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<input type="checkbox"/>	Licentiate's thesis
<input type="checkbox"/>	Doctoral dissertation

Subject	Management and Organization	Date	4.5.2019
Author	Outi Vänskä	Number of pages	84+appendices
Title	Strategic alliances as a source of competitive advantage in the digital era – How digital platforms and the emerging platform economy promote joint value creation		
Supervisor	Ph.D. Markus Kantola		

<p>Abstract</p> <p>Strategic alliances have an established role in business strategy. They are a means to achieve strategic goals that could not be reached independently with internal resources and skills. Strategic alliances can support market entry and drive growth, or they can be set up to develop product portfolios. From the viewpoint of competitive advantage, strategic alliances are a means to increase cost-efficiency or develop a unique combination of resources that help a company to offer its customers greater value than its competitors.</p> <p>During the last decade, digital platforms and the emerging platform economy have begun to disrupt traditional business models and organizational boundaries. The digital transformation has increased interfirm connectedness and digital platform ecosystems have gained attention as the building blocks of business. This thesis studies how digital platforms and the emerging platform economy change the role of strategic alliances as a source of competitive advantage. The subject is evaluated by examining how companies create competitive advantage in the platform economy. Besides, the possible challenges related to the utilization of digital platforms are considered.</p> <p>This thesis is explorative and follows a qualitative research methodology. The philosophical stances are interpretivism and constructivism. The empirical evidence was gathered by conducting seven semi-structured interviews with business professionals, and the findings were gathered through thematic analysis.</p> <p>The results indicate that digital platforms and platform economy change the role of strategic alliances as a source of competitive advantage in multiple ways. From an operational perspective, digital platforms enhance the efficiency, productivity, and flexibility of strategic alliances. As a result, they promote the formation of modern, agile alliances. From a strategic perspective, digital platforms lower the transaction cost of collaboration, support resource complementarity, and promote complementary innovation. Despite various benefits, however, it seems that digital platforms and platform economy are still emerging trends yet to be utilized in many companies.</p>	
Key words	Strategic alliance, interfirm collaboration, digital transformation, digital platforms, platform economy, digital platform ecosystems, business model transformation



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<input type="checkbox"/>	Väitöskirja

Oppiaine	Johtaminen ja organisointi	Päivämäärä	4.5.2019
Tekijä	Outi Vänskä	Sivumäärä	84+liitteet
Otsikko	Strategiset kumppanuudet kilpailuedun lähteenä digitaalisessa liiketoimintaympäristössä – Digitaaliset alustat ja alustatalous yhteisen arvonluonnin perustana		
Ohjaaja	FT Markus Kantola		

Tiivistelmä

Strategiset kumppanuudet ovat vuosikymmenten saatossa vakiinnuttaneet asemansa osana yritysten strategioita. Niiden avulla yrityksen on mahdollista saavuttaa sellaisia strategisia tavoitteita, joiden saavuttamiseen yrityksen omat resurssit ja kyvykkyudet eivät yksinään riitä. Strategiset kumppanuudet voivat toimia väylänä uusille markkinoille ja niiden avulla voidaan muun muassa kasvattaa liiketoimintaa sekä kehittää tuoteportfolioita. Kilpailuedun näkökulmasta katsottuna strategisten kumppanuuksien tehtävänä on auttaa yritystä tuottamaan kilpailijoitaan enemmän lisäarvoa asiakkailleen joko parantamalla kustannustehokkuutta tai mahdollistamalla ainutlaatuisien resurssiyhdistelmien hyödyntämisen.

Viimeisen vuosikymmenen aikana digitaaliset alustat ja kehittyvä alustatalous ovat alkaneet mullistaa perinteisiä liiketoimintamalleja ja tehnyt liiketoiminnasta yhä enemmän verkottunutta. Murroksen myötä yritykset ovat yhä enenevässä määrin linkittyneitä toisiinsa ja on alettu puhua alustaekosysteemien merkityksestä yritysten menestystekijänä. Tämän tutkielman tarkoituksena on selvittää, miten digitaaliset alustat ja kehittyvä alustatalous vaikuttaa strategisten kumppanuuksien rooliin kilpailuedun lähteenä. Päättökysongelmaa lähestytään selvittämällä miten yritykset luovat kilpailuetua alustataloudessa. Lisäksi tutkielmassa perehdytään mahdollisiin digitaalisten alustojen hyödyntämisen ongelmiin.

Tutkielma on luonteeltaan eksploratiivinen ja metodologialtaan laadullinen. Tieteenfilosofiselta suuntaukseltaan tutkimus noudattaa interpretivismin ja konstruktivismin paradigmoja. Tutkielman empiria perustuu seitsemään puolistrukturoituun asiantuntijahaastatteluun ja aineiston analyysi on tehty teemoittelemalla.

Tutkielmasta ilmenee, kuinka digitaaliset alustat ja alustatalous muuttavat strategisten kumppanuuksien roolia kilpailuedun lähteenä usealla tavalla. Operatiivisesta näkökulmasta katsottuna digitaaliset alustat parantavat kumppanuuksien tehokkuutta, tuottavuutta ja joustavuutta ja näin ollen mahdollistavat uudenlaisten ketterien kumppanuuksien muodostamisen. Strategisesta näkökulmasta katsottuna digitaaliset alustat mahdollistavat kumppanoitumisen transaktiokustannuksia ja tukevat komplementaaristen resurssien hyödyntämistä ja innovaatioiden kehittämistä. Mahdollisista hyödyistä huolimatta digitaalisten alustat ja alustatalous ovat kuitenkin kehitystrendejä, joiden potentiaali on hyödyntämättä vielä monissa yrityksissä.

Avainsanat	Strateginen kumppanuus, digitaalinen transformaatio, digitaaliset alustat, alustatalous, alustaekosysteemit, liiketoimintamallien muutos
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**UNIVERSITY
OF TURKU**

Turku School of
Economics

STRATEGIC ALLIANCES AS A SOURCE OF COMPETITIVE ADVANTAGE IN THE DIGITAL ERA

**How digital platforms and the emerging platform economy promote
joint value creation**

Master's Thesis
in Management and Organization

Author:
Outi Vänskä

Supervisor:
Ph.D. Markus Kantola

4.5.2020
Pori

The originality of this thesis has been checked in accordance with the University of Turku quality assurance system using the Turnitin OriginalityCheck service.

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1 INTRODUCTION

1.1 Background

Competition and companies' competitiveness has been the focal point of strategic management research for decades. To sustain long-term success, companies must understand their competitors and competitive environment and be able to respond to it strategically. (Porter 1989; Barney 1991.)

Much of the research on companies' competitiveness has been strongly guided by Porter's Five Forces framework. In his famous work from 1989, Porter introduced how the nature and the degree of competition are shaped by five competitive forces: the threat of new entrants, the bargaining power of customers, the bargaining power of suppliers and the threat of substitute products or services. The central part of strategy formulation is recognising these forces and being able to find a market position that best defends the company from these forces and secures competitiveness. (Porter 1989, 137.) From this traditional point of view, companies were considered as individual, autonomous entities that were striving for competitive advantage by obtaining and protecting valuable know-how and resources (Porter 1989; Barney 1991). Thus, strategic management and perceived competitiveness were based on ownership and control as key attributes in gaining strategic success (Chesbrough – Appleyard 2007, 60).

Decades later, the increasingly competitive environment and globalisation have pushed companies to re-evaluate their strategies, find new sources of competitive advantage and reach for external resources to be able to adapt to rapidly changing market conditions. Strategic alliances have become an increasingly important part of companies' strategic position and competitiveness. These interfirm purposive relationships (Mohr – Spekman 1994, 135) are not a new phenomenon, but many scholars argue that they are becoming increasingly popular means to extract value in competitive markets (see e.g. Shah – Swaminathan 2008; Zamir et al. 2014; Ferreira et al. 2014, 113–115; Gomes et al. 2016, 17). Growing literature also demonstrates the increasing popularity of strategic alliances as a research phenomenon (see Appendix 2).

Not only do academic research demonstrate the growing interest in alliances, but practical implications also point out that strategic alliances have become an important part of companies' overall strategy. For example, according to PwC's 19th Annual Global CEO

Survey¹ (2016, 35), 49 percent of the respondents said that entering into a new strategic alliance was on top of their restructuring activities –list among cost-reduction initiatives. In comparison, 27 percent of the respondents said that they were planning to complete a domestic merger or acquisition and 24 percent said they were planning to complete a cross-border merger or acquisition. Similarly, KPMG's Global CEO Outlook² (2016, 18) suggests that forming new alliances is key to accelerating the execution of overall strategy, and creating partnerships with other companies is one of the most important ways to respond to rapid market changes. Moreover, 15 percent of CEOs named managing their strategic alliances as one of their top strategic priorities over the next 3 years.

Today, interfirm collaboration has gained an established position across industries and businesses of all sizes. It is a means to drive growth, access new markets, and reach strategic goals that would be too difficult for companies to reach alone. Although strategic alliances have been a part of companies' businesses for decades, not only until recent years has companies' connectedness reached a whole new level. The rapid changes in the global business environment in the 21st-century have shaped the nature of alliances and the form in which companies collaborate. While the strategic alliance literature from the 1990s and in the beginning of 21st century focus more on dyadic alliance relationships (Chen – Chen 2003; Yasuda 2005; Mockler et al. 1997; de Man 2014, 197), strategic management and alliance literature has increasingly shifted the focus to networked, multilateral alliance relationships (de Man 2014, 197). The development of strategic networks and multi-partner alliances have raised the competition to a network-level phenomenon in various economic sectors (Wegner – Mozzato 2019, 172), and new models of alliances continue to emerge (De Man 2014, 197).

The increasing connectedness of businesses derives from the rapid digital transformation and the improvements in information technology. During the last decade, digitalisation and the development of digital platforms have transformed the way in which many companies create value and gain competitive advantage. Platform-based businesses have

¹ PwC's 19th Annual Global CEO Survey is based on 1,409 interviews with CEOs in 83 countries. The sample is selected based on the percentage of the total Gross Domestic Product (GDP) of countries included in the survey, to ensure CEOs' views are fairly represented across all major countries and regions of the world. The interviews were also spread across a wide range of industries.

² KPMG's Global CEO Outlook is based on a survey of 1,268 chief executives from Australia, China, France, Germany, India, Italy, Japan, Spain, the UK and the US. Two hundred and seventy-five CEOs came from companies with revenues between US\$500 million and US\$999 million, 595 from companies with revenues from US\$1 billion to US\$9.9 billion, and 398 from companies with revenues of US\$10 billion or more. Eight hundred and ninety-three CEOs came from public companies and 375 from private companies.

in a relatively short period acquired a dominant position in global markets, and companies such as Amazon and Apple demonstrate how platform-based businesses-models call into question traditional one-way value-chain logic and the control and ownership of resources and knowledge. (Koponen 2019, 75.) These platform-driven companies reshape the nature and structure of the global economy by creating multi-sided markets that accelerate complementary innovation and stimulate new ways of creating value to global customers. Moreover, digital platforms enhance open innovation and facilitate new forms of connectivity, and thus provide new flexible means for companies to build knowledge, share resources, and create relationships with external partners. (Nambisan et al. 2019, 1464–1486.) As digital platforms continue to disrupt existing business models and organisational boundaries, it is fruitful to examine whether and how digital technologies, such as digital platforms impact on the dynamics of strategic alliances and how the role of inter-firm collaboration will change in terms of companies' competitive success. The next chapter discusses the purpose of the study in detail and introduces the research questions.

1.2 The purpose of the study and research questions

As the introduction demonstrates, strategic alliances as such are not a novel research subject as they have been a popular subject in academic literature for decades (Ferreira et al. 2014; Gomes et al. 2016). However, the field of digital platforms and the emerging platform economy are a relatively new phenomenon (see Appendix 3). Although there is a growing body of literature regarding digital transformation, platforms, and platform-based business ecosystems, the literature remains rather fragmented and the research is to a large extent theoretical (Smorodinskaya 2017, 5246). Burgelman et al. (2018, 550) also note that the utilisation of information technology tools in different kinds of strategy contexts is a widely untapped subject area that requires more research. Moreover, Nambisan et al. (2019, 1464–1486) highlight that due to the growing significance of digital platforms in an increasingly internationalised business environment, there is a need to develop a deeper understanding of how digital platforms shape businesses. As digital platforms transcend organisational, industry, and national borders, they may serve as an important catalyst of interfirm competitive advantage and also extend the traditional alliance perspective. Gawer (2014) also points out that combining the literature of digital

platforms and interfirm network dynamics could provide fruitful insights on digital platforms in the field of management and organisation.

Drawing from these arguments, this study combines strategic alliances, digital platforms, and platform economy. Thus, the study aims to answer the following research question:

How will digital platforms and platform economy change the role of strategic alliances as a source of competitive advantage?

The following sub-questions further support the main research question:

How do companies create competitive advantage in the platform economy?

What are the possible challenges of utilising digital platforms in the context of strategic alliances?

Kothari (2004, 2) highlight that the purpose of the research is to discover answers to questions through the application of scientific procedures. Although each research has its special objective, research objectives can be divided into following four broad categories:

1. To gain an understanding of a phenomenon or to achieve new insights of it
2. To present the characteristics of a certain individual, group or situation
3. To determine the frequency with which something occurs or with which it is associated with something else
4. To test a hypothesis of a causal relationship between variables

This research falls into the first category. Thus, the purpose of this research is to explore how the phenomenon of digital platforms and the emerging platform economy impacts strategic alliances and their potential competitive advantage. In-depth insights derive from existing literature and empirical evidence. The empirical evidence was gathered by conducting seven qualitative individual interviews with Finnish business professionals that are experts in the field of strategic alliances and (or) digital platforms. The research design is discussed more thoroughly in chapter 3.

1.3 The scope of the study

This study approaches the concept of strategic alliances from a broad perspective. Thus, strategic alliances are not defined too narrowly but rather discussed in general by providing a few examples of categorisation and typology that exist in the literature. The focus is on the competitive advantage of strategic alliances and the motives behind forming strategic alliances. The competitive advantage perspective of strategic alliances is examined by utilising resource-based view and transaction-cost view that are two commonly utilised perspectives in strategic alliance literature. In addition to these viewpoints, the concept of open innovation and dynamic capabilities view is applied to shed light on how the nature of interfirm relationships have developed over time, and how and why today's businesses may be increasingly compelled to cooperate. The concept of open innovation also directs the literature review naturally towards the phenomena of digital platforms and platform economy.

Furthermore, digital platforms are explored by disclosing their non-technical scope and their technical scope. The first covers the commercial purpose of digital platforms and the latter covers the underlying architecture of digital platforms. The literature review also demonstrates how the development of platform-based businesses and platform economy has transformed industries and how digital platforms continue to drive growth and competitive advantage across industries.

The empirical analysis is a synthesis of these areas, that are strategic alliances and digital platforms and platform economy. The findings consist of key themes that describe how digital platforms impact the nature of strategic alliances and their role as a source of competitive advantage.

2 LITERATURE REVIEW

2.1 Strategic alliances

2.1.1 Definition

Strategic alliances are relationships between two or more independent companies with the purpose of sharing or co-developing capabilities or resources to achieve reciprocally significant benefits (Lenssen et al. 2011, 387). Strategic alliances can be defined as inter-firm relationships linking specific aspects of businesses of two or more companies together. They usually refer to long-term collaboration during which companies commit to a mutual project with complementary investments and profits and contribute on a continuing basis in one or more key strategic areas. (Yoshino and Rangan 1995, 4–5; Klossek et al. 2014, 36.) Hence, strategic alliances are perceived as an interfirm collaboration that has a certain strategic objective (Plazibat – Filipović 2010, 2).

Strategic alliances play a key role in corporate strategy. They are a strategic option between organic growth and mergers and acquisitions (Figure 1). Oftentimes organic growth (internal business development) or mergers and acquisitions (external business development i.e. takeover of ownership of another company) are not feasible nor the fastest way to achieve the desired strategic objectives in competitive markets, which is why interfirm collaboration may be an attractive way to join forces to achieve business objectives. (McGahan et al. 2016, 3–4.)

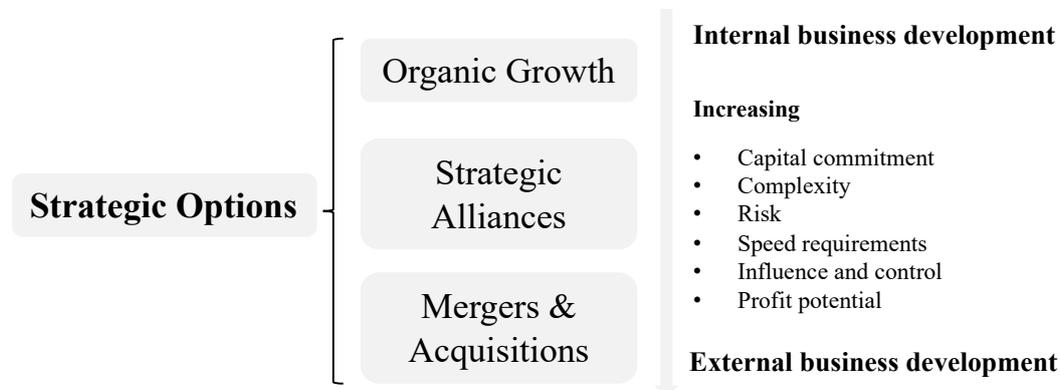


Figure 1 Key Strategic Options for Business Development (After Wig 2016, 2.)

Figure 1 illustrates the strategic options and the positioning of strategic alliances in the context of internal business development and external business development. Strategic alliances differ from ordinary cooperation in that their purpose is to engage partner companies in long term strategic matters, such as product development, market-entry, or capacity management (Zhang 2005, 76). Strategic alliances, acquisitions, and mergers are all business development methods involving external partners. However, strategic alliances are typically considered more flexible alternatives to mergers and acquisitions as the partners involved remain independent and are equally involved in the alliance (Mockler et al. 1997, 392).

Strategic alliances can take on many forms and they can be classified in many ways. Interfirm collaboration can focus on joint marketing, product development, joint distribution, technology collaboration, and so on. Depending on the nature of interfirm collaboration, strategic alliances may be organised and structured in multiple ways and with different kinds of partners, depending on the desired outcome. Typically, strategic alliances are divided into equity alliances and non-equity alliances (Figure 2).

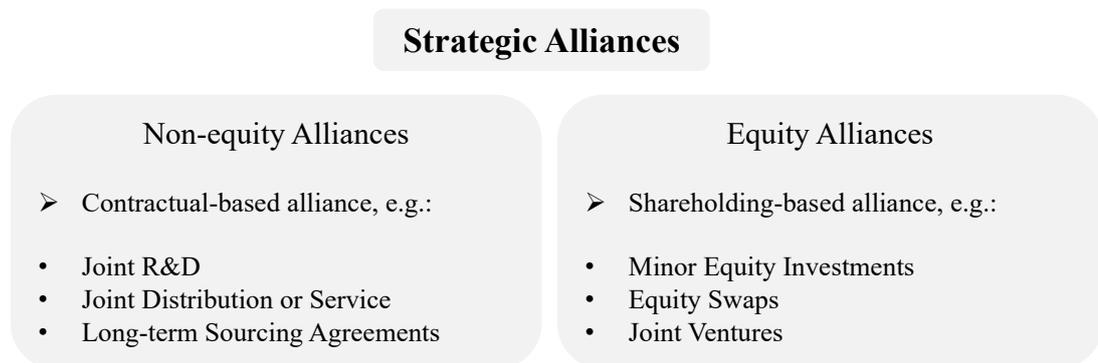


Figure 2 Strategic Alliance Classification (After Yoshino – Rangan 1995, 8.)

As Figure 2 demonstrates, equity alliances can be established as joint ventures or by investing equity in another firm (Culpan 2002, 73; Yoshino – Rangan 1995, 6), whereas non-equity alliances are contractual-based and focus on aspects such as joint research and development (R&D), and product development. In general, a contractual agreement can be considered a strategic alliance, if it has an impact on the company's value chain activity and offers benefits for the company's long-term competitive advantage. (Culpan 2002, 73–87; Klossek et al. 2014, 36.) Yoshino and Rangan (1995 6) highlight, that for example

buy-sell agreements that do not involve long-term mutual dependence, shared managerial control or continuing contribution of technology or products, cannot be considered a strategic alliance.

Among the above definition, strategic alliances can also be categorised into horizontal, vertical, and hybrid alliances, or into learning and business alliances. Horizontal alliances refer to agreements between companies operating in the same market, i.e. competitors, while vertical alliances refer to agreements between parties representing different levels of the supply chain, i.e. suppliers, distributors, and customers. Hybrid alliances again are a mix of vertical and horizontal alliances. (Zhang 2005, 77.) Moreover, learning alliances are a form of collaboration in which companies focus on *exploring* new opportunities in a joint effort. Learning alliances are formed because companies wish to learn new knowledge, acquire skills, and gain new perspectives from partners' technologies, products, and services or practices. On the contrary, business alliances focus on *exploiting* existing capabilities in order to maximise the returns from business activity and utilize complementary assets as efficiently as possible. Exploring new opportunities refer to wealth creation and higher returns in terms of untapped competencies and innovation, whereas exploiting existing capabilities refer to productivity and efficiency in terms of cost reductions, standardization and optimizing an existing set of skills, technology, and competencies. (Nielsen et al. 2010, 683.)

The fundamental reason why companies form strategic alliances is that they provide partners the possibility to reach goals they could not reach independently (Zhang 2005, 77). Strategic alliances are a popular means to increase companies' competitiveness and accelerate growth in today's globalized business environment – for example, they enable companies to access new markets and technologies faster, acquire new competencies and resources, and increase efficiency. (Veiga – Franco 2015, 1150.) Overall, at the core of interfirm collaboration is *competitive advantage* – in a rapidly changing environment, strategic alliances can offer companies ways to enhance and develop their competitive advantage and find competitive support through complementary assets and cost-efficient joint efforts. (Barbosa et al. 2010, 100.)

2.1.2 Strategic alliances and competitive advantage

Competition is the integral challenge of overall business strategy. Good product and service offering and an efficiently operating company are rarely enough to keep businesses running. To succeed in today's increasingly competitive business environment, companies must find ways to perform better than competitors.

According to Barney (1991, 102), a company has a *competitive advantage* when it is implementing a value-creating strategy that is not simultaneously being implemented by any current or potential competitors. Thus, competitive advantage is the difference between the value created by the company and the value created by its competitors. When a company has a competitive advantage, it is able to create greater value for its shareholders, customers, and suppliers than its competitors. Moreover, value creation covers three dimensions: the benefits received by customers, the costs related to suppliers, and the specific combination of customers and suppliers. If a company seeks to achieve competitive advantage, it must either increase customer benefits or lower the costs of transactions. Spulber 2009, 14–15.

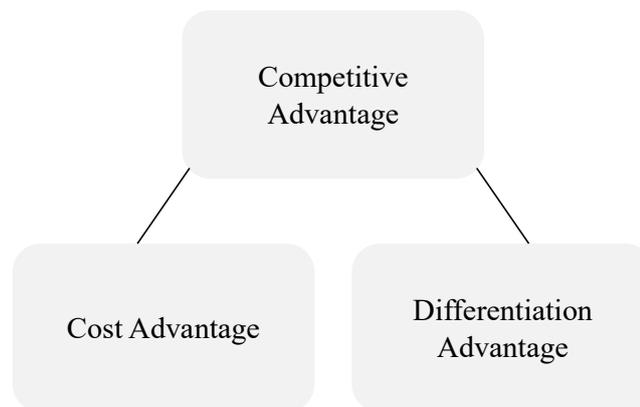


Figure 3 Competitive Advantage (After Porter 1985, 12; Spulber 232.)

As illustrated in Figure 3, a company can seek *cost advantage* by optimizing the use of assets or by lowering the supplier costs to be able to operate more cost-efficiently. Second, a company can seek *differentiation advantage* by offering higher value, such as quality or durability, to the customers. (Porter 1985, 12–14; Spulber 2009, 232–237.)

Competitive advantage is not a stable phenomenon, which is why companies must continuously identify new and alternative ways to outperform competitors. Few

companies have all the resources, skills, and knowledge to compete sustainably and efficiently in the ever-evolving and rapid markets. Therefore, strategic alliances can be a vital source of resources and expertise and thereby competitive advantage. Moreover, strategic alliances are an attractive option to increasing economies of scale and decreasing transaction costs. (Ireland et al. 2002, 413, 415.) The role of strategic alliances as a source of competitive advantage has often been demonstrated from the *resource-based* view and *transaction cost* view.

Das and Teng (2000, 33) suggest that the resource-based approach is applicable to strategic alliances since one of the motives behind forming them is to gain access to other companies' resources. According to Barney (1991, 106, 116), resources refer to all assets, attributes, processes, knowledge, and other strengths that enable companies to plan and execute their strategies. Moreover, these resources are valuable if they are scarce, incompletely imitable, rare, and difficult to substitute. Another notion is that valuable resources are key to competitive advantage only if they are scarce, incompletely imitable, rare, and difficult to substitute. Further, competitive advantage is gained through a value-creating strategy that is not simultaneously executed by any current or potential competitors. The current or potential competitors cannot execute a similar value-creating strategy simply because they lack similar valuable resources. In other words, the resource-based view reckons that the value of a company can be maximised by pooling and utilising valuable resources not possessed by others (Das – Teng 2000, 33). Since some companies are unable to access these valuable resources, strategic alliances offer them a way to fill in the gap of current resources and expected requirements (Hoffmann – Schlosser 2001, 357; Russo – Cesarani 2017, 3). By forming strategic alliances, companies are able to share resources and optimise their structure in order to be able to maximise their value. Hence, the resource-based approach views complementary resources as the key factors for alliance success. Moreover, when these complementary resources are combined together through a strategic alliance, they become valuable resources that have little value outside the alliance, but create an idiosyncratic mix of resources in this specific strategic alliance and provide alliance partners competitive advantage. (Russo – Cesarani 2017, 3.) Consequently, strategic alliances can be an attractive way to create synergies between the complementary resources provided by partners, and hence reorganise and improve the competitive position within the market in question. (Chen – Chen 2003, 1).

Transaction costs are another reasoning behind strategic alliances. The transaction-cost approach aims at explaining how companies choose the most suitable governance structure. It suggests that companies should choose a governance structure that minimises the amount of fixed and variable transaction costs (Hoffmann – Schlosser 2001, 358). Transaction costs can be defined as the costs of activities that are necessary for exchange (Das – Teng 2000, 34). According to the transaction-cost approach, companies minimise these costs when the governance structure matches the exchange conditions. (Russo – Cesarani 2017, 2.) Chen and Chen (2003, 2) highlight that the transaction-cost approach has strongly impacted on the analysis of interfirm partnerships. The transaction-cost approach views strategic alliances as organisational intermediates, between the market and hierarchy. The transaction-cost approach suggests that strategic alliances are established if costs related are less than in other strategic options. For example, companies choose a joint R&D alliance if the costs related to it are lower than the costs of in-house R&D. (Yasuda 2005, 766.) Thus, from the transaction-cost perspective, strategic alliances may be a source of competitive advantage if they allow a company to reduce transaction costs and thus achieve cost advantage.

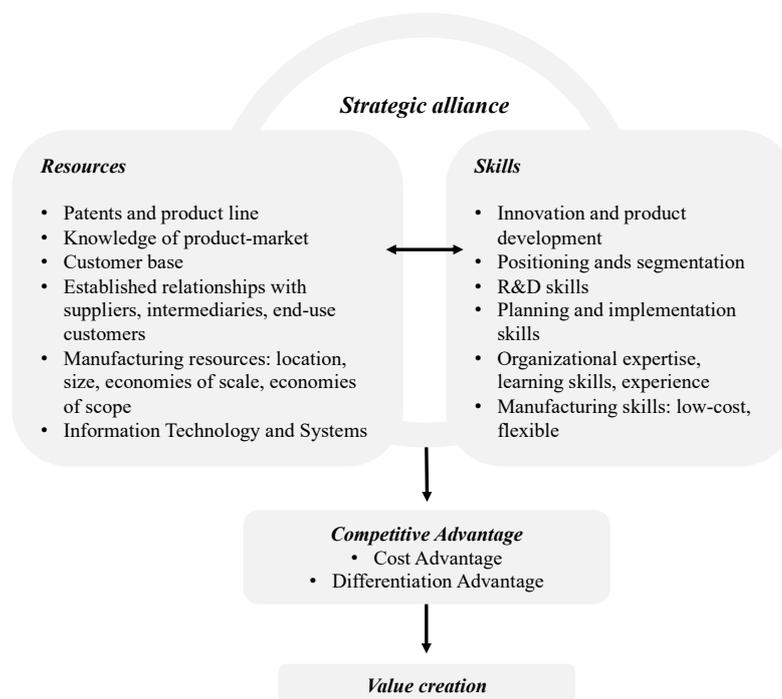


Figure 4 Strategic Alliances and Competitive Advantage (After Porter 1985, 12; Spulber 2009, 232–237; Varadarajan – Cunningham 1995, 292.)

Figure 4 represents how companies can achieve competitive advantage through strategic alliances by illustrating examples of various skills and resources that partnering companies can combine. On one hand, alliance partners can achieve competitive advantage if the strategic alliance enables partnering companies to perform multiple value chain activities at a lower cost. Through cooperation, companies can, for example, combine their manufacturing skills and resources in order to reduce transaction costs. On the other hand, strategic alliances offer partnering companies a chance to gain differentiation advantage through partners' unique resources and skills. Companies can, for example, utilise complementary resources and skills in innovation and product development and patents and product line, or combine the knowledge related to positioning and segmentation and customer base. Overall, the unique pool of these resources should enable companies to formulate and implement strategies that improve effectiveness and efficiency and result in cost advantage, differentiation advantage, or transaction advantage. (Varadarajan – Cunningham 1995, 292–293; Day – Wensley 1988, 2–3.)

The resource-based approach and transaction-cost approach provide two commonly utilised theoretical explanations on why strategic alliances might, under certain conditions, be an attractive strategic option to achieve competitive advantage. The next section discusses strategic alliances and their benefits from a more practical perspective by introducing a few industry examples.

2.1.3 Strategic alliances in practice

Strategic alliances can provide various benefits in terms of costs and scarce resources. If companies can manage alliances successfully, interfirm collaboration can offer partnering companies competitive advantage and value that could not be reached without collaboration. For example alliances such as long-term outsourcing-agreements where a company commits to buying activity from the outside, instead of engaging in-house resources into it, can be considered effective solutions in terms of costs and resources. Outsourcing is considered a strategic choice that provides benefits such as cost and capital reductions, risk-sharing with partners, access to competence and wider production capacity, quicker access to new markets, and better strategic flexibility. (Zineldin – Bredenlöv 2003, 453–454.) Moreover, companies can create synergies of knowledge by engaging in strategic alliances. When companies create synergies of knowledge, they produce new knowledge-

based capabilities and innovation by exploring and identifying viable alternatives instead of re-organising existing in-house activities. Strategic alliances enable companies to go beyond their organisational boundaries in order to reach higher R&D levels, access superior technology know-how, and skilled labour force. (Nielsen et al. 2010, 685.)

Although strategic alliances often involve a lot of risks related to partners' opportunistic behaviour and power imbalance, management complexities, and loss of proprietary information and decision autonomy, strategic alliances have established a position as an important part of companies' competitive leverage across industries (Tjemkes et al. 2012, 5–6). For example, Zineldin and Bredenl w (2003, 453) highlight, that development projects in the high-tech industry are often too big for companies to finance alone and the technology needed is too complex for one company to develop in-house, which is why joining forces might be a more appealing option. Moreover, small and medium-sized enterprises (SMEs) such as start-ups are often forced to engage in interfirm collaboration in order to gain financial capital and access resources that are beyond their reach without partnering with other companies (Moghaddam et al. 2016, 155). Comi and Eppler (2015, 12–13) state that strategic alliances can provide small start-ups multiple favourable outcomes in high-tech and hyper-competitive industries – by forming strategic alliances, these kinds of ventures can enhance their reputation, expand to international markets, as well as reduce lead times which is vital in industries with shortened product life-cycles.

Strategic alliances are also highly important in the pharmaceutical industry in particular, since the costs of developing and commercializing new drugs are extremely costly and can take decades to develop (Yoon et al. 2018, 872). For instance, DiMasi et al. (2016, 31) have analysed that capitalized R&D costs per approved drug are up to \$2.87 billion, which has led to mergers among large corporations as well as the formation of alliances among companies of all sizes³. The pharmaceutical industry has traditionally been dominated by big corporations, but today small entrepreneurial pharmaceutical start-ups that possess highly specialised capabilities, have become important actors in new drug development. Strategic alliances between big and small pharmaceuticals provide benefits for both sectors. On one hand, smaller actors get access to facilities and resources that enable regulated and approved clinical trials, which are necessary in order to commercialise

³The R&D costs were estimated based on ten multinational pharmaceutical firms of various sizes and their 106 randomly selected new drugs.

innovations. On the other hand, big pharmaceuticals can benefit from patents and technical know-how developed by innovative start-ups. (Yoon et al. 2018, 872.)

Besides the high-tech industry, start-ups, and pharmaceutical industry, strategic alliances are extensively utilised in the airline industry. Strategic alliances may offer airlines various benefits, such as access to new markets through partners' under-utilised slots and route rights, protection of current markets by managing seat capacities through shared operations, and cost-reductions and economies of scale through cost centres such as sales, ground facilities and purchasing (Morrish 2002, 403–404.) Moreover, strategic alliances allow airlines to allocate aircraft, technology, personnel, and route networks. Airline alliances also provide customers various benefits, such as service support, seamless travel, and opportunities to accrue air miles beyond their regular airline. (He – Balmer 2005, 241–242.)

Moreover, for example, co-branding alliances are a popular means to increase brand awareness, create synergies between brands, and thus draw in new customers. Co-branding alliances between independent companies with own brand names are common in various industries, such as automotive, banking, fast food, consumer goods, and retail. Co-branding alliances provide access to partner's marketing infrastructure which allows partnering companies to gain access to different customer segments and increase sales revenues and share marketing costs. Co-branding allows companies to launch joint advertising campaigns and product promotions as well as implement product integration. (Tjemkes et al. 2012, 164–168.) For example, Nike and Apple are co-branding their products to provide seamless customer experience to consumers with an active life-style. The co-branding alliance between Nike and Apple has been running for a decade, beginning with the launch of special edition Nike+ iPod and continuing with a more recent launch of Apple Watch Nike+. (Tjemkes et al. 2012, 168; Apple.com, 2016.)

The above-mentioned examples demonstrate the diversity of strategic alliances. Not only can they be established in multiple ways, including joint ventures and contractual agreements among buyers and suppliers as well as competitors and non-competitors, they also allow companies to enhance their businesses in various ways in order to gain competitive advantage in rapidly changing markets. Throughout the decades, the form of strategic alliances and their role in business have transformed according to the changes in the business environment and industry structures. de Man (2014, 195) identifies broadly three eras of alliance development in the late 20th century and at the beginning of 21st-century. Prior to the 1990s, joint ventures were predominant forms of strategic alliances and the

number of alliances was limited. At the time, joint ventures were primarily utilized for internationalization and to create economies of scale, or to acquire benefits within non-core activities. In the second era of alliances, between 1990–2010, contractual strategic alliances outshined joint ventures, and they were established for innovation and to gain flexibility in a dynamic business environment. During the time period, strategic alliances became increasingly connected to core businesses (e.g. in the airline industry), the number of alliances grew rapidly and they were mainly bilateral. In recent years, the development of the business environment and the establishment of dynamic markets have increasingly shifted the focus from bilateral alliances to multilateral alliances between various partners. de Man (2014, 197) defines the third generation of alliances as the era of open alliances. In contrast to first and second-generation alliances, open alliances have emerging structures and low hierarchy, and the alliance relationships involve less detailed contracts and allow more flexibility throughout the alliance lifecycle. The generation of open alliances is an emerging model of multi-partner alliances with a focus on collaborative value creation. The framework of open alliances is congruent with the latest changes in the global business environment and takes into account the emerging model of open innovation, which is discussed in the next section. Although de Man (2014, 196) emphasizes that the development of alliance generations does not mean that certain forms of interfirm collaboration such as joint ventures will disappear, the alliance generation framework demonstrates how strategic alliances have developed over time.

2.1.4 Towards open innovation and dynamic capabilities view

In recent years, the emerging model of openness of businesses has been getting increasingly attention among scholars (de Man 2014, 197). The concept of open innovation, originally developed by Chesbrough (2003), is based on the notion that in today's business environment, companies cannot innovate alone. Today's business environment is complex, dynamic, global and thus highly interconnected, which is why companies must develop innovation capabilities that rarely derive only inside organisational boundaries. (Das 2014, 280–281.)

Open innovation is based on collective creativity that takes place both inside and outside organizations. While the traditional business strategy has typically focused on developing internal competencies to tackle the forces of competition (see e.g. Barney 1991;

Porter 1989), open business strategies embrace the benefits of extending the value creation beyond organisational boundaries (Chesbrough – Appleyard 2007, 57–58). Open innovation enables companies to generate, develop, and commercialize ideas with multiple partners and integrate technologies outside their boundaries into internal activities and projects. (Morrison 2018, 372.) Open innovation is considered to be an important part of companies' dynamic capabilities (Bogers – Chesbrough 2013, 7; Teece 2007, 1324). First introduced by Teece et al. (1997, 516) dynamic capabilities refer to companies' ability to respond to the changing business environment by reconfiguring and renewing internal and external processes and competences. The dynamic capabilities concept thus does not focus on resources or cost-effectiveness per se, but rather on the company's abilities to appropriately integrate, adapt, and reconfigure organisational assets. In other words, dynamic capability view has shifted the emphasis in strategic management to the ability to change and quickly develop capabilities to match the changing market conditions, rather than just focusing on obtaining certain resources or competences. (Zheng et al. 2011, 1035.) Overall, dynamic capabilities reflect companies' ability to achieve new and innovative forms of competitive advantage. (Teece et al. 1997, 516.)

Organisations' dynamic capabilities view stresses the need for open innovation processes and shared resources and capabilities (Eloranta – Turunen 2015, 397). Teece et al. (1997, 514) emphasize that resource endowments are usually sticky and companies often lack the capacity to develop new capabilities quickly. Some capabilities are not readily interchangeable, which calls for embracing external partners. Open innovation emphasizes the idea that externally generated know-how enhances companies' innovation performance through intensified research and better optimization of resources (Petkovska et al. 2018, 93). In broad, open innovation highlights the flexible use of resources and purposeful inflows and outflows of knowledge, in order to accelerate internal innovation and the usage of external sources of innovation capabilities. (Cheng – Chen 2013, 446.)

The emerging model of open alliances and the literature on open innovation demonstrate the increasing connectedness of businesses. In today's globalised world, companies are inevitably more networked than before, which forces them to re-consider how this complex network of products, people, resources, capabilities, and relationships are leveraged for competitive advantage. In recent years, the rapid digital transformation has put more focus on open innovation. Digital transformation not only calls into question traditional organizational boundaries but also provides new ways for value creation. In the digital era, digital platforms have become the focal point of open innovation, as they bring

various external parties together and allow them to co-develop new capabilities in a dynamic and interactive way. (Morrison 2018, 372; Nwaiwu 2018, 21.)

The next section 2.2 discusses the development of digital platforms and platform economy by first introducing the concept of digital platforms (subsection 2.2.1) and then discussing the architecture of application programming interfaces (subsection 2.2.2) that are the technical artefacts of digital platforms. Furthermore, subsection 2.2.3 discusses how emergent platform-based business models reshape traditional business models and linear value chains and thus disrupt the way in which companies achieve competitive advantage and create value in the digital age. Finally, subsection 2.2.4 introduces how the development of digital platforms has established a modern platform economy that continues to reshape industries and organisational structures.

2.2 Digital platforms

2.2.1 Definition

Platforms can be defined as multi-sided networks, or multi-sided markets, of products, technologies, and services that bring a group of users together. The traditional definition views all multi-sided networks that facilitate groups' transactions, as platforms. By this definition, for example, newspapers that link advertisers and subscribers together, can be considered a platform. (Eisenmann et al. 2006, 2.) However, most of today's platforms are digital. Digital platforms are multi-sided networks that can capture, transmit, and monetize data over the Internet. Although digital platforms can include non-digital elements, such as product offerings (e.g. credit cards), the success of such platforms is based on the digital connectivity of the Internet and software. (Evans 2016, 5.)

Digital platforms involve various conceptualizations and definitions. On one hand, digital platforms can be defined as purely technical artefacts of an extensible code-base that constitute a digital ecosystem with complementary third-party systems. On the other hand, digital platforms can also be defined as sociotechnical groups consisting of technical elements, organisational processes, and standards. (de Reuver et al. 2018, 126.) Moreover, the non-technical view emphasizes digital platforms as commercial networks that enable business-to-business, business-to-customer, and customer-to-customer

transactions (Asadullah et al. 2018, 2). These commercial networks reach beyond their digital core and represent a modern orchestration of businesses, built around technology. Evans (2016) categorises platform-based businesses as follows:

A transaction platform is a technology, a product, or a service that serves as an intermediary between various users, buyers, and suppliers. Transaction platforms facilitate exchange or transactions between groups of individuals, and organisations that would otherwise have difficulties in finding each other. Examples of these multi-sided platforms include companies such as Uber and Amazon Marketplace. (Evans 2016 7.)

An innovation platform is a technology, a product, or a service that acts as a foundation on top of which other companies can develop complementary products, services, or technologies. The technological building blocks of innovation platform together with complementary innovators, constitute an innovation ecosystem around the platform. For example, the iPhone represents an innovation platform that enables application developers to create new applications through technology provided by Apple. (Evans 2016, 7.)

An integrated platform is a technology, a product, or a service that combines the elements of a transaction platform and an innovation platform. These platforms not only bring different groups together but also provide an ecosystem that enables innovation in terms of content creation on the platform. For example, Apple as a company represents an integrated platform – App Store (digital transaction platform) enables transactions and exchanges through various applications, whereas Apple’s large third-party developer ecosystem allows content creation. (Evans 2016, 7.)

Investment platforms consist of companies that have created a platform portfolio strategy and serve as a holding company, active platform investor, or both. Although investment platform companies are not platforms per se, they can be considered as platform-based businesses since they have a clear strategy of investing in digital platforms and platform companies and providing back-end infrastructure and front-end user experience across the brands they hold. (Evans 2016, 7.)

Thus, digital platforms are technical systems that enable participants such as companies, end-users i.e. customers, and other stakeholders to create value beyond organisational

boundaries. The cumulative power and value of platforms revolve around digital information, data, and automated technology. (Loikkanen et al. 2017, 17.) In comparison to non-digital platforms, digital platforms consist of components on different technological levels, such as device, the operating system, and the applications. These technological levels, such as mobile platforms, digital marketplaces, and payment platforms, provide different levels of technological openness that accelerate innovation through software connectors, i.e. application programming interfaces (APIs). (de Reuver et al. 2018, 126).

2.2.2 Application Programming Interfaces

The digital transformation trends provide significant advantages and drive innovation. As a result, companies are increasingly under pressure to discover cost-effective and high-performing big data systems to stay ahead of the competition. Today, many organisations need thousands of applications with underlying data services to operate their businesses. In order to gain more value for the business, these different systems and applications require integration. (Kumaresan et al. 2017, 459.)

Application Programming Interfaces (APIs) are getting increasingly attention as the building blocks of today's digital transformation (Basole 2016, 20). APIs are channels through which companies and applications that use its assets interact. APIs allow different applications to share information, functionality, and resources with one another (Moilanen et al. 2019, 230). They can be the focal entry point for companies' own website and applications, their services, and both customer and partner integrations. APIs allow various internal and external developers, as well as partners to gain access to companies' systems and data in an effortless way. (Rudrakshi 2014, 5.) Consequently, APIs act as the connectors between a dataset or a business process and a consumer application or another business process. They do the heavy work of moving data and performing specialized capabilities. Moreover, APIs provide a common format that enables different applications to speak to one another. (Boyd 2015, 15.)

APIs can be categorised into private, partner, and open APIs (Figure 5). Private APIs facilitate information flow inside a company by connecting different systems or databases. Partner APIs are APIs that both data providers and third-party developers can utilise if they have entered into a business relationship. An entirely open APIs on the

contrary, are APIs that provide access to third-party users without requiring an established business relationship. (Ann – Iqubal 2017, 51.)

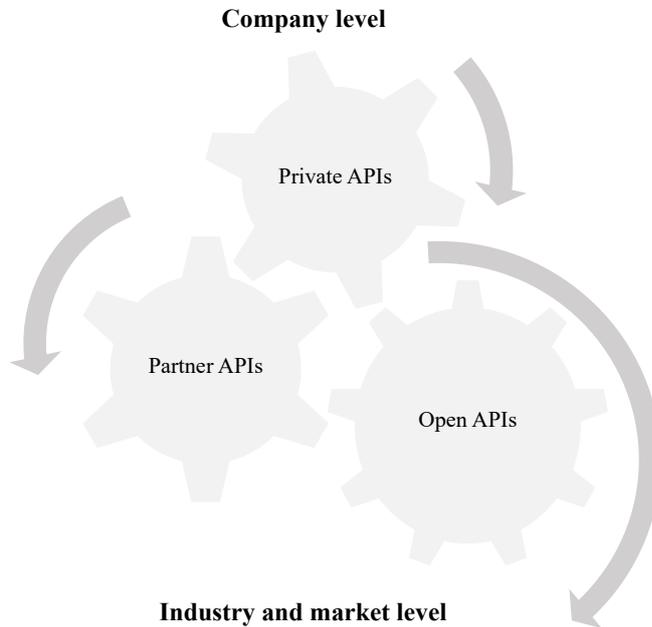


Figure 5 Application Programming Interfaces (After Ann – Iqubal 2017, 51.)

APIs offer multiple benefits. Private APIs can increase internal efficiency and productivity as well as help speed up time-to-market and cross-departmental cooperation. Partner APIs can strengthen interfirm relationships and also widen companies' reach to partners' customers as well. Open APIs again can help businesses to monetize data and capital assets and also enter new markets and create new revenue streams. (Figure 5.)

The technical functioning of APIs can be difficult to recognise and understand, so a few practical examples help to understand the idea behind APIs. Login requests on social platforms are one example. When a Facebook user joins another site via Facebook, the login request is being routed through an API. Another example is the share functions in social media. When a social media user is using share functions of applications, the applications utilise APIs to connect to another application. (Boyd 2015, 13.) Moreover, innovations such as PayPal enable merchants and customers to securely execute financial transactions by incorporating PayPal's integrated functionality on third-party applications and websites. (Ann – Iqubal 2017, 52.) APIs utilised in e-commerce enable retailers to

guide and support customers' shopping by giving access to the inventory levels and location through mobile apps and website. (Rudrakshi 2014, 7.)

In the context of digital platforms, APIs can be viewed as the connectors and the glue between multiple digital platforms and parties and thus offer various benefits to the business. They can be a part of the company's offering, a way to communicate with customers and partners, or a way to increase the quality of information and reduce costs of various internal services and systems. APIs create value for example by providing better access to information and data through open or customized availability, and by enhancing the visibility of service and enhancing open innovation. (Moilanen et al. 2019, 36, 42.) Overall, APIs can be considered technological boundary resources that enable the transmission and sharing of data and thus enhance the interaction between companies (Huttunen et al., 2019, 8).

2.2.3 Platform-based business models

Companies utilising platform-based business models have grown significantly over the past decade and no longer cover only businesses such as social media, travel, or music, but also industries such as transportation, banking, healthcare, and energy. Digital platforms have become global, and are currently active in North America, Asia, Europe, Africa, and Latin America. (Evans 2016, 4.) The rapid digitalisation forces former production and service-centric organisations to re-evaluate existing business models and instead of ownership and exchange of ownership, collaboration and interaction are becoming the foundation of business (Moilanen et al. 2019, 48).

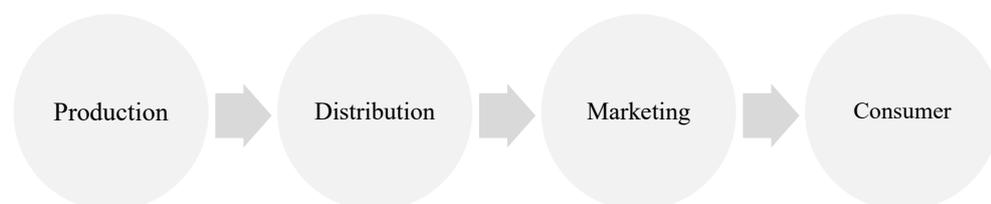


Figure 6 Traditional Simplified Value Chain (After Moilanen et al. 2019, 48.)

As noted earlier, competitive advantage is the difference between the value created by the company and the value created by its competitors. Traditionally, this value is created in a linear value creation process, as shown in Figure 6. Thus, in traditional business models, the value creation is considered a one-way process from production all the way to the consumer. The traditional value chain logic is based on optimizing and directing the value chain activities so that each activity increases the value. (Loikkanen et al. 2018, 22.) The overall principle of the value chain is that it should only include activities and phases that add value. (Porter 1985.) Further, the traditional value chain logic focuses on the supply-side economies of scale and the controlling and owning of resources and assets. (Daugherty et al. 2016, 7.)

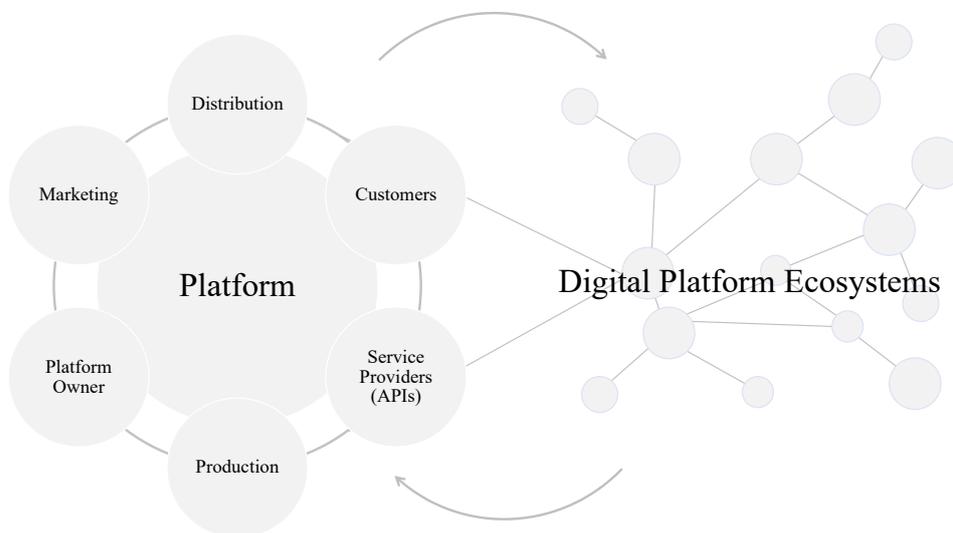


Figure 7 Value Chain in Platform Economy (After Moilanen 2019, 41.)

In contrast to the traditional value-chain, Figure 7 illustrates how the development of digital platforms transforms the traditional logic of the value chain. Instead of one-way, linear value creation, platform-based business models create value in a two-way, continuous process where digital assets, innovation capital, and platforms are at the core of value creation. Platform-based business models shift the focus from the supply-side to the demand-side, where the digital platform ecosystems (Figure 7) bring customers, partners, service providers, and other stakeholders together. (Daugherty et al. 2016, 7.) Digital platform ecosystems are networks of interdependence, where various stakeholders

collectively develop complementary product and service concepts, and comprehensive solutions that continuously create value to the customers. (Loikkanen et al. 2018, 17.) In the era of digital platform ecosystems, value is not meant to be tied to one's own company or product. Instead, the value creation is a co-operative procedure between multiple stakeholders collaborating through the digital platform ecosystems. (Moilanen et al. 2019, 41.) Although joining the digital platform ecosystem means sharing profits between members, digital platform ecosystems enable companies to increase scale operations and customer-base while also sharing risks (Loikkanen et al. 2018, 41).

The significance of platform-based business models derives from network effects that can be either direct (same-side) or indirect (cross-side). A simple example of network effects is the phone network. The phone has no value if only one person owns a phone, as one cannot reach other people with it. If two people own a phone, the network of two phones is valuable to these two people. Consequently, the phone is more valuable to the owner if one can reach more people with it. This example represents direct network effects outside platforms. The same goes for the direct network effects of platforms. The more users Facebook has, the more valuable the application is for its users as one can reach more people through the application. Along with direct network effects, platforms create indirect network effects – the more Facebook users produce content and engage with the content produced by others in Facebook, the more valuable the Facebook application is to the customer, platform, and its suppliers (Evans 2016, 6; Moilanen et al. 2019, 46.)

2.2.4 Platform economy

The development of platform-based business models has established a platform economy, which continues to transform traditional business models and changes the way in which companies and consumers interact and exchange value. Digital transformation has become inevitable for companies to remain competitive and survive in today's highly competitive business environment. (Nwaiwu 2018, 18.) Instead of traditional industry structures, the platform economy creates business ecosystems where organisations and customers are joining forces to create and sustain markets, products, and services (Teece 2018, 2). The platform economy is growing rapidly and plays a key role in increasing the productivity and efficiency of all industries and accelerating overall economic

development (Pochenchuk 2018, 65). Platform economy represents a modern market where businesses based on digital platforms have gained a significant or even dominating position in the markets (Table 1).

Table 1 Largest Companies According to Market-Cap in 2018 (After Koponen 2019, 75.)

	Company	Country	Market-cap (mrd. dollars)
1.	Apple	United States	851
2.	Alphabet	United States	719
3.	Microsoft	United States	703
4.	Amazon.com	United States	701
5.	Tencent	China	496
6.	Berkshire Hathaway	United States	492
7.	Alibaba	China	470
8.	Facebook	United States	464
9.	JPMorgan Chase	United States	375
10.	Johnson & Johnson	United States	344

In March 2018, seven out of ten of the largest companies in the world were platform-based businesses (marked in bold). This is illustrated in Table 1. Later in 2018, Apple and Amazon, both platform-based businesses, were the first companies in the world to cross the line of trillion dollars in market-cap (Streitfeld 2018). These data illustrate the significance of platforms and how companies with platform-based models increasingly dominate the global competition.

Platform economy covers a broad range of business activities built around modern information networks, where digital information and knowledge play a key role and where information technology is used effectively to increase productivity and to optimize economic structures. Modern, digital technologies enable companies to analyse large amounts of data, exchange information, and integrate different programs in a way that makes business activities more flexible, efficient, and mobile. (Pochenchuk 2018, 66.) The possibilities of platform economy have not only been recognised in the business world, but governments have also begun to take action to develop strategies that accelerate digital transformation. EU, for example, has launched a strategy called Digital Single

Market, in order to open up digital opportunities for people and businesses as well as enhance Europe's position as a world leader in the digital economy. According to the European Commission (2018), Digital Single Market could contribute €415 billion per year and create hundreds of thousands of new jobs.

Overall, digital platforms that leverage network effects, provide businesses new innovative opportunities in terms of value creation and competitive advantage. Evans (2016, 6) emphasizes that digital platforms and platform economy change the way in which organisations are led and forces companies to re-think their strategies, business models, organisational structures as well as approaches to value creation and capture. Moreover, since at the core of platform-based businesses is cooperation and networks beyond one's own company, digital platforms can support new, flexible means for interfirm collaboration. (de Reuver et al. 2018, 132) Digital platforms enable companies to offer customers complementary services, speed up access to new markets, and integrate other companies' attractive service-concepts to one's own offering. (Loikkanen et al. 2018, 41.) In addition, Moilanen et al. (2019, 90) emphasize how underlying APIs improve partner network scalability and thus strengthen the interaction between companies. Similarly, Nambisan et al. (2019, 1471) suggest that since digital platforms and digital platform ecosystems represent new forms of connectivity among various partners, they may shape and extend the theory and research related to strategic alliances.

2.3 Summary of literature review

Section 2.1 covers strategic alliances. Subsection 2.1.1 provides an introduction to strategic alliances and defines them as an interfirm collaboration with specific strategic objectives. Strategic alliances have been a part of companies' business strategies for decades and continue to grow in popularity. In today's rapidly changing environment, strategic alliances can be a source of competitive advantage and growth for many companies, as they allow businesses to explore new opportunities and exploit complementary capabilities that would otherwise be out of their reach. Strategic alliances allow companies to access new knowledge and resources and increase cost-efficiency by utilising external capabilities, resources, and knowledge. They enable companies to access new markets and technologies faster and increase their innovation capacity and competence.

Further, subsection 2.1.2 discusses the competitive advantage of strategic alliances. Since strategic alliances can be a source of cost-efficiency or resources and knowledge, their competitive advantage is typically explained through transaction cost approach or resource-based view. Thus, from the transaction-cost approach, companies engage in interfirm collaboration if it allows them to perform activities at a lower cost. From the resource-based view, strategic alliances may provide companies an opportunity to pool complementary resources that are valuable, scarce, and difficult to substitute.

Subsection 2.1.3 demonstrates how interfirm collaboration is a popular means to reach goals and achieve competitive advantage across industries such as high-tech, pharma, automotive, aviation, consumer goods, and retail. Because of their diversity, strategic alliances are perceived as a flexible means to enhance operations, innovate, and overall develop businesses. Although strategic alliances are not a new phenomenon, they have evolved over time and their role in businesses has changed along with the changes in the global business environment. Traditionally, interfirm collaboration has been more focused on dyadic relationships rather than multilateral relationships. However, multilateral alliances and open models collaboration have been getting increasingly attention in recent years and new forms of collaboration has begun to emerge. For example, Chesbrough's (2003) concept of open innovation emphasizes the need to explore the possibilities of interfirm collaboration in order to enhance companies' dynamic capabilities, as discussed in subsection 2.1.4.

Further, section 2.2 covers digital platforms and platform economy. Subsection 2.2.1 defines digital platforms as multi-sided networks of products, technologies, and services that are based on digital connectivity. Digital platforms provide a means for various stakeholders to connect and create value beyond organizational boundaries. The increasing openness of businesses derives from the rapid digital transformation and the development of digital platforms. The rise of the platform economy and the significance of digital platforms have forced companies to reconsider the sources of competitive advantage. Digital transformation continues to shape businesses and the competitive landscape, which calls for new thinking about strategic alliances and networks. Since the most recent literature highlights the importance of open innovation and platform-based businesses as a source of competitive advantage, it raises questions about whether interfirm collaboration will become a more vital part of companies' competitive advantage. In this thesis, the main contribution revolves around analysing *how the platform economy and digital platforms*

will change the role of strategic alliances as a source of competitive advantage. Before proceeding into the findings, section 3 introduces the research design.

3 RESEARCH DESIGN

3.1 The philosophical underpinnings

Conducting research requires an understanding of research philosophy. In broad, research philosophy refers to a system of beliefs and assumptions about the development of knowledge. The assumptions underlying the different research philosophies can be approached from the viewpoints of ontology and epistemology. (Saunders 2016, 127.)

Ontology refers to the study of reality and being. Ontology aims at understanding what the world is like and what is the nature of reality. In terms of research, ontological assumptions shape the way one sees and studies certain research objects. Further, ontological approaches to research can be divided into *objectivism* and *constructionism*. Objectivism is an ontological viewpoint that considers reality as external to social actors. According to objectivism, there is only one true reality experienced by all social actors. On the contrary, constructionism highlights that reality is constructed through social interaction in which social actors develop partly shared realities and meanings. Thus, from the viewpoint of management and business, ontology evaluates aspects such as what are organisations like, what is it like being in organisations and what is it like being managed or being a manager. (Saunders 2016, 127–129; Bryman 2012, 32.)

Epistemology refers to the study of knowledge. Epistemology evaluates assumptions about what constitutes valid, acceptable and legitimate knowledge, and what contributions to knowledge can be made. One key scientific issue in the context of epistemology is whether the social world can and should be researched according to the same procedures and principles as the natural sciences. Drawing from the definition of epistemology, *positivism* and *interpretivism* are two major philosophical approaches to scientific research. Positivist research aims at providing observable and measurable facts typically by developing and testing hypotheses. Positivist research pursues law-like generalisations and unambiguous and accurate knowledge, which is why positivism is typical in natural sciences. On the contrary, interpretivism aims at creating new and insightful interpretations and understandings of social worlds and contexts. Interpretivism argues that social contexts cannot be studied in the same manner as physical phenomena, which is why social sciences research requires different research approaches than natural sciences. Hence, interpretivism considers multiple meanings and interpretations as legitimate, and

acknowledge that the researcher's interpretations are key to research contribution. (Saunders 2016, 127–129; Bryman 2012, 27.)

Although the development and testing of hypotheses are common in business and management research as well, the multidisciplinary nature of business and management research enables one to approach research objectives from a variety of acceptable philosophical stances (Saunders 2016, 127). Consequently, interpretivism can be seen as an appropriate philosophical approach in management and business research, since it recognises the social complexity of organisations and their people. Further, since business and management research considers a variety of knowledge legitimate, it allows a much wider scope of research methods than many other disciplines. (Saunders 2016, 127–129; Bryman 2012, 32.)

Table 2 Philosophical Underpinnings in Qualitative and Quantitative Research (After Bryman 2012, 27–32.)

	Quantitative	Qualitative
Epistemological orientation	Positivism; natural sciences	Interpretivism
Ontological orientation	Objectivism	Constructionism

Drawing from the philosophical underpinnings, research can be divided into quantitative and qualitative research (Table 2). Quantitative research is based on the measurement of the amount and is thus applicable in research of phenomena that can be expressed in terms of quantity (Kothari 2004, 3). Since the aim is at discovering unambiguous, measurable facts, quantitative research is often epistemologically positivist and ontologically objectivist. On the contrary, qualitative research focuses on understanding the characteristics of the research problem and interpreting and contextualising meanings from people's beliefs and opinions (Baškarada 2014, 1). Moreover, qualitative research generally accepts social reality to be constructed by social actors and aims at creating rich insights through in-depth investigations, interviews, and analysis. Thus, epistemological interpretivism

and ontological constructionism can be seen as more common philosophical underpinnings in qualitative research, than in quantitative research. (Saunders 2016, 136.)

Due to the complex and ambiguous nature of the subject of this thesis, the research relies on the philosophical stances of interpretivism and constructionism. On the one hand, the reality of strategic alliances, platform economy, and digital platforms is extremely manifold as the definitions are highly dependent on the social context and interpreter. Since some of the terms of this thesis do not have established definitions or vary depending on the interpreter, they are viewed as ontologically constructive entities. On the other hand, the research topic is rather novel, as digital platforms and platform economy in general are emergent phenomena. Thus, this research combining strategic alliances and digital platforms is interpretative since the purpose is to create a new, richer understanding of strategic alliances in the era of the platform economy. Consequently, this thesis is qualitative. The methodological implications of qualitative research strategy are reviewed in the following section.

3.2 Methodological implications and research methods

The philosophical underpinnings guide the researcher to understand the different research strategies and methodological implications. The purpose of methodological implications in research is to present the logic behind the chosen research methods and to explain why the research follows a certain research strategy. (Kothari 2004, 8.) Moreover, research methodology guides the researcher in choosing what kind of data is required in the research and provides a theoretical foundation for the collection of data. Overall, research methodology refers to the analysis of the research design and the chosen research strategy. (Rehman – Alharthi 2016, 52.)

Qualitative research is a research strategy that usually highlights words rather than quantification in the collection and analysis of data. Moreover, a qualitative research strategy often follows an *inductive* approach to theory, which means that the theory is the outcome of the research process. In an inductive research process, data is collected to explore a phenomenon, identify themes, and patterns and further create a conceptual framework (Saunders 2016, 145). On the contrary, a quantitative research strategy typically follows a *deductive* approach, where observations and findings follow theory. In other words, a deductive approach aims at testing existing theories through the

development of hypotheses, whereas inductive research aims at building theory through qualitative observations and findings. (Bryman 2012, 24–27) Thus, this thesis mainly follows an inductive approach to theory.

In broad, qualitative research strategy is typically exploratory in nature, meaning that it relies on secondary research such as reviewing existing literature or informal discussions and includes interpretive techniques of collecting and analysing data. Further, these interpretive techniques seek to describe, decode, translate, and understand the outline of occurring phenomena in the social world. (Sachdeva 2009, 165.) At the data collection stage, qualitative research revolves around techniques such as participant observation, qualitative interviewing, language-based observations such as discourse analysis, and collection and qualitative analysis of texts and documents (Bryman 2012, 383.) Consequently, qualitative research covers multiple diverse research methods that aim at achieving an in-depth understanding of the research problem by collecting data from various sources, including people, organisations, events, and texts.

This thesis builds upon seven semi-structured individual interviews. Among semi-structured interviews, unstructured (no specific questions), and structured (specific questions) interviews are common types of individual interviews. While structured interviews follow detailed and pre-defined questionnaires leaving no room for question variability, unstructured and semi-structured interviews allow more flexibility and leave room for open-ended questions. Unstructured and semi-structured interviews aim at creating a dialogue that generates new ideas and perspectives, which is why most qualitative research relies on these methods. On the contrary, structured interviews are often utilised in quantitative research as the results can be analysed statistically. (Sachdeva 2009, 166–168.)

Qualitative research methods are suitable in a situation where the researcher is unfamiliar with the research topic and wants to gain a deeper knowledge of certain topic areas. Consequently, semi-structured interviews are suitable in this kind of exploratory research, as they allow the researcher to better understand the perspectives of the informants by refocusing the questions and prompting for more information when needed. (Jarratt 1996, 9.) Semi-structured interviews also give the researcher a chance to be a visible knowledge-producing participant in the interview, rather than only guiding the informant with a set of questions. Moreover, semi-structured interviews allow the interviewer a greater possibility to guide the informant and the conversation on topics that are important in relation to the research project. (Brinkmann 2013, 25.) Although the questions are pre-defined and the same with each informant, the answers are not tied to certain options and

the interviewer can adjust the questions according to each informant and the informants also have the chance to answer in an idiosyncratic manner. Overall, semi-structured interviews typically revolve around certain themes arising from the literature review of the research project. This allows greater flexibility in terms of interview questions, as the questions are guided by certain themes but not required to be word-to-word similar to each informant.

In sum, this thesis takes an inductive approach to the research phenomenon and is exploratory in nature. First, the literature review explores the existing themes and theories and provides a framework for the research. Second, the empirical part relies on seven semi-structured individual interviews, and the empirical findings are built around the themes arising from the literature review and the semi-structured interviews. Finally, the main research question “*How will digital platforms and platform economy change the role of strategic alliances as a source of competitive advantage?*” and the two sub-questions will be answered in the conclusive chapter 5.

3.2.1 Data collection and informants

The data was collected by conducting individual interviews with seven (7) informants. The interviews were conducted during the year 2019 in April, May, October, November, and December. The interview-process began after proceeding with the literature review to the point where a questionnaire framework could be planned thoroughly according to relevant themes and concepts. All the interviews were conducted in Finnish to be able to develop a richer dialogue with informants whose mother tongue is Finnish. Each of the interviews was recorded and transcribed word-for-word in their full length, and the interviews lasted approximately for an hour (see Table 3 for the precise length).

The selection of the informants began by searching for business professionals who are experts either within the field of strategic alliances, or digital platforms and platform economy, or who have knowledge within both areas. Since this study approaches the research subject from a rather broad perspective, meaning that the subject is not narrowed down to cover a particular industry or certain companies, the criteria for informants were rather flexible. The main criteria for informants were that they have extensive experience and knowledge with the subject in question from either consulting, researching, or in-

house decision-making or business development positions. Some of the first informants suggested a few names, which eased the process of finding suitable informants.

Since this thesis is not a case study of a certain company or companies and does not include any confidential information about any businesses, the interviews were not conducted anonymously and the informants are presented with their full names and professional background. This was agreed upon at the beginning of each interview. Moreover, informants were not asked specific questions about their employer nor were they required to demonstrate examples about how the research phenomenon in question occurs in the organisation they work for. The possible examples are voluntarily demonstrated and allowed to be utilised in this thesis. The informants are presented according to the chronological order of each interview.

Marjukka Niinioja

Marjukka Niinioja is an API and Product Consultant, Architect and Trainer, and a Partner at Osaango Ltd. Niinioja is an expert in the fields of digital platforms, API infrastructure, API economy, business models as well as strategic alliances and partnerships. Niinioja has experience from various industries covering both public and private sectors, and she has worked with companies from small and medium-sized businesses to large corporations, such as Kesko. In addition to consulting, Niinioja is the co-author of the book *API Economy* and the developer of an open APIOps Cycles -method while working at a software and service company Digia. Niinioja holds an MSc in Education from the University of Helsinki.

Manu Setälä

Manu Setälä is a Senior Advisor at Business Finland, specializing in platform economy and digital platforms. Setälä holds an MSc in Technology and has over 20 years of experience in software and over 10 years of experience in digital business and platforms. Prior to Business Finland, Setälä worked with a large EU-wide project called Digital Business Ecosystem that took place in 2003–2007. Setälä's more recent contributions relate to Business Finland's AI Business program that accelerates the global growth of Finnish digital service business.

Timo Seppälä

Timo Seppälä is a Professor of Practice (Digital Operations) at the Department of Industrial Engineering and Management at Aalto University School of Science. In addition, Seppälä is the Chief Researcher at the Research Institute for the Finnish Economy. Seppälä holds a PhD in Industrial Economics and an MSc in Entrepreneurship. His areas of research focus on global value chains, supply chain management, and digitalization and platform economy. Moreover, Seppälä is an expert in the fields of management operations, platformization of supply chains, digital innovations, and data-driven business models. Seppälä has contributed to over 60 research papers and other publications and his recent outputs cover subjects such as sustainability of digital future, platforms and industrial change, and benefits of data sharing.

Ville Eloranta

Ville Eloranta is a University Lecturer and Postdoctoral Researcher at Aalto University School of Business (Department of Management Studies), and holds a PhD in Technology. Eloranta is an expert in business model innovation, distributed ledger technologies, and design management. Eloranta has a solid track record of publications in top-level management journals, including *Journal of Service Management*, *Journal of Business and Industrial Marketing* and *Technology Innovation Management Review*. In his recent contributions, Eloranta has researched subjects such as value creation and value capture in ecosystem-level business models, data markets, and Internet of Things-driven B2B service networks.

Anni Ronkainen

Anni Ronkainen is the Chief Digital Officer and Executive Vice President of the Group Management Board at Kesko Corporation. Ronkainen is also a board member of various companies, including DNA Plc, Fennia Mutual Insurance Company, Statistics Finland, and Asiakastieto Group Plc. Prior to joining Kesko Corporation, Ronkainen worked as

the Country Manager at Google Finland Ltd. Ronkainen holds an MSc in Economics and Business Administration. Ronkainen has experience of leading digital transformation processes, developing both business and digital strategies, as well as working with strategic alliances and different kinds of partnerships.

Anne Pakari

Anne Pakari has over 20 years of experience in procurement, strategic alliances and partnerships, and other business development roles for example from Nokia. Her recent contributions relate to Nokia's innovation collaboration ecosystem Finland in Nokia's Global Innovation Partner Management organization. She is also a Co-Founder of Open Ecosystem Network, the new digital hub of open collaboration and innovation kicked-off by Nokia. Pakari holds an MSc in Economics and Business Administration.

Mirva Nevalainen

Mirva Nevalainen works as Head of Partner Innovation Operations at Kone Corporation. Nevalainen has over 10 years of experience in various roles at Kone, covering expertise areas such as global R&D and business development. In her current role, Nevalainen is leading partnership portfolio management and is responsible for mapping out potential partners and facilitating as well as certificating partnerships. In recent years, Kone has been collaborating increasingly with for example start-ups and other external partners to drive innovation and concept creation. Nevalainen holds an MSc in Technology.

Table 3 Informant Information

Informant	Expertise area	Interview duration	Date and place
1. Marjukka Niinioja	Digital Platforms, API Infrastructure and API Economy, Business Consulting, Business Models, Strategic Alliances and Partnerships	1 h 30 min	1 April 2019, Helsinki, Finland
2. Manu Setälä	Digital Platforms, Platform Economy, Software and Engineering, Business Consulting	1 h 3 min	7 May 2019, Skype
3. Timo Seppälä	Management Operations, Global Value Chains, Platformization, Digital Innovation, Platform Economy, Data-Driven Business Models	1 h 6 min	14 May 2019, Helsinki, Finland
4. Ville Eloranta	Business Model Innovation, Platform Business Models, Ecosystem-Level Business Models, Data Markets, Internet of Things –driven B2B Service Networks	1 h 15 min	10 November 2019, Espoo, Finland
5. Anni Ronkainen	Digital Transformation, Business Strategy, Digital Strategy, Strategic Alliances and Partnerships, Business Development	0 h 46 min	26 November 2019, Helsinki, Finland
6. Anne Pakari	Procurement, Strategic Alliances and Partnerships, Business Development, Network Management, Collaboration Ecosystems	1 h 3 min	27 November 2019, Espoo, Finland
7. Mirva Nevalainen	Business Strategy, Business Development, Research and Development, Innovation Partner Operations, IT Systems, Strategic Alliances and Partnerships	0 h 46 min	12 December 2019, Espoo, Finland

3.2.2 Data analysis

As mentioned previously, the semi-structured interviews were conducted by following a question framework based on the themes arising from the literature review. After conducting the interviews and transcribing them word-for-word, the data analysis began with coding the raw qualitative data into a communicative, logical script. In qualitative research, the purpose of coding is to examine the empirical material, including words, paragraphs, and phrases and labelling and summarising the content under a word or short phrases. Coding reduces irrelevant sections of data and makes the data more readable and structured. Thus, coding prepares the researcher for the interpretation of data and makes the analysis of relevant data segments easier. (Linneberg – Korsgaard 2019, 259–261.)

After coding the entire data, the actual data analysis began by sorting the coded data into themes. Themes can be defined as significant concepts that tie larger pieces of data together. The purpose of formulating themes is to recognise ideas and concepts that would separately seem rather meaningless, but under a broader theme bring valuable insights into the research. (Nowell et al. 2017, 8.) Consequently, the empirical part of this study consists of a *thematic analysis* of the qualitative interview data. Thematic analysis is a qualitative research method that is suitable for various epistemologies and research questions. It is useful for discovering the perspectives of various informants and identifying similarities and differences between them. Thematic analysis is a flexible and rather simple way to conduct qualitative data analysis and thus suitable for a novice researcher. Due to its flexibility, thematic analysis enables the researcher to approach the data in various ways – one can either focus on identifying meanings across the entire data set or take one particular aspect of a phenomenon under scrutiny. An important notion is that thematic analysis aims to identify patterns of meaning that are important in regards to the research question and research subject. Thus, what is common and frequent in the data, is not necessarily relevant and meaningful. (Nowell et al. 2017, 8; Braun – Clarke 2012, 57–58.)

The thematic analysis followed primarily an inductive approach to the data, which is a bottom-up approach and driven by what is in the data. As noted earlier, the inductive approach is a process in which the researcher aims to create concepts and frameworks through the qualitative observations, whereas the deductive approach is a top-down approach (Bryman 2012, 24–27). Thus, the thematic analysis was initially built upon the themes that arose from the interview data. However, the research also followed a

somewhat deductive approach, as the analysis was guided by the concepts and themes that had already come up in the literature review. Braun and Clarke (2012, 58) point out that qualitative coding and analysis often combine both approaches, as it is rather challenging to be purely inductive and ignore the underlying theoretical construct of the research. A combination of both approaches is called an *abduction*. The abductive approach enables the researcher to move back and forth between theory and data. (Saunders 2016, 148.)

3.2.3 Trustworthiness

In natural sciences, the trustworthiness of research is based on the analysis of internal validity, external validity (generalizability), reliability, and objectivity. By fulfilling these criteria, positivists aim to ensure the truth value, applicability, consistency, and neutrality of their research. (Lincoln – Guba 1986, 74.) Since qualitative results and their validity cannot be addressed in the same way as in quantitative research, i.e. in measurable and generalizable facts, the trustworthiness of qualitative research is often questioned by positivists. (Shenton 2004, 63 – Saunders 2016, 146.) In response to this critique, Lincoln and Guba (1986, 76) suggest four criteria of trustworthiness be utilised in qualitative research: *credibility* (counterpart for internal validity), *transferability* (counterpart for external validity), *dependability* (counterpart for reliability), and *confirmability* (counterpart for objectivity).

Credibility deals with how well the results of the research are congruent with reality (Shenton 2004, 64). There are a variety of ways in which the credibility of research can be enhanced. Lincoln and Guba (1986, 77) suggest that prolonged engagement with the research phenomena enables the researcher to identify possible distortions and on the other hand recognize key aspects regarding the research subject. Moreover, the key aspects should be persistently observed to gain in-depth knowledge of the research subject. Another common way to enhance credibility is to use the triangulation of data. Triangulation refers to the use of different data sources, methods, and theories. (Lincoln – Guba 1986, 77; Krefting 1990, 219.) Besides prolonged engagement and triangulation, iterative questioning, frequent briefing sessions between the researcher and research supervisor, peer scrutiny by colleagues and academics, as well as the examination of previous research findings are viable ways to increase the credibility of a research. (Shenton 2004,

69.) When it comes to prolonged engagement, the preparation work for this thesis begun and the research subject was developed during autumn 2018. The principal writing process took place during 2018-2019 and the thesis was finalised during spring 2020. During the prolonged period, the research questions were adjusted a few times and the literature review was modified several times to achieve a coherent outlook on the research subject and to recognise relevant topics and themes. Regarding triangulation, this study approaches strategic alliances from two theoretical perspectives. Moreover, the findings are discussed by contrasting them with these theories as well as with previous research. Moreover, the research process was supported by briefing sessions between the researcher and research supervisor as well as peer scrutiny.

Transferability works as the counterpart for external validity. In positivist research, external validity is concerned with how well the results of the research can be applied to other situations and are generalisable in a broader context. In a qualitative study, data and findings usually cover a much narrower number of individuals, which is why it is rather impossible to address that the results are applicable to other situations. Thus, qualitative research should demonstrate transferability, which refers to the thick description of the research phenomenon and adequate information about informants, research context, and settings. In this way the researcher provides a basis for the reader to analyse whether the findings are transferable to another research situation or not. (Shenton 2004, 69–70; Lincoln – Guba 1986, 77.) According to the nature of the qualitative study, the findings are not necessarily generalisable as such, as the amount of informants is limited and there is always a risk of misinterpretation. In addition, this thesis involves a lot of ambiguous terms and deals with a rather novel phenomenon, which may hamper transferability. However, these issues are acknowledged whilst writing the thesis and also emphasized in the work. Moreover, as the thesis builds upon individual interviews of individual professionals, it was considered relevant to provide details about their expertise areas.

Dependability, the counterpart for reliability, deals with the consistency of findings. When positivists seek to ensure the reliability of their research, they utilise certain techniques, such as simplification and controlling of research environment and procedures. At the core of reliability is repeatability – research is reliable if a further similar experiment produces similar results. (Walle 2014, 140.) Since qualitative research situations and phenomena are typically unique and more complex, and the purpose is not to identify one true reality, reliability as a criterion of trustworthiness is not applicable to qualitative research. Thus, dependability is a criterion that helps to analyse the consistency of

qualitative findings. It focuses on the description of data gathering, interpretation, and analysis. In other words, qualitative research should always include sections that demonstrate the research design and its implementation thoroughly, so that another researcher is able to follow the decision trail behind the research. (Shenton 2004, 71–71; Lincoln – Guba 1986, 77; Krefting 1991, 221.) In this thesis, the research design is demonstrated rather thoroughly. Data gathering, interpretation technique, and data analysis are discussed in detail in section 3.2.

Finally, confirmability in qualitative research refers to the degree to which the research conforms to expectations and whether the research findings, even to some extent reflect what other researchers have observed. (Walle 2014, 141.) To ensure confirmability, the researcher should aim to neutrality regarding opinions, motivations, and other biases. Thus, in qualitative research, the researcher should ensure that the findings truly demonstrate the views and perceptions of the informants, and not the preferences and opinions of the researcher. (Shenton 2004, 72; Walle 2014, 141.) In this research, the research questions were designed based on the existing literature and thus were designed as neutral as possible, regardless of the opinions of the researcher. Moreover, the findings represent the true perceptions of the informants and for example quotations are provided to demonstrate what the informants truly said about the subject. In addition, the findings are discussed by comparing the informants' perceptions with existing literature and research to demonstrate how and whether the informants' perceptions align with existing research.

4 FINDINGS

4.1 Strategic alliances in the digital era

This chapter discusses how digital transformation and digital platforms impact strategic alliances in general and how they may transform the way in which companies collaborate. Both informants and existing literature point out that digital platforms and the emerging platform economy may provide several benefits in terms of interfirm collaboration. However, it appears that digital platforms may also change the nature of interfirm cooperation and as a result increase the ambiguity around the definition of strategic alliances.

When considering how digital platforms positively impact interfirm collaboration, informants note that digital platforms enhance interfirm flexibility and agility since digital platforms and platformization reduce manual work, bureaucracy, hierarchies, and organisational silos. Instead of manual information sharing and follow-ups, digital platforms enable companies to enhance information inflows and outflows between partners, since a lot of data can be transmitted automatically through underlying application programming interfaces. For example, a few of the informants state as follows:

“ – – The overall workload and all issues like these become less heavy, and things like processing information and resources become more efficient.”

(Niinioja)

“I perceive that the logic and model of sharing information is much more open and dynamic in the platform economy than in traditional [business setting].”

(Seppälä)

In addition, Pochenchuk et al. (2018, 66) also emphasize that digital technologies and digital platforms enable advanced information sharing and thus increase productivity, flexibility, and efficiency. Similarly, Moilanen et al. (2019, 15, 90) argue that digital platforms and their underlying API architecture speed up collaboration and strengthen the interaction between businesses because of automated data processing. Moreover,

Nambisan et al. (2019, 1453) point out that the modularity of digital platforms allow partners to rapidly configure services and match resources and thus save time.

Since digital platforms remove unnecessary processes and overall allow companies to enhance operational efficiency and speed up activity, external collaboration is becoming easier to facilitate. Thus, digital platforms may lower the barriers to collaborate, as some of the informants point out:

“I think that the barriers to interfirm collaboration decrease significantly.”

(Setälä)

“In practice, digital platforms overall reduce the barriers between different actors to begin with producing and developing new complementary innovations.”

(Seppälä)

“Yes they do [lower the barriers to collaborate], because when the application programming interface is standardized and common practices are created related to how to connect to it, then yes of course it helps, it is easier for a partner and it is easier for us [at Kone].”

(Nevalainen)

Moreover, Eloranta (informant) and Pakari (informant) also agree that digital platforms transcend organizational boundaries, and similarly Neittaanmäki et al. (2016, 2) note that the conventional concept of organizational boundaries is expanding to harness external capabilities and knowledge on an unprecedented scale. Moreover, Nambisan et al. (2019, 1466) also emphasize that digital platforms transcend borders and break down barriers for collaboration, and thus provide new cross-border and cross-sector opportunities with a multitude of partners across industries and locations. Not only do digital platforms allow greater flexibility, productivity, and efficiency in terms of both intra-organizational and interfirm processes and information sharing, they also extend external networks and ecosystems to encompass a multitude of partners. Instead of bilateral hierarchical relationships and dyadic strategic alliances, digital platforms increase multilateral alliances and

strategic networks. When it comes to the shift from bilateral strategic alliances to strategic networks of multiple partners, a few of the informants state the following:

“I see that these partner networks will become much more dynamic and they will become increasingly common – – I believe that it will become a more lively ecosystem – –.”

(Setälä)

“It changes exactly like this so that a larger set of actors become more strategic because of their ability to produce these complementary innovations.”

(Seppälä)

Pakari (informant) also highlights that digital platforms allow greater openness and diversity when it comes to interfirm cooperation. Besides, Eloranta (informant) states that digital platforms enable to form a richer combination of key partners that constitute an ecosystem where the power and accountability are fairly distributed between various partners for example by utilizing blockchain technology⁴. When it comes to blockchain technology, Korpela et al. (2017, 4182) also note that it can support the development of digital supply chains that are multi-stakeholder environments integrating various B2B-relationships. These notions are comparable with de Man’s (2014, 197) arguments about how interfirm cooperation is shifting towards multilateral alliances and networks, as illustrated in Figure 8.

⁴ Blockchain technology is distributed ledger technology that is considered to enhance the security and cost-effectiveness of transactions (Korpela et al. 2017, 4182).

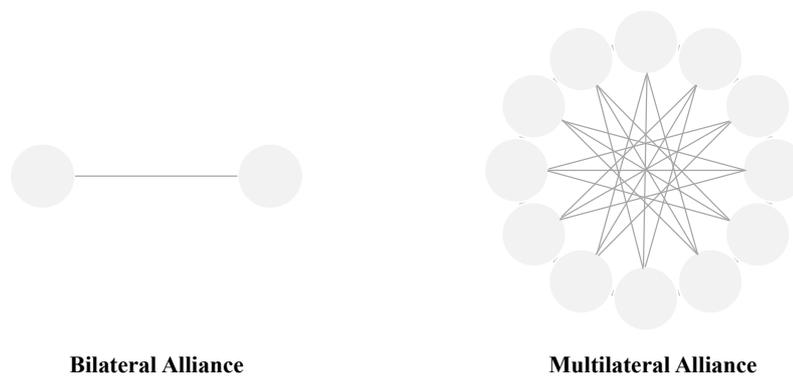


Figure 8 From Bilateral Alliances to Multilateral Alliances

In the digital era, these multilateral alliances (Figure 8) can be powered by the underlying digital platform architecture that enables a larger set of actors to create and maintain a strategic network flexibly and conveniently. As a result, platform-driven multilateral alliances create a digital platform ecosystem that enables partners to reinforce complementarity in terms of knowledge, resources, and capabilities. Congruent with informants' and de Man's (2014, 197) notions, Kimura et al. (2019, 10, 12) also predict that one of the key trends⁵ of 2020s is the development of multi-company ecosystems, that are blurring the boundaries between competitors and collaborators as well as between producers and consumers. To succeed in the era of digital disruption, companies must develop strong relationships with both customers and suppliers, as well as with other external partners involved in the digital platform ecosystems.

Besides and partially because of the above-mentioned findings, digital platforms may also have an impact on the alliance life-cycle. Informants note that since digital platforms and the overall digital transformation enable companies to perform in a more agile and dynamic way with a network of multiple partners, the alliance life-cycle may also become more dynamic and flexible. When it comes to planning, forming, managing, and ending strategic alliances in the digital era, for example, Ronkainen (informant) states as follows:

⁵ The article "The New Logic of Competition" (Kimura et al. 2019) is a part of a larger publication "Winning the '20s" by Boston Consulting Group and BCG Henderson Institute, that discusses the emerging future trends, including artificial intelligence, digital platform ecosystems, and technology, that strongly shape the future competitive environment. BCG Henderson Institute is Boston Consulting Group's strategy think tank, dedicated to exploring and developing valuable new insights from business, technology, and science by embracing the powerful technology of ideas. The Institute engages leaders in provocative discussion and experimentation to expand the boundaries of business theory and practice and to translate innovative ideas from within and beyond business.

“It should become [more dynamic] since now you cannot design everything from beginning to end, so we should proceed from a waterfall model to a more agile way of working – – The world changes so fast that if we plan everything beforehand and it is a large project, like in large corporations they usually are, there is a risk that when it is live it is already old – – I no longer believe in...that we have like a five-year [agreement], like marriage or longer, it is really difficult.”

Instead of linear partnerships with pre-defined duration and pre-selected partners, digital platforms allow companies to collaborate on an on-going basis and constitute a network where new partners have lower barriers to join and older partners to exit. Thus, digital platform ecosystems constitute a network of openness with low hierarchies and flexible structures. Overall, informants point out that digital platforms emphasize cyclical thinking instead of linear thinking in terms of collaboration processes, partner-selection, and the number of partners. In digital platform ecosystems, it is not considered a threat if everything is not agreed in detail prior to collaboration, as Eloranta states:

“The power of platforms is that they are positively work in progress, because they are platforms, we cannot agree on everything in detail beforehand...”

The open-ended and agile nature of digital platforms thus allows companies to adapt, transform and re-organize interfirm collaboration according to the circumstances more eloquently than traditional alliances that are usually based on detailed contracts, pre-defined projects, and stable count of partners. (de Man 2014, 197.)

Table 4 summarizes the above-mentioned findings and illustrates how digital platforms may disrupt the traditional perspective of strategic alliances and provide new means for organizing interfirm collaboration.

Table 4 Traditional Strategic Alliances versus Platform-driven Strategic Alliances

Traditional strategic alliances		Platform-driven strategic alliances
Detailed pre-negotiated contracts	↔	Open-ended collaboration
Hierarchical structures	↔	Low hierarchy, agile structures
Bureaucratic top-down approach to managing collaboration	↔	Flexible bottom-up approach to managing collaboration
Linear alliance life-cycle	↔	Cyclical alliance life-cycle
Pre-selected partners	↔	Dynamic in-flow and out-flow of partners
Limited amount of partners, usually bilateral relationships	↔	Growing amount of partners, increasingly multilateral relationships

As table 4 demonstrates, an interfirm collaboration that is powered by underlying digital platforms represents new forms of collaboration. The framework of platform-driven alliances derives from de Man's (2014, 197) concept of open alliances, combined with informants' notions. Overall, these viewpoints demonstrate how digital platforms and emerging digital platform ecosystems are reshaping how companies collaborate. To extend the aforementioned viewpoints, Lang et al. (2019) also give an industry example about how interfirm collaboration through digital platform ecosystems is fundamentally different from the interfirm collaboration of the past. In the automotive industry, automakers have traditionally formed joint ventures or alliances with original equipment manufacturers to enter a new market, or formed contractual alliances with suppliers to secure parts. This kind of collaboration has mainly been bilateral and intra-industry, comprising a limited amount of partners and a specific deal type, and focusing on a certain geographical location. Today, collaboration in the automotive industry is increasingly revolving around digital platform ecosystems, to enable the production of modern cars that are connected, electric and autonomous. This kind of collaboration is multilateral, comprising a multitude of partners from various industries and geographical locations. Moreover, these kinds of ecosystems utilize various deal types varying from contractual

agreements to minor equity investments. This allows more flexible collaboration structures, that can be adjusted according to changing customer preferences, regulations, and technologies.

Among the above-mentioned implications, informants also emphasize that since the overall digital transformation reshapes the traditional alliance perspective, it may also impact on how strategic alliances, strategic networks, and interfirm cooperation, in general, are perceived and defined. When discussing how digital transformation and digital platforms impact how strategic alliances are defined and perceived, a few of the informants state as follows:

“Maybe this platform economy will change it so that it becomes more indeterminate... When a contributor becomes a partner and when a partner becomes a key partner and when a key partner becomes a strategic partner, it becomes indeterminate, since these actors are at the same time in various ecosystems as well...”

(Eloranta)

”-- So that who is a strategic partner and who is not, the meaning, it might be that one cannot talk about that.”

(Setälä)

“It is a pretty good question -- A large company like Kone, we have relatively many partnerships of different levels, but like, we can have strategic partnerships that can be sort of, they, for example, provide the platform, so it is pretty strategic, we have made a strategic decision to go to that direction, and then we choose a supplier or this partner that we collaborate with and develop together. And it may be that it enables this kind of [digital] ecosystem to emerge and the ecosystem itself can be a strategic decision [as well]. That can be the thing that the line blurs, sort of that these individual partners [in the digital platform ecosystem] become strategic together. -- And these individual partners can for their part support our business strategy, but separately they are not necessarily very [strategic].”

Consequently, despite the potential benefits, it seems that digital transformation may also increase the ambiguity related to how strategic alliances are perceived and defined in the digital world. Moreover, as the number of external partners increases and the emphasis shifts from a specific strategic partner to an ecosystem of partners, it may also mark a shift towards a direction where determining specific partners and their strategic nature may become less inevitable. Instead, it becomes more inevitable to determine which digital platform ecosystems are strategically crucial to be a part of.

In sum, digital platforms enhance operational flexibility and efficiency and thus enhance information inflows and outflows between partners. In turn, digital platforms decrease the barriers for collaboration and may speed up interfirm activities. Overall, digital platforms promote multilateral, agile, and dynamic interfirm relationships, instead of bilateral, hierarchical, and linear collaboration.

4.2 Strategic alliances and competitive advantage in the era of digital platforms and platform economy

The previous chapter illustrated how digital platforms and digital transformation overall may impact positively on interfirm collaboration and the formation of strategic alliances. This chapter focuses more closely on competitive advantage and new value creation opportunities that digital platforms provide in terms of interfirm collaboration.

As discussed in the literature review, the competitive advantage of strategic alliances has typically been associated with transaction costs and scarce resources. When it comes to the advantages that digital platforms provide in terms of transaction costs, a few of the informants state as follows:

“Yes exactly like this, there is actually some research done regarding the matter and it is actually a phenomenon that reaches beyond digital platforms in particular. These, like, digital infrastructures in general for example information networks and standards related to them, they specifically decrease the transaction costs of networking.”

(Eloranta)

“Well let’s say that in the platform economy, we discuss the shift from supply-chains to platforms. And if I view that change we can see that sort of, like, the transaction costs are significantly lower in the platform economy. – Overall I perceive that the operational model of platform economy lowers the transaction costs of different operators in a sense that it is worth to participate [in platform-driven alliances].”

(Seppälä)

Setälä (informant) also notes that one of the most apparent advantages of digital platforms is that they lower transaction costs related to coordination, organizing, and other operational processes between partners. Providing an industry example, a research on interfirm seaport operations (Di Vaio – Varriale 2020, 228) similarly observes that digital platforms reduce coordination and control costs of managing data related to seaport operations involving both private and public players. Moreover, Nevalainen (informant) points out that digital platforms reduce costs related to processing co-developed products and services, since digital platforms allow partners to allocate products and services to the right customers more conveniently. Similarly, Korpela et al. (2017, 4183) point out that digital platforms and overall digital technology minimize transaction costs and thus promote the cost-effectiveness of interfirm value-creating activities. In addition to these notions, Atluri et al. (2017) emphasize that digitalization reduces transaction costs which is why it becomes increasingly profitable for companies to contract out more activities and facilitate a richer combination of interfirm relationships. When discussing why digital platforms promote cost-efficiency, for example, Pakari (informant) summarizes as follows:

“[Since] data can be transmitted between companies through application programming interfaces, the technology enables a higher level of agility, so it requires fewer investments to collaborate.”

Similarly, Nevalainen (informant) argues that since digital platforms make collaboration easier and more agile because of standardization, they lower the costs of collaboration. Regarding the investments related to collaboration, Stallkamp and Schotter (2018, 4) also argue that platforms based on digital technologies encounter low transaction costs and can be scaled up with limited capital investments. Similarly, Ronkainen (informant)

emphasizes that the platform economy is based on scalability, and because of scalability, digital platforms are able to bring together multiple partners with minimal costs.

When it comes to resources, Seppälä (informant) emphasizes that one particular advantage of digital platforms is that they encourage to begin with producing complementary innovations. When discussing more complementary innovation, Seppälä sheds light on the theme as follows:

“I think we should shift from the traditional world of [supply-chain management] and alliance management to evaluating what kind of complementary innovations our customers want. So that we would shift the supplier–partner–network -management to that direction. – Another way to think about it is that when Apple and iPhone entered the market in 2007, the value of [their] complementary innovations was around 150–200 million. And now [today] how many billions were paid to these [third-party] software developers? There was no such market before.”

Nevalainen (informant) also notes that the underlying application programming interfaces allow diverse partners to connect effortlessly and conveniently, which accelerates the ability to develop complementary innovations and value to customers. Similarly, Namisan et al. (2019, 1472) argue that digital platforms and digital platform ecosystems comprise vertical, horizontal, and lateral partners and thus enrich complementarity in terms of innovation, products, and services. These notions reinforce the perception that multi-lateral relationships are becoming strategically more pivotal than bilateral relationships.

Moreover, informants emphasize that not only do digital platforms enable partners to enhance productivity and operational efficiency related to intangible assets such as information, they also allow companies to allocate resources and detect shortfalls related to physical resources through automated information flows. Regarding resource allocation through digital platforms and underlying API architecture, Niinioja (informant) comments as follows:

“If you do not know what resources there are, I mean if you consider that the alternative is that someone looks out for information from a partner’s website or calls or sends an email for example about where your bus is running or where your package is going, it is not very efficient. So yes

there can be seen [advantages], sort of related to information about what resources you have, and where they should be transferred – – some [advantages] are more related to documentation, but then there is that, sort of, like what is the status of some equipment, does it require maintenance, is it delivered, should something be done about it, issues like these can be mitigated.”

Similarly, Ronkainen (informant) emphasizes that digital platforms allow companies to avoid redundant work and coordinate for example human resources more efficiently, so that the right things are done in the right places. Thus, from the resource-based view, digital platforms not only enable companies to enhance complementary innovation, but they also allow companies to keep track, locate, and allocate both intangible and tangible resources more efficiently. When considering the overall resource advantages related to platform-driven interfirm relationships, for example, Nambisan et al. (2019, 1476) argue that digital platform ecosystems can accelerate interfirm competitive advantage through resource sharing, since they make resources more portable.

Overall, both informants and existing literature suggest that digital platforms and the platform economy promote interfirm competitive advantage and value creation. As highlighted in the literature review, one of the focal aspects of digital transformation and the development of the platform economy is that digitalization shifts the focus from company-specific value creation to collaborative value creation (Daugherty 2016, 7; Moilanen et al. 2018, 41.). Thus, the traditional viewpoint of competitive advantage is based on the notion that a company should aim to control and own scarce resources and capabilities in order to create superior value to its customers (Porter 1985; Spulber 2009, 14–15), whereas digital platform ecosystems promote complementarity and interfirm value creation opportunities (Moilanen et al. 2018, 41). When it comes to obtaining resources and knowledge versus gaining access to resources and knowledge beyond organizational boundaries, for example, Eloranta (informant) comments as follows:

“Some of these theories [regarding competitiveness and competitive advantage] are based on, sort of, a zero-sum game. Meaning that we compete to gain a position in the market and the advantage we gain is away from our competitors. And in turn we aim to protect the position that we gain in the market. And now very probably, one focal feature of the

platform economy is that, in addition that it is still probably possible to gain a position and protect it, the possibilities of quick learners are emphasized. So like accumulating knowledge versus gaining access to information flows is focal. And the latter is sort of, it emphasizes learning, dynamic capabilities, and networking. – – There is that, sort of, if you can engage a larger set of actors to pursue a mutual goal, then you have access to a larger set of diverse resources and competences.”

In addition, Eloranta (informant) also reminds that in today’s highly competitive environment, it is becoming more challenging to achieve dominant positions in the market, which is why companies should increasingly consider how they can utilise the knowledge and capabilities of their network and partners. Similarly, Nambisan et al. (2019, 1472) argue that digital platforms and platform economy promote co-specializing, co-locating, and co-learning instead of zero-sum approaches to competitive advantage and value creation. These considerations also extend the analysis from resource-based view to consider the concept of open innovation and dynamic capabilities view in that they emphasize the importance of adaptation and reconfiguration of assets in a larger network, rather than focusing on obtaining resources and capabilities and protecting them (Zheng et al. 2011, 1035). Similarly, Ronkainen (informant) also notes that companies should be exposed to external ideas and viewpoints more regularly and increasingly explore the opportunities of open innovation and interfirm collaboration since companies cannot acquire and obtain all crucial capabilities and resources and hold them inside organizational boundaries. Moreover, Nambisan et al. (2019, 1480) emphasize that since digital platform ecosystems enable a new level of flexibility in terms of resource and knowledge configuration between multiple companies, they may serve as a vehicle for companies to attain, transfer and sustain dynamic capabilities to match the requirements of changing business environment.

Regarding interfirm value creation opportunities, informants perceive that network-level value creation is becoming increasingly crucial in order to be able to respond to increasing customer expectations. When discussing how digital transformation and the development of digital platform ecosystems impact the way in which companies collaborate and create value together, for example, Nevalainen (informant) comments as follows:

“Our business at Kone is such that we have long delivery times for example in new construction operations, so for us it is important that we have partners that are committed to our ecosystem for a longer period of time. And we hope that we can build strong partnerships so that we benefit each other and gain advantages equally. The best situation would be that our partners could between themselves create even more value, so sort of together as an ecosystem we accomplish more than if we just collaborate alone with one partner. – – I think the world is [changing] so that we do more jointly and doing jointly is more powerful. Companies collaborate more and innovate together regarding what should be offered to a client and clients also like more about solutions instead of having to juggle between different suppliers.”

Nevalainen (informant) adds that digital platforms allow partners to quickly and flexibly expand and co-develop product and service range and also combine customer base. In turn, companies have an increased ability to unlock value and enhance customer relationships. Similarly, Ronkainen (informant) emphasizes that in the digital era, companies should increasingly consider integrating digital solutions to alliances to be able to enhance customer experience and value creation. Pakari (informant) also notes that since digital platform ecosystems enhance diversity and options in terms of various partners, they may bring emergent value creation opportunities that would not necessarily be evident in the first place. Likewise, Iyengar et al. (2017, 5) point out that as digital platforms and underlying APIs break down barriers between systems and organizations, they can continuously unlock new sources of value that were not apparent at the beginning of a project. Moreover, Bailey et al. (2019, 21) emphasize that digital platform ecosystems combine information and capabilities from a wide variety of players, increasing their collective ability to explore new opportunities and enabling the rapid development of new offerings in a more complex and less predictable business environment. However, realizing these ecosystem benefits requires a new organizational logic, where partners create a shared vision, develop new capabilities for collaboration, and redesign internal processes to be more adaptive to increasingly fluid collaboration.

Finally, when considering the advantages in different kind of organizations, informants point out that collaborating through digital platforms allow companies to tackle issues and roadblocks related to organizational structures and company size. For example

Nevalainen (informant) notes that in a large corporation like Kone, expanding product and service range is typically an extremely large and heavy project, which is why platform-driven collaboration allows them to quickly develop their offering, without having to integrate partner solutions into their operations. In comparison, for example, Setälä (informant) brings up an interesting remark about how digital platforms and platform economy may provide crucial value creation opportunities for small and medium-sized companies in particular:

“If we think about why large corporations succeed relatively well, despite large corporations tend to involve a lot of administrative rigidity in comparison to small and medium-sized companies. – – So large companies lack this flexibility and agility [of SMEs] but economies of scale maintain a [level of] performance that SMEs do not have. So then if a network of SMEs, a network of strategic partners, could achieve the credibility and reliability of large corporations and at the same time maintain their flexible governance structure because of these digital platforms, then it would be supreme. – – If we can reach a situation where we can do things so that each actor trusts their network and is able to perform beyond their size, then I think that the competitive advantage will be supreme.”

Similarly, Nambisan et al. (2019,) also argue that since digital platforms provide standardized digital infrastructure and thus make resources more transferable, they may allow young companies to leverage the knowledge and capabilities from complementary partners and enter new markets quicker, even with limited resources.

In sum, digital platforms and digital platform ecosystems decrease the costs of collaboration and provide new and flexible means for companies to leverage complementary resources and capabilities. Digital platforms allow companies to quickly and flexibly co-develop product and service offering with multiple partners, and thus enhance innovation and unlock new sources of value.

4.3 Challenges of utilizing digital platforms in strategic alliances

The previous two sections disclose the opportunities that digital platforms and the development of the platform economy may provide in terms of strategic alliances and competitive advantage. Although digital platforms and digital transformation, in general, may allow companies to enhance interfirm cooperation, there are also a lot of challenges related to utilizing digital platforms in strategic alliances. The challenges related to digital platforms revolve around data-sharing, alliance and network management, industry-specific factors, and overall digital capabilities in organizations.

Informants note that the most pivotal challenges around digital platforms and overall digital transformation relate to data-sharing and proprietary information. Although digital platforms and platform economy, in theory, allow companies to enhance information sharing between each other and thus increase interfirm efficiency and flexibility, the practice is still often much more complicated. When it comes to data-sharing between companies, for example, a few of the informants comment as follows:

“For example regarding data-platforms that are based on sharing, trading, and analyzing the data, one of the biggest challenges relates to how we make agreements in advance on how to share, trade, and analyze the data. That is something we have yet to figure out in the platform economy. Like we should in advance share a cake that has not been baked and we do not even have a recipe.”

(Eloranta)

“There are always questions about whether data is transferred and if data is transferred, who owns the data, and how about all these data privacy issues and GRPR and rest, but like they are extremely important these days.”

(Ronkainen)

In addition, Nevalainen (informant) agrees that the terms around data-sharing are still often ambiguous and it is also challenging to determine the responsibilities and permissions regarding who is allowed to access and gather the data. Eloranta (informant) also emphasizes that various jurisdictions and legislations across countries impact

international companies' ability to adopt strategies related to digital platforms, since the terms of controlling data vary. Similarly, Niinioja (informant) comments that the differences in legislation affect international companies' ability to conveniently integrate digital platform solutions across countries, because a digital platform that is legitimate for example in the United States, may not be legitimate as such in other countries. In addition, Setälä (informant) notes that one of the most difficult challenges relates to how companies can protect proprietary information and at the same time optimize information flows in digital platform ecosystems and interfirm collaboration. Consequently, it seems that many organizations are still not used to sharing data with external partners although the emerging platform economy thinking promotes the benefits of data sharing. In fact, Huttunen et al. (2019, 4) point out that while there is a prominent amount of companies that consider data as a significant resource and have adopted data sharing as a common business practice, many companies are still afraid of sharing data because others could benefit from the data. Thus, companies still typically gather, acquire, and develop data for their own needs and much of the data are not shared externally let alone openly. When it comes to sharing data, much of the biases relate to proprietary information about customers. For example, a few of the informants note the following:

“One of the biggest challenges and decisions for companies is that they provide access for partners to reach their customer data. That is not an easy decision, we know it from the world of mobile internet, it was not an easy decision for Apple, it took a long time before Apple made the decision to open their application programming interfaces so that [third-party] developers were able to develop apps in there.”

(Seppälä)

“Pretty often companies want to keep data to themselves. Especially data about customers...”

(Ronkainen)

Although data-sharing may be beneficial for example when considering complementary innovation initiatives, these aforementioned concerns are also legitimate. For example Krämer et al. (2019, 22) bring up a strategic challenge in today's digital platform ecosystems: When engaging in data-sharing via digital platforms, companies run a risk of

dependency and exploitation. Although digital platforms may allow companies to for example to reach customers faster and extend customer base, engaging in digital platforms typically requires sharing some trade secrets that can become subject to opportunistic behavior. Since digital platform ecosystems revolve around sharing expertise, data, technology, and intellectual property with partners, Lang et al. (2019) suggest that companies develop their intellectual property protection mechanisms and carefully set up contractual commitments regarding data sharing agreements and intellectual property. Although digital platforms promote flexible and dynamic collaboration, these notions illustrate how engaging in platform-driven collaboration is not without some level of bureaucracy and pre-defined contracts.

Another critical issue related to utilizing digital platforms in interfirm collaboration is alliance and network management. Strategic alliances and strategic networks intrinsically are difficult to manage successfully, which is why adopting new forms of collaboration such as collaboration through digital platform ecosystems is not an easy task. Companies often struggle with identifying and developing relevant alliance management capabilities which can undermine mutual trust, create power imbalances between partners, and encourage opportunistic behavior. (Al-Tabbaa et al. 2019, 268–269.) When the network of external partners expands and the interfirm relationships become more complex, these managerial challenges naturally increase. Regarding the overall alliance network challenges, for example, Ronkainen (informant) states as follows:

“Well this network management is quite challenging, especially if you consider an organization with line management. These people do not quite understand how you even manage these networks and that is like, you should facilitate this conversation around networks and that is really not so easy.”

This links to the aforementioned issue around the increasing ambiguity of external relationships and their definition. Not only is it a challenge to make sense of the shift from bilateral relationships to multilateral relationships on a conceptual level, but the expanding network of partners also increases managerial complexity on a practical level. When extending the discussion to consider what kind of challenges revolve around adopting a platform economy mindset in the context of strategic alliances and networks, Seppälä (informant) comments as follows:

“In many contexts, we have been thinking about how the operating model of the platform economy could enable [a situation] where large companies would learn how to work with start-ups. And we see that many, sort of try to do that, but they still try to do it in a traditional supplier management kind of way. I don’t know, I don’t think that, in my opinion it is a very long and bureaucratic approach and it does not work in this world of the platform economy. It should be arranged differently. Whether it could be done with models of the platform economy, I don’t really know what the models are, because there is actually no evidence about how it should be done.”

This notion sheds light on how companies may lack the capabilities of integrating platform and ecosystem thinking into the traditional alliance and network management. When it comes to the link between digital platform capability and network capability, for example Cenamor et al. (2019, 202) have researched that digital platform capabilities may enhance companies’ ability to manage networks.

Among issues around data-sharing and alliance and network management, one should take into account that not all industries are entering the digital world at the same pace. Thus, informants point out that different industries have different digital capabilities of integrating digital platforms in their business models and interfirm relationships. While companies operating in information technology or software development are intrinsically relying on digital solutions, companies operating in traditional manufacturing are more likely to have more constraints in utilizing digital platforms in their businesses. For example, Setälä (informant) notes that platform-based alliances are naturally much easier to emerge in information-intensive industries without physical products than in the heavy industry, and comments as follows:

“Well yes there are differences, I would say that different industries enter this world of [platform economy] at a different speed.”

Similarly, Pakari (informant) comments that platform-driven alliances are likely to develop within industries such as information technology because they already possess requisite commonalities and integrations, as well as digital capabilities. Ronkainen (informant) also reminds that in many organizations, old and outdated information systems may

hinder their capability to adopt new digital solutions. Similarly, Niinioja (informant) points out that in many companies, existing processes, policies and overall capabilities may constrain their ability to integrate digital technologies into existing business activities. Moreover, Eloranta (informant) points out how innovation cycles in manufacturing and other traditional industries are rather slow, which is why such companies may not have incentives to adopt strategies based on collaborative value creation as they may still be able to gain a dominant position in the market and protect it.

Although digital platforms promote new forms of connectivity and may enhance interfirm relationships, platform-based business models are still new to many companies and far away from how they are used to organizing business activities. Unlike born-digital companies such as Amazon and Alphabet, traditional companies often need to go through a large digital transformation and change their entire organization, business model, and processes in order to be able to adopt modern digital technologies (Chanias et al. 2019, 17). Thus, many companies are still in the process of learning how to conduct business in the digital era, which is why platform-based collaboration is still a relatively new phenomenon. Informants conclude that the utilization of digital platforms and the concept of platform economy are still unfamiliar to many companies large and small and that the overall digital transformation is still a work in progress across industries. For example Setälä (informant) states as follows:

“These actors like Uber, Airbnb and Amazon, I think they represent the first versions of digital platforms or like sort of, centralized platform economy, and what is not really seen anywhere yet is this sort of decentralized, dynamic platform economy. So in that sense I think that the revolution of the platform economy still remains to be seen.”

Although there is a growing number of born-digital companies that have successfully leveraged digital technology and built their business models around digital platforms, majority of companies are still trying to transform their businesses to fit the digital era, as Seppälä (informant) notes:

“So at the end of the day there is not much proof that companies would have adopted this platform economy into their strategies.”

5 DISCUSSION

5.1 Conclusions

This thesis contributes to the understanding of strategic alliances as a source of competitive advantage in the era of digital platforms and platform economy. In addition, the thesis sheds light on the possible difficulties of exploiting digital platform technology in inter-firm collaboration. The research revolves around the main research question “*How will digital platforms and platform economy change the role of strategic alliances as a source of competitive advantage?*”. Before answering the main research question, the first sub-question “*How do companies achieve competitive advantage in platform economy?*” is covered. Finally, after answering the main research question, the second sub-question “*What are the possible challenges of utilizing digital platforms in the context of strategic alliances?*” is answered.

Based on the findings and previous literature, the logic of competitive advantage in the platform economy differs significantly from the traditional perspective. In the digital era, the traditional business strategy based on Porter’s model of competitive advantage and value is no longer necessarily the ultimate guide to sustainable success. While the traditional perspective on competitive advantage is based on the proposition that a company should aim to achieve a dominant position in the market and protect it from competitive forces, the notion of competitive advantage in the platform economy is nothing alike. Instead of aiming to win the zero-sum competition, the platform economy promotes joint value creation and collective competition. In the world of digital platforms, companies are competing and collaborating in digital platform ecosystems, where value creation is emergent, dynamic, and multi-sided. Thus, competition and collaboration are intertwined, and growing business jointly is more powerful than growing business alone. In the platform economy, competitive advantage derives from connectivity, rapid innovation, and continuous reconfiguration of offering and expansion of markets.

Moving on to the main research question. Since digital platforms and platform economy disrupt the traditional logic of competitive advantage, and shift the focus from individual competition to collective competition, the role of strategic alliances as a source of competitive advantage changes in multiple ways. The change can be demonstrated from two interdependent perspectives: *operational* and *strategic*.

From an operational perspective, digital platforms and the underlying application programming interfaces enhance interfirm efficiency, productivity, and flexibility and thus reduce barriers to interfirm collaboration. As digital infrastructures transcend organizational borders, they improve information inflows and outflows, as well as coordination and organizing between partners. Digital platforms represent new forms of connectivity, and in turn allow companies to adjust and manage strategic alliances more dynamically and efficiently. Emerging digital platform ecosystems promote open-ended contracts, agile alliance structures, cyclical processes, and multilateral relationships. Thus, digital platforms can speed up collaboration and provide new opportunities in terms of partner selection, alliance design, alliance management, and alliance life-cycle. In addition, digital platforms and emerging digital platform ecosystems improve partner and network scalability, and overall improve the functionality of interfirm operations.

From a strategic perspective, digital platforms can serve as mediating mechanisms to reduce transaction costs, enhance resource complementarity, and develop dynamic capabilities. Since digital infrastructures and standards related to application programming interfaces lower transaction costs, interfirm collaboration requires fewer investments. Moreover, digital platforms are scalable, which can provide innovative opportunities in terms of interfirm cost-efficiency. Thus, not only do digital platforms reduce barriers to collaboration from an operational perspective but they also lower barriers since they promote interfirm cost-efficiency.

Besides cost advantages, digital platforms and digital platform ecosystems can provide new means to allocate and reconfigure both tangible and intangible resources and assets. As digital platforms enhance connectivity with various partners and make resources more portable, they enrich resource complementarity and thus drive interfirm innovation. Moreover, since digital platforms enhance complementarity and enable partners to adapt and modify resources, they also provide companies new opportunities in terms of dynamic capabilities and open innovation.

Since digital platforms and platform economy enhance interfirm collaboration from both operational and strategic perspectives, they can provide new means for companies to gain competitive advantage through strategic alliances. Findings reinforce the perception that in the digital era, competitive advantage derives from emergent and multi-sided value creation among multiple partners. Moreover, informants' viewpoints suggest that digital platforms and platform economy may promote the role of strategic alliances as a source of competitive advantage as they enhance interfirm efficiency, productivity and

flexibility and most importantly, reduce transaction costs and support resource complementarity.

Finally, despite findings indicate that there is a positive link between digital platforms and strategic alliances as a source of competitive advantage, there are a lot of challenges related to utilizing digital platforms in interfirm collaboration. First, digital platforms promote data-sharing, but ambiguous terms and various legislations across countries bring challenges to utilizing them. It also seems that many organizations are still hesitant of sharing data. Second, although digital platform ecosystems offer new opportunities in terms of multilateral relationships and extended network of partners, findings indicate that network management is often challenging and companies may have difficulties in integrating digital platform ecosystem thinking into traditional alliance and network management. Third, one should remember that different industries and companies have different digital capabilities. Thus, not all companies are entering the digital era at the same pace, which is why the logic of collaborative value creation and platform-based business models are still unfamiliar to many organizations. Moreover, findings also indicate that although the emerging platform economy provides various opportunities in terms of interfirm collaboration, it also increases the conceptual ambiguity around external partners and their strategic nature.

To conclude, this thesis reinforces the messages of previous literature (see e.g. Nam-bisan et al. 2019; Di Vaio – Varriale 2020) about how digital platforms and emerging platform ecosystems can serve as a pivotal catalyst of interfirm competitive advantage since they enhance interfirm efficiency and effectiveness on operational and strategic levels. Given that there is a limited amount of research related to digital platforms and digital platform ecosystems, specifically in the context of business, management, and accounting (Appendix 3), this thesis also provides fresh insights into how digital platforms and emerging platform economy reshape traditional business models and fundamentally impact the way in which companies collaborate and create value together. The thesis enriches the understanding of how digital platforms support the formation of modern, agile alliances and extends the traditional transaction cost approach and the resource-based view of interfirm collaboration. Furthermore, the findings are congruent with the latest industry trends and support the perception that companies are increasingly intertwined, with modern technology continuing to shape the models of interfirm collaboration. Finally, this study also sheds light on how platform-driven collaboration and ecosystems are still new to many and not necessarily well understood. Thus, the findings are rather

future-oriented and not conclusive, which indicates that there is a need for future research to gain a more comprehensive outlook on the subject.

5.2 Limitations and future research

As with the majority of studies, this thesis is subject to limitations. First, this thesis approaches strategic alliances from a broad perspective and thus does not take into account varying dynamics or characteristics of different kinds of strategic alliances. One viable option for future research could be to narrow down the subject to focus on for example supply chain alliance networks and examine how digitalization and digital platforms can enhance these kinds of collaborative networks.

Second, although the study enriches the understanding of how digital platforms and the emerging platform economy impacts interfirm links and traditional business models based on one-way linear value-chain logic, the study does not specifically evaluate interfirm collaboration from a business model perspective. Thus, future research could focus on the role of strategic alliances in business models for example by comparing a traditional business model with a platform-based business model in detail. This kind of research could further enhance the understanding of what kind of role interfirm collaboration play in digitalized businesses and shed more light on how they contribute to value-creation and for example revenue streams.

Third, this study approaches strategic alliances and their competitive advantage from the perspectives of the resource-based view and transaction-cost approach, but only to a limited extend. Thus, the study does not apply those theories and the subject in question in practical business cases, which is why this particular phenomenon should be examined in practice through case studies. Although a single case study could be relevant, a multiple case study could provide a better opportunity to identify similarities and differences of how digital platforms may change the role of strategic alliances as a source of competitive for example across two different industries. Moreover, future research could also extend the theoretical perspective to consider for example multidisciplinary alternatives.

Fourth, this study consists of a reasonable amount of interviews for a qualitative in-depth study, and informants can be considered as fairly reliable due to their professional background and experience. However, future research could increase the sample size to

ensure dependability. Moreover, future research could also consider quantitative methods for evaluating the relationship between digital platforms and interfirm collaboration.

5.3 Summary

This thesis is a qualitative study exploring strategic alliances in the era of digital platforms and platform economy. The thesis aims to contribute to the understanding of how digital platforms and platform economy change the role of strategic alliances as a source competitive advantage. The findings are based on previous literature on the phenomenon and qualitative interviews of seven Finnish business professionals.

The literature review demonstrates the role of strategic alliances as an integral part of companies' strategies across industries. Interfirm collaboration can provide a means to increase cost-efficiency or reconfigure resources, acquire new skills and knowledge. Thus, strategic alliances are perceived as potential sources of competitive advantage since they may enable companies to reduce transaction costs or enhance resource complementarity. Moreover, the competitive advantage of interfirm collaboration also links to open innovation and companies' dynamic capabilities. In addition, the literature review discusses how digital transformation and emergent platform economy have disrupted industries and as a result, companies are more connected than ever. In the digital era, companies are competing with each other as networks, rather than as individual companies.

Based on the findings, it seems that digital platforms and platform economy change the role of strategic alliances as a source of competitive advantage in multiple ways. Digital platforms enhance interfirm collaboration from both operational and strategic perspectives and as a result, digital platforms and the emerging platform economy can provide companies significant advantages in terms of interfirm flexibility, cost-efficiency, and resource complementarity. Thus, digital platforms may promote interfirm collaboration as a source of competitive advantage as they enhance strategic alliances as a crucial source of value. However, findings also indicate that digital platforms and the logic of the platform economy are not yet well understood. Companies across industries may have varying digital capabilities, which impacts their ability to adopt digital strategies and integrate platform-based solutions into their business activities.

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6 APPENDIX 1 INTERVIEW QUESTIONS

Outi Vänskä

Turun kauppakorkeakoulu

Pro gradu -tutkielman haastattelurunko

Strategiset kumppanuudet yleisemmin

- Millä tavalla näet alustatalouden aikakaudella strategiset kumppanuudet?
- Muuttuuko kumppanuuksien merkitys strategisena?
- Vaatiiko uudenlaiset alustoihin perustuvat liiketoimintamallit kumppanuuksien strategisuuden uudelleenmäärittelyä?
- Madaltuuko kynnys kumppanuuksien muodostamiseen?
- Yleistyvätkö kumppaniverkostot verrattuna yksittäisiin kumppanuuksiin?
- Muovaavatko digitaaliset alustat ja alustatalous yritysten välisiä raja-aitoja? Miten?
- Voivatko digitaaliset alustat ja alustateknologia tehdä strategisista kumppanuuksista houkuttelevampia strategisia vaihtoehtoja? (vrt. fuusiot ja yritysostot, orgaaninen kasvu)
- Voidaanko saavuttaa transaktiokustannushyötyjä? Jos, niin miten?
- Voidaanko tunnistaa tarvittavat resurssit ja allokoita niitä paremmin? Jos, niin miten?
- Tehostuuko tiedonkulku kumppanien välillä? Voidaanko digitaalisilla alustoilla ja alustateknologialla lisätä varmuutta? (Yhtäältä turvata arkaluontoista tietoa ja toisaalta optimoida tiedonkulku?)

Strategiset kumppanuudet, kilpailuetu ja lisäarvo

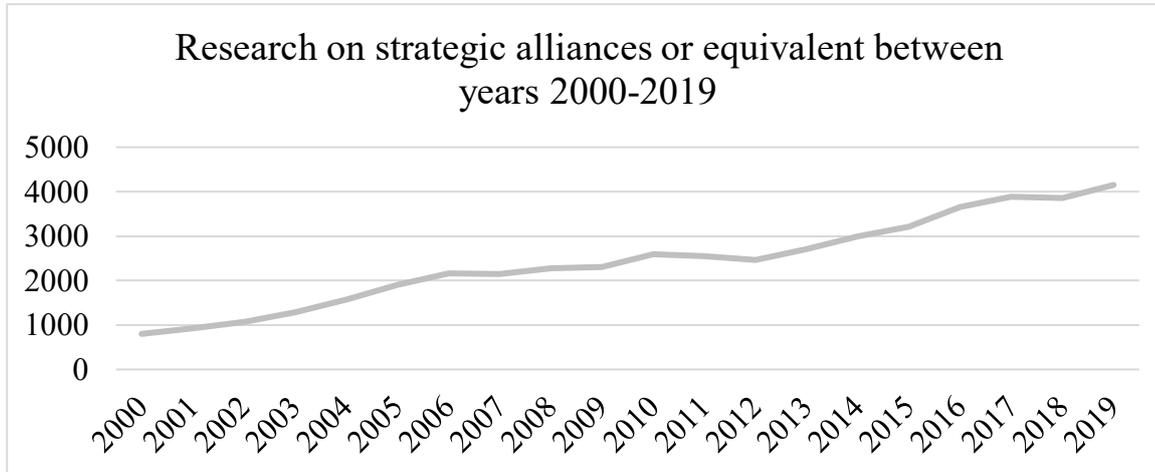
- Muuttavatko digitaaliset alustat ja alustateknologia perinteistä arvoketjumallia? Jos, niin miten?
- Vaikuttaako siirtyminen transaktioliiketoimintamalleista alustaliiketoimintamalleihin strategisten kumppanuuksiin? Jos, niin miten?

- Voidaanko digitaalisilla alustoilla ja alustatekniologialla kokonaisuudessaan saavuttaa parempia kustannus- ja differentiaaliohytyjä, joita strategisilla kumppanuuksilla tyypillisesti tavoitellaan? Jos, niin miten?
- Muuttavatko digitaaliset alustat strategisten kumppanuuksien roolia kilpailuedun lähteenä? Jos, niin miten?
- Kasvaako kumppanivetoisten liiketoimintamallien tärkeys?
- Tuleeko strategisista kumppanuuksista entistä merkittävämpiä lisäarvon lähteitä yritysten arvoketjuissa ja liiketoimintamalleissa?
- Kiihdyttävätkö digitaaliset alustat ja alustatalous kumppanien välistä avointa innovaatiota?

Digitaaliset alustat ja alustateknologia yleisesti

- Missä vaiheessa digitaalisten alustojen ja alustateknologian hyödyntäminen liiketoiminnassa on tällä hetkellä?
- Mitä haasteita digitaalisten alustojen ja alustateknologian hyödyntämisessä voi olla?
- Mitä riskejä alustavetoisissa kumppanuusmalleissa voi olla?
- Onko kallista?
- Toimialakohtaisuus?
- Onko kaikkien saatavilla? (esim. pienet yritykset, perinteiset toimialat)
- Onko esimerkkejä alustoihin pohjautuvista strategisista kumppanuuksista?

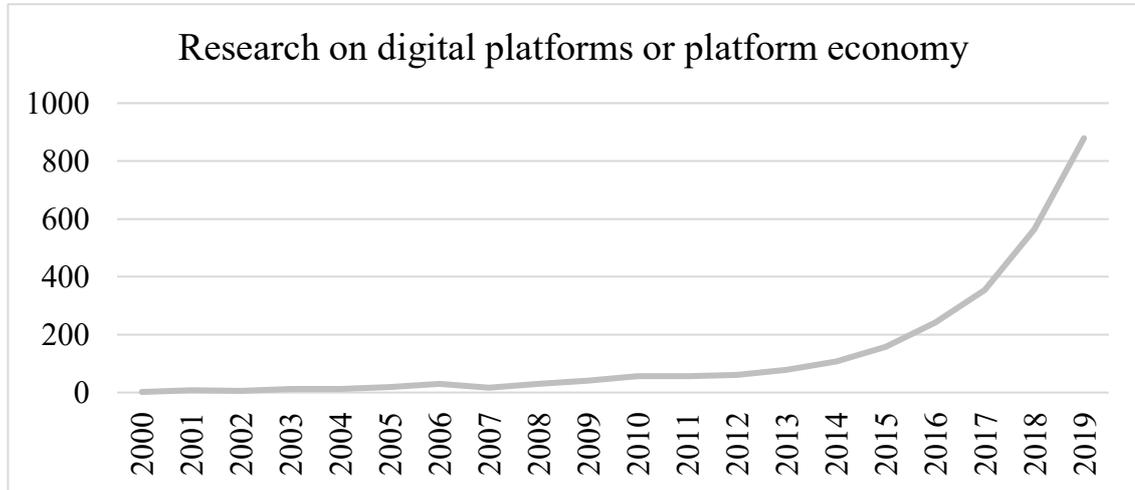
7 APPENDIX 2 RESEARCH ON STRATEGIC ALLIANCES OR EQUIVALENT



Appendix 2 Research on strategic alliances between years 2000-2019 (Scopus)

The chart is based on search data gathered from Scopus when searching with keywords interfirm collaboration, strategic alliance, partnership, cooperation, collaboration, or strategic network and their inflected forms, and narrowing the search results to the subject area “Business, Management and Accounting”. The total amount of publications is 48 493, of which articles 32 239 and other publications 16 254. The searched keywords appear either in the title, abstract or keywords.

8 APPENDIX 3 RESEARCH ON DIGITAL PLATFORMS OR PLATFORM ECONOMY



Appendix 3 Research on digital platforms or platform economy between years 2000-2019 (Scopus)

The chart is based on search data gathered from Scopus when searching with keywords digital platform or platform economy and their inflected forms. The search results comprise all subject areas, and the total amount of publications is 2 732, of which 1 457 articles and 1 275 other publications. Further, 521 publications are covering the subject area “Business, Management and Accounting”. The searched keywords appear either in the title, abstract or keywords.