public through patenting (Article 39, TRIPS Agreement). Coca Cola is a classic example of a company that is protecting its recipe for its main product and that will never make it available for anyone else, but almost all companies have some sort of trade secrets that they protect from outside competition (Frankenfield, 2021). Competing companies will likely want to know these secrets, which is why corporate espionage is such a high-stakes game that frequently pops up in the news. Most corporate espionage cases that are published happen in the defense industry, but it's just as frequent in every other industry where there is competition (Frankenfield, 2021).

Toll bridge moat or regional monopoly or near-monopoly is perhaps one of the most sought-after forms of competitive advantages, and something that is heavily controlled by local and international laws and agencies (Town, 2007). When companies have a toll bridge moat, it gives them much control over the supply of a product or service. Examples might be railroads, energy pipelines or highways, any piece of infrastructure that is extremely costly or impossible to replace by a competing service. Toll bridge moat can also mean a regional monopoly, created either by a government body, innovation, buying up competition or hoarding all existing resources (McWhinney and Kelly, 2021).

Switching costs are costs that accrue when trying to switch from one service provider to another. Switching costs are not only monetary, but temporal and emotion as well. If a company chooses to use a service provider that, for example, requires a financing contract that lasts for several years, then they generally are stuck with that one service provider. Also, if a consumer is "locked" in an ecosystem, say Apple's iOS, they are very hesitant to switch over to an Android based OS due to incomparability with their other devices. On a corporate level, most software is something that is used for decades to come, since implementing a

new ERP or CRM system is an absolute nightmare and the costs are astronomical, so the management won't make a switching decision unless the need for it is urgent (Town, 2007).

Price moat is formed quite simply by being able to produce goods and services for less than the competition. Achieving cost advantages has to do with the company creating a production value chain that can deliver a product or service that no other competitor can match in terms of value for money (Town, 2007). Even Michael E. Porter from Harvard University had a look at how cost leadership can be achieved and came to the conclusion that there are two ways of achieving it. First, companies can increase profits by lowering costs while charging industry average prices or companies can increase market share by charging lower prices while still retaining reasonable profits to stay in business (Porter, 1979). This moat is where the previous chapter's working capital management, operational efficiencies and other factors create value to the consumer. Examples from companies that compete with price are in every industry and come mostly from low-income countries where one of the biggest costs, personnel, is minimized.

Taking the observations of previous researchers on traditional companies' success factors, platform companies, at their core, are networks that facilitate economic activities among participating users. They have existed for a long time but have risen to prominence within the last decades in the age of internet. Researchers Hanseth and Monteiro explained in their paper the academic framework for information infrastructure theory (1998). and predicted that the convergence of information technology and communication will move commerce into cyberspace and every participant can access this space with a mobile device. This observation outlines the business structure of most platform businesses in the sharing economy field. There is a lesser need for efficient working capital management, tangible asset management and high capital expenditures when the business is based in cyberspace, and it creates the added benefit of people being able to access it from everywhere in the world. This observation of why platform businesses tend to perform well once they become large enough to attract participants is one of the main reasons that give platforms a competitive advantage over their traditional participants. To summarize, platform businesses have one or many of these moats, with cost being the most prominent one.

2.5 Why is value creation important for continuity of business?

It's important to understand the economics of value creation and look at why it is such an important factor in business. Businesses – and especially platform businesses – can rapidly saturate a market when successful and displace competitors by offering extreme value to

customers (Eisenmann, Parker, Van Alstyne, 2011). By doing so, they can often end up under scrutiny by various government institutions and their operations can be limited, if they grow to be a monopoly. According to Bourgeat and Daniel Kahneman, consumers have limited resources to spend on goods and services provided by businesses and therefore are rational with their purchase decisions (Bourgeat, 2015). If we agree with Bourgeat's assumptions that reflect Daniel Kahneman's studies and assume that consumers are purposeful and rational, they will opt to spend their limited resources on products and services that they feel brings the most value to them (Bourgeat, 2015). Displacing competitors is one of the side effects of free markets; companies that are not able to attract or retain customers will disappear from the market, which in turn makes room for more competitive businesses. This survival of the fittest is well understood among business professionals and much has been studied regarding the effects this causes in economies. Is value created by destroying old industries and replacing them with new ones?

McKinsey does a lot of practitioner research regarding different economic phenomena. In a recent research paper, they looked at value creation as well, specifically the on the value of value creation. They noticed that short-term value creation leads to adverse effects in the company itself as well as on the wider economy, while long-term value focus leads to sustained improved standard of living and innovation (Goedhart and Kollen, 2020). Furthermore, they argued that value is created when all stakeholders are getting a fair deal. In the world of McKinsey there are no winners and losers, because losses spill over to the wider society and have adverse effects on the winners. This is why, they argue, comprehensive value creation should be the purpose of every company to better the living standards of all people. It's important to note from McKinsey's analysis that they use other metrics besides money. Value creation is not synonymous with increased wealth, although it is a part of it. In an article written by Will Evison and Tom Beagent, value was divided into monetary value and social capital. They argue that businesses are important to society because of the social capital that they create. Companies can promote knowledge, skills, health and wellbeing in a society as well as monetary wealth. They can also destroy social capital if wealth creation is prioritized over social capital (Beagent and Evison, 2021).

There are several metrics in measuring value creation in a society. The most common metric of them is looking at GDP and its derivatives. GDP measures the economic activity of a nation and is the broadest comparable metric used in determining the wealth of a nation. When GDP is growing, workers and businesses are generally better off than when GDP is declining (Callen, 2020). Second metric in measuring value creation is GNP. The difference

to GDP is that GNP sums all the output from the citizens of a country and is not geographically limited. There are several issues with GDP and GNP as a tool for measuring wealth or wellbeing in a country. If a country's means of production are in the hands of a small elite, the GDP and GNP can be very high per person, even if most of the nation's people would live in poverty (Seth, 2022). The Gini Coefficient is a measure used mainly for income inequality. If a country's Gini coefficient is 0, it means that everybody has the same income, while if the coefficient is 1, it means that one person gets all the income (Hayes, et. al. 2022). The research on income inequality and economic value creation is inconclusive as proclaimed by IMF, but there have been studies over how much inequality is needed to best grow GDP. Francesco Grigoli and Adrian Robles studied the effects of income inequality on economic growth and found out that as GNI approached either 1 or 0, the economic output of a country was hampered. The sweet spot seemed to be at a coefficient of 0.27, which is where most of Scandinavia and Northern Europe lays (Grigoli and Robles, 2017). This can be illustrated by the chart below:

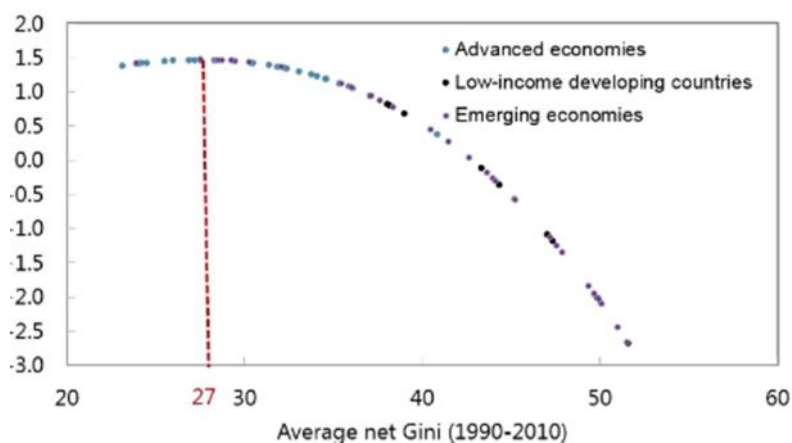


Figure 1 Average net Gini (1990-2010) source: Grigoli & Robles, 2017

2.5.1 Brief look at companies' effect on society

How do companies pay a role in value creation in society? Answering this question is a bit more complex than the usual companies produce goods and services while providing jobs to a society. and deserves a closer look. Ever since the collapse of the Soviet Union the world is largely operating in a capitalist free market economy that is regulated by local and international laws, with the notable exception of China, Venezuela, North-Korea and a few others which operate in state-controlled economies, even if some of these countries have some form of capitalism implemented within their system (Ignatius, 2021). Most formerly communist countries are operating in some form of market economy after noticing that ideals rarely lead to higher productivity than Adam Smith's arguments of individual's self-interest motivating economic activity (Smith, 1776). Companies are very much onboard Smith's boat. Essentially a business is a legal entity that sells a product or service that makes a profit for its owners, much like Friedman says, so it's motivated by its own individual self-interest. This is not to be confused with greed, after all, Smith was strongly for altruism and believed in people's good intentions and that strong ethics are essential for markets to function properly (Smith, 1776).

Businesses in free market economies with strong rule of law are not just creating wealth, but also social capital which benefits the wider society (Beagent and Evison, 2021). Robert Putnam describes social capital as a mean to facilitate co-operation and mutually supportive relationships, to create the bedrock from where all economic activity stems from (Putnam, 1993). Nan Lin went further and argued that investments in social capital have expected market returns (Lin, 2001). This implies that businesses with a social focus are more desirable to society and will prevail in the long term. With this in mind, it's useful to take a look at how platform businesses create social capital (if any) and how they create value to society.

2.5.2 Sharing economy platform companies' effect on society

Platform businesses have a unique advantage over more traditional counterparts; they can create value to more customers at lower costs than traditional companies due to their agile scalability. Economies of scale is a well understood concept in economics and something that all thriving companies try to gain when catering to the needs of a large customer base. Economies of scale is a concept that is derived from various results of academic study, starting from Adam Smith's notion that in order for an economy to produce more, division of labor and specialization is needed (Heakal, 2021). Economist Alfred Marshall took the

idea further and made a distinction between internal and external economies of scale (Marshall, 1997). Producing physical goods and services accrues costs which can be reduced with economies of scale. There are limitations to growth, however, when production capacity is maxed out and new investment is needed to further grow in scale (Kenton, 2021). At the arrival of the internet this issue was largely overcome. When creating non-physical products and services that could be accessed through the internet, the only infrastructure needed was space in the digital world, mainly storage in servers. Many IT companies and conglomerates such as Microsoft, Oracle, Amazon and the like make a large chunk of their revenue in server storage sales and the demand for more network and cloud space is increasing yearly (Annual reports from Microsoft, Oracle and Amazon, 2021). This is a key notion when looking at the second research question, which is “*What gives platform businesses in the transportation and hospitality industries a competitive advantage over their traditional counterparts?*” and helps explain why internet-based platform companies have been able to grow this quickly in the past.

With the reduced costs and increased service of platform businesses, consumers, businesses, public entities and society as a whole are benefiting. In the case of shared economy, participants can participate in the revenue generation and earn an additional income through the platform, which in turn benefits both monetarily as well as repurposes underutilized assets and makes them productive (Capra et. al, 2016). Sharing economy platforms can increase economic activity by turning liabilities into assets. An asset is defined by Barone and Kindness as a resource with positive economic value and that produces a positive return in the future (Barone and Kindness, 2022). On the contrary, a liability is defined in this part of the master’s thesis as something that has a negative expected return. This definition roots from the definition given to assets and liabilities by Robert Kiyosaki and not the definition of liabilities as being something that is owed.

In the shared economy, platforms can create both monetary and social capital to stakeholders through connecting buyers and sellers, turning liabilities into assets, sharing information, increasing the flow of capital and tax revenues, giving participants more choice and decreased prices while reducing adverse effects of creating tangible goods and services. Airbnb and Uber didn’t invent new products or industries, they merely improved on the accessibility and pricing of already existing infrastructure and turned them into products that benefitted the masses (Acquirer et. al. 2019). In a time of sustainable consumption, platform businesses are true value creators and have a distinct competitive advantage over their traditional counterparts. Sharing economy provides an easy pathway to more sustainable

economies, which is desirable since if something is not sustainable, it cannot go on forever. Positive environmental impacts are achieved through reducing the amount of resources needed, as described by Mi and Coffman (2019). Later in this thesis a closer look is taken at which factors specifically separate the successful platforms from unsuccessful ones.

As with every business, even sharing economy platforms have their issues. First one is common with every new invention; it makes the old redundant or at least reduces the customer base of existing businesses. This will lead to a change in the economy which has adverse effects on some participants and takes time to correct itself. As described before, platforms have almost no cost in scaling, which means they can grow aggressively and conquer large shares of the market quickly. This means that the displaced players in the market will have to reduce operations leading to higher unemployment, lost tax revenue, higher costs to society and less economic activity in general (Doder and Leipziger, 2016). In the long term these economic adverse effects will be overcome by increased productivity and increase in economic activity negating the adverse effects of aggressive growth (Doder and Leipziger, 2016).

Second value destroying issue that can rise is government regulation or the lack thereof. Airbnb has been accused many times of "destroying neighborhoods" by allowing people to turn their homes into hotels. City planners use a lot of time creating designated areas for hospitality and recreational activities, to which Airbnb hosts and guests are indifferent to. Many cities and even countries have regulated heavily the operations of sharing economy businesses. Cities like Amsterdam, Paris, Barcelona and Santa Monica to name a few have limited the amount of Airbnb listings within their city limits to negate some of the negative aspects that setting up hotels in places hotels are not intended to be can cause (Tun, 2022). For example, Uber has had difficulties breaking through some markets due to regulations and has occasionally been banned in countries like Finland, Bulgaria, Denmark and others (Dickinson, 2018). Limited regulations can have an adverse effect on social, cultural and environmental capital of regions while limiting regulations can have an adverse effect on capital flows and economic activity (Bivens, 2019).

Third negative effect of sharing platforms can be poor returns for participants or increasing prices for non-participants. Platforms compete primarily with price, which has the side-effect of not paying enough for service providers. Market participants whose primary income comes through a sharing economy platform are in a more vulnerable state than in an employer relationship. CNBC's investigative journalism criticized Uber for poor pay, benefits and security for its drivers (Nova, 2019). Uber has taken on steps to rectify

these issues and now provides better security for drivers than in 2019 (Uber annual report, 2021). Forbes also looked into the pay of Uber drivers and concluded that in many cities, Uber drivers make more hourly than their taxi driving peers (McCarthy, 2016).

Cities with Airbnb operating in them have also experienced higher real estate demand, which in turn increases prices and rents. The ‘Airbnb effect’ is something that many have studied in academia and found out it closely resembles gentrification. In a study conducted by Kyle Barron, Edward Kung and Davide Proserpio (2020), they found out that 1% increase in Airbnb listing would increase house prices by 0.026% and increase rent prices by 0.018%. This may not sound like much, but when you calculate it with average US housing and rent prices, the authors equated it to either \$1800 monthly increase in house prices or \$9 increase in monthly rent prices (Barron et. al, 2020). One may ask if Airbnb is the only factor that affects the increasing house prices and the answer to that is no, it is not. It is, however, a factor that affects about fourteen percent of house price growth and twenty percent in rent price growth (Barron et. al, 2020).

Are these price hikes an issue? For the people living in areas where Airbnb has a lot of listings, then it depends what the residents value. Airbnb attracts tourists which makes the neighborhood livelier. If one bought a house in a place where Airbnb has listings in hopes for peace and quiet, then they probably made a mistake. If someone owns a house and doesn’t live in it, then they might be happy that the price of their real estate asset is going up, and they get a chance of participating to the sharing economy as well. For people living on rent or who want to move in a neighborhood with many Airbnb listings, it’s a different story. Not only are prices going up, but landlords are incentivized to give up on long-term rental agreements and move into short-term lodging instead, since they usually can get more income that way. As of April 2022, a single bedroom studio in midtown Manhattan for one night on Airbnb costs anywhere from \$200 – \$500, which equates to \$6 000 – \$15 000 per month. That is more than double a landlord can ask for a single bedroom studio apartment in the same area.

2.6 Identifying value creating factors

Platform businesses in the sharing economy can create much more economic value and economic activity than a traditional business model where value and goods move from left to right (Eisenmann, Parker and Van Alstyne, 2006). In the studies of Constantiou et. al., platforms’ success is determined by the rate and scale of which a platform can attract users and then “augmenting” or keeping those users locked within the platform’s realm, so that

additional services that generate more revenue can be added later on (Constantiou, 2016; Kataja, 2019). This is also backed by Eisenmann, Parker and Van Alstyne, who argued that there are three steps for a successful platform. The first one is correctly pricing the platform, so that the service providers and service users are both happy and their utility is maximized. Pricing is done for both sides of the platform's network while one of the sides is subsidized, meaning that it is common for platform businesses to actually lose money for an extended time period when they are growing (Eisenmann et. al., 2006). The second important finding is that due to the nature of platforms, they compete for the entire market. This winner-takes-all dynamic is prevalent in platform companies due to the lack of cost in scaling (Eisenmann et. al., 2006). Once a platform has lured enough users within it, the users themselves are their most effective brand ambassadors who do not or even cannot switch away, because no other company provides the same service. These are the types of moats that practitioner investors talk about. If a business can create sufficient moats that are impenetrable from the outside, the chances of its survival are very good (Graham, 2003; Town, 2007).

The final point made by Eisenmann et. al., was the threat of envelopment, which means that a platform's product becomes obsolete, or it's being consumed by a bigger player that enters the field, taking away the network effects that the previous platform had (2006). It is therefore important to consider the third research question, which is "*How to identify the common qualities among sharing economy platform businesses that will give them a durable competitive advantage over their competitors?*" i.e., how not to be consumed by your competitors. Once demand and supply are established, and the platform is augmented, there isn't much on the academic side anymore that can explain the success of platform businesses further. Therefore, it's time to look at the practitioner's views. Bill Ackman is one of the most successful investors of all times, explained in a 2016 interview with Business Insider that platform businesses rely heavily on access to low-cost capital, a management with incredible integrity and talent, cost effectiveness and pricing power (Lopez, 2016). This is supplemented by Mark Bonchek and Sangeet Paul Choudary, who outlined their three success factors for platform businesses, which are gravity, flow and connection (Bonchek and Choudary, 2013).

Internet-based sharing economy platforms have only existed for two decades, but platforms itself have existed for millennia. At its core, business value and continuity is measured by sustained or growth in revenue. To achieve this, platform companies need a growing customer base, a product that is attractive, easy to use, and has the ability to lock customers in, so that outside competitors cannot tap into their network or divert participants

to join other competing platforms. These aforementioned traits are exactly the same as in traditional businesses, as are outlined by Fisher, Munger and all other successful investors.

2.6.1 Which assets should be shared?

There has been academic research on which assets should be shared through a platform. Lisa Gansky wrote a paper called the Mesh discussing this topic and created a quadrant of which assets are sharable and why the future of business is sharing. In the quadrant she explains that assets with high frequency of use and high cost of ownership are the ones most suitable for sharing (Gansky, 2010). Such assets can be houses and other accommodation, cars and other forms transportation, high-value clothing and apparel and much more. Sharing is not very suitable for low value products, or products that are needed for long periods of time. Finding a sharable asset for a platform is unfortunately the easiest part of the puzzle (Chasin et. al., 2018). There have been numerous sharing economy platforms that have failed either due to lack of understanding what is sharable (Gansky, 2010), how to create trust among participants (Tauscher and Kietzmann, 2017) or how to attract a critical mass of participants (Chasin et. al., 2018).

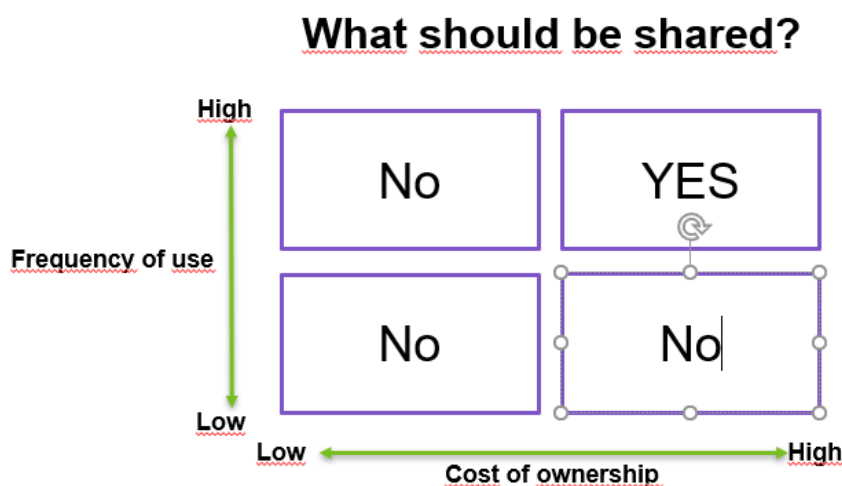


Figure 2 The Sharing Mesh. Source: Gansky (2010)

2.7 Formulating the hypothesis

In the literature review some key points are identified regarding value creation. First, since the basic economic principals seem to hold true also with platform businesses, the added value created by platforms to the economy in forms of increased productivity, price reductions, demand matching to supply and engaging individuals to partaking in the sharing economy with a low barrier of entry greatly outweigh the negative effects that disruptions of introducing new technology have to the economy (Bryan, 2015; Teczar, 2016). Second thing to note is that the barriers of entry to the platform industries in hospitality and ride-hailing are low, meaning that anyone with modest coding skills and an internet connection could establish a rival business. This was noted by Eisenmann, Parker and Alstynne in their paper *Strategies for Two Sided Markets* (2006), where the authors explained that in order to be successful, platform businesses need to create a network and scale quickly if they plan on surviving. This creates the first hypothesis of this thesis, which states:

1. *Successful platform businesses have the ability to create a large network of service users and service providers and retain them*

As explained by Eisenmann et. al. (2006) it is crucial for two-sided platforms to build a large customer and service provider base and to retain market participants as quickly as possible. Two phases are generally used to achieve attraction and retention. First platforms use a strategy called differential pricing for attracting both sides of the network. After this is achieved, they switch the pricing to a form which subsidizes one side to keep both sides retained (Eisenmann et al., 2006, Evans 2003). From a sales and marketing aspect, building a network that can attract new customers and service providers means a lot of effort needs to be put in to achieve a market dominant position. It's therefore crucial for up-and-coming platform companies to invest heavily into sales and marketing at least in the first years of operation. It's also important to note that first movers do not always have the advantage when it comes to getting market share, rather the ones that can promote and incentivize service providers and service users in the most effective way, and who can get the right financing for it as described by Ackman. This brings to the second hypothesis, which is:

2. *Successful platform businesses need to defend their businesses by creating moats as quickly as they can, because other competitors want to take their users*

In a free market environment, the most capable companies succeed while the least capable businesses are displaced and forced to be either sold off or go out of business. According to the literature, there are several factors determining the success of businesses, but the two important factors under analysis are effects of sales and marketing spend as well as R&D spend. According to Gartner's research, the average sales and marketing spend of companies is between 5 – 10% of revenue. The marketing budget is higher for B2C companies than it is to B2B companies. As can be seen later on from the data collected, the marketing spend for platform companies is much higher and is in line with the strategies formulated by academic researchers such as Eisenmann, Evans, Rysman and the like. SandM spend is one key factor that has a profound effect on the number of service users and providers in a platform business and its network. The relationship between SandM spend and revenue generation is, however, not linear and is affected by various variables, as is seen later on.

Closely related to marketing is brand image. Airbnb and Uber, the leaders of their own industries, have both extrapolated that the most important key to their survival is that people trust their platforms (Annual report, AirBnB and Uber, 2021). Trust is a very strong part of their brand image. If customers or service providers don't trust each other, the platform is not going to work. Therefore, the trust is also two sided. How this trust is established has a lot to do with the ratings of other users, in the case of Airbnb for example, both hosts and guests can rate each other for being a good (or bad) host or guest. These ratings are public and they incentivize and engage both sides of the network. Hosts with high ratings are more likely to attract guests and guests with high ratings are more likely to be accepted as guests. There can also be price incentives for high rated network members. Low rated network members can be excluded from the network. There hasn't been much research of the effect of trust in platform businesses by the academic side, even if it has a huge impact on the practitioners' side.

Second important way of building trust is by offering products that can't be breached or compromised from the outside. These products can be integrated into a platform or built by the platform provider. Keeping payment transactions secure and personal data safe is essential, because it only takes one breach to ruin the reputation of a company (Child and Rodrigues, 2004). Rebuilding the reputation of a company is an arduous task, which is why trust is key in any business, not just in platform businesses.

3. *Successful platform companies saturate the market quickly and innovate constantly*

In the famous words of the marketing guru Peter Drucker: "*The purpose of a business is to create a customer. Business has only two functions -- marketing and innovation. All the rest are costs. The aim of marketing is to know and understand the customer so well the product or service fits him and sells itself.*" (Light, 2019). Drucker's theory closely relates to the academic literature of platform businesses as well. Constantiou et. al., (2016) and Kataja (2019) divided the growth phases of a platform company into creating a network, augmenting the network and finally sustaining it. Drucker is talking about the augmenting and sustaining parts. When augmenting a platform business, the business needs to bring more value to the users when it grows larger. The value is brought through increased network effects, but also through innovation (Van Alstyne and Parker, 2017).

Uber and Lyft started out as ride-hailing companies transporting people from A to B, but have now expanded their service offering to hailing services transporting everything from food to other goods to people. They are also collecting this information to better target third-party advertisements and helping in the development of autonomous cars (Annual report, Uber and Lyft, 2021). Platform companies are not limited to a single service, but like any other company, they can and will expand their offering by expanding their platform. This requires R&D expenditure. While R&D expenditure is heavily dependent on the industry a company operates in, the general rule for investors is to look at companies that have a Price to Research Ratio (PRR) of 5-10x and avoid companies that have a PRR of 15x or above (Fischer, K., 1984). The platform companies under analysis have a relatively high PRR due to the high market valuation of the companies, so in relation to revenue the R&D expenditure could be higher. Fischer therefore seems to be in line with Drucker by stating that companies in general should be investing more heavily on R&D to stay competitive.

3 Methodology

This section explains the hypothesis that is formulated based on the literature review in section 2, as well as the methodology used in the research phase. This part also explains the data collection method and sources, how the data was made comparable with each other as well as how the data is analyzed to get reliable and comparable results. Data evaluation is also considered as is the evaluation of different statistical methods used. The goal was to find out if there are some value creating factors that explain the success of platform businesses in the hospitality and ride-hailing industries. To answer the research questions, the value creating factors needed to be identified. This was done through the extensive literature review where both the academic and practitioner views are taken into consideration.

3.1 Data collection

Acquiring relevant and accurate data is challenging when collecting from public sources. This is why the companies in question all had to be publicly traded and had to report their revenue, sales and marketing spend, number of users, visitors, service providers and service users and every other metric that was analyzed for this thesis. All of the platform companies analyzed were registered in the United States and used US GAAP reporting standards and published annual 10K reports, from where the data was primarily collected. The data is therefore secondary data collected from seven companies from two different industries. The data is comparable and accurate, because US GAAP principles demand companies to report their results, revenues and costs in a similar way and the results from operations are audited by third party auditors. The companies under US GAAP regulations are required to report quarterly results from operations which makes the data set easily managed. There are some differences between the hospitality ride-hailing industries which called for some adjustments to be made that the data between the two industries was comparable. Largest disparities were the differences in reporting costs.

There are some major limitations that need to be discussed regarding data collection and analysis, but these are discussed in more in-depth in the limitations section. What is worth noting now is that US GAAP regulations only require companies to report two years of audited financial statements in the IPO prospectuses according to the United States Securities and Exchange Commission (SEC.gov). Since some of the target companies that were analyzed have gone public in the last few years, the amount of data collected can be

insufficient for making definite conclusions. Case in point, Airbnb was established in 2007, went public in 2020 and reports financial statements from 2016 onwards. Luckily there are other companies in these industries that utilize a platform business model and that have been public for longer, which allows data collection from a longer time period.

All available financial data regarding **revenue, sales and marketing spend, R&D spending, market capitalization gross booking value and rides/room nights booked**. The data comes from 10K reports that have been audited and published by the companies themselves. The data was collected for the last 6 years (except Airbnb for 5 years). To illustrate what data was collected and used, please refer to table 1.

	2021	2020	2019	2018	2017	2016	2015
ABNB	x	x	x	x	x	x	
BKNG	x	x	x	x	x	x	x
EXPE	x	x	x	x	x	x	x
TRIP	x	x	x	x	x	x	x
TCOM	x	x	x	x	x	x	x
UBER	x	x	x	x	x	x	x
LYFT	x	x	x	x	x	x	x

Table 1 Financial data collected, years

The data that was collected was mostly in form of 10K reports, which made it reliable but not very usable as is. Every number and ratio needed to be handpicked from the data and calculated, which made the data processing part arduous and time consuming. The way this was achieved was to collect all relevant data from seven companies, five within the hospitality industry and two within the ride-hailing industry. For more accurate analysis, private information from private companies can be collected from various countries, not just from the United States, but due to scope creep this option was eliminated. The number of sharing economy platform companies in these two business areas is extremely low due to winner-takes-all dynamics as explained by Eisenmann et. al., (2006). For example, 99% of the US ride-hailing market is dominated by two players, which are Uber and Lyft as stated by an analysis conducted by Policy Advice (2022). Other ride-hailing companies are either private and do not publish the needed data or are based outside of the US and EU, which makes comparability an issue and which is outside of the scope of this thesis.

In total there are seven companies under scrutiny that provide the necessary data and numbers for making comparable, reliable data analysis. Since it is outside of the scope of this thesis to compare traditional companies to platform businesses in the same industry, this thesis focuses on analyzing the effects of certain value driving factors on the revenue generating potential of sharing economy platform businesses. Even with the companies operating in the same industry and in same markets with similar accounting principles, there are still differences to be seen in the way the companies report their numbers. US GAAP regulations are very high-level in the sense that it allows for a lot of freedom for independent companies when they report their numbers. The challenge was to find the same information throughout the years and use this to build a data sheet that could then be analyzed.

3.2 Data analysis

In the analysis phase the data is stored and data analysis tools, such as Stata and Excel are used to creating tables and other illustrations and regressions to test the hypothesis. In this part some of the useful figures are illustrated to the reader and some preliminary conclusions are drawn based on the results. The data sets are further analyzed by conducting linear regressions and t-tests to see if some or any of the hypothesis hold true and are quantifiable and useful in further research. The use of statistical tests will help answer the original research problem as well as research questions. In this part there will be a number of figures illustrating to the reader what is being analyzed. The structure goes from hypothesis 1 to 3 while first looking at the hospitality industry and then the ride-hailing industry. Any differences between the industries are pointed out and explained.

3.2.1 Hypothesis 1

Going back to the hypothesis, the first thing being analyzed was the amount of users for a service. This data is not required to be reported in annual reports according to US GAAP regulations and is therefore information that the companies can report if they so choose. Airbnb and Booking Holdings reported this information for the years they have been public, so collecting this information was possible. These figures read from right to left as regular financial statements do.

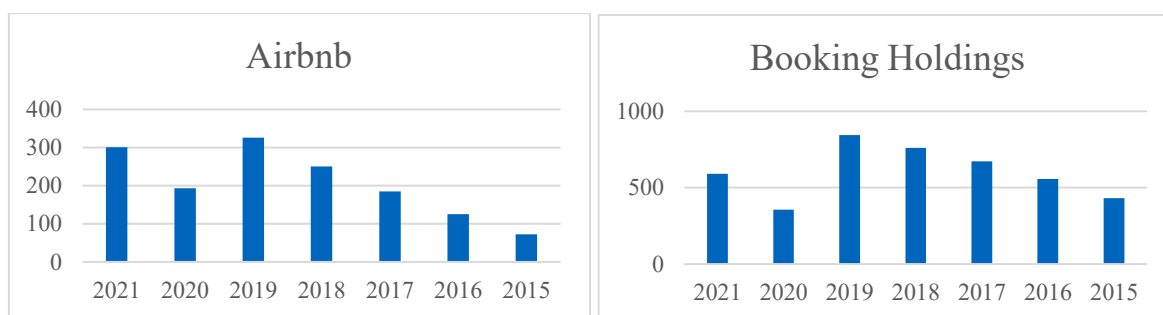


Figure 3 Airbnb and Booking Holdings, number of users (in millions)

In these two charts we can see the number of bookings through each platform. It shows that Booking Holdings has roughly double the number of bookings done through their site, which allows them to have higher revenue potential. Booking Holding's higher number in nights booked can be attributed to a variety of factors, such as they have been around longer and accumulated a strong customer base (Graham, 2013), they spend more on marketing and have therefore had the chance to accrue brand awareness for longer (Percy and Rossiter, 1992) and they offer everything from hotels to houses to flights and car rentals, which means that their product portfolio is larger than Airbnb's. Airbnb focuses on short-term rentals and lodgings, with quite recently adding "experiences" to its product portfolio (Annual report, Airbnb 2019). In recent years Airbnb has been catching up, though, and through its new 'experiences' product it can leverage its existing network of users and attract new ones to generate more revenue than with its previous product selection. This is part of the augmentation of the platform as described by Constantiou et. al. (2016). The next chart shows revenue development of these two companies.

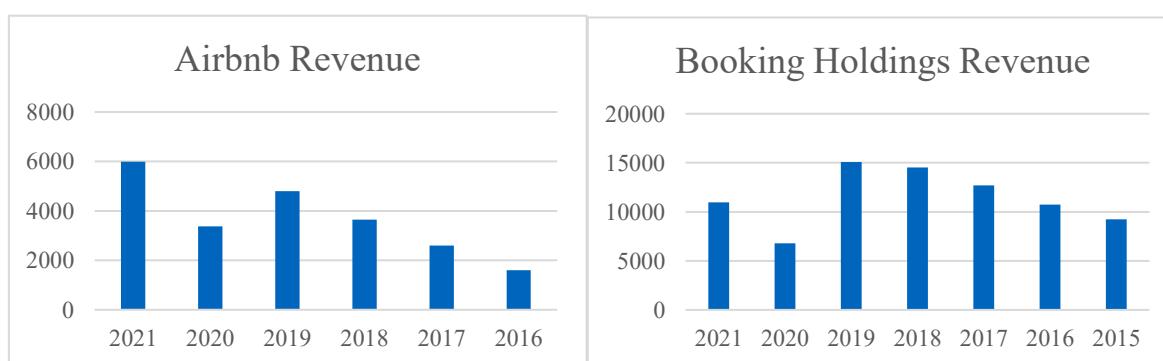


Figure 4 Airbnb and Booking Holdings revenue

As can be seen, Booking Holdings leads in terms of revenue, but revenue growth is slower than with Airbnb. Airbnb's growth in revenue has more than tripled from 2016 to 2021 which means a growth rate of around 31% compounded from 2016 to 2019 and 24%

compounded growth rate in the 5-year period of 2016 - 2021, whereas Booking Holding's annual compounded growth rate in revenue has been around 10% from 2015 to 2019 and 1% from 2015 to 2021. It is also noteworthy that the pandemic has had a smaller impact on Airbnb's revenue and growth than it has on Booking Holdings, which can be attributed to a loyal customer base and a flexible offering (Airbnb annual report, 2021). Booking Holdings gets much of their revenues from international travel which was restricted in 2020 and 2021 (Booking Holdings annual report, 2021). The pandemic had a severe effect on the hospitality industry, which complicates the task of measuring the effect of different value creating factors on revenue. It does give an interesting view onto the resilience of the industry, and it seems that Airbnb is more resilient than Booking Holdings, or the industry in general. Booking Holdings is in a much more mature stage in its business lifecycle than Airbnb and has plateaued in its revenue growth, so it will be interesting to see if Airbnb can break through Booking's plateau and continue to grow way beyond the market saturation situation where Booking is in this moment.

The pandemic had a smaller effect on the ride-hailing platform businesses, where Uber and Lyft both managed to survive and retain their dominant market positions in most of their markets. Lyft is, however, slowly eating away Uber's market share in the US, but due to the growth in the market both companies are able to grow organically (Annual reports, Lyft and Uber, 2021). In the number of bookings -figure, it becomes obvious that the pandemic had a negative but limited impact on both companies and on the wider ride-hailing economy.

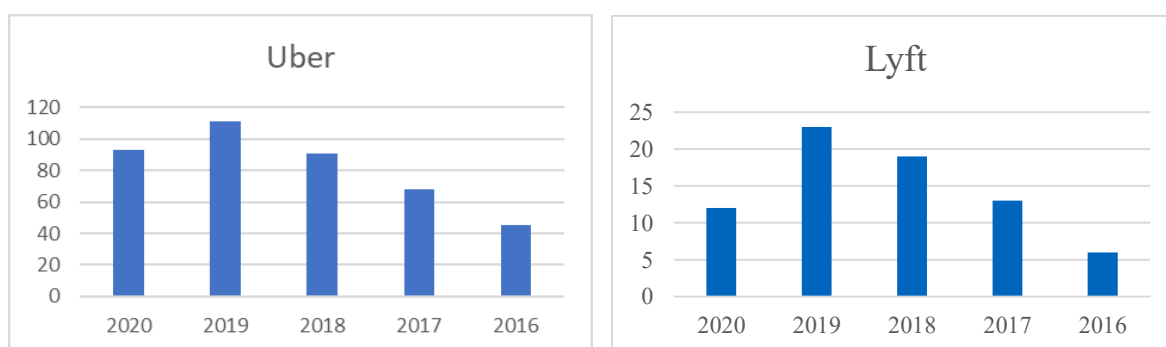


Figure 5 Uber and Lyft number of bookings

As is apparent in these two charts, the number of bookings grew rapidly from 2016 to 2019 and dropped drastically in 2020. The reasons are varied, but according to the financial reports from the two companies the main reasons were that due to a lesser need in travelling, people also didn't use as many ride-hailing services (Annual reports, Uber and Lyft, 2020). Uber was able to grow their Uber Eats segment by double digit figures, which can also be seen in the number of bookings. Lyft also has a food delivery service in its portfolio, but due

to lower brand recognition, people are less likely think of Lyft's app and see if they would deliver food faster or cheaper than Uber Eats. In a Landor Pulse questionnaire focusing on brand recognition, Uber was clearly the more favorable brand compared to Lyft (2019). Uber had a brand recognition and score of 67/100 while Lyft had a score of 27/100. This helps with the amount of bookings, because although both Uber and Lyft transport much more than just people (food, medicine, car parts and other hardware equipment etc.), Uber as a brand is much more recognizable and therefore more used than Lyft (Landor Pulse survey, 2019).

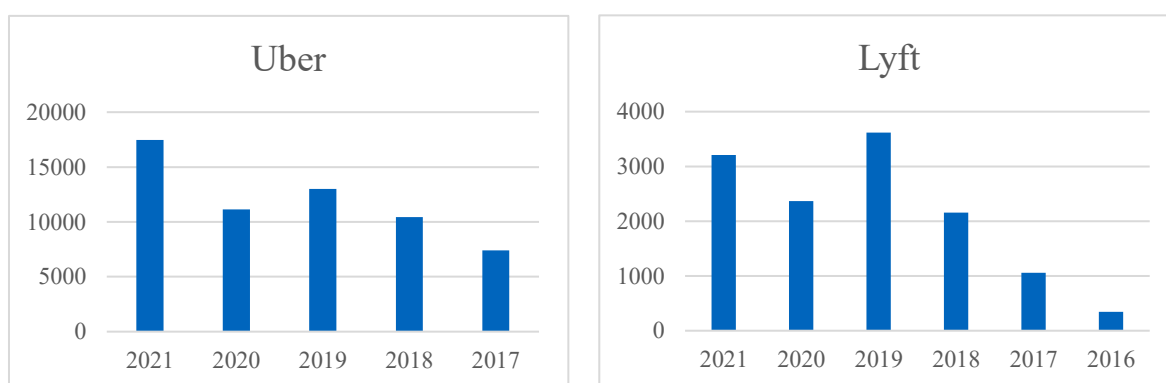


Figure 6 Uber and Lyft, revenue

In the revenue table it's noticeable to see that Uber, with its higher brand recognition and number of bookings will yield a higher revenue and a larger share of the market. When looking at some of the success factors, such as creating a platform that people trust, is price-competitive and offers an individualized service, the effects can be seen as hyper-growth of companies (Cassia and Minolta, 2012). It is also noteworthy that as Lyft has become more popular and trusted, offering a similar service to Uber with similar prices, it is gaining market share more quickly than Uber. If Uber and Lyft manage to defend their platforms and sustain them, then there is a fair to good chance these two companies will split the market in time like many other current-day duopolies, like Airbus and Boeing or Coca Cola and Pepsi (

3.2.2 Hypothesis 2

The second hypothesis is about the sales and marketing spend of platform businesses. As stated in the literature review, platform businesses generally have high marketing spend to attract more people within their networks (Eisenmann et. al., 2006; Hagi, 2014). Platform businesses can generate revenue from both the service provider and the service buyer, and these two sides of the network attract each other (Eisenmann et al., 2006). In the case of the

hospitality and travel industry, the marketing spend of the companies under analysis is on average 33% of revenue, which is considerably higher than the industry average of 3% according to Statista (2021). Within the ride-hailing industry the marketing spending equaled to 28%, which is also very high compared to their more traditional counterparts. Although the marketing spending is generally increasing yearly, in relation to revenue it stays flat or decreases as the business matures. As the platform service becomes more popular and saturates the market, more emphasis is placed on maintaining market share and producing positive returns rather than continuous investment into marketing. This strategy is in line with every other company that mature over time as is demonstrated by the following graph from CFI institute:

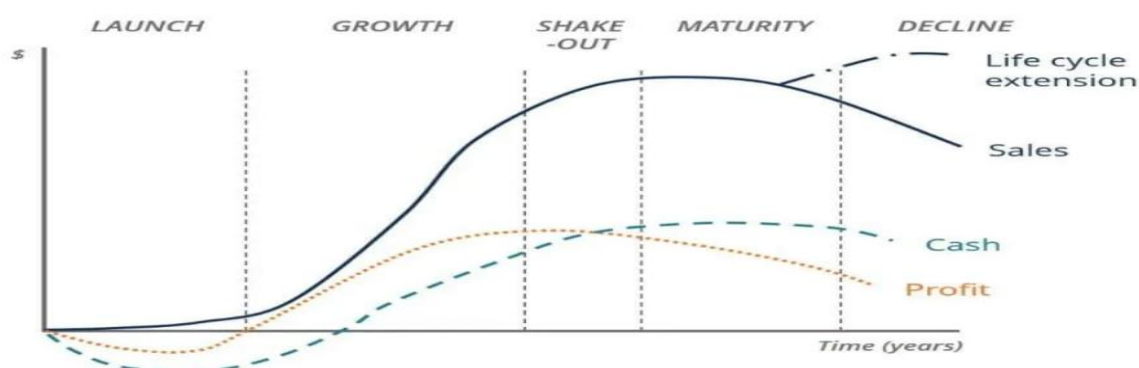
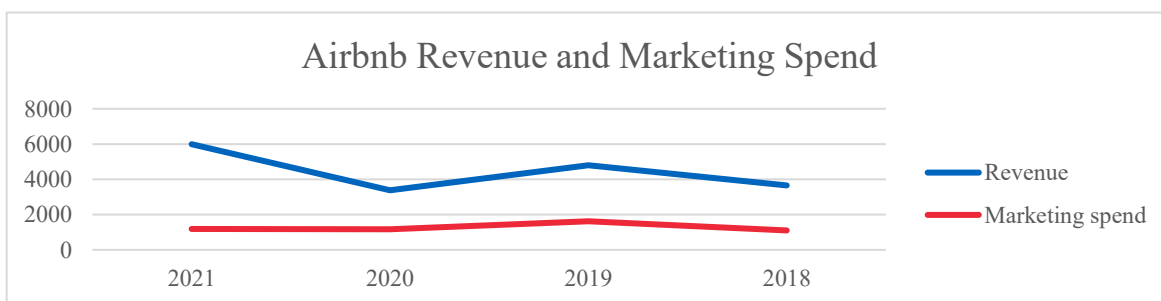


Figure 7 Lifecycle of a company. Source: Corporate Finance Institute

When it comes to the relationship between marketing spend and revenue development in the hospitality industries, a comparison can be made from public sources between Airbnb, Booking Holdings and Expedia. These companies are the largest players when it comes to sharing economy lodging and accommodation industry and are all reporting according to US GAAP guidelines making the data comparable. From their charts we can draw similarities to CFI’s basic lifecycle chart of a company:



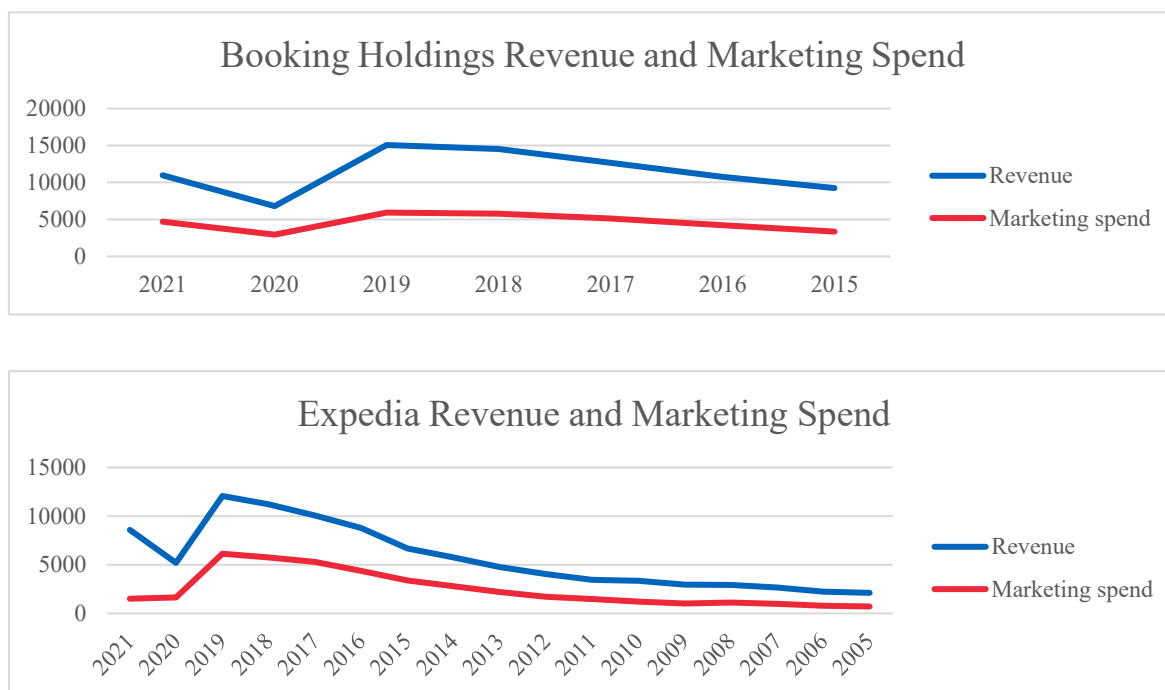


Figure 8 Hospitality, revenue and marketing spend

These three companies (Airbnb, Booking Holdings and Expedia) are at surprisingly similar stages of maturity regardless of their different years of operations with the only notable exception in growth during the pandemic. This can be mostly attributed to the novelty of the industry which has been around for only 20 years with an accelerated growth period in the last five to ten years (Yahoo finance, 2021). What can also be seen in this chart is that both Booking Holdings and Expedia are experiencing a curb in their revenue growth rates while Airbnb is still at the very early stages of its growth, meaning that it's expected that Airbnb will recover from the pandemic the fastest. The companies' marketing spend follows closely with their revenue development and remains mostly at a stable level, being between 30% and 40%. One thing that is also noteworthy is that although these companies have existed for around two decades, Airbnb being established in 2007, Booking Holdings and Expedia Group in 1996, they are still spending a third of their revenue on sales and marketing activities. Questions can be raised whether this is necessary, and if the marketing ROI is at a level that brings in a satisfactory revenue stream compared to the level of expenses. When drawing a linear regression of the data under analysis, it seems that a higher revenue causes higher marketing spending and not vice versa, as is illustrated by the following regression outcome:

<i>Regression Statistics</i>	
Multiple R	0,273482707
R Square	0,074792791
Adjusted R Square	-2
Standard Error	1408,441192

Regression statistics for Airbnb on the effect of sales and marketing spend on revenue

<i>Regression Statistics</i>	
Multiple R	0,984176043
R Square	0,968602484
Adjusted R Square	-1,4
Standard Error	568,2161711

Regression statistics for Booking Holdings on the effect of sales and marketing spend on revenue

<i>Regression Statistics</i>	
Multiple R	0,917600094
R Square	0,841989932
Adjusted R Square	-1,153846154
Standard Error	1325,034899

Regression statistics for Expedia Group on the effect of sales and marketing spend on revenue

Table 2 Effects of sales and marketing spend on revenue, hospitality industry

It is generally accepted among statisticians that a high correlation coefficient measured as Multiple R means that there is a high level of correlation between two sets of variables, in this case revenue and marketing spend. Multiple R of 1 would mean that there is a perfect positive correlation between two variables while a multiple R of 0 would indicate no correlation at all between two independent variables. In this case the multiple R of Airbnb is 0,27 which indicates a low correlation between marketing spend and revenue while Booking Holding's multiple R would indicate a near perfect correlation between marketing spend and revenue. The Multiple R is also high on Expedia, which raises a question: why is the correlation between marketing spend and revenue so weak for the company that has the highest brand value? Since Airbnb is the most valuable of the companies, it would make sense to use it as a benchmark against Booking and Expedia, as well as Trivago and Trip.com, whose multiple R were 0,20 and 0,96 respectively (see Appendix). It could also be noted that Airbnb has available data for only five years, and one of the years being a year of pandemic when asset prices dropped. What is noteworthy,

however, is that how quickly these platform companies in the sharing economy have recovered from the impact of the pandemic.

R Square measures the proportion of variance that one dependent variable has on an independent variable. In statistics, a high R Square means a large proportion of variance is explained by the model while a low R Square value indicates that a low amount of variance is explained by the model. In the case of Airbnb, only 7% of variance (that is the changes in revenue that is explained by the changes in marketing spend) is explained by the model and thus can be quite confidently discarded. In the case of Booking and Expedia, the variance explained is 96% and 84%, which would indicate a significant correlation between companies having a large marketing budget in proportion to revenue and strong revenue growth. Similar observations can be seen also from TripAdvisor and Trip.com, which have R Square values of 4% and 92%. In the case of TripAdvisor, the company has used a lower proportion of revenue in sales and marketing spend than its competitors and has failed to grow its revenues in the last five years. According to the company's annual report, the reason for the stagnant revenue is that the company is failing to attract customers and get click-based advertising revenues on its websites (TripAdvisor Annual Report, 2019). Trip.com on the other hand has spent around a third of its revenue on sales and marketing and has therefore been able to grow at a consistent rate throughout the five-year period.

In the ride-hailing industry it can be seen straight away that the similarities between the two industries are apparent when it comes to sales and marketing spend and revenue generation. In the case of Uber and Lyft it's apparent that Lyft is the challenging new entrant to market which can be seen both in faster growth and in a higher marketing spend in relation to revenue in 2016 and 2017. Uber is the more mature company of the two and the dominant player in the market and continues to be the largest player, owning around two-thirds of the ride-hailing market in the US alone (Landor, 2019). The pandemic of 2020 has had an adverse effect on the growth of both revenue and marketing spend as was the case within the hospitality industry (Annual reports, Uber and Lyft, 2020 and 2021). There is still room to grow in the ride-hailing industry, because neither company seemed to be in decline before the pandemic and both have recovered well, with Uber leading the way by increasing their revenue even higher than what the revenue was before the pandemic. Interestingly, the disparity between marketing spending and revenue within the ride-hailing industry is higher than it is within the hospitality industry. Companies in the sharing economy platform business industry are more mature and therefore should focus less on marketing and more on profit generation (e.g., cost cutting), while in the ride-hailing industry the marketing

spend is going down in relation to revenue while the companies are increasing revenue. This seems to be backwards compared to the hypothesis that a higher marketing spend will yield to higher revenues.

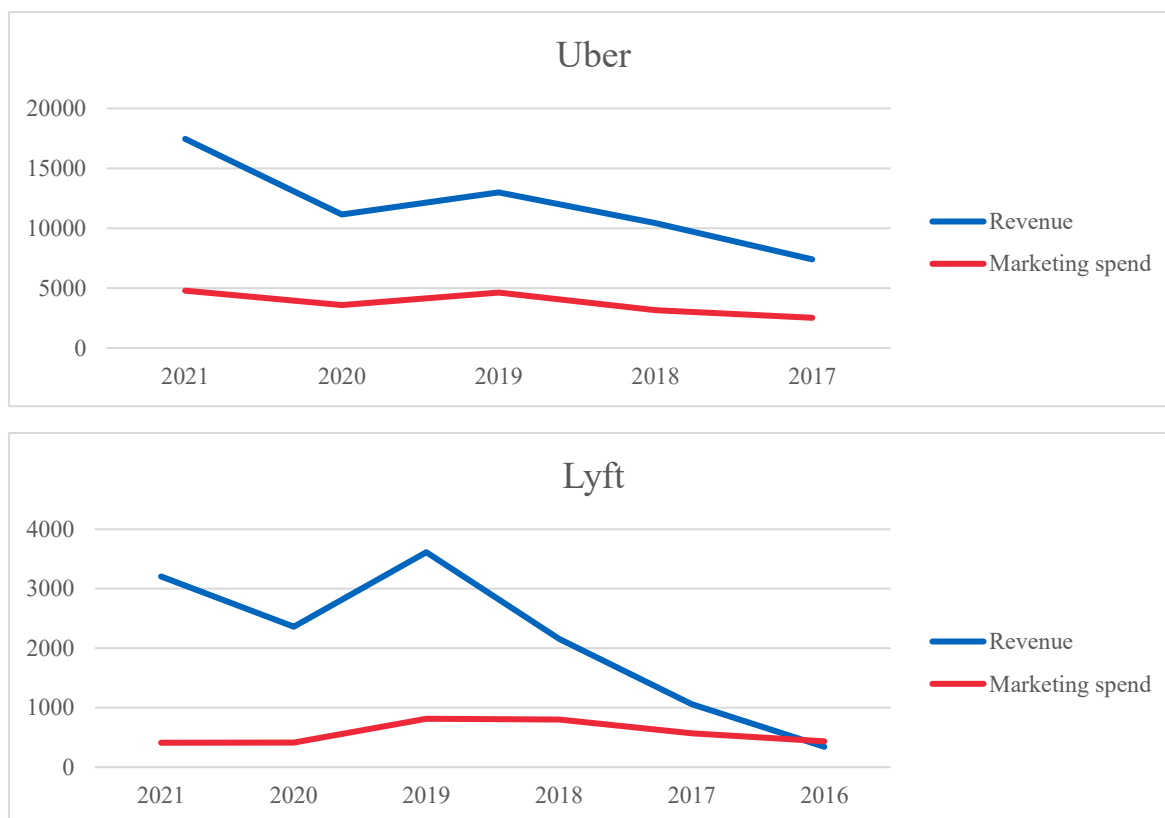


Figure 9 Ride-hailing, sales and marketing spend on revenue

With the same regression model as used with the hospitality industry, it can be seen that Uber's revenue generation is correlating much more with its sales and marketing efforts compared to Lyft's. Lyft has not kept up with Uber on sales and marketing spending in proportion to revenue but has maintained a stronger growth trajectory than Uber. By applying a little bit of economic competitive force theory from Porter, several reasons can be distributed for this, for example Lyft being a younger company who came to the market after Uber and is heavily competing with price, and thus sacrificing profitability for growth. Marketing investments also compound over time, so a large marketing effort in earlier years still has an effect many years later. What is noteworthy is that Uber has recovered from its pandemic hit faster than Lyft and is growing faster than its main competitor, which can be attributed in part for their wider brand recognition and heavier emphasis on marketing.

<i>Regression Statistics</i>	
Multiple R	0,924464587
R Square	0,854634773
Adjusted R Square	-1,666666667
Standard Error	1632,940293

Regression statistics for Uber Technologies on the effect of sales and marketing spend on revenue

<i>Regression Statistics</i>	
Multiple R	0,343438394
R Square	0,117949931
Adjusted R Square	-1,5
Standard Error	1308,368048

Regression statistics for Lyft on the effect of sales and marketing spend on revenue

Table 3 Effects of sales and marketing spend on revenue, ride-hailing industry

The multiple correlation coefficient tells us that Uber's revenue growth explains their marketing spending growth by 92% while the proportion of the variance, or the goodness of fit, is explained by 85% of the model. In the case of Lyft these two variables are 34% and 12%, which would indicate that the hypothesis does not hold true for the variables that have been used and the hypothesis should be rejected. Lyft and Uber have had an extraordinary growth path in the last decade and at least in Uber's case, it might pay off to spend less on marketing and focus more on augmenting the platform by implementing better services to it as stated by Constantiou et. al. (2016). It is also entirely possible that in the long-term Lyft is going to start losing market share when their owners demand a certain level of profitability, forcing them to either raise prices or cut costs from marketing, R&D or from some other area. Lyft is still at a start-up stage, which makes them heavily dependent on the availability of cheap capital and high input in marketing and R&D (Ackman, 2016), whereas Uber is in a dominant market position and has to defend against upcoming threats of new entrants by augmenting the platform (Constantiou et. al., 2016).

3.2.3 Hypothesis 3

Platform companies with a high brand value coming from high levels of investment into marketing and R&D are more likely succeed than platform companies that do not spend resources on augmenting and sustaining their platforms (Constantiou et. al., 2016, Kataja 2019). To be able to saturate the market quickly, a platform needs to attract users on both sides of the platform (Eisenmann et. al., 2006), it needs to retain them (Evans, 2003, Hanseth

and Lyytinen, 2010), and it needs to price correctly, market, innovate and retain the trust of its users constantly (Rysman, 2009; Gansky 2010). By enhancing the usability of their platforms, companies can attract and retain more users than they could before. In the design theory for Information Infrastructure (Hanseth and Lyytinen, 2010), the authors explain the two phases needed to get an initial userbase by overcoming the bootstrap-problem and then increasing userbase by overcoming the adaptability-problem. Initially, platforms are designed with very few features, servicing only a small audience with a perfect solution (Evans, 2003, Hanseth and Lyytinen, 2010). To grow beyond this stage a platform needs to develop itself by incremental improvements (Constantiou et. al., 2016) to better service new customers that arrive to the platform. Hanseth and Lyytinen called this the adaptability problem. When platforms overcome these first two steps, they create a powerful mix that gives the platform a good chance of succeeding. On the practitioner side, one of the most used factors in determining success is the creation of brand value. Brand value and brand recognition is not something companies are required to report on, so tertiary data is collected for this part of the thesis, mostly from data collection sites, such as Statista, Yahoo finance, Nasdaq and lex Cloud (2022). In this part brand value is collected and valued with a market-based valuation e.g., market capitalization of a brand. Data is collected and cross checked from various public sources for all seven companies (five from the hospitality industry and two from ride-hailing industry). The 5-year data collection period from the hospitality industry shows us that the two companies with the best brand recognition (Airbnb and Booking Holdings) are held in higher regard in terms of brand value than the three other companies, while in the ride-hailing industry Uber is seen as a more valuable company than Lyft.

Success of a company in this thesis is measured by growth in revenue, since it's already established that the value of a company is all of the future cashflow the company makes to its shareholders discounted by an appropriate discount rate back to today (Buffett, 1999). High revenue and revenue growth in particular will help companies survive "the natural vicissitudes of life" as Charlie Munger explained in his 2012 BBC interview. Revenue generation is most likely with platform companies that can attract the most participants in their network, and develop their offerings, which increases the market-based brand valuation of a company. Through the development of the platform itself, companies can attract more users and retain existing customers to visit the platform and use it more frequently, which leads to platform companies having the ability to extract more revenue from their users (Evans, 2003, Hanseth and Lyytinen, 2010). The development costs can be read from a

publicly traded company's Statement of Operations as the company's R&D expenditure. R&D allows for the companies to bring new products to both sides of their network and increase the usability and attractiveness of the product to participants overcoming the bootstrap and adaptability problems (Hanseth and Lyytinen, 2010). One way to increase visitor amount through means of R&D is to creating brand ambassadors with new products. Airbnb and Uber have one of the strongest brand advocates in the industry, with users promoting the platforms within their networks free of charge, leading to word-of-mouth advertising. Airbnb has even introduced a "Super host" program, where hosts will teach and educate other hosts or people aspiring to be hosts about the benefits of hosting (Airbnb Annual report, 2018; 2019). This ambassador program will benefit the company, the hosts and especially the super hosts themselves, since Airbnb rewards super hosts with a variety of benefits and preferential treatment. These incremental improvements are vital to the survivability of the platform and help in augmenting the platform (Constantiou et. al., 2016).

Δ revenue	2021	2020	2019	2018	2017
Airbnb	77 %	-30 %	32 %	40 %	63 %
Booking	60 %	-50 %	2 %	13 %	21 %
Expedia	65 %	-57 %	8 %	12 %	15 %
TripAdvisor	49 %	-61 %	-3 %	3 %	2 %
Trip.com	12 %	-45 %	14 %	9 %	

Table 4 Changes in revenue in the hospitality industry

Linear regression is used to determine the correlation and causation of the relationship between R&D spending and revenue growth. The model shows that although there seems to be a correlation between R&D spending and revenue, the correlation is in most cases weaker than the relationship with sales and marketing spend and revenue. In most cases R&D spending is not insignificant, with the Multiple R correlation coefficient ranging from 12% to 85%. In terms of causation as measured by R Square, there is limited effect on the movements of R&D expenditures on revenue in this model, which is similar to the regressions made for the relationship between sales and marketing spend and revenue in the earlier sections.

<i>Regression Statistics</i>	
Multiple R	0,125556939
R Square	0,015764545
Adjusted R Square	-1,666666667
Standard Error	1520,264237

Airbnb R&D to revenue relationship

<i>Regression Statistics</i>	
Multiple R	0,509635189
R Square	0,259728026
Adjusted R Square	-1,5
Standard Error	2337,277297

Expedia R&D to revenue relationship

<i>Regression Statistics</i>	
Multiple R	0,531942432
R Square	0,282962751
Adjusted R Square	-1,4
Standard Error	378,187657

TripAdvisor R&D to revenue relationship

<i>Regression Statistics</i>	
Multiple R	0,850687995
R Square	0,723670064
Adjusted R Square	-1,4
Standard Error	683,2351852

Table 5 Effect of R&D spend on revenue in hospitality industry

The same can be said from Uber and Lyft in the ride-hailing industry. These two companies have been publicly traded since 2019, showing a brand value curve dip right after their respective IPO's. Both Uber and Lyft were valued higher by professional investors than by the public market before their IPO. Reasons for this according to Wedbush Securities (an investment firm that follows closely the ride-hailing industry) and the New York Times were that private venture capitalists had overestimated the growth potential for the ride-hailing industry and that both companies had invested a massive amount of money in self-driving vehicles that were not going to be a viable option for the foreseeable future (Barr, 2019 and Farley, 2019). Second notion about the companies' brand value development can be seen right after the IPO during the Covid-19 pandemic when the companies suffered a drop in revenue but an increase in market capitalization mostly due to a combination of quantitative easing, future prospects and a lack of alternative investment options (Domm, 2020).

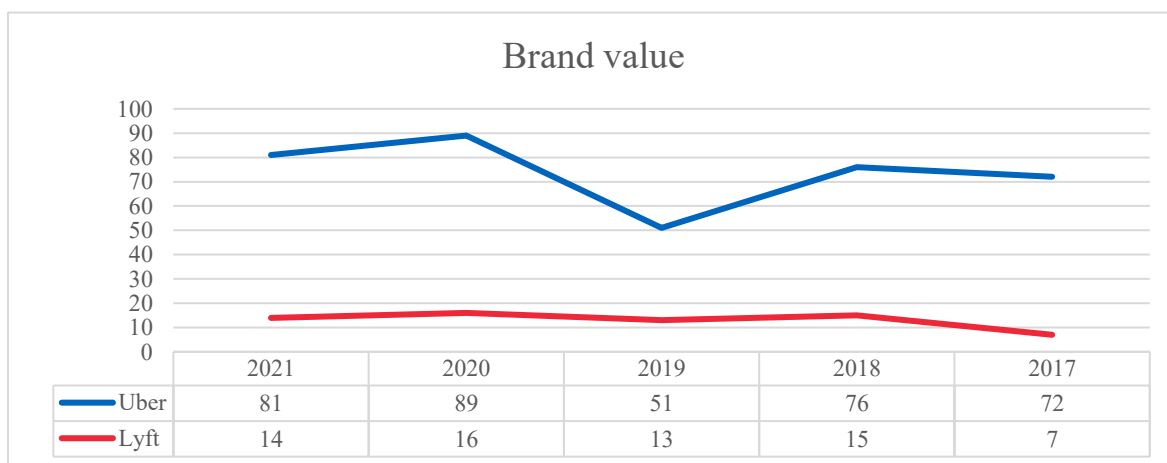


Figure 10 Uber and Lyft brand value

When it comes to Uber's and Lyft's changes in revenue and brand value, it can be seen that although there is exponential growth in revenue for both companies all the way until the pandemic, the brand value grows at a much smaller rate. In the four-year control period, the value of Uber has grown by 14%, while the value of Lyft has doubled, even though the revenue of Uber has grown by 136% while the revenue growth of Lyft has been 202%. This shows that the market has anticipated Uber's growth quite accurately, while placing more hope on Lyft to maintaining an accelerated pace of growth over Uber.

Δ in revenue	2021	2020	2019	2018
Uber	57 %	-14 %	25 %	41 %
Lyft	36 %	-35 %	68 %	104 %

Δ in brand value	2021	2020	2019	2018
Uber	-9 %	75 %	-33 %	6 %
Lyft	-13 %	23 %	-13 %	114 %

Table 6 Changes in revenue, ride-hailing

As within the hospitality industry, also the effects of research and development costs on revenue are analyzed to see how strong the linear relationship is between the two factors. As is apparent with the hospitality industry, also in the ride-hailing industry there seems to be a correlation between R&D and revenue, but a weak causation, meaning that a growth in R&D spending has almost none or negligible significance on revenue, as is seen in the results. This raises obvious questions of how much platform companies should put resources in developing their platforms, and what are the growth potential of these platforms. There are also external forces affecting the development of revenue growth (such as a pandemic), which can also limit the relevance of a single factor's effect on a variable in a regression. These questions are further discussed in the findings and limitations parts of this thesis.

<i>Regression Statistics</i>	
Multiple R	0,355558174
R Square	0,126421615
Adjusted R Square	-1,666666667
Standard Error	4003,049677

Uber Technologies R&D spending in relation to revenue

<i>Regression Statistics</i>	
Multiple R	0,909317297
R Square	0,826857947
Adjusted R Square	-1,5
Standard Error	579,6750282

Lyft R&D spending in relation to revenue

Table 7 Effect of R&D spend on revenue in ride-hailing industry

3.2.4 The importance of branding

When looking at brand recognition Airbnb has the clear advantage, with YouGov Brand Index ranking Airbnb as the company with the strongest brand advocates in the world (YouGov, 2016). In the case of Booking Holdings and Expedia, for example, the brand value is less due to Booking being a holding company that owns a large variety of brands and Expedia being a conglomerate of different travel websites, neither having the wide brand recognition that Airbnb has. In Booking Holding's portfolio are individual brands such as Booking.com, Priceline, Agoda.com etc. and part of the Expedia Group are brand websites such as Expedia, Orbitz, Hotels.com etc. Booking and Expedia have opted for a decentralized branding while Airbnb has opted for a centralized brand.

Airbnb has become synonymous with renting a house in a way that Google is synonymous with search engines and iPhone is synonymous with smart phones. What can be seen in this chart of brand value is that Airbnb was valued in a similar way as Booking Holdings by investment professionals before they went public in 2020. Before going public, the company was valued by financial professionals working in finance institutions and using different valuation methods that are generally accepted within corporate finance, such as the discounted cashflow method, enterprise valuation method, abnormal returns method or similar. This gave the company a valuation of around \$50 billion (Dufour, 2020) just before the IPO and is in line with the rest of the competition. The explosive growth in brand value after the IPO has to do with Airbnb's brand perception. Compared to Booking Holdings, Airbnb has half the users and half the revenue, but the market prices the company to be more valuable than all of Booking Holding's brands combined. Positive brand image and recognizable, trusted brand will make a platform sharing economy company more valuable, since the network and platform they have will attract more customers and service providers, and therefore more revenue, than smaller brands. This is further backed by literature on the topic from Noe (2005), Parker and Van Alstyne (2005).

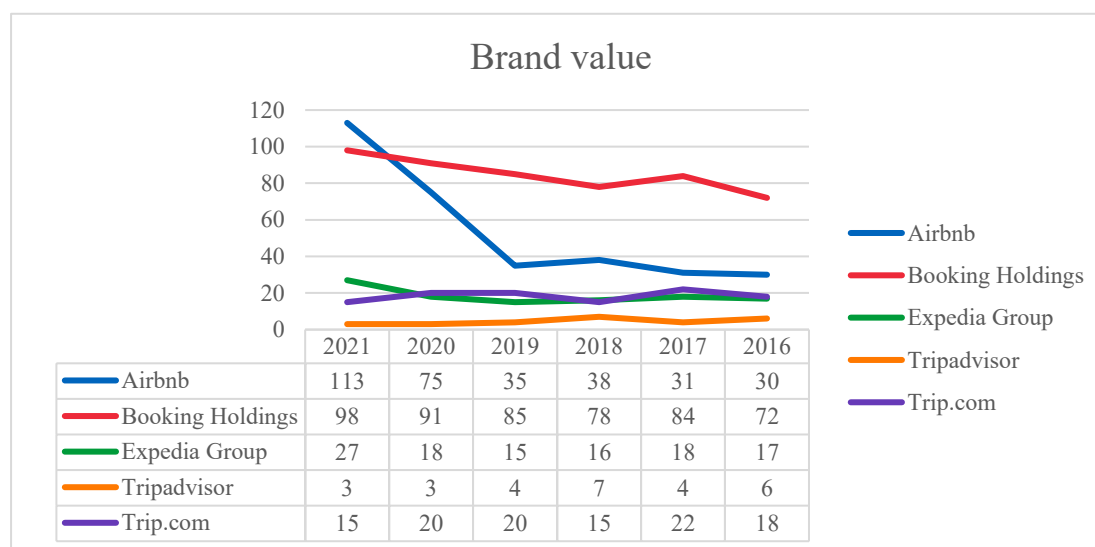


Figure 11 Hospitality industry brand value

When looking at revenue growth of the aforementioned companies, it can be seen that Airbnb is both growing the fastest every year and suffered the smallest hit during the pandemic out of all the competitors. This partly explains the generous valuation that the company has in relation to its earnings (which it doesn't have as of 2021) and shows that in an economic upturn the market prices companies with strong brands, exclusive offerings and large growth potential dearly. Brand value comprises from investments into marketing and R&D as is explained by Drucker (2012). To be able to saturate the market and sustain the platform as explained by Constantiou (2016), Eisenmann et. al. (2006), Evans (2003; 2008), Kataja (2019) and Rysman (2009), platform companies need to saturate, co-exist or fail. This three-pronged approach was explained by Rysman (2009), who said that just like Eisenmann et. al. (2006) that platform companies are prone to winner-takes-all dynamics. Due to the almost nonexistent cost of scaling, a platform company will saturate the market if its pricing to all sides of its platform is correct and if the product can satisfy the needs of its customers. In the case of Booking, Expedia, TripAdvisor and Trip.com, the products they offer are differentiated under various brands, while in the case of Airbnb, every product is marketed and sold under the Airbnb brand name. Airbnb's approach seems to have paid dividends in the last five years due to the sharp increase in valuation and abnormal levels of growth in revenue. It seems that Airbnb is trying to create all their products under the main brand much like companies such as Apple, while Booking is dividing different product offerings under various independent brands such as Alphabet is doing. Time will tell which one of these

strategies is going to be the more successful one, but for now, Booking Holdings wins in terms of revenue while Airbnb wins in terms of growth.

4 Findings

This part of the thesis explains what is learned in the literature review part as well as in the methodology part. The preliminary research problem to be answered is ‘*what are the value creating factors that give platform businesses a competitive advantage over their traditional counterparts in the sharing economy*’ and to answer this question it’s good to recap what has been said on the topic already. The first hypothesis derived from the literature and formulated to answer the research problem concerned the network that successful platform companies create to attract both service providers and service users so that the platform can attract revenue from both sides (Eisenmann et. al., 2006). Platforms with a large customer base attract and retain more customers in a positive spiral of “chicken and the egg -problem”, where a platform needs to have participants in order to attract more participants (Evans, 2003; Rysman, 2009). According to academic researchers Bican et. al., value and economic growth can be generated from networks hosted by platform businesses and have a net positive effect on the wider economy and not just for the platform company itself or for the participants partaking in the sharing economy platform (2021). They further stipulated that due to the special nature of today’s digital sharing economy platforms (or platform businesses in general), these companies do not rely on physical infrastructure or access to scarce resources, which gives them a clear competitive advantage over their more traditional counterparts (Bican et al., 2021).

Many companies within ride-hailing and hospitality industries have adopted elements and practices from industry disruptors such as Airbnb and Uber and have been able to resist a full-on takeover of the industry by these companies (Sperance, 2022). Also, the threat of new entrants is imminent to these platform companies due to the ease of accessing the market. Anyone with a computer and ten minutes of free time can build a website from scratch and start a competing platform company. This brings us back to the second hypothesis derived from literature, which was a look into how these companies attract users to their platforms and what’s the effect of it on their growth. In the methodology section of this thesis, two key quantifiable factors were analyzed. The first one being the effect of marketing budget vs revenue growth. A linear regression was made to see if there is a correlation or causation between the two variables. The analysis supports the hypothesis partly; in most cases there is a strong correlation between marketing spending and revenue growth, which helps maintaining or growing market share (Evans, 2003; Rochet and Tirole, 2003; Rysman, 2009) that comes from the platforms’ ability to acquire, retain and attract

value from customers. It was noted that platform companies spend a disproportional chunk of their revenue on sales and marketing activities in efforts of promoting their platform to both sides of the network. In the literature there were compelling reasons for spending a high amount on marketing in relation to revenue, both from academic and practitioner's side. Peter Drucker and a variety of practitioners (Ackman, Fischer, Graham etc.), explained that in order to grow aggressively, a large amount of cheap capital is needed from the very start to develop and subsidize the platform users and turn them into returning customers. This is true to both sides of a platform, not just the service providers or service users. The findings in this thesis support the justification for a high marketing spending level for platform companies in the hospitality industry, since the ones that are not spending at least a third of their revenue on sales and marketing activities seem to struggle to increase their market share or retain it in the long term. There is a strong correlation between revenue growth and sales and marketing spend even if the results are inconclusive for the causation part.

When it comes to marketing activities and brand building, it's important to note that sales and marketing spend does not equal a better brand recognition or brand image (Airbnb being the exception to the rule), but as stated before, there is a strong correlation in most cases. This is a generalization in a sense that marketing effectiveness is more important than marketing spend in most cases (Sarigollu, 2012). Newer and smarter ways of marketing have enabled companies with relatively small marketing budgets to become the talking points of the world and campaigns can become such hits that a relatively small capital input will yield to a large jump in revenue and brand value (Cox, 2020). Airbnb has become synonymous with sharing one's home and Uber has become synonymous with ride-hailing, even though the competition is increasing every year.

The third hypothesis under scrutiny was about the effect R&D into augmenting and sustaining the platform. Platform companies have a unique opportunity to scale quickly and saturate the market quickly, as per the "winner takes all" dynamics of platform businesses (Parker and van Alstyne, 2005, Eisenmann et. al., 2006). R&D cost is accrued through investment within the platform itself. It is the direct portion of a company's operational costs that are spent on the development, design and enhancement of the product that is being offered by the company. The products that are designed by platform companies do not always have to generate revenue as is mentioned by Parker and Van Alstyne, since products act as a binding factor for participants of a platform (Parker and Van Alstyne, 2005). There seems to be a link between platforms that spend a high proportion of their revenue on product development and revenue growth, since most of the new products that the companies

introduce to the platform are revenue generating, such as Airbnb's "experiences" and Uber's food delivery service Uber Eats (Annual reports, Airbnb and Uber, 2019; 2020; 2021). The link between revenue growth and R&D costs is lower than the link between sales and marketing spend and revenue growth (see Appendix), but it is noticeable and much like with sales and marketing cost, it accrues throughout the years. There is a point when spending more and more on sales and marketing as well as R&D no longer yields a satisfactory return on investment as the company matures and reaches a point when sales growth smooths out and the law of diminishing returns kick in.

The law of diminishing returns states that *ceteris paribus*, increasing a single input factor by one unit will eventually yield a proportionally lower increase in output as the critical point of optimal production is passed (Samuelsson, 2001). In mathematical terms this can be illustrated as:

$$MP = \Delta TP / \Delta L$$

This is also true with marketing activities as well as R&D activities. When drawing a linear regression on the sales and marketing spend and revenue of these companies, there is no significant causation between the two. It's more likely that a higher revenue leads to a higher sales and marketing spend as indicated by the analysis than the other way around. In case of Uber and Lyft, Uber spends a large proportion (around a third) on its sales and marketing activities, while Lyft spent an extremely high proportion of revenue on sales and marketing activities (all the way until 2018) but has since dropped their sales and marketing spend on a level way below Uber. Even with the lower sales and marketing spend, Lyft has managed to steal market share from Uber, which shows that previous spending on sales and marketing activities pays off in the long run, even if currently there is a reduction to these costs. Same goes to show with the R&D expenditures. In 2016-2017 Lyft spent around 20% on R&D in relation to revenue, while in 2019 it spends over a third of its revenue on R&D. There can be seen a loose connection alternating between sales and marketing costs and R&D costs in order to maintaining strong growth in customer base and revenue. Similar rotation can be seen within the hospitality industry. In the case of Airbnb, at the beginning of the control period in 2016 and 2017, Airbnb placed an emphasis on sales and marketing activities, whereas later on from 2019 to 2021 the company has grown R&D expenditures by almost five-fold in a time when sales and marketing spend was going down and revenue doubled. There are no academic studies based on the usefulness of this type of a rotation or

on the effect it has on growth. The full table of marketing spend and revenue as well as R&D spend and revenue can be found in the appendixes.

According to the literature, platforms have three main factors that have the largest effect on value creation, which are connection, gravity and flow (Boncheck and Choudary, 2013). The connection of the platform relates to the product itself; how easily can participants access the platform and transact with other platform participants. In the case of the companies under analysis in the sharing economy platform business, it's extremely easy for participants to create a profile or access through a web-based service to the service providers' offerings and start participating in the sharing economy. In terms of gravity of the platform, it's all about how well the platform businesses can attract participants to both sides of their network. With the more successful platform businesses the growth has been steady all the way until the pandemic, and a recovery has happened quickly after the pandemic. This can be seen in the steady rise of participants and bookings in the most valuable platform company brands, such as Airbnb, Booking and Uber and Lyft, whose investment in attracting participants is clearly paying dividends with a higher growth in participants. What is meant by the flow of platform businesses is the ease of fostering exchange and co-creating value in the process. This is where data is at the core of all these companies. How well these platforms can connect the users with the service providers for the right price is crucial for keeping the participants engaged and using the platform in the future. This is something that for the purposes of this thesis will not be quantifiable, but definitely is a great topic to be researched further.

5 Discussion

Much has been researched regarding platform businesses in the sharing economy and how they bring value to society, their network participants, the environment and the economy as a whole, but not much has been researched in terms of which value creating factors are the most relevant in platform businesses themselves. To answer this question, this thesis takes a dive into two different industries within the sharing economy: the ride-hailing industry and the hospitality industry. These two industries are noticeably different from each other, but from a platform point of view the companies among them operate in a very similar way. Although the literature on platform businesses is vast, there still are gaps in almost all areas of research. The evolution of platform businesses has been discussed by several researchers (Constantinou, 2016; Kataja, 2019) and show that there are three main factors of platform evolution. These are creating a network, augmenting the network and sustaining the network throughout its growth journey (Constantinou, 2016; Kataja, 2019). The literature recognizes these phases of a lifecycle, but does not explain their significance or map a road to success.

To tackle the original research problem, which was *“What are the key value drivers in sharing economy platform businesses and how to determine long-term competitive advantages of market participants?”*, some additional research questions were formulated. The first research question was *“What value driving qualities successful companies have that are common amongst them?”* The literature and methodology gave a clear answer to this question. Successful platforms, like other successful companies, have a product or service that customers want to buy, that are difficult to replace and to compete with, that are positioned in a way that is attractive and that can saturate the market quickly. To do this, platform companies first create a service that is simple and easy to scale, a service that attracts participants on both sides of the market (Eisenmann et. al., 2006; Constantiou et. al., 2016; Hanseth and Lyytinen, 2010). Platforms create value to all sides: the users, the service providers and usually the economy as a whole. If managed correctly, they can also create value to society and to the planet. There can be some negative economic, social and even environmental effects as well, but it’s all part of progress.

The second research question to be answered was *“What gives platform businesses in the ride-hailing and hospitality industries a competitive advantage over their traditional counterparts?”* The answer for this was also found in the literature review, but mostly from the practitioners’ side. Companies need some kind of competitive advantage if they are to

survive (Graham, 2013). These competitive advantages can also be called as moats (Town, 2007; Buffett, 1999). These moats protect the business from outside forces and ensure their survivability into the long future. The platform companies under analysis have several factors that give them a durable competitive advantage, chief among them the flexibility that they offer, the consistent marketing efforts that they have, the low cost that they offer, the attractiveness of their product offerings, their branding as well as a whole host of other important factors mentioned in the thesis. In the hospitality industry, for example, hotels are forced to use Expedia's and Booking's platform when promoting their room's availability to customers due to the attractiveness of these platforms. They are customers of the platform, and have a great dependency on them. Expedia and Booking ultimately decide, which forms of accommodation get promoted on their websites, which gives them a lot of power, both in terms of pricing and in terms of setting trends. Both Booking and Expedia have a large number of service providers on their platform, which increases their market power even further. The only thing that could threaten Expedia or Booking or Tripadvisor are other platforms, not traditional accommodation providers such as hotel chains. Platform companies in the hospitality industry have made their competition into their customers, which is why they have been able to act with such impunity. The notable exception is Airbnb, which competes with hotels and other travel booking platforms by a completely new service offering. Even though Booking and Expedia also let individuals list their homes and houses on their platform, their main business is with hotels and travel agencies, while Airbnb has specialized almost entirely on individuals sharing accommodation space. This way Airbnb has been able to create a massive brand moat, an agile sharing platform that is only reliant on people travelling, and cumulated an enormous service provider and service user base that other platforms can't compete with in the space that Airbnb operates in.

The ride-hailing industry is interesting, because it's an industry that is extremely saturated by a duopoly in the United States. Both Uber and Lyft could very quickly attract a network of users, augment their platforms and sustain them to displace incumbent competitors from the market (Constantinou, 2016; Kataja, 2019). The ride-hailing industry shows what a mature sharing economy market looks like. With the flexibility to match demand and supply and ability to price below traditional companies, Uber and Lyft are the two strongest ride-hailing companies in the world. Even with market dominance, Uber and Lyft have both disappointed their investors, because they have been unable to capitalize on their market dominance. The two companies are competing with each other fiercely, undercutting each other's pricing and matching each other's services (Patel, 2019). They

have to keep prices artificially low and margins slim in order to block other competitors from entering the market. They are also faced with stringent regulations, which hinder their freedom of operating and level the playing field with traditional competition. There are no switching costs to the service users if they want to switch between the one or the other (Patel, 2019). The regulatory environment is more evolved within the ride-hailing industry compared to the hospitality industry, which makes leveraging the inherent competitive advantages of platform businesses more difficult (Annual report, Uber and Lyft, 2019; 2020, Airbnb, 2019; 2020).

The third and final research question is *"How to identify the common qualities among sharing economy platform businesses that will give them a durable competitive advantage over their competitors?"*. This, again, was answered in the literature as well as in the methodology part. Peter Drucker made the statement that companies should market and innovate, which is a view shared by several academics and practitioners (Light, 2019; Graham and Dodd, 2013). In the empirical part of the thesis, it focused on the effects of sales and marketing spend and R&D spend on revenue to see if these two factors are statistically significant in value creation, particularly in revenue generation. The outcome of the empirical tests came to show that there is in most cases significant correlation between these factors and change in revenue, but not causation. It can be therefore said a growing business will invest more on R&D and SandM, while a declining business will invest less, but the growth and decline is weakly correlated by these factors. However, especially in the literature it is stated that in order for a platform company to have sustained revenue growth and success, it needs to create a network of users, augment the platform and keep on repeating these two phases until it is in a dominant market position (Constantiou et. al., 2016; Evans, 2003, 2009; Eisenmann et. al., 2006). These phases will take a lot of investment into SandM and R&D (Light, 2019; Ackman, 2016). This investment will accumulate and reap rewards later on, not just in the year the investment was made. Therefore it is likely that platform companies will need to invest a lot of resources into SandM and R&D to stay relevant and to be able to compete with rivals. What to exact level is, is open for debate and needs more research.

5.1 Limitations of research

Throughout this thesis there has been observations on the limitations of both the research methodology as well as the availability of data and comparability of data. The idea was to collect a database from various sharing platform companies in the hospitality industry and

ride-hailing industries and then compare them together and see which factors are significant in determining the long-term competitive advantages of these companies over their peers and competitors. It quickly became apparent that the data available from public sources (mainly from 10K and 10Q reports) was somewhat limited due to the fact that these companies have not been public for very long and therefore the information about their history is limited to the few years these financial statements are published. The number of public sharing economy platform businesses in these two industries that operate in the US market is also very limited, which is why the scope had to be limited to five companies in the hospitality industry and two companies in the ride-hailing industry. The reporting is required to be done quarterly, which limits the amount of observations and datapoints under analysis to four over one year. This in itself is not a big factor, since a higher number of datapoints does not equal a better result in the regressions, however, due to the way expenses are reported, finding and quantifying data that is relevant for this research requires a bit more effort from the analyst.

When it comes to the comparability of data, the conclusion is that the datasets are comparable. All data that was used is audited according to US GAAP auditing principles (except brand value metrics which were taken from a reputable third-party source, mainly from NASDAQ) and are therefore assumed to be accurate and true. There are differences in how companies from the two industries measure for example their sales and marketing costs, but these differences could be taken into account and comparable data was found.

As one could imagine, financial reports focus heavily on, financials, which as a data source has its uses, but some assumptions had to be made for this thesis. When answering the research questions and testing the hypothesis it became necessary to draw conclusions between financial data and qualifying data, which leaves the door open for quite some academic counter arguments regarding the relevance of certain metrics. There are many more factors that have an effect on brand value than just marketing spend, R&D or product development, sales growth etc., but it is not practical or purposeful in this thesis to try to cross-analyze every changing micro and macroeconomic factor. The purpose of this thesis was to try to answer the research problem both from a qualitative and quantitative perspective and it turned out that qualitative data had a stronger emphasis on the different value creating factors.

5.2 Suggestions for further research

Sharing economy is a fascinating topic that has received the attention of many academics and practitioners alike. Several fields of study have contributed to the research of platform businesses, including Eisenmann, Parker and Van Alstyne from the platform economics point of view, Evans, Rochet and Tirole from the sharing economy platform point of view, from Constantiou and Kataja in the maturity and growth of platform companies and from the information sciences point of view as described by Hanseth and Lyytinen. There are several gaps in this research, however, starting from the definition of the sharing economy (Sundarajan, 2016). There are several definitions of what belongs in sharing economy and what does not, from academics like Schor (2014) and Knote and Blohm (2016). In this thesis the sharing economy is defined as sharing underutilized, high-value short-term assets through a digital platform for a fee (Constantiou et. al., 2016; Kataja, 2019; Gansky, 2010). This definition best suits the needs and research objects of this thesis, although other definitions are recognized and discussed.

This thesis recognizes several universal factors that create a competitive advantage for companies in general, such as a strong brand, a natural (or unnatural) monopoly, intellectual property, switching costs and pricing. These moats are mostly from the practitioner's side and very little academic research has been conducted on the significance of them. Practitioners such as Buffett and Munger, Graham and Dodd and Fischer, steer away from companies that do not possess strong competitive advantages. Platform companies inherently have many of them as discussed in this thesis. The academic literature, however, is lacking in recognizing what causes competitive advantages and how to maintain them.

In the empirical part of this thesis two value creating factors were looked at as defined by Drucker. The significance of the factors was determined, and the results were mixed. In the future research about this topic, a larger sample is needed from a longer time period. At the time of making thesis a global pandemic is just about to wind down, which is an enormous external factor that affects the variables used in this thesis as a basis of the analysis. This skews the results and does not allow for the hypothesis to be confirmed or rejected, which means that by default the hypothesis must be rejected. This is in contradiction to the academic and practitioner research on the topic, which is why it should be researched further.

6 Conclusions

This master's thesis answers the question what are the factors that give platform companies in the sharing economy a competitive advantage over their competition. Although the companies under analysis in this thesis are operating in a new business environment and are disruptors in their own right, the basic economic and corporate finance principles apply. Platform companies are networks that have more than one side, so instead of value moving from left to right as in a traditional business where cost is to the left and income on the right, platforms facilitate value creation on both sides (Eisenmann, Parker and Van Alstyne, 2006). Three important value creating factors are identified and their effects are analyzed. These three factors are the platform's ability to attract a network through sales and marketing operations, the platform's ability to retain and grow revenues from customers through investing in the platform itself, and finally, the ability of a platform to be resilient and the ability to adapt to changing market demands.

Winning market share is key for any company, but this is especially true with platforms. Platform companies have an almost zero cost in scaling up, which means that they can quickly saturate the market with their product or service and potentially displace every other company within their industry. This business model attracts a lot of attention, which makes the threat of new entrants an especially dangerous challenge for platform companies (Ackman, 2016). Platform companies need to have a clear vision of what their purpose is and spend a disproportionately high amounts on branding and other marketing activities, as well as continuously invest in their products. Designing an ecosystem that is easily entered by service providers and users, but which will lock participants in place is no easy feat, but is imperative for platform companies' success (Town, 2007).

Although the sales and marketing spend as well as research and development costs are high on all of the platform companies that are analyzed, the benefits of this inconclusive. There seems to be a strong correlation between high sales and marketing spend to revenue growth, but whether this is justified could not be inconclusively determined based on the data and methods used in this thesis. The reasons for this are that the companies that are analyzed do not operate in a vacuum and there are several factors that have an effect on their financial performance. This is why most of the research and conclusions in this thesis are focused on analyzing previous research on the topic, since forecasting future success is an uncharted territory.

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Appendix A: Revenue per year

Revenue in millions	2021	2020	2019	2018	2017	2016
Airbnb	5991	3378	4805	3651	2600	1600
Booking	10958	6796	15066	14527	12681	10743
Expedia	8598	5199	12067	11223	10060	8773
TripAdvisor	902	604	1560	1615	1569	1532
Trip.com	3142	2807	5122	4504	4115	2769
Uber	17455	11139	13000	10433	7402	3845
Lyft	3208	2364	3615	2156	1059	343

Appendix B: Sales and marketing spend per year

Marketing costs in millions	2021	2020	2019	2018	2017	2016
Airbnb	1186	1175	1621	1101	871	663
Booking	4682	2934	5922	5786	5113	4228
Expedia	1522	1649	6135	5767	5298	4367
TripAdvisor	125	112	131	123	103	91
Trip.com	722	675	1335	1396	1274	844
Uber	4789	3583	4626	3151	2524	N/A
Lyft	411	416	814	803	567	434

Appendix C: R&D cost per year

R&D cost in millions	2021	2020	2019	2018	2017	2016
Airbnb	1425	2753	977	579	401	228
Booking	N/A	N/A	N/A	N/A	N/A	N/A
Expedia	1074	1068	1263	1122	1387	1235
TripAdvisor	212	220	293	275	243	243
Trip.com	1411	1175	1533	1399	1269	1107
Uber	2054	2205	4836	1505	1201	846
Lyft	912	909	1506	301	137	65

Appendix D: Sales and Marketing spending impact

S&M to Revenue impact	Multiple R	R Square
Airbnb	0,27	0,07
Booking	0,98	0,97
Expedia	0,92	0,84
TripAdvisor	0,20	0,04
Trip.com	0,96	0,93
Uber	0,92	0,85
Lyft	0,34	0,12

Appendix E: R&D spending impact

R&D to Revenue impact	Multiple R	R Square
Airbnb	0,13	0,01
Booking	N/A	N/A
Expedia	0,51	0,26
TripAdvisor	0,53	0,28
Trip.com	0,85	0,72
Uber	0,36	0,13
Lyft	0,91	0,83