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TRANSFORMING BETWEEN OPEN AND CLOSED BUSINESS STRATEGIES: IMPLICATIONS ON VALUE PROPOSITIONS

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ABSTRACT

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Transforming Between Open and Closed Business Strategies: Implications on Value Propositions

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Open and closed business strategies is a topic connected with business model innovation and value proposition concepts. The topic of open strategies and closed to open strategy transformation has been studied thoroughly, however, open to closed business strategy transformation topic has a limited literature coverage. Consequently, there is a research gap in the intersection of these concerning topics. Therefore, this study provides insights on the relationships between business strategy changes and focuses on the implications on value propositions. In addition, the study elaborates further on the implications on value constellations and value capture mechanisms and investigates how such strategy changes resonate with stakeholders.

This research employs netnographic multiple case study method, investigating two case companies in automotive and social media sector by adopting longitudinal approach. Data used in this study consists of vast variety of secondary archival data. Additionally, NVivo tool is used for the sentiment analysis. The results reveal that business strategy changes, majorly have positive impacts on value propositions, however, there are instances. Similarly, reactions towards value propositions after strategy change can be either positive of overwhelmingly negative. Observations show that credible customer relationships have significant role in determining reactions. Moreover, strategy changes can introduce innovations and adaptations in value constellations and potentially improve value capture mechanisms as well.
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Bu çalışmanın tamamlanmasında ve karşılaştığım zor zamanlarda benden desteği esirgememiş olan değerli aileme ve sayın aile dostlarına en derinden gelen teşekkürlerimi sunuyorum. Bu tezin tamamlanması, kendilerinin bana verdiği destekler sayesinde mümkün olmuştu.

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[Signature]
List of Abbreviations

**BM**: Business Model

**BMI**: Business Model Innovation

**VP**: Value Proposition

**CVP**: Customer Value Proposition

**OI**: Open Innovation

**EV**: Electric Vehicle

**ICE**: Internal Combustion Engine

**SoMe**: Social Media

**COGS**: Cost of material labour manufacturing overhead

**TCO**: Total cost of ownership

**CAGR**: Compound annual growth rate
# TABLE OF CONTENTS

1  Introduction ............................................................................................................. 10
   1.1  Research Questions ............................................................................................ 12
   1.2  Theoretical Framework ....................................................................................... 14
       1.2.1  Business Model ........................................................................................ 14
       1.2.2  Value Proposition ...................................................................................... 14
   1.3  Definitions .......................................................................................................... 15
       1.3.1  Business Model (BM) .............................................................................. 15
       1.3.2  Business Model Innovation (BMI) ............................................................ 16
       1.3.3  Value Proposition (VP) ............................................................................ 16
       1.3.4  Value Constellation .................................................................................. 17
       1.3.5  Value Capture ........................................................................................... 17
       1.3.6  Closed to open and Open to closed Strategies ........................................... 18
   1.4  Delimitations ...................................................................................................... 18
   1.5  Research Methodology ....................................................................................... 19
   1.6  Structure of the Study ....................................................................................... 20

2  Business Model ........................................................................................................ 22
   2.1  Evolution of the Business Model Concept .......................................................... 23
   2.2  Business Model Components ............................................................................ 24
   2.3  Business Model Innovation ............................................................................... 27
       2.3.1  BMI and Value proposition .................................................................... 29
       2.3.2  BMI and Value Constellation ................................................................. 30
       2.3.3  BMI and Value Capture ........................................................................... 31
       2.3.4  Literature Reviews on BMI ...................................................................... 32
   2.4  Open and Closed Business Models .................................................................... 35
       2.4.1  Closed Business Model ......................................................................... 35
       2.4.2  Open Business Model (OBM) ................................................................ 38

3  Strategic shifts between closed and open strategies .............................................. 41
   3.1.1  Closed to open Strategy Change .................................................................. 43
   3.1.2  Reversion from Open to Closed .................................................................. 45
4  Value Proposition ........................................................................................................49
  4.1  Evolution of the Concept .........................................................................................50
  4.2  Perspectives on Value Proposition .........................................................................53
  Goods Dominant (G-D) Perspective ............................................................................53
  Service Dominant (S-D) Perspective ...........................................................................54
  Mutually Determined Perspective ..............................................................................54
  4.3  Antecedents of Value Proposition .........................................................................55
  4.3.1  Market Knowledge ............................................................................................55
  4.3.2  Innovation .........................................................................................................55
  4.3.3  Product Knowledge ...........................................................................................56
  4.3.4  CVP Formalization ...........................................................................................56
  4.3.5  Leadership Support ............................................................................................56
  4.4  Consequences of Value Proposition ......................................................................57
  4.4.1  Customer relationships and Brand Reputation ................................................57
  4.4.2  Design Characteristics .......................................................................................58
  5  Research Methodology ..............................................................................................59
  5.1  Netnographic Research .........................................................................................60
  5.2  Case Study .............................................................................................................61
  5.3  Data Collection .......................................................................................................63
  5.4  Data Analysis .........................................................................................................65
  5.5  Validity ...................................................................................................................65
  5.6  Research Process ....................................................................................................67
  6  Findings and Analysis ...............................................................................................69
  6.1  Case companies and Industry Overview ................................................................69
  6.1.1  Electric Vehicle Industry .....................................................................................69
  Tesla Inc. ......................................................................................................................71
  6.1.2  Social Media and Entertainment Industry .........................................................74
  Reddit Inc. .....................................................................................................................77
  6.2  Value Proposition Implications ..............................................................................81
  6.2.1  Market Knowledge ............................................................................................83
  6.2.2  Innovation .........................................................................................................88
  6.2.3  Product Knowledge ...........................................................................................91
  6.2.4  Leadership Support and Formalization ............................................................92
  6.2.5  Customer Relationships and Brand Reputation ...............................................94
6.2.6 Design Characteristics ........................................................................................................... 96
6.3 Strategic Changes and Impact on Business Model components .............................................. 99
  6.3.1 Value Constellation ............................................................................................................. 99
  6.3.2 Value Capture .................................................................................................................. 104
6.4 Community Reactions to Business Model Changes .............................................................. 110
  6.4.1 Tesla Inc. ............................................................................................................................ 110
  6.4.2 Overview .......................................................................................................................... 114
  6.4.3 Reddit Inc. ......................................................................................................................... 116
  6.4.4 Overview .......................................................................................................................... 119
7 Discussions ............................................................................................................................... 121
  7.1 Summary .............................................................................................................................. 121
How do switches between closed to open and open to closed strategies affect value proposition of companies? .................................................................................................................. 122
Why and how the strategic changes are used between open and closed business models? 124
How do value propositions resonate with the stakeholders after strategic changes? 125
7.2 Theoretical Implications ........................................................................................................ 126
7.3 Practical Implications ............................................................................................................ 129
7.4 Limitations and Recommendations ....................................................................................... 132
8 References ............................................................................................................................... 134
Appendices .................................................................................................................................. 145

LIST OF FIGURES

Figure 1. Research Questions ........................................................................................................ 13
Figure 2. Conceptual Business Model Framework ...................................................................... 28
Figure 3. 9 building blocks or Business Model Canvas ............................................................... 30
Figure 4. Competitive process framework .................................................................................... 32
Figure 5. The Knowledge Landscape in Closed Innovation ......................................................... 36
Figure 6. The Knowledge Landscape in Open Innovation Paradigm ............................................ 39
Figure 7. Open-Close Strategic Choice Dynamics with examples ................................................ 42
Figure 8. Drivers behind shifting open to closed strategy ............................................................ 46
Figure 9. Customer - Innovator interaction for strategic decision ........................................47
Figure 10. Development of the propositions concept ........................................................50
Figure 11. CVP framework .................................................................................................52
Figure 12. The research Process .......................................................................................68
Figure 13. Milestones in Tesla history .............................................................................73
Figure 14. Sector performance by the weighted average of intraday total return ..........75
Figure 15. Milestones in Reddit history .............................................................................80
Figure 16. Tesla stock price development and comparison with Toyota, Daimler, GM, Volkswagen and Nissan respectively to the colour list ...........................................84
Figure 17. Declining weighted average of battery prices over the years .......................85
Figure 18. A comment from a user regarding other alternatives .................................88
Figure 20. Desktop and mobile combined visits to reddit.com between February 2018 to July 2019 (in millions) .................................................................102
Figure 21. First profit predictions from Musk .................................................................106
Figure 22. Sponsored links promoted on the top regardless of the votes .................108
Figure 24. Word frequency of reactions on internet ......................................................110
Figure 25. Two examples of positive reactions ..............................................................111
Figure 26. Two examples of negative reactions ............................................................112
Figure 26. CEO is not hesitant to reflect his personal side on social media ...............115
Figure 28. Word frequency of reactions on internet ......................................................117
Figure 29. Two examples of positive reactions ..............................................................118
Figure 30. Two examples negative user reactions .........................................................118
Figure 31. One example of communication between Reddit CEO Yishan Wong and a user ..............................................................................................................119

LIST OF TABLES

Table 1. Business Model Components ...........................................................................25
Table 2. Relevant Situations for Different Research Methods ........................................62
Table 3. Data types and numbers for Tesla Inc. listed based on their validity ............63
Table 4. Data types and Numbers for Reddit Inc. listed based on their validity ........64
Table 5. Case study tactics and design tests ................................................................. 66
Table 6. Social network sites ranked according to their active users in 2019 .............. 76
Table 7. US market EV vehicle shares ........................................................................ 86
Table 8. EU market EV vehicle shares ........................................................................ 86
Table 9. Value constellations of two case companies after their strategic move .... 104
Table 10. Value capture mechanisms of two case companies after their strategic move .............................................................................................................. 109

LIST OF APPENDICES

Appendix 1. Tesla 2019 Q3 metrics ........................................................................... 145
Appendix 2. Installed public charging outlets globally .............................................. 145
Appendix 3. Social following behaviours .................................................................... 146
Appendix 4. Reputation rankin of Tesla .................................................................... 147
Appendix 5. Tesla customer reactions sentiment analysis in NVivo ...................... 147
Appendix 6. Reddit user reactions sentiment analysis in NVivo ............................... 148
Appendix 7. Tesla reactions from online article authors and analysts sentiment analysis in NVivo ................................................................. 148
1 Introduction

Since the emergence of digital era and fast penetration of Internet use, technology and knowledge dissemination has gained significant momentum. This momentum has certain implications on business, economy and related concepts, such as business model innovation. Today, there is a massive amount of valuable data and knowledge floating around the globe and such rapid knowledge dissemination enabled different business models and emergence of concepts. Considering the business and economic landscape is completely different than even a decade back; it has become essential for businesses to develop a business model, which creates value for both company and its stakeholders by utilizing benefits of digitalization.

Interest towards business models has immensely increased during last two decades, in both practical and theoretical aspects (Chesbrough, 2010; Clauss, 2017; Foss & Saebi, 2017; Massa, Tucci, & Afuah, 2014; Massa & Tucci, 2013; Wirtz et al., 2016). Business model is a vast concept on its own, but essentially it should ensure the stable operations for the organization and provide enough flexibility for making changes. (Cavalcante, Kesting, & Ulhøi 2011). Thus, companies need to adjust their position and business models time to time; to create and capture the value, in order to catch up with the continuously changing landscape (Johnson, Christensen, & Kagermann, 2008; Yunus, Moingeon, & Lehmann-Ortega, 2010). This has brought business model innovation concept into the scene, which has attracted similar interest from academicians and practitioners. Similar to BM, BMI is a vast concept that branches into various scopes and is yet to be fully understood (Wirtz & Göttel, 2016).

To this respect, organizations, whether they are for profit or non-profit, have been applying innovations on their business strategies and other BM components. Concept of innovation has gone through certain transformations over time as well; at the crossroads of business model and innovation concepts, shifting to open strategy or reverting to close strategies is only one interesting field of research. The topic was investigated by many authors, however, Appleyard & Chesbrough’s (2017) study
focuses on the topic specifically and reveals important findings. They conceptualize closed to open transformation as adoption strategy, as adapting to external environment to create and capture more value for company and its customers. On the other hand, they define open to closed transformation as reversion, as abandoning open strategy and “reverting” back to proprietary strategy. In early phases of an organization, starting with an open initiative could offer significant benefits, such as attracting more customers or stand out from many other entrants. However, as the market matures, open-to-close strategy could be more lucrative and feasible than continuing an open initiative (Appleyard & Chesbrough, 2017). Contrasting to this behaviour, some organizations that adopt closed strategy from the beginning may have the need to switch to an open approach to increase dissemination of their technology, product and to invigorate the industry. Both strategic changes have certain implications on value propositions.

There are two great examples of such phenomenon in recent history business landscape. In 2014, US based automotive and technology company Tesla Inc. announced that their electric car patents are open for anyone to use in good faith and “in the spirit of open source movement, for the advancement of the EV technology” (Musk, 2014). This announcement sparked many discussions in industry setting, among consumers and also academicians. Tesla’s strategic move opened a door for company to build the market and accelerate the adoption of EV’s. Contrasting strategic decision was made by Reddit Inc., a US based news, web content aggregation and social media site, in 2017. Reddit decided to close its source code because open source complicates development of features and increases risk of new features to leak. Also, Reddit is becoming more and more decentralized, and open source initiative makes is very difficult to merge open resource repositories. Such strategic move was anticipated in Appleyard & Chesbrough’s (2017) study, as the organization opted for value capture over value creation cooperatively in open source setting. This decision was not taken lightly by the developer community of the Reddit and company was accused of “betraying their own users” and not being transparent.
Considering the gap of research, which specifically investigates open and closed business strategies and their impact on value propositions sparked the interest of this research. As value propositions are one of the core elements of a BM (Payne, Frow, & Eggert, 2017), strategic changes between closed to open and open to closed could affect the value proposition of a company. Additionally, there is limited knowledge in the existing literature on open to closed business strategy transformation, how does value propositions perceived by different stakeholders after such strategy change and what factors within value proposition play significant role. Strategy changes may have significant effects on communities, which consist of important portion of potential customers and stakeholders. For many companies, investing more into digital customers may have impact on value propositions as it may be necessary to create the “hype” about their products and services, or simply to attract more users. Well-crafted business strategy formulations or innovations can act as enabler as well. The way stakeholders perceive value propositions after strategy changes may reveal significant takeaways for today’s business landscape, where reaching customers or other stakeholders is much easier than before.

### 1.1 Research Questions

The aim of this study is to illustrate the shifts between open to close and close to open business models, what components changed during the continuum and to seek the implications on the firm’s value proposition and value capture. Moreover, this study is to look into how the stakeholders perceived such shifts in business model and value delivered. Therefore, the main research question is constructed to answer these research objectives accordingly:

**How do shifts between open and closed business strategies affect value proposition of companies?**

The main research question covers several phenomena and is rather broad, thus, there are other supportive questions formed to find out more comprehensive answers. Hereby, two sub-questions are formed. First sub-question seeks answer to how and why companies switch between close to open and open to close strategies. This
question primarily focuses on what components are influenced or affected by such strategy change. Hereby, the supportive question built as follows:

**Why and how the strategic changes are used between open and closed business models?**

Next sub-question focuses on the value proposition aspect of the study. Value propositions may differ even by smaller changes in the business models or some of its components. Forerunner companies in their field can magnify these changes and thus have very strong impact on their customers, stakeholders on different levels and overall market within their industry. Engaging with stakeholders effectively can also have positive implications accountability, performance (Gao & Zang, 2001), as well as value creation (Gould, 2012). For this reason, making such significant change in their business model will have certain outcomes on their value proposition. Hence, the following question is formed as follows:

**How do value propositions resonate with the stakeholders after strategic changes?**

Following figure illustrates the research questions used in this study.

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**Figure 1. Research Questions**
1.2 Theoretical Framework

In this study, two distinctive frameworks are used to combine two different concepts. As value proposition is an essential part of BM, first framework is used to describe the business model and the components which are altered in the course of the business. Second framework is used to assess the value proposition and its ecosystem.

1.2.1 Business Model

The business model framework used in this paper is adopted from business model concept developed by Yunus, Moingeon & Lehmann-Ortega (2010). Yunus et al. (2010) state in his study that, even though there is still lack of consensus on the business model definition and extensive ongoing literate work, there are three distinctive components often emphasized, which he outlined them in his conceptual framework as value proposition, value constellation and profit equation. For the purpose of this study however, “profit equation” component is changed with “value capture”. Rationale behind this change is explained in section 2.3.

1.2.2 Value Proposition

Value proposition framework used in this paper is primarily adopted from Payne, Frow, & Eggert’s (2017) customer value proposition conceptual framework to illustrate what resources used or altered and what are the consequences on the value proposition. In their work they emphasize that the term customer value proposition is widely used by managers and academicians, however, there is still lack of understanding and research on the concept of value. This is due to the fragmented views, widespread focus on different aspects and lack of theoretical foundations. Therefore, they present conceptual framework of CVP. The framework utilizes popular resource-based theory,
which is used often in marketing. RBT is important in this framework; as it provides better comprehension of the strategic significance of CVP (Payne et al., 2017).

1.3 Definitions

This chapter introduces the definitions of the main concepts used in this thesis. Therefore, it provides important concept definitions to explain business model, in which are business model and business model innovation. Closed to open and open to closed strategies will also be explained under business model definitions, since they are directly related with the business models and strategies, and it is the foundation phenomenon of this particular study. In the value proposition context, most significant concepts are referred as value proposition, value constellation and value capture.

1.3.1 Business Model (BM)

When it comes to business model, there are abundance of discussions on the term used to explain various aspects of the concept. Distinctive definitions are used in variety of studies which may reflect on certain aspects to other definitions, however, researchers are not willing to acquiesce on a unified definition, which hinders cumulative development. (Zott, Amit, & Massa, 2011) Such lack of clarity leads to a confusion (Zott et al., 2011; Porter, 2001), makes it very difficult to comprehend the concept and its components.

In a general level, a definition of a business model can be provided by adopting different aspects from different researchers. Business model is a rationale behind a firm on how it creates, captures, and transfers the value (Osterwalder & Pigneur, 2010), a portrayal of a company (Amit & Zott, 2001), a “machine” of the organization which runs in a specific way to create value (Casadesus-Masanell & Ricart, 2010, 197) or an “organizational device” to create value (Svejenova, Planellas, & Vives, 2010). This study focuses on certain components of business model, which is based on Yunus et al.'s (2010) framework and the components are value proposition, value constellation and value capture. Therefore, the definition provided by Teece (2010,
suits well for the purpose of this study, which he described business model as, “A business model articulates the logic, the data and other evidence that support a value proposition for the customer, and a viable structure of revenues and costs for the enterprise delivering that value.”.

1.3.2 Business Model Innovation (BMI)

At a general level, Wirtz, (2011) defines business model innovation as creating a new business model. However, there are different views adopted by researchers. For instance, Gambardella & McGahan, (2010) emphasizes the technology aspect and defines BMI as innovation on the assets of the firm and its commercialization. On the other hand, Johnson, Christensen, & Kagermann, (2008) defines BMI as re-delineating the business model accordingly to characterize new customers and value propositions. Mitchell and Coles (2010 in Wirtz 2016) shares the similar view of BMI as formulizing a new business model. Yunus et al.’s (2010) view goes in line with these definitions, but it depicts more specific view on BMI and describes it as creating value proposition and constellation combinations in order to generate more profit. Lastly, a definition which reflects to aforementioned views comes from Wirtz, Pistoia, Ullrich, & Göttel (2016, 3) as “… the design process for … a new business model, which is accompanied by an adjustment of the value proposition and/or the value constellation and aims at generating or securing a sustainable competitive advantage.”.

1.3.3 Value Proposition (VP)

Bower and Garda (1986 in Payne et al. 2017, 20) define “value delivery system” as combination of choosing, providing and communication value proposition. According to Lanning (1988 in Payne et al. 2017, 20) value proposition defined as the “entire set of resulting experiences”. Webster (1994 in Payne et al., 2017) defines value proposition as a statement of a firm to differentiate from competitors and how to deliver value. Subsequent definitions from different authors share some similar aspects with these definitions. For instance, Rintamäki, Kuusela, & Mitronen, (2007, 624) define VP as a “strategic management decision” on what is value for customers that the company can deliver, and which gives the company a competitive edge. Ballantyne and Varey
(2006) focus on co-creation of the value and defines VP as specific propositions to enable value exchange between suppliers and customers. In their latter work, Ballantyne et al. (2011) defines value proposition as an offer or promise which is communicated by the firm to its customers.

The value proposition concept is still evolving; therefore, it is important to make a brief separate definition of customer value proposition, which is the main focus of this thesis. Very briefly, CVP narrows down how the value is distributed across the customer but at the same time it includes other stakeholders into account. For that reason, Payne et al.’s (2017,6) CVP definition fits best in this study; they define CVP as “a strategic tool facilitating communication of an organization’s ability to share resources and offer a superior value package to targeted customers.”. a mean to establish communication of a firm’s capacity to deliver its resources and set of values to its target customers.

1.3.4 Value Constellation

The term value constellation can be addressed differently by authors. For instance, Yunus et al. (2010) refer directly as value constellation, whereas Teece (2010) refers as value delivery and Adner (2017) uses the term “value creation” as a combination of value proposition and value constellation. In its essence, value constellation depicts a system or a network, which includes activities, suppliers and customers and illustrates how the value is produced and delivered (Yunus et al. 2010).

1.3.5 Value Capture

Value capture is “financial translation” of value proposition and value constellation it illustrates how the value is generated from the value proposition and through value constellation (Yunus et al., 2010). Value capture component within business mode framework in this study includes revenue channels and cost structures.
1.3.6 Closed to open and Open to closed Strategies

Dynamics of fostering growth or establishing more control and ensure profiting from innovation depends on the organizations desires (Appleyard & Chesbrough, 2017). A firm that applies protective patent strategy may enjoy high margins in the short timeframe, but potentially suffer from a lack of complementary innovations or retaliations from the competitors in the long run. Contrasting to this, a firm that applies an open strategy may benefit from wide use of its technology and knowledge assets, rapid adaptations, and abundance of contributors in the short run, while losing its competitive edge of the technology in the long run. Therefore, relationships between open and close strategies may shift over time due to market and firm-based dynamics (Holgersson, Granstrand, & Bogers, 2017). In this regard, Appleyard and Chesbrough (2017) introduce shifting closed to open strategy to accelerate customer surplus and adoption of technologies at a faster rate. In contrary, if the market matures and number of arrivals decrease, firms may focus on value capture more than value creation, which may end up employing proprietary strategy. This phenomenon is referred as shifting open to closed strategy.

1.4 Delimitations

To begin with, the context of this study is specifically limited, therefore, it has certain delimitations. The research does not specifically focus on certain industry; however, case companies belong to high technology (electric cars and batteries) and digital industry (internet and media), where customer needs and wants are very dynamic and ever-changing. Nevertheless, this case study does not intend to generalize the results, instead, provide detailed understanding of the phenomena with descriptions and explanations (Eisenhardt, 1989). Technology oriented firms can belong to very different contexts, even though they have similar background and industry, thus, the results may differ from firm to firm.

Furthermore, it is necessary to set limits on the value proposition and business model notion for this study. As business model literature covers broad range of topics, this
study specifically aims to strategy changes in business models as a business model innovation. These changes are regarded as shifting between closed to open and open to closed strategies, and this thesis aims to investigate how such strategy changes affect the customer value proposition of the company.

Business model framework proposed in this study includes three components, which are value proposition, value constellation and value capture. Value proposition term essentially used in various studies (Ballantyne, Frow, Varey, & Payne, 2011; Payne et al., 2017; Skålén, Gummerus, von Koskull, & Magnusson, 2015), and it is applied value literature as well as business model literature. As value propositions are basis of the business model (Teece, 2010; Yunus et al., 2010), primary focus of this thesis will be on the implications on the value proposition and how it is perceived by the stakeholders. Even though CVP framework used in study provides certain perspective on value constellation and capture, they should be treated as separate entities. However, due to the limited resources, they will not be examined as detailed as the value proposition in this study.

1.5 Research Methodology

In this study, qualitative research method is used to provide rich explanations for real-life settings and describe a specific phenomenon (Yin, 2015). For this particular case, how do changes between open and closed strategies affect value proposition of companies. Moreover, this study utilizes longitudinal approach to demonstrate causal paths, identifying strategic patterns with regards to time perspective (Aaboen, Dubois, & Lind, 2012). The objective is to gain better understanding of the concepts and how they behave in practical fields.

The research context of this study is two global leading companies in high technology and social media sector. Origins of these companies are United States; however, their products and services are represented worldwide, and they are known with their fairly recent strategic changes on their business model. In high technology industry, products can yield large sums of profit, however, customers are hesitant to invest in
high proprietary technologies due to higher prices, limited availability and possible delivery problems, therefore, business model innovation is necessity to attract customers (Chesbrough, 2007) and differentiate strategies to offer novel value propositions (Amit & Zott, 2001). In social media industry, due to rapid emergence of online communities and high internet usage creates great potential for profit and value creation. On the other hand, it leads competitive imitation, which forces companies to make strategic decisions on whether they open their business model or keep it proprietary for their value propositions (Casadesus-Masanell & Zhu, 2013, 2). These factors emphasize the importance of understanding implications of business model strategy change on customer value proposition.

In order to gain deep understanding of the phenomenon, this study utilizes broad range of secondary data. The collected data covers between the date two companies employed strategic changes till the time this research was conducted. Moreover, additional data gathered from the date going back to the establishment of two companies to enrich the context. The main sources of data consist of wide variety of archival secondary sources such as annual reports, company investor reports and presentations, industry overlook reports from various research companies, online interviews, news releases, case studies, online articles, social media posts as reactions of the online community. As Ambrosini, Bowman, and Collier (2010) suggested, teaching cases can be used in the absence of primary data and reputable sources improve the reliability. For this abundant and broad data set, netnographic multiple-case study method is used as a method of analysis, as it provides rich explanations and descriptions as well as interpretations by analysing online archival data (C. Kozinets, Robert, Dolbec, & Earley, 2014).

1.6 Structure of the Study

This study consists of two main sections, which are theoretical and empirical. First chapter introduces the theme and background, the research gap and research questions. Additionally, it introduces theoretical frameworks used in this study, main definitions as well as delimitations.
Chapter 2, 3 and 4 constitutes the main theoretical part of by the introduction of relevant existing literature reviews in regard to main concepts of this study. Chapter 2 focuses on business model and business model innovation, field of research and important concepts. Chapter 3 introduces closed to open and open to closed strategies as business model innovation and provides insights on strategy change settings. Chapter 4 specifically focuses on value proposition, different perspectives and antecedents of the value proposition concept. This section forms the base of this research and its combination with the empirical section, research questions will be answered. Chapter 5 elaborates the research methodology even further. Chapter 6 and its subchapters presents the findings and analysis of value proposition and implications after strategic changes on two case companies, as well as their industry overlook. The chapter continues with the analysis of other business model components and concludes with the analysis of reactions of stakeholders to value propositions and strategic changes. Following with Chapter 7, summary of the analysis, illuminating the research question answers, presenting theoretical and practical implications are presented. Chapter 7 also concludes this research by presenting limitations and recommendations for the future studies.
2 Business Model

Over the past years, there has been long discussions on the very definition of the term “business model” and the discussion is still ongoing in the academic community (Casadesus-Masanell & Ricart, 2010; Osterwalder & Pigneur, 2010; Wirtz et al. 2016; Cavalcante, Kesting, Ulhoi, 2011). For that reason, there are abundance of definitions, focusing on different components, industries and aspects, yet, not a consensus on a common, conclusive definition. Zott et al.’s (2011) study on this matter reveals important numbers, “of the 103 business model publications reviewed, more than one third (37%) do not define the concept at all, … existing definitions only partially overlap.”.

Academicians have deeply focused on these discussions on the definitions, which makes the progression pace of the concept very slow and hinders further development of the terminology (Massa, Tucci, & Afuah, 2014); Zott et al., 2011). For instance, Teece (2010a) defines BM as a design, which incorporates value creation components of a firm. He continues further that, technological advancements, globalization of trade, transparency of barriers enhances businesses but also escalates the rivalry, which forces companies to focus on more customer-oriented solutions, and therefore, re-evaluate how to capture the value. (Chesbrough & Rosenbloom, 2002, 529) addresses BM as “the heuristic logic that connects technical potential with the realization of the economic value.”. Casadesus-Masanell & Ricart (2010, 195) refers to BM as “reflection of the firms’ realized strategy” along with their “machine” analogy.

Reviewing studies and articles on BM reveals one fact clearly that the term business model is used to explain variety of different phenomena and therefore, the term business model represents not one concept, but many (Zott et al., 2011). Even though the lack of clarity hinders the cumulative work, these discussions contribute greatly to the definitional convergence of the concept, which allows researchers to apply the term on variety of contexts (Foss & Saebi, 2017) and presents a “homogenous” picture (Wirtz et al., 2016).
2.1 Evolution of the Business Model Concept

The business model concept origins go back in history; thus, it is not new nor novel. On the other hand, its popularity and usage spiked in recent years, both by practitioners and academicians. In their research, Ghaziani & Ventresca, (2005) analysed the use of the term BM in managerial articles between years 1975-2000. They found that 1563 publications out of 1729, which contains the term BM, belonged to the short period of time between 1995-2000. Similar research conducted by Zott et al. (2011), which proved the similar trend is progressing. Between 1975-2009, BM had been mentioned over in 8000 documents. 1200 of these documents and articles were in academic journals, which also shows the non-academic research outrides academic studies. Significant growth in publications correspond to year 1995 to recent years, which shows the interest on the concept had grown rapidly in the near history.

Recent developments in information technologies, increased globalisation and integration, transparency of the barriers made innovation and product lifecycles significantly shorter; thus, made global business to thrive, but at the same time, it caused competition to peak compared to the past years. Such changes make business models compelling to differentiate themselves from others, make it vital to adapt in dynamic and complex market environments. (Wirtz, 2011; Casadesus-Masanell & Ricart, 2010; Teece, 2010; Wirtz et al., 2016). Morris, Schindehutte, & Allen (2005, 727) refers this decade as the “new economy”; in this new economy era, emergence of the ICT and Internet based companies accelerated the further research of the concept, as their way of working is very different than classic businesses from industrial era (Teece, 2010a). However, as the new economy has diminished especially after the dot com crash, popularity of business model concept and e-commerce continued spreading across firms and led to very different approaches and discussions in the scientific arena, which is another reason why there are so many different definitions and on-going discussions on the very definition of the concept (Wirtz, 2011).
Today, business model concept continues to its development towards more unified understanding which contains the fundamental aspects of three views, which are technology oriented, organizational theory and strategy oriented views (Wirtz, 2011, 34). Although, the theoretical foundation of the concept is still very thin and fragmented due to the irregular use of the term (Wirtz et al., 2016, 3) and the lack of clarity on the combination of the significant components of the business model concept (Casadesus-Masanell & Ricart, 2010; Morris et al., 2005), there is an emerging consensus on the overall business model concept and its components (Massa et al., 2014) as well as the importance of related concepts such as “business model innovation” (Zott et al., 2011) in the course of the research.

2.2 Business Model Components

In order to possess clear comprehension on business model concept definition, distilling related components is important, as business model is usually articulated by its components (Clauss, 2017; Wirtz et al., 2016) Various authors put business strategy in the centre of business model components discussions, on the other hand, some authors focus on more definitive and clear focus on components. As different authors have different approaches to business model, their focus on components vary. Such variety, which represents similar fashion with BM definitions, adds another complexity to understand business model concept. (Clauss, 2017) review on these components or as he calls them “sub-constructs” sheds light on this matter and gives a good picture of varied conceptional views. His analysis reveals that the most refined models define about three components whereas the most complex one’s defined up to 20 components (Clauss, 2017, 5). Table 1 illustrates some of these components based on the existing literature.
From looking into the existing literature and the set of components studied, value components (value proposition, customer value proposition, value constellation, value capture, etc.) are emphasized in multiple studies. Among these studies, Osterwalder & Pigneur’s (2010) Business Model Canvas (BMC) covers the broadest set of components. Their classification consists of nine components in which they call it “nine building blocks”. BMC divides business model into two main categories; efficiency and value, and the building blocks come under these two main categories. Notwithstanding, some authors keep their focus very narrow on the components, for instance, Yunus et al. (2010) emphasize three important components of business model, which are value proposition, value constellation and profit equation. Yunus’s study on these components serves as conceptual framework in this paper, which are explained in the section 1.3.1.
In their study, Chesbrough & Rosenbloom (2002) identifies six components, which are value chain, value proposition, market segments, cost structure and competitive strategy. All these components revolve around the value as they define business model “a construct which mediates the value creation”. Afuah (2014, 156) defines business model components as capabilities, CVP, market segments, revenue model, growth model and discusses the advantages of Less-is-More-Innovations. Shafer, Smith, & Linder (2005) points out lack of clarity in the business model concept and therefore, classify four components to provide clear understanding of the concept, primarily for the practitioners. Their components consist of value network, create value, strategic choices for market, strategic choices for governance. identifies key components as CVP, profit formula, key resources and key processes and states that identifying these key components will eventually lead to effective value proposition and materialization of the value proposition. He continues his arguments as that same business model which constitutes these components can also be used to accomplish different CVP or materialization of a different opportunity (Johnson et al., 2008).

Saebi, Lien, & Foss (2016) have a different approach on business model components. In their study, they seek the answer for how to measure business model. To measure business model, they first identify and measure its components, which they identify as VP, target customer, structure of the value delivery and capture mechanisms. As a side notion; they define structure of value delivery as external collaboration with stakeholders within value chain or value ecosystem (Saebi et al., 2016, 7), which reflects the term value constellation. Casadesus-Masanell & Ricart (2010) cover BM components under two distinct categories; choices and consequences. Choices extend further to three main types, which are policies, assets and governance structures. As mentioned in section 1.4.1 the output of the “machine” (referring the BM) will depend on the combination of components and choices it was fed with and it will deliver different consequences, which also affect the efficiency of the BM (Casadesus-Masanell & Ricart 2010, 199).

Some authors reflect business model components in their studies and connections between BM and innovations. Among these studies, Teece (2010) identifies business
model components as new technologies, customer benefits, target markets, revenue streams and ways of capturing value. He defines BM as an architecture of the business, whereas these components are the elements building the foundation of this architecture. These elements or components are vital to design effective business models, Internet based industries are emerging, which also creates significant need to innovate for new value creation and capture mechanisms. Zott and Amit (2010) on the other hand, focus into business model innovation and value creation more narrowly and place BM as the source of innovations. To highlight business model innovations and their applicability, they introduce activity system which includes structure, governance and content elements (Zott and Amit 2010, 9), in which these elements depict which activities to be performed to design the business model. These discussions eventually lead to another trending and important concept within business models, which is business model innovations.

2.3 Business Model Innovation

Change in the business environment is not something new, it has been there and will always be there as long as there are technological advancements and business activities ongoing. High integration of internet in devices we use in our daily life, such as mobile phones, IoT’s and integration of internet in business made this change accelerated and sometimes harder to catch the pace by the companies. Companies need to adjust themselves continuously to create competitive edge to survive in today’s business environment (Johnson et al., 2008; Yunus et al., 2010), as competition and rivalry is getting fiercer in global and highly digitalized markets. Innovation is a great way to deal with such challenges and support companies in the search of competitive edge and adjustment process. Looking at the recent history, companies which gained significant competitive advantage, have one thing in common that is successful implementation of the BMI (Casadesus-Masanell & Ricart, 2010; Massa et al., 2014). BMI is seen by organizations as an important source of value creation in unstable environments, going it of the existing situations and specifically focuses on creating and exploiting opportunities (Schneider & Spieth, 2013).
The concept of BMI has attracted high interest from different parties in recent years, however, the phenomenon is yet to understood completely due to the variety of scope and objectives of existing literature and these existing literatures cannot catch the pace of recent developments (Wirtz et al., 2016). There are different approaches to BMI and definitions, such as Johnson et al., (2008) define BMI constructing a new business model and value proposition; Mitchell & Bruckner Coles (2004) opt for replacement of a new business model with the existing one, and Massa et al. (2014) emphasize the overall process of activities of implementing new business model by identifying environmental opportunities. Foss & Saebi, (2017, 216) defines BMI as complex and novel changes on key components of BM or architecture which connects these components. BMI generates new profit streams by incorporating different value propositions and partners in the ecosystem (Yunus et al., 2010). Therefore, BMI has a great effect on components of a business model, in which are for this study; 1. value proposition 2. value constellation and 3. value capture.

![Business Model Framework](image)

In their study, value proposition seeks to identify customers and the product or service that customers are willing to pay for; value constellation is the ecosystem of value chain and it involves partners and stakeholders within the value chain as well as seeking how the value is delivered; financial equation is the financial equivalent of anterior of the two, exploring how the value is captured financially (Yunus et al. 2010).
For the purpose of this study, there is small yet significant change. In the original concept, profit equation is designed financial equivalent of the value proposition and constellation (Yunus et al. 2010). In order to identify the ways of how the value has been captured, what alterations have been made or if there has been any alterations in the revenue system, supply of the goods or services (Teece 2010) in the course of the business model change over time, the component “profit equation” will be replaced by the “value capture”. Another rationale behind this change is that, business models involve large set of stakeholders at different levels (suppliers, partners etc.), thus, value capture includes wide set of entities taking part in the capture process (Zott et al. 2011; Bocken et al. 2014) and it can support value constellation and can illuminate how different stakeholders perceive and respond the change in the business model. In other words, value capture is more inclusionary concept to shed light on small yet significant details.

2.3.1 BMI and Value proposition

In its essence, business models serve two main functions; they create value for customer by defining set of activities and they capture the value from these activities performed by the firm (Chesbrough, 2007a). Value proposition seeks to identify customers and the product or service that customers are willing to pay for (Yunus et al., 2010) and it is one of the main tools to establish the engagement with customers.

Creating and applying innovation on value proposition can be necessary for some of the business models. For instance, social business models which aim primarily to serve society to improve poverty; such business models are different on certain aspects from profit maximizing businesses. Therefore, they require creating new propositions or applying innovations to current value propositions. (Yunus et al. 2010, 312). Even though BMI requires regular changes on the BM structure of an organization, it still relies heavily on changes on other components of the BM and their harmony with each other (Clauss, 2017).
2.3.2 BMI and Value Constellation

Value constellation is the ecosystem of value chain; it not only includes the firms’ value chain but also its partners value chain and their ecosystem as well (Yunus et al., 2010). Value constellation defines how the value is delivered to the customers. Similar to the VP, constellations require systematic innovations to keep pace with BM changes and to address changing customer needs and wants. Osterwalder clearly illustrates on 9 building blocks, which later evolved into Business Model Canvas (Osterwalder & Pigneur, 2010): how the constellation makes a net around the value proposition of a BM.

![Figure 3. 9 building blocks or Business Model Canvas. Taken from Osterwalder, (2005)](image)

Value constellations may include wide range of partners. All these partners within the constellation can contribute to the value proposition. Additionally, value constellation can increase complementary goods for the supply side and can multiply demand on the customer side (Chesbrough & Rosenbloom, 2002, 8). As businesses are increasingly represented on digital environments, networks can expand greatly all around the globe, which increases the value of constellations beyond money. Transition to digital environment potentially creates new business models and new business models may create the need to innovate constellations and activities. Value chains in Internet based businesses include intangible assets such as information, which is particularly difficult to protect and may require different approaches on interactions with partners. Similarly, new technologies may require innovations on
constellations, such as opening up platforms to partners to isolate firms themselves from their competitors.

2.3.3 BMI and Value Capture

Value capture is a complex issue when it comes to technological innovations and Internet-based businesses. Especially scientific discoveries and innovations; risk of spill-over is simply too much, which makes certain changes on value capture necessary, such as embedding the invention into the product and capture value that way rather than selling the intellectual property (Teece, 2010, 185). Internet offered services for free also makes value capture very complicated for Internet-based firms. For them bundling, premium services or even creating a new business model may be required to capture the value (Teece, 2010, 187). Casadesus-Masanell & Zhu (2013, 29) investigate BMI in value capture in competitive environment and states that adoption of a new business model can be a way to change both value creation and capture. Aligning with these authors, Chesbrough & Rosenbloom (2002) also emphasize on the business model that it should be suitable with the value capture mechanism in the first place, however, if the value capture is not as efficient as desired from the product, then business model innovation is vital. Casadesus-Masanell & Ricart (2010) also support this view by his competitive process framework and states that business model defines value capture mechanisms and it defines what tactical choices a firm has; tactical choices, which determine how much value is captured. As value capture mechanisms are tightly connected with value propositions and whole business model (Teece, 2010a), BMI can be required for an efficient value capture logic.
2.3.4 Literature Reviews on BMI

There are number of literature reviews on BM and related concepts which also cover BMI concept and research streams which include BMI (Foss & Saebi, 2017). In their article, Schneider and Spieth (2013) analysed 35 papers particularly on BMI literature and identified three main research streams, which are enablers, elements and processes and effects achieved through innovation. Even though internet and globalization lower various barriers, still drivers and prerequisites are vital to identify for innovation process. Similarly, identification of the elements plays crucial role in understanding, designing and setting into motion of innovations. As a side notion regarding these two streams, Johnson et al. (2008, 7-8) contributed five occasions, which would enable or initiate innovation process as: 1. If existing solutions are hardly affordable and complex for customers and there is a space for disruptive innovations, 2. A novel technology which can be materialized through new business model, 3. A situation where is “job-to-be-done” opportunity, 4. Evade from low-end disruptors and, 5. To address shifting competition. Lastly, impacts and effects of BMI still remains as somewhat unknown zone even today, which is again bears vital significance to understand the concept and how to react for the environmental changes (Schneider and Spieth 2013).
In their literature review, Wirtz et al. (2016) analysed 178 articles within BM and BMI literature and provide very extensive overview of the existing literature. Very briefly put, they emphasize that high integration of internet use accelerated the research on BMI literature particularly, both academic and practical fields. They identified three main research streams which resembles the concept of BMI and its components. These streams are identified as corporate strategy, innovation and technology management and entrepreneurship (Wirtz et al. 2016). Some authors in the existing literature base their BM definitions upon corporate strategy, (for instance Casadesus-Masanell and Ricart, 2010, Teece 2010, Johnson et al. 2008), therefore, Wirtz et al. (2016, 5) argue that BMI is affected and carries the remnants of the corporate strategy of a BM. Innovation and technology management carries vital importance for the research and development and management of the overall process, which goes specifically in line with Schneider and Spieth’s (2013) elements and processes view. However, among these, entrepreneurship is the least researched area and gained the most importance during the recent years (Wirtz et al., 2016).

In their recent systematic literature review, Foss & Saebi (2017) point out that the concept is still lacking clarity and there are certain gaps on antecedents of conditions. In their review, they identified four research streams. First research stream they identified is conceptualizing of BMI and it refers to identifying definitions of the BMI concept itself. Second stream takes BMI as a change process and it aligns with Schneider and Spieth’s (2013) as well as Wirtz et al.’s (2016) views. Third and fourth research streams are outcomes and consequences respectively and they address the literature focuses on what outcomes do BMI processes deliver and what are the implications for the organizations. These last literature streams are aligned with Schneider and Spieth’s (2013) study as well and in general they do overlap in certain aspects. To sum up, all these identified research streams contribute to the BMI concept, value creation and creating competitive advantage; on the other hand, majority of the literature are conceptual and descriptive, which is another obstacle on clarity (Foss & Saebi 2017).
One point in BMI definitions and existing literature reviews are that, they all touch into different components of a business model and therefore, one needs to understand well the linkages, components of BM and also the ecosystem to get a grasp of BMI (Afuah, 2014). For the ecosystems; global business arena is not in vacuum; therefore, organizations and entrepreneurs are affected by their environments and ecosystem they operate in, while designing innovations for their BM (Afuah, 2014). As BMI is seen by organizations as an important source of value creation in unstable environments (Schneider & Spieth, 2013), firms want to pursue threats within their environments to exploit opportunities (Afuah, 2014, 37). In such environments, uncertainties are often high, which makes collaboration with ecosystem partners and adapting commotional knowledge into changing environment is vital for organization to survive (Sosna, Treviño-Rodríguez, & Velamuri, 2010). Recent IBM study conducted with 2148 CEO’s shows that partnering with ecosystem players is getting more significant than ever for co-creation and innovation; 57 percent of the CEO’s collaborate with their ecosystem partners for innovations (Global C-suite Study, 2018, 13-14).

Although the definitions and identified research streams overlap in certain aspects, it proves that the concept is still emerging. It also shows clearly that, BMI originates from BM in its essence; as business models enable R&D and various innovations to seek competitive advantage over competition (Demil & Lecocq, 2010). These innovations can be radical or disruptive, which could require not necessarily incremental changes but change in whole business model system (Cavalcante et al., 2011; Yunus et al., 2010). Successful business models prevent organizations to take such path of change in their business models (Chesbrough & Rosenbloom, 2002), however, due to uncertainties about future and complexity of the competition will cause a challenge between old and new business models (Markides, 2006), which eventually takes us to consider open and closed business models.
2.4 Open and Closed Business Models

The way companies do business is under constant transformation today. Few decades ago, internal and strictly protected R&D was considered as one of the biggest asset firms have, however, new firms or start-ups are opting for getting development ideas from outside more and more (Chesbrough, 2003a). This trend gained popularity after Chesbrough coined the term open business model, which is very much linked with the open innovation (Weiblen, 2016). Therefore, one might think that open and closed business models are linked with open and closed innovation phenomenon. However, there are grey areas before such interpretation (Leminen, Turunen, & Westerlund, 2015; Weiblen, 2016): as closed innovation does not provide much to explain firm’s value creation and capture mechanisms, ecosystem and relations with external partners, and; there are cases that open business models may not always utilize open innovation model in their value creation processes (Weiblen, 2016). However, in this study, open and closed innovation systems will still be linked with open and closed business models to get better idea about the nature of the business models.

Opening business models, embracing external ideas to improve processes, transforming from proprietary approach to openness is widely recognized form of business model innovation (Chesbrough, 2006; Chesbrough, 2007b). Osterwalder, Pigneur and Tucci (2005) also regard that moving from close to open business models and collaborating with external partners as an effective and profitable way of creating and capturing value. On the other hand, depending on the type of business or product and competitive environment, moving from open to more proprietary - closed approach might yield better value capture (Appleyard & Chesbrough, 2017).

2.4.1 Closed Business Model

In the existing literature, there isn’t a particular definition for the term closed business model (CBM); it is a generic term, which represents traditional business models that firms focus internally or inwardly in terms of value creation and value chain. Literature
reviews on this specific term tend to have very different focus and therefore, only mention closed business models shallowly. On the other hand, as reviewed on the section 2, there are abundance of literature reviews on business models. Notwithstanding the lack of definition or literature reviews on the specific term, Chesbrough (2003a;2003b;2006) links the term with closed innovation model. Even though they are two different concepts, it seems semantically correct to link two phenomena, by focusing on Chesbrough’s work.

![Knowledge Landscape in Closed Innovation](image)

**Figure 5. The Knowledge Landscape in Closed Innovation. Based on Henry Chesbrough, “Open Innovation: The new imperative for creating and profiting from technology”, (2003a, 31)**

Firms, which incorporate closed business and innovation model use their internal capabilities and assets to materialize their ideas. Firm boundaries are strict and even stricter when it comes to R&D operations. On the other hand, this rigidity provides certain advantages to the firms, as they potentially accumulate in-house innovations over the years (Dąbrowska, Lopez-Vega & Ritala, 2019). One clear difference between open and close model reveals in idea screening phase, where close innovation is relevant. In closed environments, “false negative” ideas tend to be missed due to risk aversion and corporate boundaries, which usually ends up with valuable spill-overs (Chesbrough, 2003b, 37). Still, until the end of 20th century, closed model was seen as critical asset, which determined the success of the companies for number of valid reasons. One reason is that firms hope to achieve longer lifespan (Sydow et al., 2009) and success in their market (Hannan & Freeman, 1984), as it becomes increasingly difficult to manage operations in a larger scale (Dąbrowska,
Chesbrough (2003a) states that one of the biggest reasons behind was the gap between scientific studies and their practical or commercial applications, which created the need for companies to set up their own research centres to be able reap profits from scientific discoveries. Therefore, companies started to establish R&D facilities and employed highly qualified people, that resulted with new discoveries and technologies, varying from synthetic fibres to lasers (Chesbrough, 2003b). In closed business models, which incorporate closed innovation, ideas are generated and developed internally and embraces “successful innovation requires control” motto (Chesbrough, 2003b, 36).

In spite of the growing literature on open business models and value components, it is very challenging to find studies specifically addressing CBM’s or proprietary models and their relationship with the value components. Despite the lack of taxonomy and clarity, CBM’s aim for value creation and capture, which designs its value proposition considering its customer segment, captures value and incorporates network of partners (Holm, Günzel, & Ulhøi, 2013). However, these activities are done in-house, rather than incorporating external resources; as in-house operations can be less costly in the long term, less risky and easier to control and coordinate (Porter, 1998, 301). RBV and “inimitability” also plays important role while designing value propositions in closed models (Alexy et al., 2017). Today, companies are in collaboration with each other one way or another with their constellation, however, closed models don’t “include” external partners; they keep collaboration on a simple level such as selling and sourcing (Weiblen, 2016). Therefore, close models limit leveraging capability of value capture mechanisms (Holm et al., 2013; Weiblen, 2016). Compared with open models, CBM is narrower concept as it excludes external resources (Chesbrough, 2007b).

By the end of 90’s, closed innovation model lost its popularity in terms of being a critical asset, due to several reasons according to Chesbrough (2003a;2003b). One factor is that; as the mobility of employees increased, availability of qualified work force also increased, and it became more and more challenging to control spill-overs. Emergence of the venture capitals gave opportunity to the experts to establish their
own start-ups. Such factors contributed external suppliers to advance their products and benefit from economies of scale. Therefore, closed innovation systems become more and more financial burden for companies (Chesbrough, 2003b, 40). Even though the eroding factors, closed innovation model is not abandoned completely and used partially (Weiblen, 2016) by many industry giants and focal firms today. Depending on the industry and the product, some companies even revert to proprietary strategies, which is covered in Section 3. However, open business models gained undeniable popularity during last two decades, both by practitioners and scholars, and it offers much more than closed business models in terms of opportunity (Alexy et al., 2017).

2.4.2 Open Business Model (OBM)

Open business model is a form of BMI, which attracted many authors attention (Amit & Zott, 2001). This form of innovation primarily suggested by Chesbrough (2003a;2003b;2006) to transform traditional closed model into an open one. Contrary to closed model, OBM embraces external ideas for R&D (Chesbrough, 2003a) and firms can use external channels for materialization of their ideas, such as licencing (Chesbrough, 2003b). Technological advancements and rivalry lead companies to explore complementary resources; therefore, opening business can provide external resources in terms of R&D and increase the potential to enter new markets (Chesbrough, 2006). This is particularly attractive for large enterprises with closed business models, because it offers lucrative benefits in terms of time and money (Holm et al., 2013). Such exploration also aligns with open innovation, as ideas to create value can come from inside or outside of the company. Christensen (2006) argues that companies need to understand the need of vertical disintegration and letting control go over certain parts of value chain to external stakeholders, in order to create and capture value much more efficiently. Therefore, OBM’s are required, if a firm adopts open innovation practices; as they include competencies and practices to embrace external partners (Chesbrough, 2006).
Open innovation phenomenon particularly focuses on openness in research and development processes. However, open business model includes broader spectrum; such as value creation and capture mechanisms, ecosystem and has very broad perspective on resources (Storbacka et al 2012), which means, incorporating open innovation on R&D does not necessarily makes a business model open. This perspective helps for clarity as well; open business models do not have to operate in terms of open innovation principles (Weiblen, 2016, 51), which complements Chesbrough’s view on open business models and open innovation.

OBM’s make use of internal as well as external ideas and resources for their value propositions (Sheets & Crawford, 2012). As they utilize external resources, value constellation is particularly important for OBM’s to capture value. They specifically include their constellation (stakeholders in their value chain and activities) in their value creation and formulation of their value propositions; which leads to collaborative value creation and capture (Weiblen, 2016). One might think that closed models as well collaborate with their constellation, so what is the difference? The difference lies within “inclusion” of the external resources, not simple interactions such as sourcing or selling (Weiblen, 2016, 54). This inclusion of external resources and partners can
leverage efficiency of the value capture by using external partners’ key assets, or partners can leverage their value capture mechanisms (Chesbrough, 2007b).

Opening up businesses or keeping closed depends upon type of business, product and environment. For instance, platform-based or Internet based businesses may opt for open source strategy to maximise appropriability (West, 2003), whereas some others can keep some aspects open, some aspects closed in their business model (Laursen & Salter, 2006). Therefore, companies should analyse their environment and business to make the choice, because; despite its growing popularity, opening up introduces new costs to the firm (Dahlander & Gann, 2010) and may not be beneficial all the time. For instance, collaboration with too many external partners can impose high costs, which might also distract management’s attention, and critical problems may arise due to opportunistic behaviour of the partners (Dahlander & Gann, 2010, 706). Considering downsides and requirements or bolstering value creation and capture activities, firms can decide to adopt open strategy and opt for BMI to open their business model, or maintain their closed model, or switch between open to proprietary approaches.
3 Strategic shifts between closed and open strategies

Despite growing interest on open strategies and business model innovations, there is lack of studies on what are the motives on companies to decide whether they open or move towards proprietary approach in their business models (Appleyard & Chesbrough, 2017). These motives lead to strategic change from closed to open or open to closed, and studies are still emerging, especially on open to closed aspect. However, at the very heart of these motives and strategic moves lie appropriating value from innovation, which broadens the range of studies.

Closed to open and open to closed business strategy changes have been studied thoroughly within open innovation literature, however, Appleyard and Chesbrough’s (2017) work has taken as a cornerstone in this study, because of their focused approach on the phenomenon. Their study reveals that, in the essence, firms are motivated either growth or higher profits, which leads to more open or proprietary approach respectively; and the firms’ choice of either strategy shows their preference, value capture or collaborative value creation (p. 310). Adapting an open strategy on the early phases of the business can attract customers, however, as market saturation gets near the culmination point, reversing to proprietary approach becomes more attractive. Environmental and market forces play significant role here; opting for open strategy for a closed project or reverting to proprietary strategy may depend on the product adoption rate, structure of the ecosystem and competitiveness of the market (Appleyard & Chesbrough, 2017, 310). This view aligns and complements Teece’s (1986) perspective on “profiting from innovation”, as he argues that appropriability regime/strategy depends on the technological and legal environment as well as access to complementary assets.

Based on these factors, if the environment is right, firms can make strategic decisions on adapting open strategy or reverting proprietary model. Or combination of both regimes, meaning that openness and accessibility can be differentiated across
different partners within value constellation, or accessibility to technologies can be balanced by offering some technologies openly at the same time keeping proprietary complementing technologies and capturing value from them (Holgersson, Granstrand, & Bogers, 2017). Alexy et al. (2017, 14) refers value capture from complementary resources as “value migration”, meaning that reducing value capture to distil more value from complementary products, similar to “razor and blade” models. Additionally, Appleyard & Chesbrough (2017) illustrated a matrix of decisions in the Figure 8 to emphasize dynamic nature of strategy migrations and value related motives behind. In the figure, Ex Ante represents the initial strategy and Ex Post represents remaining strategy of a firm.

![Figure 7. Open-Close Strategic Choice Dynamics with examples. Adapted from Appleyard & Chesbrough (2017, 311)](image)

Companies in Closed-Closed cell benefits their profit by their proprietary products, monopolistic position in the market and high producer surplus, where companies in Open-Open cell capture value from both high producer and consumer surplus, and complementary goods and services provided along the free ones. In the meantime, consumer and producer surpluses change according to dynamics and of the market for the companies in Open-Closed and Closed-Open cells. (Appleyard & Chesbrough, 2017, 313) Appleyard & Chesbrough (2017) provide further details for open approach: large number of contributors can be attracted, which would drag down the costs, improve quality, maximize parallel experiments and therefore, results in higher
producer surplus. For the consumer surplus perspective, openly available products would be free, and customer can capture the value anywhere within the value chain; resulting higher customer surplus. This view aligns with Swann (2014, 34), as he argues that new and existing customers would opt for lower price which in return provides higher consumer surplus. This matrix and perspectives on strategy migrations lead discussion to drivers behind choices.

3.1.1 Closed to open Strategy Change

Motives behind shifting strategy from closed to open business model can be found in number of studies under open strategy context. As opening falls under BMI context (Chesbrough, 2006), studies from that phenomena can be incorporated as well.

Drivers behind migration in strategic orientation may vary, for instance, Saebi et al. (2016) examine these drivers on a broad perspective as opportunities and threads. Laursen & Salter (2006) emphasize on innovation and technology as main driver and state that adapting open strategy is important for the search of innovation sources from external parties, because companies will need number of sources to contribute their innovation and technology development processes. Otherwise, sticking with closed model may be symptom of organisational myopia. Holm et al. (2013) go hand in hand with this perspective; technological innovation as main driver behind adaption of open strategy, to explore complementary assets held by third parties, thus, increase value creation and capture. Furthermore, Appleyard & Chesbrough (2017) contribute more; open strategy generates higher customer surplus in two ways: firstly, it enables customers to tailor the product to a level. This customization can compensate the costs and delivers higher value for the customers. Secondly, open strategy promotes freely available or open sourced products along with complementary services. This eliminates license fees, generates higher customer surplus and attracts more contributors.
At this point, Alexy et al. (2017) emphasize creating and appropriating value through openness as a key drive and details relation between consumer surplus, value creation. In their study, they identify consumer surplus as identical to resource value. By opting for open strategy, firms neutralize “inimitability” aspect, therefore, open up more space for competitors and new entrants for imitations, which results in lower prices. Aligning with Appleyard & Chesbrough’s (2017) view, third parties and customer involvement enables customization through open resources. Lastly, openness allows companies to coordinate mutually to create novel products, therefore be able to form complex value propositions (p. 8). These value propositions may attract customers from proprietary products to open ones, because it enables cooperation and easy entry for others (Moritz et al. 2015 in Alexy et al. 2017, 8), thus, further value creation can be achieved.

In the existing literature, some authors emphasize competencies to support their decisions for such significant strategy migration. Even though he mainly addresses to OI, Christensen (2006) identifies three major competencies in a rather broad sense, for open initiatives. According to his study, companies should have absorptive capacity to enable coordination between external stakeholders and value chain, and to be able to diversify the product portfolio of the company. Second, integrative competencies required to integrate dispersed value constellation elements and company specific knowledge. Third competence is the dynamic capacity to share knowledge between stakeholders and reconfigure company knowledge.

Appleyard & Chesbrough (2017) contribute with couple more of aforementioned competencies: technology prowess and organizational support. They explain technology prowess as “ability to apply its knowledge stock to the innovation initiative at hand.” (p. 316). Appleyard et al.’s (2008) “ecosystem effect” complements to this competency: if a firms’ prowess level is close to its competitors, cooperation in an open initiative can enable all parties to capture more value by means of supportive ecosystem, even though it lowers the profits due to its distribution between number of stakeholders. This effect leads to organizational support, which is vital for companies.
migrating from closed to open strategy. It is vital because collaboration to develop processes requires substantial amount of organizational support.

3.1.2 Reversion from Open to Closed

Open strategy can be crucial, for instance for rapid adoption, and later working with a large community to foster innovation, however, based on the circumstances; a revision of strategy might be required to revert back to closed approach (Appleyard & Chesbrough, 2017). For instance, trade-offs between losing control technology input gained can also be the determinant of reversing back to close strategy (Casadesus-Masanell & Almirall, 2010). Additionally, large communities can be very costly and difficult to sustain unlike their contributions or internal/external factors may force firms to reassess their position, which reveals open to closed strategy as a way to sustain business over time (Chesbrough & Appleyard, 2007).

This phenomena has not yet attracted much interest compared with closed to open strategy, and lack of studies narrows down diversity of literatures to review. Appleyard & Chesbrough’s (2017) study makes the pivotal contribution once again. In their work, they distinguished shift driven factors under two main sections as firm-driven and market-driven.
Appleyard & Chesbrough (2017) further break down firm-driven factors. Internal technology prowess as if a firm accumulated enough expertise to develop the product by itself without the help of the community. Aiming on quality and mastery can trigger such strategic change. Similar to Appleyard et al.’s (2008) ecosystem effect, firms need to consider whether their supportive ecosystem generates any further value or is it taking the control over? The answer could be another driver behind the shift. As part of this ecosystem, forging strong relationship with the customer base is another critical point. One motivation could be identified as dissipation of interest between partners of the open initiative, whether the goals are reached or fell short can drive companies to revert. Finally, if the open initiative poses a risk for the main business, companies can consider close strategy to protect their position.

For the market-driven factors, Appleyard & Chesbrough (2017, 315) state that the rate of customer arrivals is one factor which determines balance between value creation and value capture; open initiatives can attract customers faster than closed initiatives, however when the market matures, firms focus migrates “from value creation to value capture”, which promotes closed approach. As the last driver factor, their study emphasizes that under similar mature market conditions, customers opt for stability.
and firms desire to provide better customer experience, therefore, companies may decide to revert their strategy to closed one to be able to sustain stability in their product platforms.

Based on these two main categories of drivers, Appleyard & Chesbrough (2017) boil down firms’ perspective on making strategic migration to “liberate-control” and “variety-stability” and illustrates the interaction between customer and innovator as in Figure 10.

![Figure 9. Customer - Innovator interaction for strategic decision. Adapted from (Appleyard & Chesbrough, 2017)](image)

Based on these motivations and drivers behind, firms may decide to adaption of an open or reverting back to proprietary model strategies; and sometimes apply for “hybrid” models, where some aspect of their business model stays closed and some aspects are open, and there is no distinct border between these two aspects (Appleyard & Chesbrough, 2017). Adopting an open approach strategy can provide rich external sources for R&D, extend firms core competencies by using external partners, multiply network effect and thus enable to formulate novel value propositions and various combination of value capture mechanisms (Alexy et al., 2017; Appleyard...
In order to maintain value creation and capture, firms should have certain competencies (Appleyard & Chesbrough, 2017). On the other hand, firms sustainability may depend on reverting back to closed and more proprietary or hybrid strategy after sometime (Chesbrough & Appleyard, 2007), as high number of external collaboration declines the firm’s ability to generate value over time (Appleyard & Chesbrough, 2017, 318).
4 Value Proposition

Appearance of the concept value proposition goes back to 1980s and since then, the term has been used widely by the managers and academicians, yet, there are very little research on the topic (Payne et al., 2017; Ballantyne et al., 2011; Payne and Frow, 2011). Payne et al., (2017, 1) state that the concept appears in EBSCO database in 1995, nearly 90 studies published by 2015 and 560 references made between 2006 to 2016, showing that increased attention. Just like business models, views and definitions of the concept varies from author to author based on what specific aspect and industry they focus on, which may cause confusions on the definition of related terms and concepts (Payne et al., 2017).

Rintamaki et al. (2007) define value proposition as a formulation of what is value for customers that the company can deliver, and which gives the company a competitive edge. Ballantyne and Varey’s (2006) emphasis is on co-creation of the value to enable value exchange between suppliers and customers. Ballantyne et al. (2011) define value proposition as an offer or promise which is communicated by the firm to its customers. Adner (2016, 5) opts for more broad perspective and he defines VP as, a “promise benefit” for the “target”. Payne et al., (2017, 6) use the customer value proposition and defines it as “strategic tool … to offer superior value package to targeted customers”.

One detail that shows fragmentation and emerging state of the literature is the use of interchangeable terms. Although there are variety of definitions and perspective or context changes from author to author, “customer” aspect remains in common in majority of the definitions. Within these definitions and studies, customer value proposition may seem to be narrower than value proposition. CVP includes not only customers into account but also stakeholders, however there isn’t a distinctive line between two. For instance, Anderson et al. (2006) use the term CVP and implies that it is value proposition which resonates with the customer, however, they do not differentiate two terms and use them interchangeably. Similarly, Payne et al. (2017)
specifically focus on CVP in their study and uses the term interchangeably with the value proposition.

4.1 Evolution of the Concept

In order to make distinction between related terms, one needs to look at origins and evolution of the concept value proposition to comprehend different perspectives and later antecedents and effects. Payne et al. (2017) make extensive review on origins and development of the concept and they trace the origins back to 1910’s, starting as propositions concept. Figure 11 illustrates their findings of development on a chronological manner.

Over the years following proposition of core benefits concept, value proposition concept evolved gradually. Bower and Garda (1986 in Payne et al. 2017, 4) introduced the value delivery system and later on Lanning and Michaels’s work in 1988 extended this concept and defined value proposition as benefits offered to a customer and price they willing to pay (Ballantyne et al., 2011; Payne et al., 2017; Skålén et al., 2015). Their approach to concept consisted on three steps value delivery system, which included “choosing, providing and communication the value” (Ballantyne et al., 2011,
Complementing their study, they extended their definition by adding "entire set of experiences" and proposing higher engagement with customer as not to think like one but becoming one (Lanning, 1998 in Payne et al. 2017, 4).

In their book, Smith & Wheeler (2002) specifically focused on customer experience and delivering the superior value. They stated that “experience is every firms’ value proposition” (Smith & Wheeler, 2002, 73). A year later, Ballantyne (2003) introduced creating value propositions in a reciprocal way by firms work with their customers. Extending Ballantyne’s (2003) work, Lusch & Vargo (2006) emphasized the importance of the cocreated value propositions especially in service dominant logic. Anderson, Narus, & Van Rossum (2006) identified value proposition under three types; all benefits, favourable points of difference and resonating focus, to distinguish focus points for firms to identify what their customer wants and needs. In their study, Rintamäki et al. (2007) identified four dimensions to develop customer value propositions upon, which are economic, functional, emotional and symbolic dimensions. Therefore, CVP could address how customer and firm perceives the value (p 631). Their study extended CVP concept further by evaluating it through network perspective (Payne et al., 2017, 4).

Recent developments in the existing literature shows that studies emphasize broad range of stakeholder engagement. In their study, Ballantyne et al. (2011) point out that active and wider stakeholder engagement is required to integrate resources. Truong, Simmons, & Palmer (2012) align with this view and suggest that value propositions should embrace not only customer-supplier relationship, but whole network of stakeholders. As other research streams developed, customer value propositions extended toward innovation direction. Skålén et al. (2015) looked value propositions through service innovation perspective and suggested that value propositions are combination of different resource and practices. Their study reveals four different ways of service innovation, which leads creation of value propositions. These ways are adaptation, resource-based innovation, practise-based innovation and combinative innovation. In their study, Payne et al. (2017) address the customer value proposition with respect to firm, customers, stakeholders and proposed conceptual framework to
illustrate characterization and influence of CVP's, which is also used in this study as a theoretical framework and illustrated below.

![Figure 11. CVP framework, adjusted from Payne et al. 2017](image)

As this study focuses on the business model change by closed to open or open to closed strategies, and its implications on the customer value proposition. To analyse and interpret these implications, it is important to identify perspectives and the
antecedents of the value proposition. In CVP framework, Payne et al. (2017) points out three different perspectives and classifies antecedents into two main categories; firm-based resources, which could consist of tangible and intangible resources (Barney & Arikan, 2006) or capabilities which could enhance the productivity (Makadok 2001), and market-based resources that consist of marketing activities. Next section reviews these perspectives and antecedents in the light of Payne et al.’s (2017) and other authors views in the existing literature.

4.2 Perspectives on Value Proposition

Reviewing the origins and prior literature suggests clearly that the customer value proposition concept is still emerging. However, there are certain perspectives on customer value proposition, which deserves attention. As Anderson et al., (2006, 91) state that “There is no common agreement as to what constitutes a customer value proposition”, elaborating different perspectives is important for the clarity of the concept (Payne et al., 2017).

Goods Dominant (G-D) Perspective

Basis of G-D perspective goes back to the value delivery system, which includes three stages; choosing the VP, providing the VP and communicating the VP (Ballantyne et al., 2011; Payne et al., 2017; Skålén et al., 2015). Goods dominant perspective is named differently by authors; for instance; Ballantyne et al. (2011) refer it as “supplier crafted value”, whereas Payne et al. (2017) refer it as “supplier-determined perspective”. Different names point out one aspect in common, which is the supplier. G-D perspective on the value proposition concept argues that value as a marketing offer, should resonate with the what customers want (Skålén et al., 2015), and it should be communicated by a supplier to a customer (Ballantyne et al., 2011). Anderson et al. (2006) adopt this perspective in his study and emphasized it three different value proposition types. Rintamäki et al. (2007, 630) adopt the similar perspective in his study and emphasize on suppliers’ competencies to create and deliver customer value
proposition and create competitive edge. Vargo and Lusch (2008) align with this perspective as they state that value should be embedded in the goods to ensure supplier to customer mechanism.

Service Dominant (S-D) Perspective

Lusch & Vargo (2006, 407) state that S-D perspective is a “challenging method to the fundamental marketing”. According to Ballantyne et al. (2011), S-D perspective assumes that value is co-created by both customers and firms. They point out that suppliers don’t just deliver the value to the customers, suppliers deliver the value “with” customers, thus, value is created in a relation and interactivity (p 202). Skålén et al. (2015) share this definition and state that value is created during interactions. They continue that firms cannot deliver the value like in G-D perspective, because it depends on the context and interaction between company and customer. Additionally, Payne et al. (2017, 6) emphasize customer perspective and experience is important, thus, firms try to identify what attributes are more valuable for their customers. S-D perspective includes to value creation process not only customers but network of stakeholders, therefore, all parties can collaborate with each other, integrate their resources and create value (Ballantyne et al., 2011; Lusch & Vargo, 2006).

Mutually Determined Perspective

S-D perspective introduces the co-creation of the value and mutually determined perspective extends its context further. Ballantyne (2003) states that this perspective includes reciprocal benefits between firms and customers. Aligned with this view, Glaser (2006) also points out that if the firm and customers realize that they can mutually benefit from a negotiation, value outcomes can be improved. Ballantyne & Varey (2006) and Ballantyne et al. (2011) specifically emphasize this reciprocal realization and communication of the negotiation of the value creation. Similar to these views, Day (2011) suggests that mutually determined value propositions include the benefits which occurs before, during and after customer experience of using the
product or service. Moreover, Payne et al. (2017) argue that mutually determined perspective is significant for B2B context as it considers how the value is delivered across the customer relationships. For instance, fast food and computer parts offer highest value at different stages of consumption. Finally, they state that this perspective extends CVP and encourages it to engage with customers and stakeholders to achieve better value outcomes.

4.3 Antecedents of Value Proposition

Antecedents can help to identify and provide further insights on value proposition. In their study, Kozlenkova, Samaha, & Palmatier (2014) identified four resources which are identified by Payne et al. (2017) as antecedents of CVP.

4.3.1 Market Knowledge

Kozlenkova et al. (2014) state that there is a shift toward more knowledge-based economies, which makes knowledge as a success factor. Payne et al. (2017), align with this view and points that market knowledge, which consist of customer and competitor knowledge is a significant competitive advantage source for companies. They continue that in B2B and B2C context, it is vital for firms to understand their customers and how customers objectives and needs, and how they would be affected after value creation and use. Similarly, good knowledge about rivals is vital to assess in order to measure “superiority or inferiority” of the value (Payne et al., 2017, 10).

4.3.2 Innovation

According to Skålén et al. (2015), innovation is the substance to develop value propositions and different practices in new ways. As their view adopts S-D logic, they emphasize the service innovation specifically, and point out that service innovation
must be planned from the customer perspective, therefore it would identify new resources within value constellations. Similar view is argued by Chesbrough (2003a) from the open innovation viewpoint that new resources can be created through collaborations in open initiatives. Payne et al. (2017) touch upon another issue that CVP’s help companies to discover new or existing problems and develop solutions by adopting innovation and innovative practices.

4.3.3 Product Knowledge

According to Behrman & Perreault (1982), product knowledge refers understanding of application and features of the goods or services offered by the firm, which is required to address problems on the customer front. Therefore, it should be developed by the company (Payne et al., 2017). Schmitz, Lee and Lilien (2014) identify product knowledge as vital component for CVP creation and emphasize that its combination with market knowledge would deliver full promise and benefit.

4.3.4 CVP Formalization

Osterwalder et al. (2014) refer formalization as to organizational processes required for value propositions, managerial processes in general and seeking how to deliver the value to the target customers. Payne et al. (2017) emphasize that formalization enables identifying resources, customer relationships to unleash full potential of CVP’s. They also stress that, despite its importance, not many firms realize the significance of formalizations for CVP creation.

4.3.5 Leadership Support

Payne et al., (2017) define leadership support as strategic vision of the firms and how leaders can characterize this vision. They continue that leadership support is important
in a sense that it emphasizes the importance of CVP’s strategically and help firms to identify market opportunities.

4.4 Consequences of Value Proposition

Customer value propositions can affect both firms and customers in number of ways. According to Morgan (2012), CVP’s enhance firms’ responsiveness by pointing out that supplier’s purpose is to address what customer’s need and satisfy that need. Additionally, Saura et al. (2005) point out that CVP’s can strengthen the bond between company and employees and like emotional and psychological attachment. In this context, leadership support and formalization as antecedents of CVP, bolsters the impact of CVP on the companies as the leaders can establish sense of purpose among employees by committing company resources to the right customer needs (Payne et al. (2017). Moreover, Payne et al. (2017) argue that CVP’s affect customers in a positive way by addressing their perception of value, providing stream of satisfaction and providing clear sense of what benefits they receive at what cost. In customer perspective, brand reputation, relationships with customers and design characteristics are significant resources to identify CVP’s impact on customers.

4.4.1 Customer relationships and Brand Reputation

According to Macdonald et al. (2016), it is often challenging for customers to understand what the value promise is they get and how to utilize this value in a specific context and to make the distinction between promised and realized cost savings. In that sense, companies that have stronger brand image have stronger impact on customers as the communicate their value promise more effectively (Payne et al., 2017). Anderson and Weitz (1992) argue another plus on the strong brand reputation that, it provides sense of trust to customers that the firm will keep its promise and deliver the promised value. In return, customers will develop emotional bond and trust towards the company. Similarly, Payne et al. (2017) follow these views and argues
that maintaining good customer relationships will return as good reference and credibility of the company and it will establish the bond between firm and customer.

4.4.2 Design Characteristics

Final consequence aspect which affects firms and customers is design characteristics of CVP’s. On this front, Payne et al. (2017) identify four categories for the design characteristics which are the CVP perspectives, explicitness, granularity and focus. They point out that based on the perspective adopted, firms can identify their true potential. Explicitly communicating the value proposition is vital to avoid confusions and ambiguity in the customer’s mind. Chandrashekaran et al. (2007) align with this argument and state that explicit and clear value propositions helps customers to have realistic expectations. Next, granularity refers that CVP’s can be crafted in different levels such as on different firm or customer segment level. Lastly, focus is the extend of the value dimensions. Rintamäki et al. (2007) argue that value propositions differ significantly according to their extend of value dimensions.
5 Research Methodology

Recent business studies covering the last two decades, whether in theoretical or practical context, have been utilizing qualitative research methods, in order to enable various interpretations and to define different concepts (Foss & Saebi, 2017; Haas, 2018; Johnson et al., 2008; Teece, 2010b; Wirtz, 2011). Additionally, case study methods are suitable to understand and explore why the choices were made by the case companies (Ghauri & Firth, 2009) and to explore undiscovered realms holistically (Eisenhardt, 1989; Yin, 2015). As Tesla Inc. and Reddit Inc. were chosen due to their recent significant changes in their business models, multiple case study approach was suited best for this research. Multiple case study can be also valuable as the scarcity of similar researches, as this very specific topic intersecting BMI and marketing field has not yet gathered much attention compared with BMI and BM studies.

On a higher level, aim of this research is to illuminate how different concepts behave in practice and affect different elements within business and marketing scope. In this study, “concepts” represent business models, business model innovations and value propositions. “Elements” represent individuals as consumers and other parties such as suppliers or other business partners. To illuminate the topic of this study, it is vital to capture different perspectives of individuals and focus on how they think and approach to changes. To identify causal paths and identifying strategic patterns, time perspective should be considered as well (Aaboen et al., 2012), therefore, longitudinal approach utilized as well.

In this regard, internet and social media can be used as a source, which provides vast amount of rich and rare data and eliminates certain geographical and time-related barriers (Kozinets et al., 2014). In order to analyse large amount of such data requires understanding of internet communities and social media dynamics, which points to netnographic analysis.
5.1 Netnographic Research

In this era, field of Internet offers vast amount of data, which is provided by members who belong completely different backgrounds, values and environments. Internet and social media platforms remove certain barriers such as accessibility, geography and time; and allows researchers to reach enormous rich and rare data. Netnography (Internet + ethnography), is an established qualitative technique that combines the analysis of such archival data and different forms of digital data available online. (Kozinets, 2010) The term introduced by Robert Kozinets as an “adaptation of qualitative methods used in consumer research, cultural anthropology, cultural studies … enabling study of consumer behaviour of virtual communities …” (Kozinets, 1998 2). Netnography provides certain flexibility to discover diverse behaviour of stakeholders within diverse and complex online environment (Kozinets et al., 2014).

Comparing with ethnography, netnography is not only used in social and cultural studies but also in different business practices. It is more flexible approach, which can be accompanied with different research methods. (Kozinets et al., 2014; Scaramuzzino, 2012) In one of his study, Kozinets et al. (2014) highlight certain distinct features of netnography, which are:

1. High accessibility
2. Variations in communications
3. Interactions between different platforms
4. Increased archiving capabilities

Even though these characteristics enable vast opportunities, netnography brings number of challenges along. Online interactions include variables, which makes them very complex: they can take place either privately, publicly or both. Time aspect adds one layer more, interactions can happen over different time periods with large number of contributors (Ruhleder, 2000). Interactions can take place on multiple number of platforms, which requires researcher to be present on multiple platforms and have the capabilities to use and navigate different systems. Kozinets et al. (2014) highlight some other challenges that online and “real world” settings can be very different, in
which netnographic research may only provide partial and altered view. Gathering data from online sources requires taking ethics, privacy and consent related into account. Lastly, online environment can provide so much relevant and irrelevant data, which may cause “data asphyxiation”.

This study aims to discover business model innovation implications on value proposition in the eye of the stakeholders, whether they are consumers or partners, which makes analysis of their views very valuable. Additionally, time and accessibility problems due to case companies make netnography a suitable research method for this study.

5.2 Case Study

Case studies offer more flexibility as they enable conducting layers of complex analysis (Yin, 2017), which may be of the of reasons why they are used throughout the scientific research projects. In her study, Eisenhardt defines case study as a strategy, which “focuses on understanding the dynamics present within single settings” (Eisenhardt, 1989 534) and provides opportunity to better understand phenomena by providing valuable explanations as well as descriptions (Eisenhardt, 1989). Case studies as a method are also suitable method for answering “How” and “Why” questions as they are likely to explain and direct researcher to study a case (Yin, 2017). This research employs both How and Why, which points the direction of case study method.

Another important factor, if case study method is considered is the researchers ability to control behavioral events. Yin (2017 43) highlights that experiments require direct manipulation of behaviour, whereas in case studies; applicable behaviours cannot be manipulated and the purpose is to study contemporary set of events. As the phenomenon this study employs is contemporary and does not require any manipulation on behaviour, it justifies the appropriability of case study as a research method.
Even though there are no strict methodological distinctions between single and multiple case studies, multiple case studies can be more advantageous and more complex at the same time; they require considerably more resources and there is a possibility of direct replication even if there are only two case studies (Yin, 2017 98). The cases of Reddit and Tesla represent strategic business changes to address problems originating from market and firm driven dynamics. While Tesla opted for closed to open, Reddit went open to closed path. These transformations may have certain implications on value propositions over time. In that sense, the cases selected are in conjunction of multiple concepts, which makes the topic rather complex and may require direct replication in the future. Further, the motivation behind research questions selected for this study is to take a deeper look into value proposition components and implications with strategic transformations. In that sense, multiple case study method enables the analysis of data within each case and across the cases. Additionally, two different cases investigated in this study are expected to reveal similar results, which aligns with the literal replication logic (Yin, 2017 97). Therefore, multiple case study method serves best for this research.
5.3 Data Collection

There are multiple methods of data collection in case studies, and the gathered data can be either qualitative or quantitative; and in some cases, it can be both (Eisenhardt, 1989; Yin, 2015). The nature of data used in this research is qualitative, which consist of secondary archival data; annual reports, corporate blogs and news, free form prospectuses, online interviews, industry overlook reports, news articles, online discussions gathered from multiple platforms and social media shares. In such variety, netnographic data collection procedures utilized.

Annual reports used in this study are from Tesla Inc. covering the years between 2010-2019, in order to identify if there are changes in the form of value proposition as well as business model elements. To complement this data, 10 corporate news and blogs, 12 archived interviews with founder and CEO Elon Musk, 4 different industry outlook reports, 38 news articles and 69 social media posts and 54 tweets were used. The gathered data includes the information revolving around Tesla opening their patents to public and their efforts toward vertical integration of their supply chain as well as value perceived by their stakeholders.

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<td>Annual report</td>
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<td>Corporate News and Blogs</td>
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<td>Archived Online Interviews</td>
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<td>News Articles</td>
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<td>Industry Overlook Reports</td>
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<td>Social Media Posts</td>
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<td>Tweets</td>
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*Table 3. Data types and numbers for Tesla Inc. listed based on their validity.*

Data gathered for Reddit Inc. was more limited. Reasons for limitations vary; the company is not yet publicly traded, which means reliable data was limited with co-
founder statements, archived online interviews with co-founders, blog posts posted by management on Reddit.com and reputable news articles. Reddit posts made by managing admins also considered as blog posts. In total, 3 interviews, 12 blog posts, 3 industry outlook reports and 18 news articles used. Additionally, 127 social media posts used to assess the reaction from online community regarding strategic changes and how the implications were perceived.

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<td>Social Media Posts</td>
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*Table 4. Data types and Numbers for Reddit Inc. listed based on their validity.*

There are number of ways to capture online data to prepare it for analysis such as taking screenshots or recording the whole session when searching for data or using tools such as Website Copier to archive the whole content of the webpage which contains the data. However, mining large amount of data using such tools may cloud the real purpose and cause researcher to lose focus (C. Kozinets et al., 2014). To avoid this problem, all archival data was documented manually in word processing and analysis tool Microsoft Excel. All the data collected from various web-based sources were categorized based on their post or publication date, source type (interview, annual report, social media post etc.), the actual content and by their author (for the case of interviews and articles). Each row of data was assigned specific keywords to identify which concept they are related to. Even though archived data is considered as published content (C. Kozinets et al., 2014 268), ethical concerns should not be taken lightly. In order to avoid unexpected consequences and to protect the privacy of the original posters of social media posts, user identities were anonymized.
5.4 Data Analysis

Data analysis is one of the most challenging section of a qualitative research (Ghauri & Firth, 2009), because main issue in qualitative research is to be trustworthy, as well as authentic rather than being reliable (Sinkovics, Penz, & Ghauri, 2008). Therefore, in this study, it is not enough to understand and interpret the data but also realize the background context to produce more authentic analysis.

Netnographic data analysis aims to organize different types of data, whether they are textual, visual or audio, into a useful format where a research output can be constructed (Kozinets et al., 2014). As Kozinets et al. (2014) suggest, “old-fashioned hands on” data analysis conducted to keep focused on interpretations of data, which was (especially, the data gathered from social media) re-read carefully to interpret and analyse value perspectives.

The data analysis process was as follows; all the data archived and documented on Microsoft Excel was re-sorted chronologically and according to data type and read thoroughly. This process did not only allow to understand the phenomenon but also gave good understanding on how the context and data source affect the content. Sorting the data by their post or publication dates also allowed the data to be analysed longitudinally, and a timetable could be drawn. Data collected and documented on Excel was assigned keywords to make process faster. This step created a hierarchical order of the themes and revealed patterns. Also, themes in the master data file were coded automatically in NVivo CAQDAS (computer assisted data analysis tool) tool to assess the sentiments, whether they are positive or negative and create word clouds to assess what is the general overview.

5.5 Validity

As mentioned before, there are discussions and disagreements about quality in a qualitative research (Roller & Lavrakas 2015; Ghauri & Firth, 2009). Main problem in qualitative research is more of a trustworthiness and authenticity, thus, reliability is not as critical (Sinkovics, Penz, & Ghauri, 2008;Creswell, 2003). Therefore, reliability and
validity cannot be used as they would be in a quantitative research. However, the reason why case study method selected in this research to understand very specific phenomenon with greater detail (Eisenhardt, 1989). Additionally, reliability of a research is measured by whether a study is repeatable (Yin, 2017; Bryman & Bell, 2011), and it is exceptionally difficult to repeat case studies with archival data, as the data sources may deprive in time and may not be possible to return back. On the other hand, interviews can be referred back and web based archive tools such as Wayback Machine can be used to re-visit data sources if necessary.

Yin (2017) identifies four different tests which are used in case studies to judge the quality. These are construct validity, internal and external validity and reliability. Internal validity is excluded in this study, as it is inapplicable to descriptive and exploratory studies (Yin, 2017 81). The tests used in this study is illustrated in Table 5 below.

<table>
<thead>
<tr>
<th>Test</th>
<th>Case study Tactic</th>
<th>Study phases where tactics applied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construct Validity</td>
<td>• Use multiple source of evidence</td>
<td>Data collection and composition</td>
</tr>
<tr>
<td></td>
<td>• Have key informants review draft case study report</td>
<td></td>
</tr>
<tr>
<td>External Validity</td>
<td>• Use theory in single case studies</td>
<td>Research design</td>
</tr>
<tr>
<td></td>
<td>• Use replication logic in multiple case studies</td>
<td></td>
</tr>
<tr>
<td>Reliability</td>
<td>• Use case study protocol</td>
<td>Data collection</td>
</tr>
<tr>
<td></td>
<td>• Develop case study database</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Maintain a chain of evidence</td>
<td></td>
</tr>
</tbody>
</table>

Table 5. Case study tactics and design tests. Adopted from (Yin, 2017 79)

Construct validity refers to operational measures for the studied concepts. Construct validity is a challenging test as case studies are often criticized that researchers draw subjective judgements and fail to establish operational measures (Flyvbjerg, 2006; Ruddin, 2006). The first tactic is fulfilled in the research as there are multiple sources of evidence used. However, as the data is collected through secondary source, validity may raise some issues. On the other hand, Ambrosini, Bowman, and Collier (2010) suggested, teaching cases can be used in the absence of primary data and reputable
sources improve the reliability. For the case of this study, main reliance was on secondary data from corporate sources, online interviews and from other reputable news sources such as Bloomberg, Financial Times and Reuters, to ensure the quality. The second tactic is partially fulfilled as the case company stakeholders have not review this research but only supervisors have, which may weaken the reliability.

External validity refers to the extend of the results and their generalizability (Yin, 2017). In qualitative studies, external validity is another challenge as the case of one company may not always applied to other cases. In this study, the theory framework for BM, BMI and VP were designed after a thorough literature review. Although the number of cases used in this study are small, theoretical replication logic was utilized in this study as similar results were predicted. One highlight to mention here is that the data used in this study may not be generalized for cases which belong to different industry context.

Final test for case study design in reliability, which refers whether similar results can be found if another researcher follows same procedures for a same case. This does not mean concluding similar findings by studying a different case but conducting the same study over again (Yin, 2017). This test aims to minimize biases and potential errors. To ensure reliability, using a database and following a case study protocol is essential. This study utilized data from number of sources, which is documented and sources were given clearly.

5.6 Research Process

The figure presented below visualizes the process of this research by reflection the main notions. In first step, inductive approach was utilized to analyse the data, however, deductive approach was used as well, to formulate the research questions. As Saunders, Lewis, & Thornhill (2016) state, strategies cannot be considered exclusively, and it is very well applicable to combine different strategies. Thus, netnograpathy, multiple case study and archival research strategies used as a
harmonized combination in this research. Methodological choice was made as qualitative and time horizon was considered as longitudinal. Lastly as a technique, traditional manual analysis was used. NVivo software was also utilized to visualize and assess sentiments as well as general overview in data collected. These sentiment lists are illustrated in Appendix 5 and 6.

Figure 12. The research Process. Adjusted from Saunders et al. (2016)
6 Findings and Analysis

The following section discusses the findings of this research in the following way. First, the case companies are introduced, and brief overview of their industry is given following with the analysis of the data. Analysis started with value proposition implications of strategy change as value proposition is one of the core component of business model. Then, value constellation and value capture implications discussed. Lastly, community and customer observations elaborated.

6.1 Case companies and Industry Overview

The following section, industry overview is presented for additional context. Later, case companies used in this study are introduced which are Tesla Inc. and Reddit Inc.

6.1.1 Electric Vehicle Industry

Unlike common knowledge, electric vehicles have a long history going back. First EV in history was built by a priest, Anyos Jedlik in 1827, which was merely a board with wheels, combined with crude electric motor (Guarnieri, 2012). Since then, there had been multiple attempts to produce EV’s by small and big car producers throughout the history. However, these attempts end up with termination, mostly due to technological incapacities, significantly high costs and lobbying efforts of big car manufacturers (Bellis, 2017).

Electric vehicle industry has witnessed enormous expansion in recent years thanks to technological advancements, emergence of new manufacturers (e.g. Tesla), increased environmental concerns and global manufacturers interest towards the industry. BloombergNEF 2019 EV outlook report reveals that while in 2010, there were only few thousand EV’s were sold; in 2018, this number has risen to over 2 million vehicles. The report foresees that EV sales to rise to five times more in 2025, 14 times
more in 2030 and 28 times more by 2040, compared with 2018 figures. By 2040, more than one third of the global passenger vehicle fleet is projected to consist of EV’s. (BloombergNEF, 2019)

In terms of markets, China is in leader position, followed by European and US market. Within these markets, Norway has the highest share in EV adoption (IEA, 2019a). Multiple market research reports signify that ICE vehicle market saturated, therefore, EV industry is booming and will continue to grow unless significant adverse events take place (BloombergNEF, 2019; IEA, 2019a; J.P Morgan, 2018). Additionally, industry growth projections support the expected growth figures in sales in the upcoming years. Even though the sales figures expected to grow, overall industry is still suffering because of the high costs; purchasing price of a traditional ICEV is nearly 40% cheaper than similar sized EV, similar price gap on total cost of ownership also in favour of ICEV (IEA 2019b).

In light of these information, certain implications can be made; as EV industry dependent on energy storage technologies, battery technology has to evolve faster, so manufacturers can scale their operations and provide affordable vehicles. Evolving battery technology will address “range anxiety” as next generation EV’s are expected to have comparable ranges like ICEV’s in the near future (Deloitte 2019). Advancements in battery technology likely to affect demand for raw materials and various components positively, therefore, companies may point their focus into more vertically integrated operations. Developments in energy storage technologies will potentially affect other energy systems, thus, cleaner energy solutions would be one step closer (IEA 2019a).

In this context, it is evident that there is shift from traditional technologies, which eventually compels EV manufacturers to re-evaluate their business models as well as different strategies than traditional vehicle manufacturers. This fact has been realized and repeatedly highlighted in Tesla Inc. annual reports since 2010 as one of the “Risk Factors”, stating that;
"Our distribution model is different from the predominant current distribution model for automobile manufacturers, which makes evaluating our business, operating results and future prospects difficult."

Today’s EV landscape, major automakers cannot be a mere spectator, thus, they have announcements on electrifying mobility. Based on these announcements (IEA, 2019a, 115-117), German manufacturers statements deserve attention; Volkswagen announced in 2019 first quarter that they will take into consideration to leave German car industry association (VDA), if there is a lack of concentrated efforts on battery electric cars (Welt 2019). Following this statement, Daimler and BMW agreed that VDA and EU legislations will work towards charging infrastructure and electrified mobility technologies will comply with these developments (Murphy 2019). Asia based automakers also speed up diversifying their EV portfolio in conjunction with US based automakers, pioneered by Tesla.

Tesla Inc.

Tesla Inc. (former name Tesla Motors Inc.) is an American automotive and energy systems company. Headquarters stationed in Palo Alto, California, one if the Silicon Valley city. Company was founded by Martin Eberhard who was the first CEO and Marc Tarpenning, the first CFO, in 2003. (Gregersen & Schreiber, 2019). They named the company after famed engineer and inventor Nikola Tesla. Eberhard and Tarpenning were inspired by General Motors’ electric vehicle program EV1 (Greiner et al. 2019), which was unexpectedly cancelled. GM stated that EV1 “had never appealed the core tech enthusiasts and … there simply weren't enough of them at any given time to make a viable business proposition for GM to pursue long-term” (Schneider & Edds, 2005). Eberhard and Tarpenning realized the potential despite the initial failure of project EV1 and wanted to produce an electric sports car, which is not exclusively efficient but can be high performing than traditional cars.
While seeking investment for the company, founders met Elon Musk, who shared similar thoughts about electric cars. Musk involved into the company after Series A funding, where he invested $7.5 million from his personal wealth. Musk became a board member after his first investment and led successful investment rounds afterwards (Greiner et al., 2019).

In 2008, Tesla announced their first electric sports car Roadster. Roadster was inspired by AC Propulsion’s (an electronic powertrain company for EV’s based in US) tzero model (Baer, 2014), which Musk would call it “a mistake that he wouldn’t repeat again” after 5 years later (AutoBild, 2014). First Roadster was delivered to Elon Musk and assembly line opened in March 2008. Tesla was in turmoil during this year because after Ebenhard’s stepping down, there had been number of changes in the management and company faced serious financial and supply-chain related problems. Musk took over as CEO in October 2008 and laid off 25% of the employees to reduce the burn rate of the company (Baer, 2014).

In June 2009, Tesla launched IPO and raised $226 million in the first initial public offering (Bloomberg, 2010). In 2012, Tesla expanded its portfolio with Model S, a premium and all electric sedan which has the longest range of any electric car vehicle. The company extended their portfolio further in 2015 with Model X; mid-size SUV, in 2017 Model 3; low priced EV for mass market and Tesla Semi; semi-trailer truck, whose production will start in 2020. (Tesla, 2016a) Apart from electric vehicle production, Tesla started to focus on solar energy systems and battery production as well, after merging with SolarCity in 2016 (Tesla, 2016b). Moreover, Tesla is now concentrating its focus on battery production and vertical integration with SolarCity merger and with Gigafactory 1. Gigafactory is not only an enormous factory but a product of Tesla, a machine as Elon Musk defines (Musk, 2015). He also highlights that Tesla will not be alone building Gigafactory; they are expecting other manufacturers to invest in similar sized operations in the future. Following figure illustrates the milestones of Tesla since the beginning till today.
Figure 13. Milestones in Tesla history. Sources include annual reports, quarterly updates, company blogs, social media posts from CEO.
6.1.2 Social Media and Entertainment Industry

When it comes to Internet and media industry, it is challenging to set the boundaries and limit the scope, simply because the fluid nature of digital environment. Social media history can go back to first use of telegraph and telephone before internet era (Schejter & Tirosh, 2015). Emergence of the social media channels after internet is around 90’s with examples such as; classmates.com in 1995 and sixdegrees.com in 1997. However, the platforms during 90’s did not last long due to low interest and low adoption of internet use. Later in 2000’s, there emerged business network platforms such as Friendster in 2002 and LinkedIn in 2003. Not only professional but for personal use platforms started to emerge after this time period; MySpace in 2003, Reddit and Yahoo 360 in 2005, Facebook (for public use) and Twitter in 2006 and Tumblr in 2007.

Social media industry today is extensively diverse and has undergone tremendous transformation in terms of technology as well as applications. By 2019, number of internet users is estimated around 57% of the world population, which is equal to 4.3 billion users. Therefore, is not only valuable industry for individuals but also for businesses, who reach audience and use it for commercial purposes.

Market landscape is divided into many segments, such as; books, music and films, social media, games, internet advertising, broadcasting, art and sports. Among these segments, books and magazines segment was the most dominant in 2018 and 5.5% growth is expected between 2019-2030. On the other hand, game segment is the fastest growing with 15% for the same time period. (Marketwatch, 2019) For the social media segment, the penetration has increased 9% since 2018 (Hootsuite, 2019). Internet advertising segment forecasted to grow CAGR %8 by 2023 and to reach $160.8 billion. (PWC, 2019). Sector performance of all segments changes very rapidly due to the everchanging nature of the industry. In order to stay within the context of this study social media will be the focus.
As for the brief market outlook for social media, America region is leading the highest SoMe use rate, which is roughly 59%. Following Europe with 56%, Asia and Oceania with roughly 46% and for Africa it is 20%. (Hootsuite, 2019) Among these regions, China has a unique nature because of the regulations and its rather closed ecosystem. Global web Index 2018 flagship report reveals that market is highly saturated for social media as 98% of digital consumers use various social media channels for keeping up with the news, media and content creation and consumption, and product research. Market landscape consists of number of service providers, however, there are two dominant players which are Facebook and Youtube. 85% of the internet users have account in Facebook and 79% have account in Youtube. News aggregation platform Reddit users consist of 18% of whole the internet users (GWI, 2018).
<table>
<thead>
<tr>
<th>Social network sites</th>
<th>Active users (in millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook</td>
<td>2375</td>
</tr>
<tr>
<td>Youtube</td>
<td>2000</td>
</tr>
<tr>
<td>Whatsapp</td>
<td>1600</td>
</tr>
<tr>
<td>Facebook Messenger</td>
<td>1300</td>
</tr>
<tr>
<td>WeChat</td>
<td>1112</td>
</tr>
<tr>
<td>Instagram</td>
<td>1000</td>
</tr>
<tr>
<td>QQ</td>
<td>823</td>
</tr>
<tr>
<td>QZone</td>
<td>572</td>
</tr>
<tr>
<td>TikTok</td>
<td>500</td>
</tr>
<tr>
<td>Weibo</td>
<td>465</td>
</tr>
<tr>
<td>Reddit</td>
<td>330</td>
</tr>
<tr>
<td>Twitter</td>
<td>330</td>
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<tr>
<td>Douban</td>
<td>320</td>
</tr>
<tr>
<td>LinkedIn</td>
<td>310</td>
</tr>
<tr>
<td>Snapchat</td>
<td>294</td>
</tr>
<tr>
<td>Pinterest</td>
<td>265</td>
</tr>
<tr>
<td>Viber</td>
<td>260</td>
</tr>
<tr>
<td>Discord</td>
<td>250</td>
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</table>


User behaviours vary greatly within these social media channels. Over the years, trend of behaviour evolved. By the end of 2018, large portion of digital consumers state they use their social media accounts to follow news, engage with multimedia content and product research rather than share their photos and keeping in touch with friends or other people (GWI, 2018, Appendix 3). Broadly accepted social media channels include; blogs, forums, review platforms, multimedia sharing platforms, gaming networks, professional networks and social networks (Aichner & Jacob, 2015). Within these channels, user-generated content is one of the most important feature (Obar & Wildman, 2015).
Today, advanced applications supported with AI based algorithms lead users to consume content more actively (PwC, 2019). These information gives an idea on the scale of transformation on behaviour in social media. Moreover, users incline towards more personalized environments virtually, where they are served more “related content”, which also points big opportunities in social media segment. Increasing number of users and sophisticated data collection techniques raise alarm for privacy and transparency but at the same time allow shape their business based on the dynamics. Shaping the business may mean many things; offering new content types, new features, services or sometimes, introducing certain limitations.

Reddit Inc

Reddit Inc. known as reddit.com is an US based news aggregation, web content sharing and social networking site and private company, most often referred as “the Internet’s front page”. The site is known its unique community culture, traditions such as pairing with random user and sending Christmas gifts, AMA sessions with celebrities and political figures (Ask Me Anything) and vast amount of content with its user base. Company was founded in 2005 by two fellow student friends Steve Huffman and Alexis Ohanian from University of Virginia. First attempt from two entrepreneurs was to make a mobile app, which they called “My Mobile Menu” that allows users to order at restaurants ahead of time (Fiegerman 2014). They pitched the idea at Y Combinator seed accelerator program, but they were rejected. However, Y Combinator co-founders advised to look into browsers instead of a mobile app and maybe to create a site something like Slashdot.com (Moretti, 2012). After brainstorming sessions and saw the need for such site and decided to name it as “Reddit” like shorter version of “read it”. Seed funding was made by Y Combinator of $100,000 and company was founded.

In 2005, the first version of Reddit was launched, and first post was posted by Ohanian, which was downvoted by Huffman (Fiegerman, 2014). Later, the founders would admit that they were boosting the site with fake accounts, bots and scraped content from
news sites so that visitors wouldn’t only see blank pages (Mead, 2012). New members joined the original team, Christopher Slowe, whose apartment was the Reddit’s first headquarter and Aaron Swartz whose company Infogami merged with Reddit in 2005. However, their direct competitor, Digg, recognized them soon after and Reddit started differentiating by introducing option to post comments and subreddits for dedicated topics such as programming and science. One breakthrough in 2006, mass media company Conde Nast acquired Reddit for $20 million and team moved to San Francisco (Hempel, 2015). In 2008 they allowed users to create their own reddits which are called as subreddits which was the true differentiator between them and competitors (Reddit, 2008a).

Reddit did not start its life as an open source project; however, original co-founders and Aaron Swartz were advocated for free and open internet. Their acquisition by Conde Nest was in a way driving them towards content restrictions and censorship (Jaffee, 2014). Even though the restrictions, site went open source in 2008 by an announcement from Huffman that they are opening the source code open to public (Reddit, 2008b). However, a year back, Aaron Swartz was fired, and original co-founders left the company in 2009 (Reddit, 2009) which was partially as a result of their advocacy. Reddit became operationally independent in 2011 and co-founders joined the team again after publicly recognized Victoria Taylor, director of talent, being fired and whole Reddit went on revolt by shutting down 265 subreddits by moderators and resulting with interim CEO Ellen Pao’s resignation (Wired, 2015). The joint statement from moderators stated that it wasn’t only because of the firing but “resentment against the admins for running the site poorly - being uncommunicative and disregarding the thousands of moderators who keep the site running”.

Reddit Inc. have had very successful funding rounds over the years. After the seed funding, Reddit raised $50 million in B series, $200 million in C series and $300 million in D series funding rounds and eventually valued as $3 billion market valuation (Reuters, 2019). Reddit have been introducing new features in the course of business such as reddit gold (premium membership), reddit coins that users can purchase them to give awards to valuable posts to promote, accepting Bitcoin as a payment method
and mobile app. However, various controversies which does not align with community values and privacy terms of the site have been taking place as well, such as CEO’s statement that they know everything, even users “dark secrets” (TNW, 2016) and editing of negative comments in the Donald Trump subreddit and banning other subreddits raised questions about site’s credibility and political motivations behind. The site reversed their strategy on open source in 2017, which is one of the scopes of this study. Following figure illustrates the milestones and history of Reddit Inc.
Figure 15. Milestones in Reddit history. Sources include blogs, social media posts and news sources.
6.2 Value Proposition Implications

Value proposition in literature refers as a formulation to communicate the value to customer (Rintamaki et al. 2007; Ballantyne et al. 2011), co-creation of value between suppliers and customers (Ballantyne and Varey's, 2006), a strategic tool to deliver superior value to customers (Payne et al., 2017). Collected archival data reveals significant implications on value proposition antecedents as a result of business strategy change. In the following sections, case companies were analysed one after another.

First expression for going open patents strategy was announced by Elon Musk from a corporate blog in June 12, 2014. In the corporate blog he stated that;

"Tesla patents in the lobby of our Palo Alto headquarters … have been removed, in the spirit of the open source movement, for the advancement of electric vehicle technology. … Tesla will not initiate patent lawsuits against anyone who, in good faith, wants to use our technology." (Musk, 2014)

This movement from an automaker was quite unexpected; if patent wars in the same year between major technology companies (Samsung, Apple etc.) were considered. Additionally, car makers don’t often reveal their patents to public, however, Tesla case was unique; not only the strategic move but also the rationale. In corporate annual reports and corporate blog posts, it has been reiterated by Tesla that the company aims to build and accelerate the adoption of electrical vehicles as a sustainable transport alternative which uses sustainable energy sources. Therefore, the planetwide carbon crisis can be addressed. Justification for adopting an open strategy to their patents was in line with this mission. Musk highlighted that this move can accelerate the technological advancements, and everyone can benefit from it (Musk, 2014b). One very important detail to consider is that patents are always open to public as they are public filings, however, Tesla’s move was to not to initiate lawsuit as long as they are being used in good faith. On the other hand, open strategy with patents
undeniably offer value and potentially a way to enable cross-licencing options and deal with so called patent troll companies.

Contrary to Tesla, Reddit followed opposite direction and they reverted back to proprietary strategy. Based on the community reaction, the site admins were not updating source code repositories for a while, which was already a sign for users who actively work on the code. First expression of closing the source code came from the founding engineer Christopher Slowe in 2017, announcing the decision and explaining the rationale. He explains,

“Open-source makes it hard for us to develop some features "in the clear" without leaking our plans too far in advance. As Reddit is now a larger player on the web, it is hard for us to be strategic in our planning when everyone can see what code we are committing. … Merges are getting increasingly difficult, especially as the company grows and more developers are touching the code more frequently. As we move towards a more service-oriented architecture, Reddit is being divided into many smaller repositories that are under active development, which means that a 3rd party trying to run a functional Reddit install is finding it more and more difficult to do so.” (Slowe, 2017).

Beginning of the statement, Slowe explains the reason why they opened the source code as that company’s future was very uncertain and they needed community to keep the site alive by creating content. In the following posts, community reaction was harsh, users did not take the decision so well. Some expressed this was a move because Reddit is implementing user tracking measures in favor to company and its shareholders to hoard detailed user data which does not comply with privacy terms, some said reasoning is very poor and does not make sense, considering the announcement was made on programming subreddit, where majority of users know the architecture and current problems. Number of users who found the decision sensible was very little. Christopher Slowe stated under original announcement that this is not a big change, but it is making explicit what we have been doing, supporting the complaints that source code was not being updated for some time. Moreover,
considering nearly all reactions came from programming community, the strategic move did not exactly resonate with the rest of the users or subreddits.

6.2.1 Market Knowledge

In 2014, portion of the EV projects in major automakers was either very small or did not exist at all. The amount of EV's produced were very limited with limited range (Musk, 2014b). Such specific environment put Tesla in a niche category, where development, production and ownership costs were too high. The company was not able to cut down the costs, thus, However, the investments required for the technology were too steep. In Tesla annual reports since 2010, these issues have been highlighted as one risk factor that company’s success is dependent on cutting the costs. Historical achievements on EV projects were also not satisfying. For instance, GM had to terminate their electric vehicle program EV1 and the rationale was explained by the company spokesperson that they simply didn’t have strong enough customer base to appeal and the volume of their customers were not enough to sustain the production of their EV1. In other words, EV1 was addressing an exclusive audience in a niche market. Major automakers did not have significant push on EV projects except Toyota Prius and Nissan Leaf. Musk reflected on market situation back in 2014 in the blog post that “electric car programs (or programs for any vehicle that doesn’t burn hydrocarbons) at the major manufacturers are small to non-existent, constituting an average of far less than 1% of their total vehicle sales.” (Musk, 2014).

On the customer side; they were seeking greater flexibility, cost effectiveness and more convenience, which could be achieved by attracting big players attention to the industry that would accelerate the technology advancement, extend charging infrastructure and standardize the market. Tesla could not do it all alone, thus, they opted for a business strategy to push others to help. The reaction to such unique strategy change was controversial to analysts and Internet, however, stock prices reacted positively to the news as they increased nearly 10% right after this announcement for a short term. Tesla was also aware of the similar threat where GM
fell into with EV1; they had to persuade their existing and potential customers that Tesla cars offer great value and quality in terms of performance and aesthetics. Thus, they would be able to keep retain existing customers and attract new ones.

![Figure 16. Tesla stock price development and comparison with Toyota, Daimler, GM, Volkswagen and Nissan respectively to the colour list. Chart was accessed in 23.11.2019. Source: https://www.reuters.com/companies/TSLA.O/charts](image)

Additionally, there was little penalty company had to pay economically, because the competition is really with the ICE vehicles and these vehicles were determining the prices in the marketplace and effectively determining the profits that the electric vehicles can make. By opening the patents, and more companies realized the potential in the industry and new market such as charging stations, which slowly brings more standardization. Tesla would get more value if other companies would follow their trailblazer strategy with open patents. But even the competitors wouldn’t respond to Tesla’s strategic shift, Tesla would still benefit from this strategic move in the eyes of customers and suppliers (primarily companies in energy business such as Panasonic). Therefore, reciprocity was quite important but not fully necessary. Shifting to open strategy eventually impacted on manufacturing and cost cutting efforts as well as battery production by Tesla. The affects are visible in near future as Tesla ramped up Model 3 production in 2018, which covered 50% of all EV sales in US and 8% of the global EV fleet, and today, EV sales penetration accelerates very quickly as 68% of
the EV market consist of BEV’s (BloombergNEF, 2019). On the other hand, the strategic change of Tesla heated up competition significantly as a result of declining battery production costs, extended range capabilities and extended charger network throughout the globe. However, apart from US market, Tesla will likely to dominate Europe market in the near future. This can be interpreted from the raising pressure on air quality and reducing of fossil fuel usage. Recent EU policies toward EV industry and major manufacturers support will likely to increase the density of charging stations even further (IEV, 2019). Additionally, Tesla’s large investments on battery production and manufacturing investments opened the gap of know-how and enabled significant cost cuttings, which is expected to increase EV adoption by 8% in 5-year period (BloombergNEF). These information’s align with the Payne et al.’s (2017) that market knowledge that consist on customer and competitor knowledge offer great competitive advantage. Musk’s Master Plan from 2006 gives hints of this knowledge and implications of open strategy is visible today on market knowledge component of value proposition.

All in all, in light of the developments after strategic transformation from closed to open strategy, Tesla strengthened its position in market and industry. In terms of financial performance, company hit the best stock price as of October 2019 and received positive comments from financial analysts that company illustrated strong cash flow (CNBCE, 2019, see figure 16 above). Company delivered 38.500 Model S and X
combined in 2014 (Tesla Motors, 2015) and for 2019, company revealed that they delivered 97,000 vehicles by the end of 2019 Q3 (CNBCE 2019), which equals to tremendous 152% increase with the vehicle deliveries compared with 2014 figures. As of 2019 Q3, Tesla dominates especially in US market EV sales by 79.25% market share. Below table illustrates the market structure of US for EV vehicles.

<p>| | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>Tesla</td>
<td>79.25%</td>
</tr>
<tr>
<td>Chevrolet</td>
<td>7%</td>
</tr>
<tr>
<td>Nissan</td>
<td>5%</td>
</tr>
<tr>
<td>Other manufacturers (Toyota, Mercedes-Benz etc. combined)</td>
<td>2.94%</td>
</tr>
<tr>
<td>Volkswagen</td>
<td>1.99%</td>
</tr>
<tr>
<td>Audi</td>
<td>1.96%</td>
</tr>
<tr>
<td>BMW</td>
<td>1.86%</td>
</tr>
</tbody>
</table>

*Table 7. US market EV vehicle shares. Source: Cleantechnica 2019*

Europe market view quite different and diversified than US; however, Tesla leads the market with Model 3 with total market share of 17%. Below table illustrates top five manufacturers with highest market share.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tesla</td>
<td>17%</td>
</tr>
<tr>
<td>Renault</td>
<td>9%</td>
</tr>
<tr>
<td>Mitsubishi</td>
<td>7%</td>
</tr>
<tr>
<td>BMW</td>
<td>6%</td>
</tr>
<tr>
<td>Nissan</td>
<td>6%</td>
</tr>
</tbody>
</table>

*Table 8. EU market EV vehicle shares. Source: Cleantechnica 2019b*

On the other hand, in today’s Asian market, Tesla faces great competition. Despite limited figures available for Asian market, there are number of strong competitors such as Nio, BYD, Geely, SAIC (Volkswagen and GM partnership) and BAIC stands against Tesla in primarily Chinese market. All in all, in the course of business after strategic transformation of Tesla, company bolstered its position significantly against major manufacturers in the EV and automotive industry.

On the social media side, things were more complicated than automobile and EV industry. Social media dynamics and internet environment is very fluid and may
change dramatically in a short amount of time. On their very first years, Reddit had number of competitors such as Digg.com, Del.icio.us and Slashdot.com. In 2017 and 2018, market was already dominated by big players such as Facebook and Youtube. Even though they were not direct competitors, increased exposure and traffic has gained more importance and visual/multimedia content was becoming more attractive (Social Media Examiner, 2019). Moreover, based on the statements from CEO Huffman, data collection capabilities of the company were limited, and company was in disarray in terms of revenues, which required company to act. One of the reasonings for shifting to closed strategy was that there is a high risk of leakage before introducing features like video uploads to Reddit by bypassing 3rd party applications. One another motivation was the aim to increase internet ad revenues, which may have impact on strategic change decisions. By 2019, Reddit made $119 million net ad revenue in US market, which shows 55% increase compared with 2018 (Schiff, 2019). On the other hand, majority of the Reddit users know how to adverse ads by using extensions such as adblockers. Open to closed strategy gave the company to implement certain algorithms to go around such issues.

As user profile, over 70% of Reddit users were male and nearly 60% are between the 18 and 29 years old. Nearly half of the users identified themselves as liberal and 13% identified as conservative and rest of the users say they were moderate. (Barthel et al. 2016) Apart from user landscape, Reddit had number of direct competitors such as Voat, reddit.me and 4Chan, which were open sources. However, as majority of the user’s state, these alternatives were not as functional. Majority of the alternatives were established by emulating Reddit source code however biggest problem for the users was that these alternatives don’t have similar community culture as Reddit, therefore, company did not risk give away from its market share. Today, majority of the Reddit’s direct and indirect competitors seem to be focusing on attracting users with visual content and work on value capturing mechanisms such as more sophisticated ad services. One takeaway from these facts is that the competitive landscape is getting tougher and imitation of certain features can play important role with the success of these sites. By archiving the source code and mobile app code repositories, Reddit also aimed to protect its knowledge assets and its competitive position.
Aligning with Appleyard & Chesbrough’s (2017) insights, market realities such as user adoption rate, firm competencies, reduced reliance on outside assets on source code development and increasing number of competitors, using similar interface and source code repositories being extremely fragmented pushed company to make such strategic decision. Implications on market knowledge aspects of closed strategy move could be interpreted as; the company increased its ability to protect its position in highly competitive market, minimized the risk of new features to be leaked, potentially introduce new anti-spam measures and introduce new ranking and ad visibility algorithms.

6.2.2 Innovation

Payne et al. (2017) touch upon another issue that CVP’s help companies to discover new or existing problems and develop solutions by adopting innovation and innovative practices. In this research, closed to open and open to closed strategies are both considered as innovative practices or enablers of such practices as they were preferred in order to address certain problems.

For the Tesla case, firm level problem was the level of technology prowess, which was not high enough for company to achieve what company aims and deliver it to customer. It wasn’t only because the company was technologically insufficient; the EV concept was too new and ecosystem partners did not enable much capabilities in terms of value constellations and of value capture mechanisms. That caused prices to be way higher and put EV’s into premium and niche market. Shifting to open strategy
with patents did not only entice other manufacturers and governments but also created pressure on them, which was necessary to make cost-cutting moves, involve multiple parties into development and scale up the production to benefit economies of scale. In 2010, Panasonic invested $30 million in Tesla, and subsequently after open patent announcement, two companies signed agreement for the first Gigafactory (Tesla, 2014). Additionally, Tesla acquired SolarCity and started focusing on energy systems and concentrated its focus on battery production more, which was in line with original “Master Plan”. In 2017, Tesla reached a level, where company shares were traded more than $304 and company. These developments supports Chesbrough's (2003a) viewpoint that new resources can be created through collaborations in open initiatives, which Tesla leveraged open initiative to bolster battery and energy business, accelerated customer arrivals while creating loyalty. All these developments have direct or indirect effect on innovations the company introduced such as autopilot to significantly reduce the human-caused accidents and the whole solutions within zero emission concept.

For the Reddit case, technology prowess was overcome by opening the source code and attracting developers to help at the inception, which also increased traffic as well. Even though the founders admitted they “faked till make it”, meaning that they boosted the traffic with fake accounts and bots until traffic gained momentum (Mead, 2012). The site did not suffer from developer or knowledge deficiency but finding competitive edge. Reddit introduced certain innovations, such as allowing users to create interest specific groups which are called subreddits. Subreddits were the true differentiator between big competitors such as Digg. However, it also caused a lot of chaos, once users started posting inappropriate contents and images. But this was the vision of Reddit and co-founders, who adopted nearly pure freedom of speech, which could be also interpreted as the trust in community. Shifting to closed strategy in this context was perceived as “betrayal” to the vision and community spirit by the users.
Features like community driven subreddits, upvoting and downvoting, Reddit mobile and played important role on community development. However, it also brought hardships to manage, therefore, company started shifting into decentralized and service-oriented approach by building own cryptocurrency and mobile app. The idea was that users would fund their app with Bitcoin, and they connect to p2p network, consisting of other users. To download a content, users need to pay very small amount of Bitcoin; and if other users upvote to content, they would also receive very small number of Bitcoins to incentivise the quality content. Therefore, every one of the users would be a server hosting Reddit (Williams, 2015). This architecture and overall project were cancelled, however, in the closed source announcement, Slowe mentioned that they are abandoning “monolithic” version and shifting into more service oriented, which points out that the strategy change may have connections with decentralized approach. Overall, the increasing technology prowess and innovation led company to opt for closed strategy, which potentially has certain implications on innovation as well; as Reddit was sharing the market with its competitors and proposed almost similar
value, company went for open initiative to overcome technology prowess to differentiate. However, as the supporting ecosystem emerged and market landscape started to accommodate way too many similar sites “forking” Reddit’s source code, company was pushed to abandon open initiative. However, as company reversed its strategy, users who actively contributed the source code development were pushed away as well. This can be interpreted that innovation pace may slow down in longer run or company may accelerate decentralization efforts back again. On the other hand, closed source code can contribute greatly to establish stability on the platform.

6.2.3 Product Knowledge

According to Behrman & Perreault (1982), product knowledge refers understanding of application and features of the goods or services offered by the firm, as well as viable combinations of these two (Uлага & Reinartz 2011).

In 2016, Tesla announced acquisition of SolarCity Corp, which was wholly owned subsidiary of Tesla. Elon Musk highlighted in an investor's call that in order to solve the sustainable energy question company needs a sustainable energy production, which is going to come overwhelmingly in the form of solar energy. Then if both companies combine that with stationary storage and electric vehicle; they would have a complete solution to a sustainable energy future. He states that it’s more efficient to do sell Powerwall and Tesla cars in the same store at the same time as an integrated system. These comments support that Tesla did not only aim to deliver value through advanced electric vehicles but also combination of other services, which enabled company to create a more compelling, greater value and service for the end customer as well as for the company. Business strategy change in this regard have acted as an activator for company to achieve means to acquire SolarCity indirectly and harmonize two different businesses into complementary products and services.

If one would look at the bigger picture, reddit.com itself is the product of Reddit Inc. Site specific design features can be considered as products for the users as well, such
as subreddits, embed function to embed comments to other sites, dedicated platform for uploading images to site and dedicated tool to upload videos. In 2010, Reddit mobile app was released, and it received big overhaul in 2017, introducing chat function with other users, theatre mode for viewing visual content and moderation tools (The Verge, 2017). Additionally, company launched Reddit Gold in 2012, which provides certain benefits to users such as ad-free browsing, buying coins and be able to give prizes, gifts and coins to other users. Reddit Gold was replaced with Reddit Premium in 2018 after new design and new features were introduced such as members-only subreddits and monthly coin gifts. Moreover, site started accepting Bitcoins as a payment method in 2013. However, primary product for Reddit has been the ad space on the homepage or on specific subreddits, and sponsored links, which looks like a post but with a “sponsored” tag next to it. As ranking number 20 worldwide and number 11 ranking in US (SimilarWeb 2019, information accessed in 11.11.2019) with over 330 million users and over 130 thousand active communities (Reddit, 2019a), promoting on Reddit is a great opportunity for marketers and brands. Each user means a set of eyeballs and increased exposure and chance to engage, which is an important competitive edge Reddit has and why user base is so important for the company today. Company has been utilizing different strategies and methods on their ad’s strategy (Sosa, 2015), however, open to closed strategy on source code may have either significant implications on segmentation and targeting or mining data to work on behaviour patterns. However, these implications raise questions about transparency and privacy. Considering Reddit management thinks very positively of leveraging artificial intelligence applications and CEO highlighting Reddit does not collect personal data (WSJ, 2018), which conflicts CEO’s previous statement of “we know dark secrets of yours” makes these arguments stronger. However, it should be noted that these implications are limited in this study with speculations based on user reactions.

6.2.4 Leadership Support and Formalization

Payne et al. (2017) defines leadership support as strategic vision of the firms and how leaders can characterize this vision; whereas formalization organizational structures
and processes for crafting value propositions. In 2006, Elon Musk published his “Master Plan” for Tesla as producing range of vehicles to speed up migration from carbon economy to solar economy, which is one level closer to sustainable solutions (Musk, 2006). He elaborated company strategy as aiming high end of the market, then drive down market with higher volume and lower prices with each model. A year before the open strategy change in patents, Musk reiterated company aim was to accelerate the adoption of sustainable transport by producing mass market electric cars into market (Musk 2013).

Closed to open move with patents was not all altruistic, but strategic as well. The CEO’s envisioned that how a larger adaption of electric cars can help Tesla and industry as a whole. Therefore, the investments could be allocated on the cars and manufacturing, and pace of development and innovation could drive and aid R&D efforts with lesser investment, which would ultimately help company to formalize the intended value propositions. This specific strategy on patents resembles pooling of patents in software industry which brings standardization; for Tesla, it would bring standardization with charging and infrastructure, which could be established by Tesla alone but by competitors as well. This point addresses the “flexibility” in Tesla VP, which meant that there should be either supercharger stations all around the markets where Tesla operates, or Tesla cars to be compatible with 2nd party charging stations, therefore, flexibility is provided. The expected growth by 2040 in EV industry, Tesla growth revenue figures and number or public charging stations for EV’s (632,000 by the end of 2018) (BloomberNEF, 2019) clearly illustrates characterization of leader’s vision corresponding with open strategy change. On the other hand, Tesla continued to secure some significant battery patents, especially in 2017 (Lambert, 2017), even though Musk stated that patents are legal liabilities. Although the company has to patent its technologies, there has been discussions whether the engineers who contributed the patented technologies would be a legal liability for the company and face the risk of losing their jobs. Considering Musk’s infamy on making redundancies, these facts rise suspicions on leadership support component.
At the very beginning of establishment of Reddit, both co-founders and original team advocated for open and free internet, however, Ohanian and Swartz emerged more than others. Although Huffman and Ohanian were willing, Aaron Swartz was against the idea of selling Reddit to Conde Nast and soon after the acquisition, he was later fired by the parent company and his relationship with Reddit was over. However, Ohanian actively lobbied against SOPA and PIPA and was hailed as “The Major of Internet” by Forbes (NY Times, 2012). In brief, SOPA (Stop Online Piracy Act) and PIPA (the Protect IP Act) were the bills aiming to prevent copyright infringements by restricting access to sites that host pirated content (CNN, 2012). In 2012, whole Reddit blacked-out by admins for 12 hours to protest SOPA and PIPA bills, followed by Wikipedia with similar reaction and supported by Google, Mozilla, Tumblr and Wordpress (Jaffee, 2014), which eventually led these antipiracy bills to die out. Based on these facts, the value propositions offered for Reddit in this study supports founders’ early vision. After the acquisition by Conde Nast, management changed soon after and site was often criticized having political motivations behind its actions. Despite Reddit has become operationally independent in 2011 and original founders returned back to company management in 2015, closing source code did not exactly reflect the early visions and actions of the founders but reflected the necessity of the market conditions and difficulties in revenue generation. Moreover, closed strategy did not exactly affect the majority, as nothing visible has changed on Reddit. Some users stated that they didn’t even know Reddit was an open source. However, programming and developer community outraged and accused admins with betraying their own community. Therefore, even though small portion if the users realized the changes and were against it, it is difficult to say leadership support was sufficient during this strategic change and there were negative impressions and implications.

6.2.5 Customer Relationships and Brand Reputation

There is a strong relation between brand reputation of a company and customer relationships in the perspective of value propositions. Strong brand reputations add
credibility to value propositions and binds the company to deliver the value. (Payne et. al, 2017)

There is no doubt that Tesla is very active with social media through its CEO Elon Musk and targeting their audience by considering everchanging online environment as well as addressing global issues. Tesla has been using word-of-mouth and social media marketing to announce adopting open strategy, which was received either positively, but for some as a “marketing ploy”. This move also accelerated the rate of Tesla fans and Elon Musk fans in the online community. As company implied strongly that the strategy change was a step for cleaner and sustainable energy, this attracted green communities’ attention as well. Even though there was positive impact, there were certain issues which affected the reputation negatively. As listed in 2019 annual report, there were; delivery delays due to production ramp delays, manufacturing delays and some quality problems as a result of supplier problems, new feature issues and second version of Autopilot. Apart from these issues, production delays and shaky financial portfolio of the company potentially damaged brand reputation over time, as Tesla’s brand reputation fell dramatically in 2019 (see Appendix 4), which company refused to comment. These might support the negative perception about Tesla’s announcement patents are being open and in use of good faith, company won’t pursue lawsuit. However, it is undeniable Tesla has built very strong brand reputation and customer relationships over time and it is clear to see strategy change on patents accelerated this development (Appendix 4).

Community and culture are at the heart of Reddit (Debigare & Weinberger, 2015). This fact is well known to the company as well; according to Reddit, their audience consider information on the site is 1.8 times more trustworthy that other social media channels, because these communities are user-driven and members have a certain level of trust (Reddit, 2019). User base and community is the equivalent of supporting ecosystem as highlighted by Appleyard & Chesbrough (2017) that forging a strong relationship with legacy and newly arriving customers is vital when closing a project. However, this aspect did not seem to be handled well by the company. Reddit’s strategic shift to closed source was not taken as positively by the community as Tesla’s open strategy
move. The site had very controversial history such as; privacy and transparency issues, admin manipulations of comments, with upvotes and downvotes to make some posts highlighted and some buried under thousands of other posts, banning of subreddits, users and even firing employees with no explicit reasoning and some other actions which were led by political motivations according to users.

As an example to politically motivated accusations, Reddit users speculate why admins won’t ban pro-Donald Trump subreddits even though the content and community from these sections disrupt other communities and praise hate speech, even though the admins won’t have second thoughts to ban other subreddits if they believe these sections don’t follow community guidelines. Open to closed move was criticized by users heavily, including accusations that the company may be implementing certain features which may collect too detailed data from users and this data to be utilized in favour to 3rd party stakeholders. Even though company had valid points with closed strategy, some portion of the users did not take it well. Because there were not any additional statements from neither CEO nor other admins, closed strategy on brand reputation and customer relationship aspects seemed to suffer rather than improved.

6.2.6 Design Characteristics

Based on the observations, goods-dominant perspective seems to be the most effective perspective in terms of value propositions for traditional automakers. These companies craft the value and deliver it their customers and company competencies give the competitive edge. Tesla Inc. followed similar perspective at the very first years of their business. Essentially, Tesla offered three distinct value to their customers. These were;

a. Long Range and Recharging Flexibility  
b. Energy Efficiency and Cost of Ownership  
c. High-Performance Without Compromised Design or Functionality
The value propositions were clearly presented in Tesla annual reports since 2010. There hasn’t been any changes or very minor changes in the definition of these points over the years. The value points are quite self-explanatory, in a way to communicate the intended value. One important detail is, all these value offerings required advancement in technology in order to deliver value to customer. Nevertheless, they were kept realistic as Chandrashekaran et al. (2007) states that explicit and clear value propositions help customers to have realistic expectations. Explicitness played a role in prioritization and the way “Master Plan” worked over the years, as can be seen from the chronological view of the company (Figure 13). Another observation is that after switching to open strategy with patents, there is evident shift into mutually determined perspective. This shift cannot be observed through the value propositions given by company but can be interpreted through the direction of actions and statements the company over the years. Reciprocity in mutually determined perspective can be seen on a supplier level for Tesla. Partnership agreements, subsequent and significant investments on manufacturing resulting with Gigafactories, accelerated industry pace, growing government incentives on EV’s can support this assessment. In terms of granularity, value propositions did not seem to change its position and stayed between firm and segment level over the course of business. On the other hand, value dimensions focus was even more concentrated to clean and sustainable energy. Tesla achieved to this point with their EV’s where none of the competitors were not able to address properly. The reason for can be speculated as these competitors kept their main focus on ICE vehicles as they are the main profit drivers for automakers.

As Reddit Inc. is a private company, they do not publish corporate documents to public, where clear value propositions can be analysed through corporate channels. However, number often discuss what value Reddit provides to them, which can be boiled down with management and company actions and synthesized into value propositions. Moreover, although they are not announced so explicitly, Reddit often promotes what separates them from competitors, which emphasizes their value propositions. In the light of this fact and based on the user feedback, Reddit provides;

a. Variety of new content which is highly attractive and even addicting.
b. Chance to engage with vast and very diverse community, who has different interests, lives, insights.

c. Be part of an online community and culture.

d. Anonymity, which makes people more "real" on virtual environment and eliminates social pressure.

As stated above, these propositions are written based on the user feedback on what value the company provides for their users. Moreover, these values are not only for individuals but also for brands and companies, as companies see reddit.com as a massive platform to potentially engage with billions of impressions. Therefore, value propositions are explicit enough for stakeholders.

Another observation for Reddit regarding value perspectives is that, company has been utilizing service dominant perspective quite explicitly; by creating value for their customers (primarily, site users and marketers) with customers. As users interact with each other and create more either textual or multimedia content, further value is created for non-member users, which potentially affect them to become the member of the community and join the discussion. This means that every time a piece of content is created, potential for impressions for ad revenues and further value creation is established and it goes on and on in this way. Closed strategy on source code had almost no impact on this, however, it has bigger impact on overall credibility to the site and Reddit culture, in the eyes of users. Also, open to closed strategy did not seem to cause any major change on value proposition perspective, however, if previous decentralization and Bitcoin funded content creation projects comes on the table, company may shift into mutually determined perspective in the future. In terms of granularity, closed strategy did not seem to have any implication on value propositions and stayed between customer segments and individual customer level, even though it seemed to refer firm level granularity at the first glance.
6.3 Strategic Changes and Impact on Business Model components

Following section extends the analysis to other business model components which are value constellations and value capture.

6.3.1 Value Constellation

Chesbrough & Appleyard (2007) state that firms which adopt an open strategy have to adjust their business models that they can capture the value elsewhere in their value chain. This is primarily meant for web and software firms, for instance Reddit’s case; the company generated great value by introducing lots of features through great consumer surplus while it was pursuing open approach. Even though the company reversed the strategy, consumer surplus effect is still present, which provides the competitive edge. However, this can be viewed from a different industry setting as well. Tesla’s approach to its distribution channels is also quite different than traditional manufacturers and has been transformed just like its manufacturing lines since shift to open strategy on patents.

Vehicle manufacturing and assembly operations primarily takes place in Fremont and Lathrop in California, Tilburg in Netherlands and Gigafactory 1 in Nevada, along with battery production. 2019 annual report gives total vehicle production as 254,530 which shows 152% increase YoY. Tesla speeded up vertical integration practices to further cut down the costs and production in these factories (especially in Gigafactory 1) are highly vertically integrated and Tesla is moving further with integration. By the year 2016, Tesla facilities achieved 80% vertical integration (Jones, 2016) which is very unlikely in automotive industry. Musk stated in a symposium in 2014 that their initial plan was to produce as little as possible. However, since day one, this strategy did not work so well as electric vehicles required completely different approach in every component. Their suppliers were not ready for such exclusivity and Tesla suffered greatly; delivery times delayed, interior and exterior quality problems raised. After...
adopting open strategy, company witnessed a surplus in both consumer and producers, which lead emergence of internal supportive ecosystem. Musk continued that they realized they had to insource more than outsource and had to find a way or make a way, therefore they made their way to vertical integration with their superior know-how on unique technology (Musk, 2014b).

Value constellations may include wide range of partners and stakeholders. Stakeholders of Tesla consists of communities, customers, employees, shareholders and governments. Tesla has very strong relationship with communities and consumers with the help of with corporate strategy and mission company follows. Opening patents especially was taken overwhelmingly positive by the communities and consumers. Company had partnerships with number of recognized car and battery manufacturers. According to annual report records, company partnered with Daimler and Toyota to provide services for powertrain systems. Tesla did not only offer its services but also partnered up with Daimler and Toyota, in 2009 and 2010 respectively (Rothaermel, 2016). Panasonic on the other hand, company partnered for the battery cell production; two companies made the alliance in 2014. There was quite obvious stir in the EV market after Tesla’s opening patents as short after the announcement, Nissan and BMW were keen to talk with Tesla (Foy, 2014). In 2015, Toyota opened its fuel-cell technology patents (Toyota, 2015); Ford followed the similar trend and opened its patents to further accelerate the industry-wide development (Ford, 2015). Most recently, Tesla and Daimler have been in talks regarding prospects for a battery-powered Sprinter van. This is a great example of combining well-crafted and executed strategic alliance strategy with business strategy change, which enabled Tesla to extend their surrounding ecosystem and value constellation capabilities. Multiple alliances with large organizations may end up one partner leveraging more benefit than others (Gulati, Khanna, Nohria, 1994). Additionally, Tesla’s success was not seeing each partnership as exclusive deal but part of a bigger strategy to establish EV standard and be competitively advantageous. However, strategic move brought certain consequences as well. After two years, Toyota and Tesla officially ended their partnership (Bloomberg, 2017). One biggest reason was that two companies became tough competitors. This is one implication that Tesla’s strategy actually worked in a sense that to spur the industry and competition.
Unconventional sales and external logistics practices gained momentum after Tesla’s open strategy switch on its IP’s. Unlike other manufacturers, Tesla does not utilize franchising but direct sales and service facilities. By owning their distribution and service channels, company aims to gain capital efficiency, speed of product development and increased customer experience. However, this strategy has created a lot of friction, mostly due to the local regulations and lobbying activities of car dealers. For instance, in March 2014, New Jersey banned the sale of Tesla cars because of its direct sale strategy (Tesla, 2014b), however, decision was reversed after a year. Considering regulatory frictions and financial hardships, Tesla shifted its sales from its online store early 2019 and kept limited number of showrooms for selling the concept only. Company states in a blog post that this was required to push the Model 3 costs down and keep it that way and also for other cost efficiencies. Instead of test drives, they announced that, customers can buy the cars, try it for a week or for 1000 miles; and if they are not satisfied, they can receive full refund. (Tesla, 2019). These developments don’t seem to be a result of the open strategy but an extension of it, to capture value from value chain.

Moreover, Tesla relies on word-of-mouth heavily to promote the brand. Despite allocated budget for marketing activities, Tesla doesn’t spend money on advertising. Since 2012, annual reports highlight that word-of-mouth is the primary driver of sales and will be in the future as well. Musk states in one interview that he invests all the money to make the product as compelling as possible so that people love and will talk about it (Leonhardt & David, 2018). CEO Elon Musk is using Twitter actively Tesla placed their open strategy in their marketing efforts which resulted overwhelmingly positive. After their change of strategy, there wasn’t any changes with the use of marketing channels. Despite there are people who find Tesla’s move as “canny” and “altruistic” communities associate this move as a big step towards sustainable and more clean future.

For Reddit case, value constellation elements are not as diversified and unconventional as Tesla. Reddit delivers value to its customers (primarily its users)
through its website, Reddit.com. The traffic of reddit.com has increased tremendously over the years. The site was reaching nearly 175 million users per month back in 2014 (Fiegerman, 2014), which has increased to over one billion users per month in 2019 (Figure 19). These traffic figures alone can imply that users generate enormous amount of content every day. Content as an intangible asset is the factor which appeals other companies. Reversing back to closed strategy did not seem to have negative impact on the traffic figures and web channel but it cut down completely the complementary support from users, whose support potentially had impact on site’s growth and source code development efforts.

![Figure 19](https://www.statista.com/statistics/443332/reddit-monthly-visitors/)

Even though use of legacy technologies decreasing such as SMS, mobile penetration has been rapidly increasing, which reached the adoption rate of 42% worldwide in 2019 (Hootsuite, 2019). This rapid development was realized by Reddit and mobile app has been in focus more than before as another value chain. The company archived mobile app source code along with site source code and features introduced in mobile app after strategy change provides an evidence that the shift impacted positively on mobile channel as new features were released along with a
comprehensive overhaul. Another observation based on this fact that Reddit will likely to focus on mobile further and may introduce additional features. As mentioned multiple times, closed strategy may revive decentralization efforts through mobile app use once again and may lead the company to different direction.

Today, Reddit is known by almost anyone within digital marketing or advertising domain for its potential, therefore it is not common to see reddit.com being promoted on either digital or printed media. Company promotes its ad business and gives certain figures on the website; however, it is rather static promotion. On the other hand, Reddit has a sales team, that is the biggest group of employees according to CEO, which had (and still has) been organizing pitching sessions with large brands to promote their potential (Castillo, 2018). Related with the growth stats and gradual traffic increase, Reddit has undertaken a big redesign project after strategic change, which introduced new features such as night mode and design overhaul. Despite its enormous traffic and popularity, reddit.com looked and felt surprisingly underdeveloped, which is backed up with CEO’s statements that “Really, since the day we launched the site, we were like ‘you know, we can do better’ and he called Reddit as “dystopian Craigslist”. (WSJ, 2018). Reddit introduced three new viewing options to users, which are classic look, card look that makes the site look more like a Facebook and more compact option. Navigation made more accessible and easier. However, biggest change was addition of profile pages. In the previous design, profile pages didn’t give any more than basic info about user, however now, users can customize their own profile pages just like on Facebook, other users can post comments on user profiles if allowed and users can pin posts on their profile pages. This approach shows Reddit may be slowly shifting towards Facebook-like social strategy and this may enable Reddit to segment its user base more effectively. Considering these activities happen after revision strategy, it is fair to say changes were in the pipeline and rolled out after announcing the strategic change, potentially to prevent leakages.

At the beginning of the acquisition of Reddit, Conde Nast aimed to reach out bigger brands to use reddit.com to give ads, however, the mods did not seem to be aligned with the idea, simply because the user base were not interested to see same shiny
ads which were displayed on Vogue magazine. Therefore, it made ads very difficult to sell (Fiegerman 2014). However, company switched the strategy with the ads and started promoting media and technology related advertisements as users were much more interested. This move also shows that Reddit embraced primarily media and tech organizations as key stakeholders other than its users, which include The Washington Post, Taboola, Time, HuffPost, CrowdTangle and many others (Reddit, 2018). On the other hand, when we look at the way Reddit pitches its ad space, we can see there isn’t any differentiation with ads as the site includes ads from various companies and brands today. The strategic change back to closed source code did not seem to resonate much within these partnerships, however, in the future, company can utilize closed strategy and freedom to introduce certain features to monetize user data, which would be serve B2B stakeholders.

To sum up and visualize value constellation overview of two case companies and implications of their business strategy moves, below table can be formed.

<table>
<thead>
<tr>
<th>Value Constellation</th>
<th>Tesla Inc.</th>
<th>Reddit Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Web Store, Retail stores and showrooms</td>
<td>Reddit.com, reddit mobile app</td>
</tr>
<tr>
<td></td>
<td>R&amp;D, Innovation, w-o-m marketing, open strategy, infrastructure network</td>
<td>New features and major design overhaul, pitching reddit to larger brands</td>
</tr>
<tr>
<td></td>
<td>Daimler, Panasonic, governments</td>
<td>Users, The Washington Post, Taboola, Time, HuffPost, CrowdTangle, many other media and tech organizations</td>
</tr>
</tbody>
</table>

Table 9. Value constellations of two case companies after their strategic move.

6.3.2 Value Capture

Value capture mechanisms are tightly connected with value propositions and whole business model (Teece, 2010a). Value proposition elements discussed so far has certain implications on value capture as well. Since the day of open patents announcement of Tesla, there has been significant changes and development in the markets and technology platforms. Similar and more dramatic change took place on internet and social media industry and applications as well. Therefore, Tesla’s closed to open move, and Reddit’s open to closed move has implications on value capture.
Tesla generates its revenue primarily from the sale of their cars. Vehicle portfolio of the company consists of Model S ($70,115-$90,115), Model X ($75,315-$95,315) and Model 3 ($30,815-$48,315). New Roadster production is expected to start in 2020 and base price is $200,000. According to 3Q 2019 update, Model 3 production has already begun in China, Model Y is expected to be launched in 2020 and Tesla Semi to be started in same year. 2019 annual report reveals annual revenue of Tesla in 2018 of $24.4 billion and biggest expenditure item is COGS by 81% of the revenue. Majority of the revenue came from vehicle sales, ($17.6 billion) following vehicle leasing ($883 million), services ($1.39 billion) and energy systems ($1.55 billion).

Even though Tesla produces aesthetically appealing and performance packed zero emission cars, the company have been dealing with more serious financing problems since day 1 and raising money. Before the initial IPO, Tesla had to raise $40 million in May 2008, which CEO would later state that Tesla had financial breakdown in 2008 and it was the worst year ever (AutoBild, 2014). Tesla’s revenue profile shows quite stable and gradually increasing trend over the years (Appendix 2), however, the high technology and engineering costs forced company to lay of its workforce time to time to stabilize its profitability. This was required to ensure car prices remain stable and as low as possible. Biggest redundancy was made as 25% when Elon Musk became CEO (Baer, 2014). Most recently, Tesla announced 7% of its employees laid off in first quarter of 2019 (Matousek & Kanter 2019).

Although the company spent efforts to ensure profitability for the shareholders, first profits were made in the 3Q of 2016 (Reuters, 2016) and next profits were recorded in 3Q and 4Q in 2018 which was announced with a tweet from CEO replying to another tweet from The Economist bashing Tesla’s economic status.
Tesla’s strategic shift on patent portfolio enabled an ecosystem and larger market. As Appleyard & Chesbrough (2017) discusses, profit level may fall because of increased collaboration and supportive ecosystem. On the other hand, Tesla did not have the capabilities at the beginning which resulted with significant CAPEX and EV concept was unknown for the customer. Record number of sales in 2019 and gradual increase in Tesla cars support this fact; even though there are rightful suspicious regarding company’s profitability, strategic shift made in 2014 has undeniable effect on revenue figures. Additionally, Tesla has been capturing value through its vertical integration efforts as well by reducing its reliability to suppliers and eventually cutting the costs further, having more control over the production and quality and increased response times.

When history behind the Reddit’s cost structure looked into, it is clear to say that Reddit did not have big problems with financing and cost structure at the beginning because co-founders received $100,000 seed funding from Y Combinator to ensure the licencing and soon after they sold it to Conde Nast for millions. Reddit did not really have big running costs at the beginning, considering it was under the wings of a corporation and before 2010’s, Conde Nast kept print and digital operation costs separate, which made rapidly growing reddit.com’s costs condoned. However, after integration of operation costs, Reddit was becoming a burden for the parent company. (Fiegerman, 2014) Today, the cost structure lays on the storage of data, servers and employee compensation packages as well as overhead costs. On the development side, users had been working on the source code repositories and tracing bugs for
free, however, closed strategy neutralized this option. However, Reddit’s biggest employee group consists of engineers for development. On the other hand, mods within subreddits work voluntarily to observe community and site guidelines. Open to closed approach in this perspective may have positive impact on the cost structure of the company, even though “free” development is cut out, company will have freedom to branch and work on the source code which would reduce frictions with the internal developers and may provide more stable platform, which eventually cut further development costs.

Primary revenue source for Reddit has always been advertising. At the beginning, company had serious problems to generate revenue. The user base and potential were great but from the advertiser’s point of view, Reddit was infamous with its inappropriate content and freedom the users had, which deteriorated the revenue performance. Today, community guidelines and actions from the management aims to lower the concerns from advertisers’ point of view, however, this approach seem to cause friction with the users. 2019 figures show that Reddit made $119 million net ad revenue in US market which equals to 55% increase compared with 2018 data (Schiff, 2019). Closed strategy on this regard may have impact on capturing value from the ads. Even though ad and metric implementations or features on source code may not be useful to public, useful information regarding anti-spam or ad related features may leak and can be used against this revenue stream. Reddit has also been using sponsored links as well to make ads look like regular posts but tagged with “sponsor” tags, effectively to avoid ad blockers and encourage users to click on them. Moreover, sponsored links are promoted on the top of the homepage, regardless of their upvotes which offers great advantages for the impressions, which is a concern for company to keep ranking algorithms proprietary to not to give away competitive knowledge to competitors. Therefore, closed strategy utilized value capturing aspect of ads channel.
Additionally, Reddit is capturing value from its premium subscription program. Reddit premium was initially announced as Reddit Gold and offered number of benefits such as ad-free browsing, credits (which were replaced with reddit coins), member-only subreddits and some other benefits. When it was announced first, executives from Conde Nast did not know about the subscription model, however, Reddit employees made the announcement at a time when the managers were out of the office for weekend. The announcement on the blogs subreddit was so successful that by the time management knew about it, Reddit generated six figures and the subscription system got approval (Fiegerman, 2014). Reddit changed the name from gold to premium after strategy change, because users were often confused whether gold account has something to do with virtual currencies. Premium subscription gives users 700 coins per month, which are virtual goods that can be used only in reddit.com and can be used to give silver, gold and platinum awards to good posts or comments to make them stand out. Users who receive any of these awards are granted limited days of premium features based on the award they receive. Premium subscription costs $5.99 per month. Predicted revenue Reddit would make in 2019 only from gifted
awards is around $1.176 million alone (Reed, 2019). In light of these information, it is possible to say closed strategy implications on value capture aspect of business model has been positive. Considering the new features introduced on premium subscription after strategy decision can be interpreted that company had more flexibility and freedom to develop new features with minimized risk of leaking and stability of the platform. Additionally, value impact of these features on users may be bigger than openly working on these features in the future.

In summary, value capture aspect of the business model of two case companies can be visualized as below table.

<table>
<thead>
<tr>
<th>Value Capture</th>
<th>Tesla Inc.</th>
<th>Reddit Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Increased revenues and profitability through cost cuttings, vertical integration efforts, new products. ($21.4 billion (2014: $3 billion))</td>
<td></td>
<td>• Rapidly increasing ad revenues, premium subscription backed with many features ($65 million ad revenue in 2018, $119 million in 2019, over one million dollars revenue from premium, prediction based on gifted awards)</td>
</tr>
<tr>
<td>• Increased costs due to high CAPEX (Net loss: $1.06 billion (2014 $294 million))</td>
<td></td>
<td>• Overhead costs, data storage, employee compensations</td>
</tr>
</tbody>
</table>

Table 10. Value capture mechanisms of two case companies after their strategic move
6.4 Community Reactions to Business Model Changes

6.4.1 Tesla Inc.

Documented reaction from users on internet is very positive at the first glance. NVivo divides user profiles into 4 segments in general. Out of 123, 30 comments are very positive which consist of users who were overwhelmingly satisfied almost on a hype level, 52 comments moderately positive, consisting of users who took the development as a clever business strategy. 21 comments moderately negative that consist of users who took it moderately negative and 20 comments very negative, which are users who took the announcement negative and consider the strategy change as either marketing ploy or PR. Below is illustrated word frequency analysis and word cloud.

Figure 22. Word frequency of reactions on internet. Source includes user comments from Tesla forums, Reddit forums and tweets.
Very positive and moderately positive perceptions mainly revolving around open patent strategy as a brilliant move as well as people praising Elon Musk as a “hero” and “great visionary”. Moderate reactions stress on the value and opportunities, which this strategic decision potentially would bring and speculate potential implications on the industry and other players in the market. Some of the moderate reactions include discussion on “this is a fair strategy for Tesla to protect themselves against “patent trolls”, which buy and aggregate IP’s and licence them to 3rd parties. These companies are notorious and hated within business setting. They don’t take it as simple altruism, contrary to negative reactions.

On the other hand, there are moderately and very negative comments as well. Moderate reactions are inclined to be sceptic about the way this strategic shift was announced, whether it really serves the purpose and highlighting the grey areas in this strategy. Fair amount of moderately negative reactions stresses the fact that patents are already open to public and the way Tesla created the impression as they are opening their core technologies, which is definitely not the case. As stated in the original announcement from company, many people highlighted “what does ‘in good faith’ mean?”. Some users on discussion forums elaborate on this issue that if a company decides to use Tesla patents, Tesla could nullify “good faith” statement and it could be problematic. Therefore, there are lots of grey areas in the announcement as a counter argument to comments regarding Tesla to use this strategy defensively, to protect itself from patent hoarder companies. Number of reactions state as follows,
“If you take Tesla stuff and try to alter them to be exclusive instead of universally compatible, Elon Musk would have decent legal ground to sue you into oblivion.”, regarding what Tesla could do if they would exploit these grey areas. Moderately negative reactions can be summed by the following statement that “details are horrendous, but the headline is enough to create positive reaction”.

Very negative reactions mostly revolve around the idea that this strategic move is nothing but a marketing ploy, cleverly communicated by the company, primarily to attract attention of consumers and create pressure on the industry players, thus, Tesla to strengthen its position. This portion of the community more strongly express their feelings on the abundance of grey areas and overcomplications in details. Number of criticisms towards the positive portion of the community includes statements such as “Is this just him looking for PR?... It’s never out of the kindness of someone’s heart in business” and “… It may serve as an ideological stance on their part but it does wonders for marketing ...”.

![Figure 24. Two examples of negative reactions. Source: Reddit.com/r/news](image)

On the other hand, on the news sources, analysts and commentators observed to be very cautious with the strategic change move. NVivo extends 25 comments selected comments into 53 references and 13 of these references are observed to be very
positive, 24 moderately positive, 14 moderately negative and 2 very negative. However, closer inspection reveals that some of the moderately positive and moderately negative comments are very close to each other and common sentiment observed is rather mixed than positive or negative.

In very positive references, authors of news articles and analysts refer that open strategy with patents were clever move by the company it will eventually spur the industry, entice other manufacturers and increase the awareness of EV, which would return back to company as increased sales. Moderately positive comments highlight that this could be considered as a risk, but it is no doubt a smart move, which would not be expected from an automaker. On the other hand, moderately negative comments stress the grey areas in the open patent pledge. Some authors highlight that what does “good faith” stands for and it is just too grey area which leaves a back door for Tesla to potentially exploit open strategy. Some other authors highlight that, upon a closer inspection, this pledge means that if some of the companies use Tesla patents, Tesla can use other companies’ patents in return, which would not be desired for all companies. Very negative comments highlight that Tesla continues to file patents, even though Musk stated he doesn’t really support the patents anymore.

Lastly, some of the major auto manufacturers responded this move as well as other stakeholders. Some of the manufacturers actually followed similar strategic fashion, therefore, they showed the reaction in practice. Observations show that, there were not so clear statements from other manufacturers, however, the implications underlying were realized. For instance, Fiat Chrysler CEO stated that "I think he (Musk) deserves more attention that we have given him. In terms of the underlying business model and what he's doing, it's something we need to understand much better." (Woodyard, 2014). Similarly, Musk himself stated that some of the companies already made inquiries already, however, he did not reveal any details. These are elaborated further in the following section.
The patent pledge was initially made for other manufacturers and suppliers for the intention on spurring the industry and attract attention of other manufacturers to diversify the competition. Some of the manufacturers seem to start using certain patents from Tesla, however, there isn’t any clear data to draw implications. However, Tesla’s previous partner Toyota opened up 5680 fuel cell patents roughly after 6 months with a slogan “the door to the hydrogen future” (Businesswire, 2015). This is one clear implication that major manufacturers share similar ideas that open strategy could be viable for technology and market development for not only software or high-tech companies but also automotive industry. Similar trend followed by Ford by opening nearly 2000 patents in 2015, Nissan and BMW stating that they are willing to talk with Tesla after patent pledge supports this interpretation. These developments could mean that the success of the strategic move may diminish over time, if similar fashion would be followed by other manufacturer. On the other hand, it also points out, EV industry and competition will dramatically increase in the upcoming years.

Even though social media is in use more than ever before, not many CEO’s comfortable to use the tool and actively engage with their audience. Elon Musk is definitely not hesitant to use social channels and it has big impacts on Tesla brand. Based on the observations on positively reacted users to shift to open strategy, it can be interpreted that Tesla’s awareness and reputation is strictly tied to CEO’s actions. It is evident that Tesla and its CEO are inseparable today as the CEO doesn’t hesitate to show what he is interested in and showing personal side of him, which is why the company is able to use word-of-mouth marketing so good and be able to keep its advertising budget at minimum. Similar success can be seen from the reactions to strategic change in 2014.
One side note is that negative comments on social channels like Twitter is nearly non-existent but more prominent on discussion forums such as Tesla forums, comments under online articles and Reddit forums. This might be due to character limitation on Twitter or psychological pressure, such as, whether Musk himself replies to negative commentaries as he is very active on Twitter. Even though negative reactions have valid points and these points were stressed by various analysts and experts; general perception towards open patent strategy and developments in value points are positive. As it seen from the reactions from online news and articles, authors reacted mostly positively, however, both positive and negative comments include the risk factor as well as “unanswered questions” and “grey areas”. However, one consensus is that Elon Musk plays the biggest role behind this positive reaction success, not the strategic move alone. Tone of voice he uses often include references from games or other popular culture elements, he is recognized as visionary and innovator, which enables Tesla to reach large audience. On the other hand, facts, figures, annual report commentaries and quarterly statements since 2014 show that there are absolute advancements in the value company offers, for instance: range of Tesla cars increased 38% in average, number of Supercharger platforms increased 335%, 20-40% energy efficient compared with other manufacturers. Total cost of ownership for BEV’s are still high compared to ICE (IEV, 2019 165). Tesla also changed their
statement regarding TCO in 2018 annual report that “Our vehicles offer an attractive cost of ownership compared to internal combustion engine or hybrid electric vehicles.”, whereas same information starts with “We believe, …” statement in 2014 report, however speculation on this may not be relevant to the scope of this study. Lastly, Tesla vehicles now offers instant acceleration advanced autopilot system, active safety features updated via over-the-air updates and number of easter eggs and pun games (such as Tesla Model S, 3, X, Y) which goes beyond traditional automaker. Based on these, the improvements in the value propositions over time perceived mostly positively by the online communities who are potentially consist of consumers and suppliers.

6.4.3 Reddit Inc.

Documented reaction from Reddit users to closed strategy is very negative at the first glance, however, upon careful review, number of users who find the decision reasonable and expected. Similar to Tesla case, NVivo divides user profiles into 4 segments. However, due to the long explanation’s users made in their comments, NVivo divided some of the long posts into multiple posts. Therefore, original 123 comments extended into 174 references and sentiments were created based on these references. Out of 123 comments, there are 11 very positive references, which includes comments that supports strategic decision and people state they understand the business perspective. 47 references are moderately positive which includes comments that understand the reasoning but feeling sad about the decision. 53 references are moderately negative, questioning admins why they opt for closing the source code. 63 references are very negative, which include very disappointed comments and further speculations behind the motive. Below is the illustrated word frequency analysis and word cloud.
Very positive references didn’t include too much detail, users supported Reddit’s decision and they stated they understand the business point of view in the decision making. Moderately positive references are similar; however, users stated that there could be other alternative solutions for whatever rationale was given by the admins. Some users elaborated that if the open-sources project is run successfully for for-profit entity, it would eventually go closed and some users elaborated that mods who oversee subreddits were probably not happy with the decision, however, it is the requirement from business side.

Figure 26. Word frequency of reactions on internet. Source includes user comments from Reddit forums, comments posted under online articles and tweets.
Despite positive comments, the majority of the online users, whether they are Reddit users or not, have taken the closed strategy negatively. In moderately negative comments, users question the reasonings and propose alternative options that archiving the whole code. Some users state that they are disappointed to see the admins don’t really make use of community efforts towards developing the code and open source advantages. Number of users criticized the ranking algorithm of posts and stated their concerns regarding further unwanted changes with ranking algorithms, automatically deleted comments, manipulation of posts by admins and censorship measures. Some of the comments highlighted that Reddit hasn’t been updating the source code for a while anyway and now they had to make announcement. In very negative comments on the other hand, users criticized company heavily for the strategic decision and directed their disappointment. They found reasonings very poor and stressed on the concerns regarding transparency, use of user data and sharing it with 3rd parties. Some users accused company of betraying their own user base, some users stated they will delete their accounts or leave Reddit for good.

Figure 27. Two examples of positive reactions. Source: Reddit.com

Figure 28. Two examples negative user reactions. Source: Reddit
6.4.4 Overview

From the perspective of the development of the business, Reddit’s decision on reversing back to closed source code strategy was an anticipated move. Aligned with the Appleyard & Chesbrough’s (2017) views, the way company created and captured the value transformed over time as well as market conditions and internal capabilities, which led the company away from openness eventually. From the user’s perspective, there are certain reasons why the community did not take the strategic changes so well.

First off, Reddit co-founders have been advocates of free and open internet since the day they started operations of reddit.com. Alexis Ohanian has been actively giving speeches and lobbying against SOPA and PIPA bills which eventually died out. Their views and plans for website were the foundation which created community culture and one of the motivations behind going open source in Reddit. In 2014, Reddit joined DERP (Digital Ecologies Research Partnership), a joint initiative, which was established by community websites that aimed to promote open and accessible user data for ethical and academic studies and explorations. In same year, company announced that it will donate 10% of its ad’s revenue to non-profits, chosen by the community. All these developments in the past strengthen the sense of culture within users.

Figure 29. One example of communication between Reddit CEO Yishan Wong and a user. Source: Reddit
After Reddit was sold to Conde Nast and in the course of business, the site went through challenging times in terms of transparency, censorships, conflicts with the mods and users. During these times, community wasn’t managed so well, which caused the erosion of the credibility and relationships with the users. All these developments signalled a major culture shift in Reddit, losing touch with their community and conflicting the historical values and actions, which would be the last desired thing for a community-driven business. Especially legacy users, who has been members for a long time seem to built-up memory of these developments in the past and reflected their frustration once the company announced strategy move. Since the admins did not separate the customer base into legacy and newcomers, reaction was inevitably very negative.

Despite negative user response after the revision strategy announcement, number of new features rolled out, along with major design and visual overhauls and company received major funding in D series round for $300 million and its market valuation reached to $3 billion in 2019. Based on the news sources and online articles, revenue figures seem to increase gradually as company reached $119 million revenue in 2019 alone from the ads. These facts support the idea that the open to closed shift had a meaning for only a small portion of the users, and it meant something beyond value, but a transformation in the community culture. One reason why the reversing back to closed source did not resonate with larger user base could be because majority of the users are not familiar or have no use of the open source movement, unlike the development community, who were aware of the changes. Today, when we look at the developer subreddit or other subreddits which accommodate technically oriented users, it is often to see similar frustration towards the credibility and transparency of the company, which was observed under original announcement. Therefore, it can be said that strategy change went largely unnoticed by the majority of the users and media. Users, who noticed the announcement reacted negatively; potentially due to previous actions of the management and loss of trust built in time. The performance and figures of the company did not seem to be affected by the negative perception of its users towards strategic decisions; even though users benefit from the newly introduced features and further value they receive, there is general frustration towards the shifting focus of the company, therefore, towards value propositions.
7 Discussions

Following chapter will first summarize the findings of this research, findings and highlight what are the relevant results within the scope of this study. Following the summary, theoretical contributions and the link between literature will be discussed. Third, practical implications will be elaborated and last, limitations and recommendations for future research will be disclosed.

7.1 Summary

Two case studies investigated in this research belong to different industry settings, offer different type of products and services and address to different type of customers. Both of them are very large organizations serving their products worldwide; Tesla Inc. is publicly traded company and Reddit Inc. is currently private company. Both companies serve in B2B and B2C markets, however, their primary focus is on B2C. Tesla Inc. operates within automotive industry, which is very competitive with very strong rivals; however, the company has introduced a new perspective into electric vehicles industry. Reddit Inc. operates within internet and social media industry, where the dynamics are completely different and bound to change in the blink of an eye. There are also strong competitors within this realm, almost monopolies, however, Reddit itself is considered a monopoly by some parties as well. All in all, two companies belong to different settings, which require unique approach to their business models and strategies, offer different type of values and have unique perception in the eyes of their customers. Tesla Inc. is strongly associated with its CEO and the customer perspective is very positive as the company is often referred as the forerunner for the future technologies. Reddit Inc. on the other hand has complex perception in the eyes of its largest stakeholders, its users. People enjoy the online communities and culture there, however, certain portion of the users suffer from the actions of admins and certain controversies throughout the history of company. These differences and market conditions required certain alignments in two companies' business model and have implications on value propositions.
How do switches between closed to open and open to closed strategies affect value proposition of companies?

Overall, some aspects within the value proposition experienced certain improvements for both companies, some other aspects actually deteriorated to a degree after business strategy changes. However, this deterioration is quite limited and did not seem to have strong effect on current performance figures.

Value propositions of Tesla Inc. remained same after their shift to open strategy with patents, however, they improved the potency of these propositions strongly. Overall, company improved its’ product offerings significantly; as the technology prowess and know-how capability rapidly increased, Tesla was able to combine its solar panel business with battery business and Tesla Powerwall emerged. Additionally, range of vehicles increased noticeably, autopilot capabilities improved, and charger network expanded. Tesla also got big credit from their customers and accelerated EV adoption rate, which indicates the effect on the “Market Knowledge. Strategic shift and its public announcement created big pressure on big manufacturers as it was initially directed to manufacturers. Some of the major vehicle producers recognized the strategic move and followed similar trend with their strategy and opened number of patents regarding key technologies. Competitive landscape became much more structured; as of today, almost all manufacturers have at least one EV car in their portfolio or have in their plans for the upcoming years. Over the years, Tesla also strengthened its position in US and European market dramatically. The current market share of Tesla consists of 79% in US and 17% in EU EV market as of 2019. Tesla also entered Asian market as one of significant player, however, competitive landscape is much tougher there because of number of local companies slowly raising. Thanks to the pressure and gained recognition, company was able to allocate its focus into battery technology and strengthen its agreements with large suppliers such as Panasonic and became a supplier of other manufacturers such as Daimler, which had a great impact on “Innovation”. “Leadership Support” has been always strong with Tesla, as the company is strongly affiliated with its CEO, however, shifting the strategy brightened Musk’s prominence even further. Tesla has been infamous with production delays and thorny financial history and the infamy still persists to a level; however, due to strong
“Brand Recognition”, many customers take it kindly and similar behaviour is observed with shareholders. Lastly, there is a shift observed into mutually determined perspective with design characteristics and a shift towards energy business. All in all, closed to open strategy played significant role or accelerated these improvements on VP components; even if they were not direct consequence of strategic shift.

There are no explicit value propositions given by Reddit Inc. as company does not disclose any corporate documents yet; however, from the perspective of users, value propositions could be identified. After the closed strategy, there were certain improvements in the value offerings observed, as company introduced many features along with sitewide improvements. Additionally, number of new features introduced for premium subscription and tools for uploading content to the site. Company bolstered its position in its competitive market as a monopoly, as number of sites which emulated Reddit source code increased. There was also high risk of leakage that would have impact on company’s competitiveness, which shows the implications on “Market Knowledge”. Company introduced many features in the past, and released many after strategic change, which shows the new products were waiting in the pipeline. These developments show implications observed on “Innovation” after reverting to closed strategy. With highly increased technology prowess, company may introduce further features in the future and focus on mobile domain more strongly. Decentralized architecture and more service-oriented approach seemed to be in the scope of closed strategy and innovation aspect as well. After the transformation, biggest product change was new design and features which showed slight shift towards Facebook-like social media platform. Even though number of new features introduced, implications on “Product Knowledge” is still limited. As the company now has more freedom to implement, there may be a shift in direction towards consulting to other brands with its extensive knowledge of user data. Impact of shift on the “Leadership Support” observed as negative, as the decision seem to conflict with the views and visions of co-founders who were in the management position when the decision was announced. Additionally, none of the managers made any statements after the strategic shift, except founding engineer. Similarly, closed strategy move affected “Customer Relationships and Brand Reputation” negatively in the eyes of users who reacted the
decision very negatively. Lastly, there are no visible implications on design characteristics of value proposition.

All in all, closed to open strategy affected positively the value proposition components in Tesla Inc., with almost all aspects. Even though it did not have the similar potent improvements on Reddit Inc.’s VP components, still there are some positive implications on especially product knowledge and offering. Additionally, closed strategy could be one accelerant of Reddit Inc. shifting its focus to decentralized approach and more service and B2B oriented. Similarly, Tesla Inc. is slowly moving towards complete vertical integration and even towards reversion path from its open strategy in the near future.

Why and how the strategic changes are used between open and closed business models?

Use of both closed to open and open to closed strategies are result of market and firm specific developments in their business environment. In order to reach masses, Tesla opted for shifting from its defensive strategy from its technologies, which helped company to ensure profitability of its core innovation. By opening the use of patents and use of its services (supercharger network) to other vehicle manufacturers, shifting to open strategy was used by the company to reinforce company ecosystem and to improve the overall value created in the electric vehicle market for the sake of industry growth and hope to gain subsequent profits. Ambitious plans set by major manufacturers, rapid developments in sales and revenue figures within EV industry, long and short-term projections support this interpretation. For instance, number of EV’s sold is expected to rise up to 28 million cars per year by 2025. By 2040, this number is expected to be 56 million per year. (BloombergNEF, 2019) German manufacturer Volkswagen is planning to announce 70 EV models within 10-year timeframe and increase its investments to €30 billion in EV’s by 2023 (Reuters, 2019b). Moreover, Tesla improved its share price from $164 in 2014 to $358 in 2019, which is equal to 119% increase over the years (Based on NASDAQ figures).
Following the strategic move, Tesla also extended its vertical integration capabilities, introduced new strategy with distribution channels and enhanced value capture mechanisms; as the company achieved 80% of vertical integration in its manufacturing back in 2016 (Jones, 2016), which decreased work hours by 33% and nearly doubled vehicle production (Field, 2019).

Opposite progression was observed with Reddit, as the company reversed back to closed strategy on its source code. Since opening the code in 2008, users contributed to improve the code further, which also transferred the benefits to Reddit. Open source code helped Reddit to increase consumer surplus and ultimately its technology prowess as the company gave away its resources and received valuable technical input over time. However, the company’s focus shifted to become more service-oriented and B2B stakeholders, increasing difficulties to control stability of the platform caused the open strategy to swing back. Company archived its site and mobile source codes but left some of the engineering tools open. By closing the source code, company can now control and monetize the platform more easily. Closed strategy was also in favour with more decentralized and service-oriented approach; therefore, company shifted its focus into mobile channels to distribute value.

How do value propositions resonate with the stakeholders after strategic changes?

Even though EV’s not new, the concept hasn’t been so widely used by the automakers. When Tesla placed EV’s into central of their business model, combining with high performance and zero emissions, interest was aroused among the communities on different levels. Number of companies raised inquires for the use of patents and over the years, similar behaviour with strategic change was observed. Additionally, company has been socially active and was able communicate open strategy shift as not only a solution for its business but also an important step for the future of sustainable transport and clean energy. CEO’s approach to social media use and success to communicate with consumers from different generations helped value
propositions and strategic changes to be perceived very positive. Tesla was also able to reflect its improved value propositions in performance figures, which was also taken positively by the shareholder community.

Contrary to Tesla, Reddit's value propositions were not taken positively after the strategic change. There are multiple reasons for it, however in general, the shift in the company culture and from B2C to B2B stakeholders, contradictions between visions and actions of the management, decreasing credibility and trust to company were the primary suspects. Contrary the highlights by the company of the values and importance of its users, there doesn’t seem to be strong and credible relation with the community anymore. As the way how value is captured changed over time for Reddit, unsuccessful community management and disconnection between management and users resulted negative perception of value propositions after open to closed strategy move.

7.2 Theoretical Implications

Similar to business model studies, strategic shift between closed to open has been studied under open innovation concept extensively. Contrary, open to closed phenomenon is still understudied phenomena; however, it slowly gains more attention. Likewise, value propositions has been studied inadequately and number of firms who employ appropriate value proposition practices is surprisingly small (Payne et al., 2017). Moreover, there is a clear gap of research in the conjunction of business model innovation, shifts between open and close business strategies and value propositions. Thus, this study does not aim to make theoretical contributions but rather investigate strategic changes and their implications on value propositions, changes in different business model elements, how these changes resonate with the end-user, from a longitudinal aspect and investigates how these concepts work within different industry settings.
Even so, this study proves the statement by Afuah (2014) that business model should be flexible enough to adapt everchanging requirements and dynamics. By allowing certain alterations in business model components and strategy, firms are able to improve their value components, especially value propositions. The strategic choices of firms are not static but dynamic and may change over time, depending on consumer, firm or market related drivers. The migration between “liberate-control” continuum also illustrates the interaction between customer and innovator, which aligns with the findings of Appleyard & Chesbrough’s (2017) study. Moreover, the role of top management is evidently laid out in this study aligning with the findings of Chiaroni, Chiesa & Frattini (2010).

Opting for open strategy enables access to rich external sources for R&D, extends firm’s core competencies by using external partners, multiplies network effect and thus enables to formulate effective value propositions and various combination of value capture mechanisms as stated by many authors (Alexy et al., 2017; Appleyard & Chesbrough, 2017; Chesbrough & Appleyard, 2007; Holgersson et al., 2017). Furthermore, as Saebi and Foss (2014) suggest, open strategy can provide additional opportunities for value capture and creation for organizations compared with in-house development, and it can lead significant cost reductions. Tesla case provides practical evidence to support these views and how IP’s used as enabler through change of business strategy. It also shows that open strategy indeed extended firm’s competencies by agreements with major battery and auto manufacturers; network effect multiplied over time; which allowed Tesla to improve their manufacturing processes and accelerate vertical integration efforts. These developments decreased production delays and steep cost of battery manufacturing. The partnership with Panasonic and GM enabled company to advance battery technology through Gigafactory and exchange of knowledge, which eventually led company to cut down vehicle production costs and improved Tesla’s position in industry and market.

Teece (2010) argues that strong IP protection is not always beneficial for firms, if they experience problems in value capturing. He also continues that information is difficult to put a price tag on and sell, which makes value capture and overall business model
design a very challenging task. Tesla and Reddit cases provide evidence for both arguments. IP’s can become an obstacle for the company if the market suffers from lack of technological advancement, which directly affects adoption of the technology and production costs. For Tesla, company shifted their strategy to open on patents and significantly improved value capture mechanisms; however, company did not apply fully open strategy on their business model. Their successful and unique approach was hand in hand with traditional business aspects, which aligns with the views of Schneider and Spieth, (2013), Voelpel et al. (2004) and Lichtenthaler (2011). Additionally, they introduced completely different distribution strategy by selling their cars from web store and keeping small showrooms in busy areas (like shopping malls) only for showcase of the vehicles. On the other hand, question remains as how a firm could capture the value from the vast amount of information by keeping their knowledge assets open in an increasingly competitive environment.

Companies may depend on reverting back to closed strategy after sometime, as high number of external collaboration declines the firm’s ability to generate value over time (Appleyard & Chesbrough, 2017, 318), which was the case in Reddit. As suggested by Laursen and Salter (2006), early stages of the product or business, external sources may need to draw knowledge from various sources to increase the knowledge pool. However, as the market slowly matures, then transformation may be required to restrain openness to stay competitive. Additionally, within the context on OI, Lichtenthaler (2011) discusses that organizations need to develop certain capabilities in order to manage open processes. Reddit case illustrates this continuum that initial open initiative enabled the company to develop of internal capabilities with establishing strong R&D teams and absorptive capacity over time. Reddit’s commitment to openness from its inception allowed company to extend its technology prowess, knowledge assets and accumulated experience. In course of the business, company reduced the use of external assets gradually to a point that source code turned closed completely, which these developments support the findings of Chesbrough and Appleyard’s (2017) findings. However, as Laursen and Salter (2006) suggest, this shift also put company in a position to fall into organisational myopia and miss opportunities in the future. Additionally, these interpretations can imply that Tesla may shift from open to closed strategy over time.
Moreover, strategic shifts took place in both cases affected firms value proposition components. Morgan (2012) states that strategic decisions play an important role on competitive advantage of companies. From the Tesla case, firms position within market and industry and developments on value propositions show that strategic shift provided certain boost for the company. For the Reddit case, similar improvements observed on certain value components along with negative implications. Further, Payne et. al. (2017) argue in their study that improvements in value propositions have positive impact on customer perception, which would further strengthen engagement and, satisfaction. Moreover, they state that strong brand reputation and credible customer relationship can strengthen the impact of value propositions. Additionally, positive employee satisfaction has a role to play in customer perception. Reddit case clearly shows how lack of communication between management and voluntary mods affected employee satisfaction and this led to user dissatisfaction with the values provided for them. Loss of credibility in the eyes of users impacted certain value proposition components to be affected negatively after strategic shift and further value propositions to be perceived very negatively. On the other hand, Tesla benefitted positive perception mainly from its customers and its alignment with leadership vision and actions, which eventually had positive implications over value propositions after strategic shift. All in all, strategic changes can be used for co-creation and exchange of value between suppliers and customers. In addition, the benefits and the drawbacks of strategic changes may resonate differently with different customers. For example, focusing only firm-level dynamics and omitting the community may not provide nuanced or targeted value offerings that resonate well with the customers of a company.

7.3 Practical Implications

In the context of this study, patents may be strong defensive mechanisms to profit from an innovation, however, adopting open strategy with patents may generate interest from external parties to contribute in innovation or the firm to develop
complementary assets, potentially standardize the technology and strengthen value constellation and capture mechanisms within business model. Conversely, if there is a high consumer surplus and high risk of imitation, if the stability of the business platform is questionable, company may not find open initiative as lucrative anymore. Open initiatives can generate large contributions and establish a supportive ecosystem; however, it may lower the control over the value capture mechanisms and dissipate the interest of shareholders. Thus, the focus would shift towards value capture than value creation and to establish more control over the knowledge assets. These developments can lead company to lean towards reversing back to proprietary strategy. For both scenarios, this study provides certain practical implications.

Tesla Inc. case illustrates that if the technology is rather new and consumers are hesitant, adopting an open strategy may entice the interest of suppliers and stakeholders and potentially contribute the pace of innovation and consumer adoption rate. As the contributions and interest would create certain pressure, it would also provide certain level of power to the adopter to shape competitive landscape to a level. With the positive perception among end-users and shareholders, company can leverage benefits to improve its product offering, take a step-in standardizing practices in its complementary assets. This would have implications on value constellations and improve value capture mechanisms over time.

Following such strategic path may be unusual for certain industries. As per the findings of this study, positive implications on value propositions are not limited with the product knowledge and offering but other aspects as well, such as market knowledge, innovation and overall formalization of value propositions. The role customer relationships and communication play vital role on these implications. If the strategy would be communicated effectively to different levels of stakeholders by leveraging the power of social media channels; positive perception on brand reputation can multiply intended outcomes. Therefore, managers or executives should know their customers and strive to think from their perspective. Additionally, companies and managers could be more open-minded with the use of digital tools to engage with the end user, and it may help companies to understand what the stance of their customer
is, whether if there is a gap between the vision of a company and leader, and what is the role of strategic change.

Reddit Inc. illustrates an interesting case of monetizing and turning a community into a business but also it provides a clear example of shifting open to closed strategy. As the company opened its source code for website and mobile app, its users made big contributions to the development. Openness and transparency were also part of the community culture. It helped company to become a monopoly with huge user base and enormous amount of content created by users every day. However, there has been explicit shift in the company culture which affected the way users reacted and implications on value propositions.

Open contributions to knowledge assets, especially in the web-based businesses may cause excessive fragmentation in the source code which would primarily complicate the customer experience. If the organization’s intention is to enhance value capture mechanisms and shift towards more service-oriented approach, reversing back to close strategy may be more applicable from the business and practical perspective. It would definitely provide more control and decrease the risk of new features to be leaked, especially in an environment where the imitation can take place rapidly. Control over the knowledge assets can help company to develop and release features as value offerings, which would impact revenue mechanisms positively. However, it may decrease the pace of innovation in time. Making such strategic change in a community driven business will require strong and credible relationship with the users who spend their effort voluntarily. Such as in Reddit case, if there had been big controversies, which tarnished the credibility of the company in the eyes of customers, it will potentially rupture the relation between company and legacy users and leave negative impression on the newcomers. If that happens, the perception of value propositions will be negative and may cause damage the brand in the long run.

Ultimately, strategic business changes, whether moving from closed to open or reversion back to a closed strategy have both positive and negative implications on
certain value proposition components. Based on the observations on longitudinal development in the course of business, business strategy changes do not require significant changes in business model, however, this may differ in different industry settings. Building strong relation with the community and stakeholders can significantly minimize negative implications if not avert. However, this may again depend upon circumstances.

7.4 Limitations and Recommendations

First and foremost, the reliability of a netnographic research can be problematic when it is compared to more traditional methods of qualitative research. As digital environment cuts across the complexity of face-to-face communications, the use of netnography may offer an incomplete view. Another pragmatic problem with netnography is that; because internet contains so much data, it becomes very easy get data overload, which affects the quality of data collected and whole research process. Another risk with data overload is that it increases the risk of biased views when being exposed with such large variety. Anonymous data sources may pose ethical and privacy related issues. Further, repeatability of a netnographic study may be challenging, because both the phenomenon and its environment is constantly changing. The archived data which is present in internet rarely stays unchanged or it may be permanently removed over time.

The case companies selected for this research are forerunners within their own industry context and they are very popular. This made reaching primary data sources from these companies impossible. One big limitation was that Reddit Inc. being private company. Thus, the company does not publish any corporate information to the public, which increases the reliance on admin statements on blog posts and social media posts, posted by executives and user posts. Additionally, data used in this study could have been broadened by variety and amount, however, manual processing of such data is very laborious work and the resources for such endeavour were not available.
Findings of this study shows that strategic switches resulted with certain changes in value constellations, however, small portion of those changes can be called as innovation, rest can be called as adaptation. These changes had certain implications on value capture mechanisms. Value proposition components of two case companies affected on different levels by the strategic changes. Most noticeable finding was the implications of such changes on customer relationship and how it affects customer’s view towards value proposition of a company. In fact, the industry setting of two companies were quite different to each other, which may have certain affect the way strategy changes perceived by stakeholders. Therefore, future studies can focus underlying dynamics in different industry settings, especially strategy changes in more traditional companies and more detailed implications on not only value propositions but also constellations and capture mechanisms. Input from internal resources can provide valuable insights for such type of study. Finally, more concentrated study on B2B markets and focusing on implications on stakeholders within this can further shed light on different research fields of relevant concepts.
8 References


Kanter, J., Matousek, M. (2019). Please only use the sharing functionality at the top of the article. Elon Musk says he's firing more than 3,000 Tesla staff because of pressure on profits and Model 3 production challenges. [www document]. [Accessed 3.11.2019]. Available


ditr reddit_and/


Appendices


Appendix 2. Installed public charging outlets globally. Taken from BloombergNEF report
### Social Following

% who say they follow these types of social media accounts

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brands you like</td>
<td>36%</td>
</tr>
<tr>
<td>Actors</td>
<td>32%</td>
</tr>
<tr>
<td>Singers, musicians or bands</td>
<td>31%</td>
</tr>
<tr>
<td>News / media organizations</td>
<td>29%</td>
</tr>
<tr>
<td>Contacts relevant to your work</td>
<td>27%</td>
</tr>
<tr>
<td>Brands you are thinking of buying something from</td>
<td>25%</td>
</tr>
<tr>
<td>Comedians</td>
<td>24%</td>
</tr>
<tr>
<td>Sports stars</td>
<td>22%</td>
</tr>
<tr>
<td>Bloggers</td>
<td>22%</td>
</tr>
<tr>
<td>Entrepreneurs / business people</td>
<td>18%</td>
</tr>
<tr>
<td>Vloggers</td>
<td>17%</td>
</tr>
<tr>
<td>Charities / good causes</td>
<td>16%</td>
</tr>
<tr>
<td>TV Presenters</td>
<td>15%</td>
</tr>
<tr>
<td>Politicians</td>
<td>14%</td>
</tr>
<tr>
<td>Journalists</td>
<td>12%</td>
</tr>
</tbody>
</table>

*Appendix 3. Social following behaviours. Taken from Global Web Index 2018 report, available: https://www.globalwebindex.com/reports/trends-19?hsCtaTracking=62ea46df-2ace-4b22-ad53-6e13786a3ad0%7Ca3696eif8-0c16-4eae-9dad-b3a88e9a7f8d*
### Appendix 4. Reputation ranking of Tesla

Retrieved from Axios, available [https://www.axios.com/axios-harris-poll-corporate-reputations-bcc0c03d-0bb5-4eb1-b591-4622bb4b01ed.html](https://www.axios.com/axios-harris-poll-corporate-reputations-bcc0c03d-0bb5-4eb1-b591-4622bb4b01ed.html)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>Trend 2010-19</th>
<th>2019 Score</th>
<th>Change in Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>#36</td>
<td>Honda</td>
<td></td>
<td>76.0</td>
<td>17</td>
</tr>
<tr>
<td>#37</td>
<td>Toyota</td>
<td></td>
<td>75.9</td>
<td>5</td>
</tr>
<tr>
<td>#42</td>
<td>Tesla Motors</td>
<td></td>
<td>75.4</td>
<td>39</td>
</tr>
<tr>
<td>#46</td>
<td>Affinity</td>
<td></td>
<td>74.5</td>
<td></td>
</tr>
<tr>
<td>#56</td>
<td>Ethics</td>
<td></td>
<td>73.2</td>
<td></td>
</tr>
<tr>
<td>#34</td>
<td>Growth</td>
<td></td>
<td>78.6</td>
<td></td>
</tr>
<tr>
<td>#14</td>
<td>Products/service</td>
<td></td>
<td>82.0</td>
<td></td>
</tr>
<tr>
<td>#54</td>
<td>Citizenship</td>
<td></td>
<td>68.5</td>
<td></td>
</tr>
<tr>
<td>#39</td>
<td>Vision</td>
<td></td>
<td>77.8</td>
<td></td>
</tr>
<tr>
<td>#58</td>
<td>Culture</td>
<td></td>
<td>73.2</td>
<td></td>
</tr>
<tr>
<td>#57</td>
<td>Character</td>
<td></td>
<td>70.8</td>
<td></td>
</tr>
<tr>
<td>#22</td>
<td>Trajectory</td>
<td></td>
<td>79.9</td>
<td></td>
</tr>
<tr>
<td>#58</td>
<td>Ford</td>
<td></td>
<td>73.0</td>
<td>1</td>
</tr>
<tr>
<td>#61</td>
<td>Hyundai</td>
<td></td>
<td>72.3</td>
<td>5</td>
</tr>
<tr>
<td>#70</td>
<td>General Motors</td>
<td></td>
<td>70.2</td>
<td>0</td>
</tr>
<tr>
<td>#71</td>
<td>Volkswagen</td>
<td></td>
<td>70.2</td>
<td>2</td>
</tr>
<tr>
<td>#85</td>
<td>Fiat Chrysler</td>
<td></td>
<td>65.8</td>
<td>0</td>
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### Appendix 5. Tesla customer reactions sentiment analysis in NVivo

<table>
<thead>
<tr>
<th>Sentiment</th>
<th>Files</th>
<th>References</th>
</tr>
</thead>
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<tr>
<td>Positive</td>
<td>1</td>
<td>82</td>
</tr>
<tr>
<td>Very positive</td>
<td>1</td>
<td>30</td>
</tr>
<tr>
<td>Moderately positive</td>
<td>1</td>
<td>52</td>
</tr>
<tr>
<td>Negative</td>
<td>1</td>
<td>41</td>
</tr>
<tr>
<td>Moderately negative</td>
<td>1</td>
<td>21</td>
</tr>
<tr>
<td>Very negative</td>
<td>1</td>
<td>20</td>
</tr>
</tbody>
</table>
## Appendix 6. Reddit user reactions sentiment analysis in NVivo

<table>
<thead>
<tr>
<th>Sentiment</th>
<th>Files</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive</strong></td>
<td>1</td>
<td>37</td>
</tr>
<tr>
<td>Very positive</td>
<td>1</td>
<td>13</td>
</tr>
<tr>
<td>Modestly positive</td>
<td>1</td>
<td>24</td>
</tr>
<tr>
<td><strong>Negative</strong></td>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>Very negative</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Modestly negative</td>
<td>1</td>
<td>14</td>
</tr>
</tbody>
</table>

## Appendix 7. Tesla reactions from online article authors and analyst's sentiment analysis in NVivo

<table>
<thead>
<tr>
<th>Sentiment</th>
<th>Files</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive</strong></td>
<td>1</td>
<td>58</td>
</tr>
<tr>
<td>Very positive</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Modestly positive</td>
<td>1</td>
<td>47</td>
</tr>
<tr>
<td><strong>Negative</strong></td>
<td>1</td>
<td>116</td>
</tr>
<tr>
<td>Modestly negative</td>
<td>1</td>
<td>53</td>
</tr>
<tr>
<td>Very negative</td>
<td>1</td>
<td>63</td>
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