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INNOVATION THROUGH CO-OPETITION

A qualitative study aiming to explore factors promoting the success of co-opetition in product and service innovation

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ABSTRACT

The central topic of this master's thesis is the simultaneous pursuit of competition and co-operation, coined into one term; "co-opetition". This phenomenon has received increased attention by scholars and practitioners in the past two decades since it adapts to today's fast-changing business environment and enables mutual benefits for rival companies. This paper addresses the lack of literature regarding the interplay between co-opetition and specific innovation types. A co-opetitive relationship can drive businesses towards new opportunities to achieve innovation outcomes that they cannot accomplish alone. The purpose of this thesis is to provide businesses and academics a better understanding of co-opetition, its challenges, and success causing determinants in a real business context related to innovation. Special attention is paid to the exploration of critical soft factors behind the successful outcome of co-opetition between rival firms innovating together, and a comparison of those factors between product- and service-oriented companies. Nine qualitative interviews with professionals from well-known companies were conducted to investigate their perception and experience in innovation through co-opetition. This data led to the identification of four themes: the process of innovation through co-opetition, the reasons for and challenges in co-opetition, and the well-working co-opetitive relationship. This study confirmed predicted critical success factors, Trust and Commitment, of well-working co-opetitive relationships. Furthermore, this thesis identified additional critical success factors including both common, namely Alignment and Openness, and differing determinants between product innovation, particularly Understanding, and service innovation, including Time and Size Balance. Lastly, findings revealed the tendency of companies to participate in ecosystems that enhance the emergence and pursuit of co-opetition.

Keywords: Co-opetition, co-operation, collaboration, competition, innovation, product innovation, service innovation, success factors

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1. INTRODUCTION

In the last two decades, the landscape of business has changed, and innovation has received considerable attention (Bengtsson & Knock, 2014). As a result of globalisation and technological advancements, the business environment has become more dynamic and complex, the life cycle of products and services has become shorter, and, at the same time, research and development costs have increased (Ibid). Therefore, the need for consistent improvement and renewal of a firm's performance has gone beyond the capacities and resources of a single company (Storey, Cankurtaran, Papastathopoulou, & Hultink, 2016). As a result, a new way of thinking about business has emerged (Brandenburger & Nalebuff, 1996). A substantial number of firms simultaneously co-operates and competes with their competitors; thus, creating an even higher value of innovation, competitive advantages, as well as collaborative products and services (Bengtsson & Kock, 2000).

This novel phenomenon has challenged classical strategic views (Brandenburger & Nalebuff, 1996). Firms co-operate to share knowledge and create value, and at the same time, compete to expand the market and divide the spoils (Brandenburger & Nalebuff, 1996). Several studies observe and refer to it as co-opetition (Della Corte, 2018). This paper uses the term as well, since the label is an engaging phrase that reflects the acts of companies that simultaneously compete and co-operate. Co-opetition in this sense "*represents an integrative theoretical bridge which stretches to join the two contrasting mentioned perspectives*" (Dagnino & Padula, 2002, p. 5). As the two paradoxical logics of interaction come into play, this relationship becomes a complex but beneficial matter (Luo, 2005).

There has been a growing interest in the phenomenon, and it has become widespread across various business sectors (Muijs & Rumyantseva, 2014). It interconnects value creation and value sharing and adapts to more dynamic environments by the integration of external resources (Bengtsson &

Kock, 2014; Chesbrough, Vanhaverbeke, & West, 2006). However, most of the previous studies extensively investigated only the nature, types, and intensity of co-opetition (Della Corte, 2018). There are only a few available studies about the exploration of distinctive success factors of co-opetition that could help businesses reduce failure rate and develop increased innovation performance; therefore, more research is suggested in different innovative environments (Evanschitzky, Eisend, Calantone, & Jiang, 2012).

Furthermore, according to Jorde and Teece (1990), it is of particular importance to take part in co-opetition if innovative firms want to compete in today's interconnected global market. Co-opetition can trigger innovation and foster the economy towards new opportunities by adapting to the dynamic business environment (Della Corte, 2018; Gnyawali, 2011; Park, Srivastava, & Gnyawali, 2014). However, the relationship between co-opetition and innovation performance is still under-explored; some authors even specified the lack of knowledge on the linkage between specific innovation types and co-opetition practices (Ibid).

Concerning various classifications of innovation, several researchers emphasise that the distinguishment of product and service innovation is a significant step towards the success of future studies in the innovation area (Storey, Cankurtaran, Papastathopoulou, & Hultink, 2015; Nijssen, Hillebrand, Vermeulen, & Kemp, 2006). Therefore, this research paper centralises the topic around whether the object of innovation is a product or service. Due to the dissimilar offerings and characteristics of products and services, for instance, services are intangible, heterogeneous, and perishable, a distinction of product innovation and service innovation is essential (Schleimer & Shulman, 2011). Despite the similar underlying mechanisms of innovation and the fact that both types intend to innovate successfully, the context of their development and the prioritisation of drivers and dimensions are different (Nijssen, Hillebrand, Vermeulen, & Kemp, 2006).

Overall, based on the relevance of co-opetition and the identified gap in the literature in connection with innovation types, the following research question is addressed in this master's thesis.

What factors determine the success of co-opetition and how do they differ in product and service innovation?

Therefore, the purpose of this master's thesis is to "*seek new insights*" about co-opetition, with particular attention to critical success factors, and to *"assess the phenomenon from a new light*", which are the nature of product and service innovation in this case (Saunders, Lewis, & Thornhill, 2009, p. 139). The researchers intend to achieve this through an exploratory research with a qualitative approach. The most appropriate way to pursue the exploratory study of the co-opetition phenomenon in connection with product and service innovation is by the use of qualitative guided interviews and having research participants from different companies. Respectively, the outcome of the thesis can provide important implications for literature and company managers, who are already engaging or considering participating in co-opetition to achieve either product or service innovation. For an overview of this paper, the structure of the following chapters is presented in Figure 1.

THEORY REVIEW	• Competition • Co-operation • Strategic Perspectives • Co-opetition • Success Factors • Innovation
METHODOLOGY	• Purpose of the Research • Research Philosophy • Research Approach • Research Strategy • Data Collection • Data Analysis • Data Quality
ANALYSIS	• Presentation of Companies • Process of Innovation through Co-opetition • Reasons for Co-opetition • Challenges in Co-opetition • Well-working Co-opetitive Relationship
DISCUSSION	• Main findings
CONCLUSION	• Theoretical implications • Practical Implications • Limitations • Future Research

Figure 1: Structure of this Master's Thesis (Own designed figure)

2. LITERATURE REVIEW

This chapter aims to touch upon concepts, theories, and reference literature relevant to this master's thesis research question. The examination of existing knowledge is particularly essential in order to develop a basic understanding and notion of the phenomenon and success factors of co-opetition together with innovation. The section consists of six parts including competition, co-operation, strategic perspectives, co-opetition, success factors, and innovation.

2.1 COMPETITION

Competition has always been an inevitable part of the business world; thereby, it is a central unit of both strategic and economic thinking (Barney, 1986; Vickers, 1995). A substantial amount of studies and theories from around the world state that competition is a dynamic situation in which several participants within a specific market or industry act as rivals (Oliver, 2004; Vickers, 1995). Each player is oriented towards achieving superior performance and gaining competitive advantage over the other firms in the same market (Hunt & Morgan, 2006; Porter, 1985; Quintana-García & Benavides-Velasco, 2004). According to Michael E. Porter (1985), one of the most famous economists and researchers known for his theories in business strategies, "*competitive advantage is at the heart of a firm's performance in competitive markets*" (p. xv). In the literature of competition, it is common to refer to the competitive relationship as a "zero-sum game" or "win-lose game", meaning that one firm's gain is equivalent to the opposing firms' loss (Bengtsson & Kock, 1999; Brandenburger & Nalebuff, 1995; Dagnino & Padula, 2002).

Competitive firms follow a self-interest-oriented behaviour by developing strategies that better fit or manipulate the structure of the industry to their advantage (Padula & Dagnino, 2007; Quintana-García & Benavides-Velasco, 2004) or by creating inimitable competencies (Peteraf, 1993). In pure competition, organisational boundaries between the competing players are sharp and distinct, thus excluding information exchange completely (Oliver, 2004). In order to outperform others and be the only beneficiary in the market, firms identify and exploit opportunities (Padula & Dagnino, 2007). Therefore, they can utilise scarce resources more efficiently, improve the optimal allocation of resources, and produce distinctive products and services (Ibid). In other words, competitive advantage stems out of the value a firm creates for its customers within the company (Dagnino & Padula, 2002; Porter, 1985).

Porter (1985) argues that a good competitive strategy is about the exploration of a favourable position in the industry. Sustaining an advantageous market position can increase companies' financial performance in the long run (Hunt & Morgan, 2006). All in all, competition generates fundamental economic efficiency and determines the adequacy of activities that can strengthen firm performance (Lado, Boyd, & Hanlon., 1997; Porter, 1985; Nelson, 1991; Schumpeter, 1934). Therefore, it provides an incentive to engage with innovation and good strategy implementations (Ibid).

2.2 CO-OPERATION

Contrary to competition, co-operative strategies have been diffusing business management literature ever since the late 1980s (Bayona, García-Marco & Huerta, 2001; Padula & Dagnino, 2007). Several authors have researched this term; however, in the literature, they refer to co-operation and collaboration simultaneously. Therefore, throughout this paper, both terminologies are used interchangeably to mean the process of units jointly working together for the benefit of themselves and the partnering parts (Lindenfors, 2017).

In the 1990s, international management theory did not stress the importance of business co-operation activities (Holtbrügge, 2004). In most cases, the phenomenon was perceived as a second-rate solution, as well as the generator of negative impact on competitiveness (Ibid). Even the aforementioned Michael E. Porter stated that "*alliances appear to be most common among second-tier competitors or companies trying to catch up*" (Porter, 1990, p. 67). However, the perception of co-operation activities has changed management theory and practices in the last two decades (Holtbrügge, 2004). The term has been understood in different ways and conceptualised with, and across disciplines; furthermore, it has developed as a non-integrated and interdependent phenomenon

(Barki & Pinsonneault, 2005). Thus, firms engaging in co-operative activities, especially across national borders, gain the ability to tackle the upcoming challenges and compete on a global scale (Ibid).

This alternative perspective emphasises the existence of the business world by a network of relationships created and supported through collaboration (Padula & Dagnino, 2007), as well as joint value creation (Dagnino & Padula, 2002), with the goal of achieving mutual benefits (Lado et al.,1997). In contrast to the competitive paradigm, firms in a collaborative interdependence enhance their performance by assembling complementary resources, capabilities, and skills together (Norman & Ramirez 1993). Instead of winning the game against another firm, as in competition, companies try to explore and strive for mutual benefits by maintaining and encouraging a constructive interdependence (Ibid). Thus, in increasingly multifaceted and dynamic environments, researchers acknowledged that firms can improve their performance by engaging in strategic collaboration (Lado et al., 1997). Thereby, the performance of one company has a positive impact on the performance generated by another (Padula & Dagnino, 2007). That is why co-operative interdependence is defined by collective interest rather than a narrowed self-interest (Kanter, 1972). As a result, engaging in co-operation activities fosters the social exchange process (Hakansson & Ostberg, 1975) which, in turn, requires commitment (Griesinger, 1990) and aligned trustworthy behaviour (Dagnino & Padula, 2002). Moreover, co-operation has long been well-known as a low-cost strategy for gaining technology and market access (Hamel & Prahalad, 1989). As a consequence, many firms nowadays are getting more involved in a dense network of collaborative interorganisational relationships, such as contractual alliances, joint ventures, and one-sided or mutual minority interests (Hoffmann, 2005; Gomes-Casseres, 1998).

Vertical and Horizontal Relationships

Based on the fact that companies work more collaboratively, there is a greater interest in forming business networks and understanding how companies carry out business activities in this way (Bengtsson & Kock, 1999). Both in literature and practice, it is essential to distinguish between horizontal and vertical co-operative relationships in order to adjust individual performance accordingly (Tidström, 2014). Vertical relationships take place within the value chain; for example, between buyers and sellers, whereas horizontal relationship occurs within the same level, for example between competitors (Cygler, Sroka, Solesvik, & Debkowska, 2018; Kylänen & Rusko, 2011). As highlighted by Bengtsson and Kock (2000), understanding vertical and horizontal relationships is significant, as the relation of control and power between collaborating partners highly affects the performance of the co-operation, when fulfilling determined goals.

Vertical relationships are easier to grasp due to the distribution of resources and activities among different players of the supply chain (Bengtsson & Kock, 1999). In contrast, horizontal relationships are often more informal and invisible by nature (Ibid). Nonetheless, vertical relationships typically incorporate economic change (Easton & Araujo, 1992), which is rarely the case in horizontal relationships, due to the fact that these relationships often build on information and social exchange (Bengtsson & Kock, 1999). Petter, Resende, de Andrade Júnior, and Horst (2014) also argued that the latter relationship form is characterised by the intense transfer of technical information between employees, as well as the broader scope of management including individuals with their interests, values, and goals. When comparing horizontal and vertical relationships, it is claimed that building horizontal relationships is more often forced based on increased rivalry and mutual dependence of companies (Bengtsson & Kock, 2000). In opposition to vertical relationships, horizontal relationships are typically more conflicting because the interests within the same industry often cannot be fulfilled at the same time.

All in all, both types of relationships are equally important for the focal company when carrying out activities in a network context (Bengtsson & Kock, 1999). They involve greater possibilities for industrial growth based on the potential synergies of a group for increasing the competitiveness collectively (Ibid).

2.3 STRATEGIC PERSPECTIVES

2.3.1 Resource-Based View

One approach to analysing how firms either compete or collaborate is through the so-called resource-based view (Lado, Boyd, & Hanlon, 1997). It focuses on "*the antecedents of rent-seeking* *behaviours, and supplies a rationale for viewing organisational competencies as the drivers of strategic interdependence*" (Ibid, p. 113). From a competition perspective, two fundamental assumptions underlie the resource-based view, considering resources as key elements. First of all, companies' internal resources and capabilities are heterogeneous, and secondly, the mobility of those resources across companies is not easy (Barney, 1991; Peteraf, 1993; Quintana-García & Benavides-Velasco, 2004). Therefore, sustaining differences in profits and gaining competitive advantage is partly caused by owning unique resources and not in particular to the structural conditions of an industry (Lado et al., 1997; Quintana-García & Benavides-Velasco, 2004). In other words, by having superior, inimitable, and distinctive capabilities compared to rivals, companies qualify to develop economic rents and to sustain competitive advantage (Amit & Schoemaker, 1993; Peteraf, 1993; Quintana-García & Benavides-Velasco, 2004). On the other hand, from a co-operation point of view, companies focus on the better utilisation of resources through the sharing of resources with another company; hence, splitting risks and costs as well (Eisenhardt & Schoonhoven, 1996; Ganguli, 2007).

2.3.2 Game Theory

Another conceptual lens for analysing companies' strategies through competing and co-operating is game theory (Lado et al., 1997). According to Brandenburger and Nalebuff (1995), business can be considered as a "*high-stakes game*" (p.57) and the essence of its success lies in ensuring that business players play the right game. Instead of joining an available game setting, strategies actively shape the game while playing it. Game theory explains the behaviour of firms within a market, how they conceive and pursue strategic action that enables them to optimise payoffs (Lado et al., 1997). Thereby, game theory empowers analysts to research different market situations considering a small number of players, hidden actions, limited information, incomplete contracts, or opportunities for adverse selection (Quintana-Garcia & Benavides-Velasco, 2004). One common aspect is in line with the aforementioned theory of competition, describing it as a zero-sum game (Bengtsson & Kock, 1999; Dagnino & Padula, 2002). In competition, business is seen as a war; one could change the game in a way to come out ahead, saying that in order to win, other players have to lose. From a co-operation point of view, companies' interdependence relies on a positive-sum game (Dagnino & Padula, 2002; Ritala, 2012). In this case, players, who are the companies, seek higher benefits through joint value creation and common goals; thus, the more successful a firm is, the greater the gains in the total outcome (Lado et al., 1997; Dagnino & Padula, 2002).

SUM UP

Overall, these two strategic perspectives are beneficial for understanding the underlying strategies of competition and co-operation further. In addition, these views provide readers with a rationale of the central phenomenon of this master's thesis, presented in the following chapter.

2.4 CO-OPETITION

Traditionally, the earlier described competition and co-operation have been considered principally as the two antagonistic ends of a single continuum (Lado, Boyd, & Hanlon, 1997). However, the two paradigms only offer a partial slice of the real world (Ibid). New theories go beyond the boundaries of competition and co-operation, claiming that the merger of these two forces enables companies to capture the advantages of both. This hybrid behaviour, comprising elements of both competition and co-operation, has been named as co-opetition in literature, further displayed in Figure 2 (Bouncken & Kraus, 2013; Dagnino & Padula, 2002). The aim of this section is to provide an overview of co-opetition, including the nature, reasons, challenges, and classifications of the phenomenon based on the existing literature.

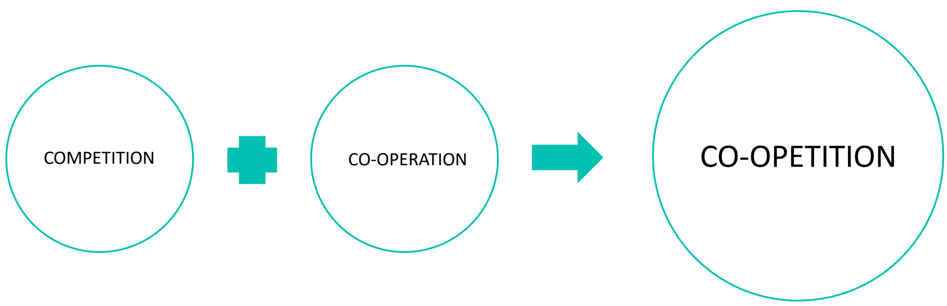

Figure 2: Composition of Co-opetition (Own designed figure)

Co-opetition first received attention at the beginning of the 1990s, when Fisher (1992) published his article "Preaching Love Thy Competitor" in the New York Times. He was praising Ray Noorda, chief executive officer and visionary leader of a software company called Novell Inc., who mentioned the term "co-opetition" as the firm's business philosophy, stressing "*the need to cooperate with all comers – even competitors to make the networking industry grow*" (Fisher, 1992, p. 003001; Bouncken & Fredrich, 2011; Dagnino, 2002; Ganguli, 2007). Later, the term was introduced into the research field of strategy in 1996 by Brandenburger and Nalebuff; however, it did not get much attention since most scholars at the time developed their research based on the traditional, opposing perspectives.

Thus, the original concept was proposed by Brandenburger and Nalebuff (1996), referring to the interplay of firms and indicating the demand to embrace competitors, as strategic players in collaboration (Dagnino & Padula, 2002). The term points at the complex structure of companies' interdependence by being an "*integrative theoretical bridge*" (Ibid, p. 5) that connects the aforementioned contrasting paradigms of competition and co-operation. In other words, co-opetition builds on the idea that a more dynamic business environment requires companies to engage in both competitive and co-operative strategies simultaneously to be more successful (Lado et al., 1997).

In the last two decades, both the conceptualisation and the practical use of co-opetitive phenomenon have evolved; thus, there has been a growing interest in co-opetition, and it has become widespread across various business sectors (Muijs & Rumyantseva, 2014). This increased interest is contingent upon a shift from the former internal resources centred logic to a new one focusing on the integration of external resources through networking enabled by today's dynamic business environment (Chesbrough, Vanhaverbeke, & West, 2006; Bengtsson & Knock, 2014). There is a need for consistent improvement and renewal of the firm's performance, and activities that extend the capacity and resource boundaries of a single company to incorporate dynamic interactions with other firms (Bengtsson & Knock, 2014). As a consequence, the relationship of companies is getting more complex, resulting in difficulties like defining who is a direct competitor or a partner (Dagnino & Padula, 2002; Ganguli, 2007). Coy (2006) exemplifies a daily life approach, labelling the complex co-opetitive relationships as "*sleeping with the enemy*" (p. 96). In addition, he also highlights another striking description of co-opetition by which a person has two conflicting thoughts in an individual's mind, but the person is still not perceived as crazy. All in all, the co-opetitive perspective interconnects the collaborative nature with competition; thus, enabling value creation and value sharing at the same time (Dagnino & Padula, 2002).

Being a multifaceted and multidimensional concept, various studies, forms, and multiple levels of analysis exist in the co-opetition literature; therefore, there is a lack of a commonly accepted definition (Dagnino & Padula, 2002). Given that co-opetition occurs when companies are interconnected in a dynamic environment, and when competition and collaboration happen simultaneously, for this thesis research, the paper follows Bengtsson and Kock's (2000) understanding of co-opetition:

> *"paradoxical relationship that emerges when two firms cooperate in some activities, such as in a strategic alliance, and at the same time compete with each other in other activities" (Bengtsson & Kock, 2000, p. 412).*

According to their definition, organisations collaborate in some markets, industries or product and services areas, while compete in others. Therefore, competition and co-operation can be separated between different business units, even when the activity is close to the customer (Bengtsson & Kock, 2000). Although the field of co-opetition lacks an immense amount of empirical research, relevant examples are available in the history of the business world, mainly from the high-tech and automotive industries (Della Corte, 2018; Slywotzky & Hoban, 2007). Such examples include the collaborative activities in sourcing printer engines between Hewlett-Packard and Canon, as well as the co-operative arrangements establishing a standard for the next generation of digital video players between two global rivals, Samsung and Sony. In addition, an example from the automotive industry is the effective collaborative work between Toyota and General Motors; enabling Toyota to build cars in the USA while General Motors could learn about lean manufacturing methods from Toyota (Slywotzky & Hoban, 2007).

2.4.1 Paradox in Co-opetition

Following Smith and Lewis (2011), a paradox is defined as "*contradictory yet interrelated elements (dualities) that exist simultaneously and persist over time*" (p. 387). As stated in the co-opetition definition above, the context of co-opetition enlightens fundamental dualities (Luo, 2005). As the two different logics of interaction (co-operation and competition) come into play, this relationship becomes a complex but beneficial matter (Ibid). Similar to the principle of Yin and Yang, unique elements are included in each part of the duality that companies have to view holistically (Gnyawali, Madhavan, He, & Bengtsson, 2016). Literature suggests three critical dualities arising from the contradiction of competition and co-operation that companies have to consider in co-opetition.

The most commonly examined one is **value creation versus value appropriation**: "*creating value is an inherently cooperative process, capturing value is inherently competitive*" (Luo, 2005, p. 72). While the participating firms share knowledge for creating value jointly, they have to protect some parts of their internal capabilities and avoid unintentional exposure of assets resulting in opportunistic moves by the rival (Gnyawali et al., 2016). Secondly, companies have to pay attention to the duality of **bonding versus bridging**. Organisations working closely with their competitor requires bridging on weak ties providing informational access; however, they have to stay away from dominant bonding when they become too close, hence vulnerable. Lastly, the duality of **separation versus integration** should also be mentioned. Challenged by the nature of competition and collaboration, firms in co-opetition should separate these activities spatially or temporarily, while making an efficient integration of the knowledge each receives.

All in all, a compelling pursuit of co-opetition calls for the understanding of each element of the duality separately, in order to grasp the full potential of the aspects, and jointly, to make agreements and mutual benefits (Gnyawali et al., 2016).

2.4.2 Reasons for Co-opetition

There is no doubt that the complex rationale of co-opetition raises the question of why companies decide to collaborate with competitors in the first place. Consequently, multiple scholars have studied the reasons behind the adoption of co-opetition in different empirical environments (Tether, 2002; Bouncken & Fredrich, 2011; Gnyawali & Park, 2011; Ritala, 2012). Usually, the intentions are mixed involving both private and shared interests; however, the ultimate goal is to strive for mutual benefits (Dagnino & Padula, 2002). Most commonly the explanation of co-opetition motives is inspired by the above mentioned theoretical foundations of the resource-based view and the game theory in paragraph 2.3.1 and 2.3.2 (Cygler et al., 2018; Ritala, 2012). Gnyawali and Park (2011) argue analysing the outcomes at multiple levels, including the focal firm, dyadic, and industry levels.

First of all, considering game theory, co-opetition is perceived as a **variable-sum game**, in which the interfirm interests are partially overlapping and mutual; giving all participating players the opportunity to gain benefits and be in more advantageous positions (Dagnino & Padula, 2002; Shor, 2005; Cygler et al., 2018). Usually, co-opetition is associated with the "tit for tat strategy" that is built on correlation, in which players are encouraged to think strategically about the following moves (Cygler et al., 2018). The extant literature suggests that co-opetition derives from the logic that companies collaborate for increasing the size of the business pie while compete for dividing the bigger pie up (Brandenburger & Nalebuff, 1996). It is in contrast with the traditional view that says the business pie has a fixed size and companies kill each other for a slice (Coy, 2006).

Thanks to collaborative efforts, firms that undertake co-opetition aim to **enlarge their market value**, while also following the competitive desire of capturing a more significant proportion of the increased market value privately (Gnyawali & Park, 2011). In other words, there is the potential for co-opeting companies to benefit more from expanding the total size of the market mutually rather than competing alone in the first place (Ritala, 2012). As a consequence, companies can **strengthen their market position**, **expand geographically, achieve economies of scale and range, and develop more dynamically** (Cygler et al., 2018). In addition, companies can apply co-opetition as a defensive move to protect the market position they have been able to capture (Ritala, 2012; Cygler et al., 2018).

Secondly, Tether (2002), and Gnyawali and Park (2011) claim that competitors co-operate with each other to **address common problems, challenges, and opportunities**; especially when the problems are outside the scope of competition, and when co-operation can influence the whole market environment (Tether, 2002; Cygler et al., 2018). For example, recently more attention is paid to the sustainable development of businesses; thus, firms are concentrating on environmental and social improvements. However, in order to address these, companies need to collaborate with other organisations, including rivals, as they alone face resource and competence barriers in achieving the improvements (Cygler et al., 2018).

Thirdly, in accordance with the resource-based view, companies that engage in co-opetition wish to utilise fewer resources and **increase efficiency** (Ritala, 2012; Cygler et al., 2018). The exchange of knowledge and skills, the pool of resources result in sharing risks and costs (Ritala, 2012; Cygler et al., 2018). Moreover, similarly to any form of collaboration, companies in co-opetition may wish to **obtain complementary strengths**, generating synergy effects of joint resources (Cygler et al., 2018). Such a relationship is a "*fountain to new ideas, […] and new resource combinations*" (Bouncken & Fredrich, 2011, p.2). As a result of accessing, acquiring, and leveraging each other's relevant knowledge, companies can jointly develop new products, services, technologies, and enter new markets (Cygler et al., 2018).

Following the example of Muijs and Rumyantseva (2014), when a firm holds a certain market share but does not produce a full range of products (like juice and yoghurt in the dairy industry), it stocks and sells the products of its competitor. As a consequence, customers can experience the full range of products. It builds loyalty and strengthens the relationship with consumers, while the competing company gains access to the inaccessible share of the market. All in all, as a result of co-opetitive activities, companies can work towards to the stimulation, generation, and enhancement of innovation (Cygler et al., 2018; Della Corte, 2018; Park, Srivastava & Gnyawali, 2014). This paper elaborates more on innovation in section 2.6.

Overall, companies engage in the strategic move of co-opetition to improve their positions, resources, and capabilities in response to the fast-changing environment in which they take place (Dagnino & Padula, 2002). Before entering a co-opetitive relationship, firms are suggested to evaluate the potential benefits and risks (Cullen, Johnson, & Sakano, 2000). Therefore, after discussing the several drivers and beneficial outcomes of co-opetition presented in Figure 3, the following paragraph explains the possible drawbacks and risks.

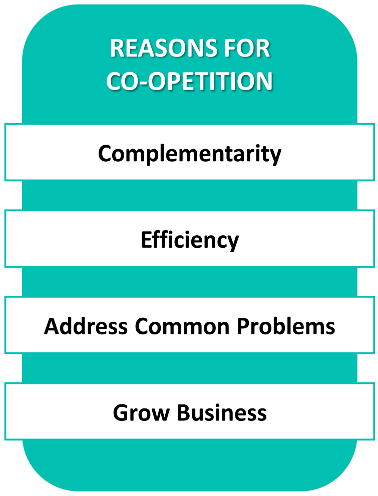

Figure 3: Reasons for Co-opetition (Own designed figure)

2.4.3 Challenges in Co-opetition

The decision on entering a co-opetitive relationship requires careful management attention; besides the earlier described potential advantages, companies should also consider the negative interpretations, possible threats and disadvantages associated with such a relationship (Cullen et al., 2000; Cygler et al., 2018; Kraus, Meier, Niemand, Bouncken, & Ritala, 2018). Drawbacks are inherent features of any form of relationships (Cygler et al., 2018); however, this paragraph highlights the challenges derived directly from when companies interact in co-opetition; hence, elements that also profoundly affect the central unit of this paper: the success factors of co-opetition.

Building a co-opetitive relationship is based on the expectations and behaviours of the involved companies (Kraus et al., 2018). As already mentioned in the Paradox in Co-opetition part (2.3.1), **opportunism** could arise from any side of the relationship due to the competitive essence of co-opetition (Bouncken & Fredrich, 2011; Gnyawali et al., 2016; Cygler et al., 2018). Each company carries the risk that its counterpart will make use of the gained knowledge they share (Dowling, Roering, Carlin, & Wisnieski, 1996). Additionally, unintentional knowledge and **information leakage** could occur leading to loss of control over unique resources; therefore, it gives an opportunity to treat co-opetitive activities temporarily and leave the relationship once the individual goals are achieved (Cygler et al., 2018).

Previous studies also suggest that when companies engage in co-opetition, the relationship involves **contradictory views**, organisational settings, approaches, and strategic intentions creating various antagonistic conditions (Gnyawali et al., 2016). These asymmetries have important implications for the companies' perceptions of the co-opetitive relationship as well as for their behaviours towards each other. Over time, the stability of the participating companies' relationship can often change due to modified expectations, behaviours, and unequal contributions (Cygler et al., 2018; Kraus et al., 2018). As a consequence, conflicts and tensions are more likely to occur among players, decreasing the effectiveness of co-opetition (Gnyawali et al., 2016; Cygler et al., 2018).

All in all, the decision about engaging in co-opetition and choosing a rival company is a balancing act (Slywotzky & Hoban, 2007). A balanced combination of co-operation and competition, and effective management contribute to avoiding the possible risks presented in Figure 4.

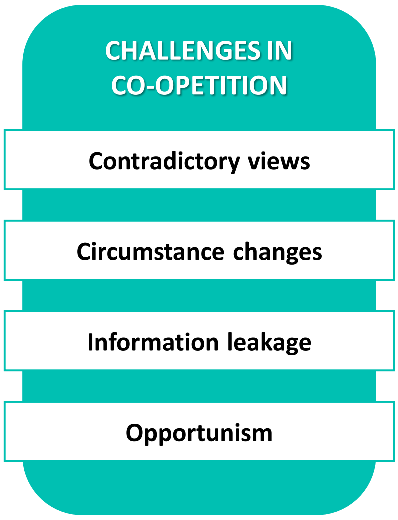

Figure 4: Challenges in Co-opetition (Own designed figure)

2.4.4 Classifications of Co-opetition

Since the interest in co-opetition has increased over the years, authors have undertaken various classifications to help understanding the status of companies and their relationship (Dagnino & Padula, 2002; Della Corte, 2018; Luo, 2007). The phenomenon has been viewed and analysed from a variety of perspectives, including differentiation of situations, processes, intensity, types of participating firms, and impacts. The following paragraphs provide a more detailed overview of co-opetition classifications that are relevant to the analysis part of this master's thesis.

2.4.4.1 Types of Co-opetition

Contributing to the investigation of co-opetitive strategy options, Dagnino and Padula (2002) analysed the automobile industry and proposed a typology matrix based on two co-opetition forms: dyadic and network co-opetition. The former concerns basic two-firm relationships, whereas the latter refers to a more complex relationship structure among more than two firms. The authors differentiated four categories presented in Figure 5. **Simple Dyadic** co-opetition is a relationship along one single level of the value chain between two competing firms, for example, Research and Development (R&D) Consortia, when different entities work together to do research (R&D Consortia, 2016). **Complex Dyadic** co-opetition refers to the relationship of two firms along several levels of the value chain, such as two organisations that co-operate on car production while also competing in car distribution. The third co-opetition type is termed **Simple Network,** linking multiple firms along one single level of the value chain, like the buyer-supplier relationships that are known as "vertical relationships". Lastly, **Complex Network** co-opetition includes multiple firms along several levels of the value chain, for example, industrial districts and firm clusters.

		Number of Firms	
		Two	More than Two
Level of Value Chain	Single	**Simple Dyadic Coopetition**	**Simple Network Coopetition**
	Several	**Complex Dyadic Coopetition**	**Complex Network Coopetition**

*Figure 5: A Matrix Representation of a Typology of Coopetition (Dagnino & Padula, 2002) * graphical representation adjusted to the design of the master's thesis*

2.4.4.2 Intensity of Co-opetition

Based on different dynamics; the extent to which a global firm is simultaneously competing and collaborating with another global player, Luo (2007) proposed another typology of co-opetition, particularly in the context of international markets for multinational enterprises. The author's findings are summed up in Figure 5, differentiating four situations in which global co-opetitors may find themselves. A **Contending Situation** is likely to occur when the competition between the organisations is high; thus, aiming for market power and a competitive position while co-operating is limited. It usually exists when several firms occupy the majority share of global markets, and both the product and resource similarities are high. An **Isolating Situation** refers to an extreme case when organisations interact only moderately, maintaining both competition and co-operation at a low level. A **Partnering Situation** takes place when there are high resource complementarity and low market commonality; hence, companies collaborate a lot to share values, while competition is insignificant. Finally, an **Adapting Situation** happens when both competition and co-operation are high, and companies collaborate in certain areas only. They mutually depend on each other to accomplish common goals.

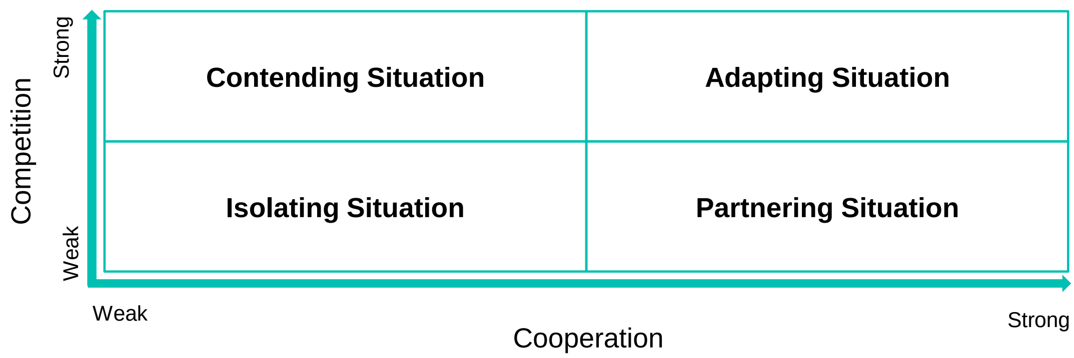

*Figure 6: Intensity of Co-opetition with a Major Global Rival (Luo, 2007) * graphical representation adjusted to the design of the master's thesis*

2.4.4.3 Diversity of Co-opetition

Another typology introduced by Luo (2007) is centralised around the geographic comprehensiveness and number of companies undertaking co-opetition. Based on these two dimensions a quadrant of distinct situations is displayed, similarly to the author's previous typology, in Figure 7. In a **Dispersing Situation**, companies co-opete with just a few rivals in a wide array of international markets. A **Concentrating Situation** exists when there are fewer co-opetitors in very few international markets, including relatively new and small companies. Thirdly, **Connecting Situation** occurs when an immense number of firms does co-opetition, but only in concentrated markets. Lastly, **Networking Situation** arises when many firms co-opete in a lot of international markets.

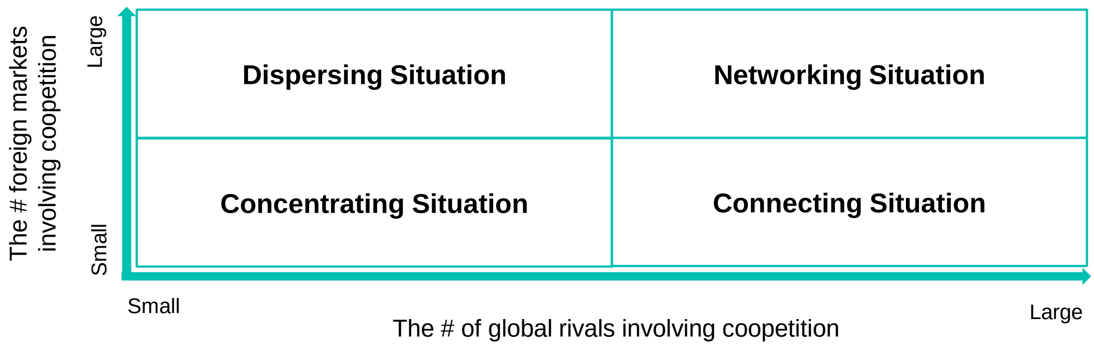

*Figure 7: Diversity of Co-opetition with Multiple Global Rivals (Luo, 2007) * graphical representation adjusted to the design of the master's thesis*

SUM UP

The review of co-opetition in this chapter sheds light on its multifaceted conceptual origin and its hybrid structure that comprises elements of two contrasting paradigms: competition and co-operation. Investigating this paradoxical relationship allows for an understanding of what co-opetition is, what the underlying dualities are, why companies consider pursuing collaboration with competitors, what the possible risks are, and how the phenomenon can be classified. The recent increased interest in co-opetition is rooted in its adaption to the dynamic business environment and in the shift towards the integration of external resources that enables mutual benefits for the participating companies. In perceiving co-opetition as a variable-sum game, a holistic view of each element of the fundamental dualities is required to grasp the full potential of co-opetition in enlarging market value, strengthening market position, addressing common problems, increasing efficiency, obtaining complementary strengths, and generating innovation. Although the possible outcomes are promising, careful management attention is required, as there are risks of opportunism, information leakage, and asymmetric conditions that could decrease the effectiveness of co-opetition. It has been found that various classifications of co-opetition exist with divergent scopes; the types of different dynamics, geographic comprehensiveness, amount of participating companies, and the complexity of the relationship should be highlighted.

2.5 SUCCESS FACTORS

After discussing the rationale, divergent characteristics, and classifications of the co-opetition phenomenon, the next step is to examine the determinants driving co-opetition in a successful way, according to existing academic papers. Over the years, many authors in the business literature agreed on the fact that, in order to realise full advantages of strategies, organisations should consider defining factors influencing performance and success in the first place (Chin, Chan, & Lam, 2008; Evanschitzky, Eisend, Calantone, & Jiang, 2012; Petter, Resende, de Andrade Júnior, & Horst, 2014). However, there are only a few available studies on how to do co-opetition in a favourable way, and what factors contribute the most to achieving this (Resende, Volskib, Betimc, Carvalhod, Barrose & Sengerf, 2018).

First of all, this section intends to clarify the blurry terminological differences of factors defining success, then summarises the key points of two previous academic models that are either highly cited or most recently published in relation to this paper's topic of co-opetition. Finally, the section further aims to highlight the most significant indicators supporting successful co-opetition, based on the comparison of the existing models.

2.5.1 Critical Success Factors

In previous studies, authors have been using various interpretations and expressions, such as key success criteria or critical success factors simultaneously (Petter et al., 2014; Jünger, Pestinger, Elsner, Krumm, & Radbruch, 2007; Lydeka & Adomavičius, 2007; Resende et al., 2018). According to the Chambers Dictionary (1994), success can be defined as having achieved the desired effects, outcomes or results.

On the one hand, there are key success criteria dealing with measures by which either the success or failure of a business or project can be judged (Cooke-Davies, 2002). On the other hand, critical success factors focus on the inputs towards the management and its system, which lead to the direct or indirect success of the business or project (Ibid). Despite the fact that the distinction between the two concepts is subtle, they both aim to define a manageable aspect that significantly leverages the competitive performance and position of a company, within an industry (Resende et al., 2018). In this research, the term “critical success factors” is applied for further analysis, as this label conveys its significance in decision-making.

Following Singh and Shrivastava’s (2013) perception, critical success factors are variables, characteristics or conditions that, when sufficiently managed, may have a favourable effect on a business networks’ success, by considering its competitive environment. Thus, critical success factors support decision-makers by directing their attention to essential processes, which define and guide the management’s orientation towards optimising the decision-making process (Chen & Karami, 2010; Dasanayaka, 2012; Tavassoli & Tsagdis, 2010).

Furthermore, some authors distinguish and categorise a group of critical success factors as either hard or soft (Bóna & Lippert, 2015; Cullen et al., 2000). On the one hand, acknowledging hard elements as the visible parts affecting the functioning of an organisation, such as operational structures, information systems, and financial situations. On the other hand, the soft side is described as the development and management of relationship capital, focusing on elements that are difficult to defined and requires the presence of people. In this context, relationship capital is perceived as the relationship quality which exists between social actors (Coleman, 1990).

Findings from most recent studies emphasise the importance of focusing on soft and invisible factors when undertaking strategic alliance and project management (Bóna & Lippert, 2015; Cullen et al., 2000). As this research focuses on the phenomena of co-opetition, in which human interactions and the social exchange process of participants play an important role; therefore, this paper relies especially on the conceptualisation of critical success factors that are considered soft and mainly invisible.

2.5.2 Critical Success Factors in Co-opetition

Despite the increased interest in co-opetitive activities in the last two decades, described more in section 2.4, only a few studies have been published in the particular field of critical success factors of co-opetition (Resende et al., 2018). However, there is a need to discuss existing academic journals in order to gain a better understanding of the determinants that require special attention when doing this paper's analysis. Therefore, the following sub-section gives an overview and compares the most cited hierarchy model of Chin, Chan, and Lam (2008) to the more recent analysis model of Petter, Resende, de Andrade Júnior, and Horst (2014). Although the two models are built on different empirical settings and listings of factors, they are selected based on the fact that both of them agree on the importance of soft parts in a co-opetitive relationship.

Purposely to investigate and determine critical success factors for implementing co-opetition strategy management, Chin, Chan, and Lam (2008) introduced a co-opetition hierarchy model, presented in Figure 8. The model is based on a comprehensive literature review validated by conducting interviews with experts. It consists of seven critical success factors and seventeen critical success subfactors that are part of three categories labelled management commitment, relationship development, and communication management.

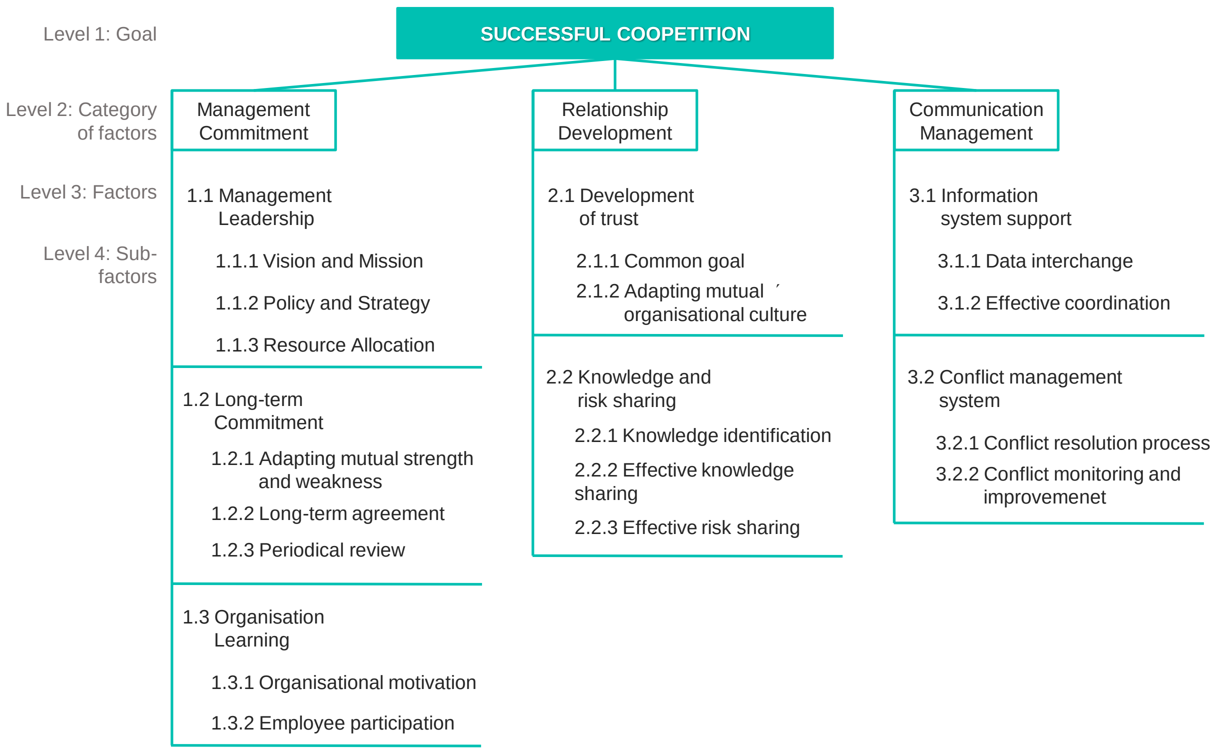

*Figure 8: Hierarchical Model of Co-opetition Strategy Management (Chin et al., 2008) * graphical representation adjusted to the design of the master's thesis*

The first category, management commitment, indicates the degree of management support in the application of co-opetition (Chin, Chan, & Lam, 2008). It incorporates the following factors: "management leadership" examines how the leadership team constructs and sustains a clear vision and values guiding activities; "long-term commitment" includes agreements of responsibilities and benefits that can reduce the number of possible conflicts; and "organisational learning" defined as the "*process of detection and correction of errors*" (Chin et al., 2008, p. 443).

The second category, relationship development, refers to the essentials of a healthy and functional relationship between co-opetitors and focuses on two main areas, namely "development of trust" and "knowledge and risk sharing" (Chin et al., 2008). They argue that the development of trust reduces conflicts, whereas risk sharing reduces overall losses.

Lastly, communication management is described as "*the systematic planning, implementing, monitoring and revision of all channels of communication*" (Ibid, p. 444) within a company, and between co-opetitors (Chin et al., 2008). The authors identified two factors: “information system support”, as they act as enablers that coordinate production, communication with customers; and “conflict management system” comprising conflict resolution process, and conflict monitoring and improvement that facilitate information gathering and decision-making, while understanding the context well.

According to the findings of their analytic hierarchy process, management commitment is considered the most relevant category (Chin et al., 2008). Among all factors listed in their model, based on the results, **“management leadership”** has the most relevant critical success factors. The authors suggest that the management team maintain support and steadfast commitment to managing co-operation with competitors successfully. Their respondents emphasised that most of the time the executive team does not state clear direction to co-opetition, and they rather focus on short-term benefits. Another determinant identified and prioritised is **“development of trust”**. The authors argue that building and maintaining trust with competitors is crucial to establish valuable co-opetition as it can reduce the number of conflicts. In association with the sub-factors of the model’s main factors, findings demonstrate that **vision and mission**, **common goals**, and **resource allocation** are considered the most outstanding. The importance of vision and mission is in line with the fact that the research participants lacked the management’s commitment and attitude, thus, identifying vision, mission, and both individual and shared goals is crucial. Resource allocation incorporates the use of capital, technology, and humans sufficiently. All in all, Chin, Chan, and Lam (2008) emphasise that the exploration and prioritisation of these success factors could help companies investigating and assessing their current status and business performance.

The **other model** proposed by Petter, Resende, de Andrade Júnior, and Horst (2014) reveals critical success factors that influence co-opetition performance with special attention on horizontal co-operation networks. They constructed a meta-analysis model from a systematic review of literature, centralised around the determinants of systematic competitiveness and networks of companies. As a result, the authors structured a hierarchical model with four pillars, presented in Figure 9, each representing factors with different degrees of coverage.

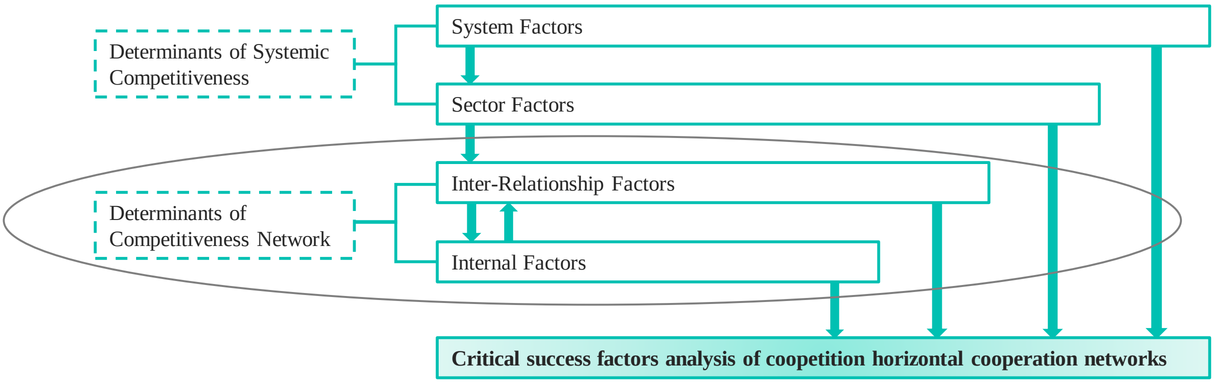

*Figure 9: Critical Success Factors Analysis of Co-opetition Horizontal Cooperation Networks (Petter et al., 2017) * graphical representation adjusted to the design of the master's thesis*

The first level, Systemic Factors, deals with a global analysis of the industry's competitiveness that originates from the system itself (Petter, Resende, & de Andrade Júnior, 2017). The second level, named Sector Factors, stands in direct relation to the competitiveness analysis of a specific sector. Furthermore, the third group, Inter-relationship Factors, includes competitiveness analysis of activities working in a co-operative way. The last level, Internal Factors, encompasses the factors analysing the competitiveness power in a company network internally, in combination with the core competencies of each company that influence the co-opetition performance (Ibid). Factors from the sector level, as well as the systemic level, are not controllable by the company's network (Petter et al., 2014). Therefore, based on the aforementioned nature of co-opetitive relationship, the original paper, as well as this study, concentrate more on the critical success factors identified on the level of inter-relationship factors and the level of the internal factors.

Out of 185 pre-selected articles, 52 journals were suitable to study in order to establish the model of Petter, Resende, Júnior, and Horst (2014). From that final collection of academic papers, 18 critical success factors and 48 variables were extracted at the previously described two analysis levels of inter-relationship and internal network companies. One of their main results is that co-operative performance appears through the evolvement of good inter-relationships between different companies. In connection with that, **"trust and commitment"** is the most cited factor of their analysis.

Petter, Resende, Júnior, and Horst (2014) claim that a high level of trust between co-opetiting partners reflects the level of co-operative commitment among them directly. Both trust and commitment are seen as a superior catalyst for structuring and forming competence and credibility between the network actors. Thus, they stand in direct connection with each other. Commitment can increase the level of trust when all network participants commit and realise their roles and tasks together, as well as equally. With that in mind, commitment can be translated into loyalty among network actors that ensures the continuity of co-operation between firms when it is understood at all organisational levels.

"Exchange of experience and learning" is another prevailing critical success factor in the study of Petter, Resende, Júnior, and Horst (2014). By definition, "*the greater the exchange of experience and/or technical information, the higher the levels of absorption and learning that occur internally in companies, as well as the whole network environment*" (Ibid, p. 169). In that sense, the term describes the sharing of already adapted knowledge and experience by companies within the collaborating network. While facilitating the development of the network through such sharing, new knowledge is created at the inter-relationship level. The generation of knowledge, in turn, adds value to the network of firms in different aspects, for example, through innovations in the service and product segment (Ibid).

Furthermore, the **"innovative competence"** of a company, can be defined as the ability of a firm to react towards the market demands of the consumer, by taking into account the characteristics and attributes of differentiated and novel products (Petter et al., 2014). Also, the authors outline that there is a need to consider the structure of the organisation, the administrative process and the production's adaptation and evolution. Therefore, the innovative competence of a firm is considered as an important critical success factor when performing co-opetitive practices.

Another relevant determinant is **"people management"**, involving the capacity of a firm to identify, manage and retain their talent, as well as the commitment of the company's human resources towards co-opetition (Petter et al., 2014). Lastly, the **"intangible assets"** of a company is also an outstanding critical success factor when engaging in co-opetitive practices. It reflects the added-value, which a company brings in to non-measurable resources, such as the development and absorption of licenses, expertise, and patenting of new products. All in all, Petter, Resende, Júnior, and Horst (2014) emphasise that the competitiveness of a company is depended on its human resources along with its core competencies.

2.5.3 Shared Critical Success Factors in Co-opetition

In spite of the unique empirical settings, approaches, and publication dates; the results of these previously described models share some critical success factors. First of all, the particular importance of human capital, as well as companies' competences for co-opetition, have been clearly brought to light in both studies. Moreover, it should also be mentioned that having "development of trust" and "management leadership" as one of the main outcomes in the research paper of Chin, Chan, and Lam's (2008) is aligned with the results of Petter, Resende, Júnior, and Horst's (2014) model that highlights the factors of trust and commitment.

In addition to the models presented earlier, further academic papers confirm the importance of the factors the two models agreed on, by focusing mainly on trust, dependency, and commitment in different contexts (Bouncken & Fredrich, 2011; Cullen, Johnson, & Sakano, 2000). When analysing the performance of general strategic alliances, or collaboration before the appearance of co-opetitive phenomenon, Cullen, Johnson, and Sakano (2000) described the quality of relationship and interaction among actors through the lens of relationship capital. Considering various types of relationship capital, for example, cultural sensitivity and norms, the authors presented commitment and trust as the major forms based on the manager's experience from both failed and successful outcomes. They argue that mutual commitment is inevitable to work on problems and develop equal contribution from participating sides. Also, they discuss that a lack of trust could result in taking unfair advantages of the situation and holding back information from partners.

Another article supporting the factors mentioned above, written by Bouncken and Fredrich (2011), centralises a quantitative analysis of co-opetition and its performance around trust and dependency. They define trust as a "*social lubricant*" (Ibid, p. 1) and argue that it is a building block improving not only regular collaboration, but also the interactions between co-opetitors. Moreover, they propose dependency as an additional essential factor to consider, due to the fact that in co-opetitive relationships an asymmetric distribution of power-dependency can occur, if one company takes the lead. Overall, their findings indicate that the influence of co-opetition on success is positive, especially in the contexts of high dependency and high trust.

2.5.3.1 Trust

The subject of trust, highlighted as one of the common critical success factors of the two models earlier presented, has been widely studied in various contexts, including the different kinds of social relations of daily life (Araujo & Franco, 2017). Understanding why and how it is happening has always been a central topic for sociologists, psychologists, and economists (Lewicki, McAllister, & Bies, 1998). This paper chose to use the following definition that describes these characteristics: "*a psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviors of anothe*r" (Rousseau, Sitkin, Burt, & Camerer, 1998 p. 395 as cited by Araujo & Franco, 2017).

Most scholars see it as an essential ingredient or foundation of a healthy interpersonal, or collaborative, relationship that shapes the behaviour and intentions of each relationship partner (Lewicki, McAllister, & Bies, 1998). In a business environment, trust plays an important role, as each participant in the working relationship wants to make sure that the quality of inputs is equal from all sides, thus ensuring a well-working process (Cullen et al., 2000).

2.5.3.2 Commitment

Based on the outcome of the previously mentioned model comparison, commitment should also be more explained. By definition, it covers the intention of each individual in any partnership, like an implicit or explicit pledge, to establish and maintain a valued relationship in the long run (Gundlach, Achrol, & Mentzer, 1995). It supports motivation and involvement as committed partners are willing to make short-term sacrifices by investing assets and demonstrating reliability in exchange for benefits (Ibid). Thereby, it is considered as a positive and active orientation towards the partnership (Chang, Sheu, Klein, & Jiang, 2009).

As a consequence of a powerful signalling act of participating parties, the quality of the relationship is strengthened; thus, the set is ready for building trust (Gundlach et al., 1995). However, in order to maintain a good relationship, equality is essential meaning that each participant's contribution has to equal the benefit received from the relationship (Cullen et al., 2000). In the context of the business world, commitment is also characterized by the acknowledgement of project goals and the motivation of the individuals within a firm (Chang et al., 2009), or, in case of this paper's topic, outside the firm with competitors.

Figure 10: Critical Success Factors in Co-opetition (Own designed figure)

SUM UP

The above section presented an understanding of the demand to explore and prioritise critical success factors that determine the performance and outcome of co-opetition. As a consequence, space for development and action plans for the future can be identified, and businesses could work towards reducing the failure rate and increase innovation. Based on two existing models that are addressing the identification of critical success factors of co-opetition, trust and commitment are found as the common denominators and highlighted as the most significant contributor to the success of co-opetition in Figure 10.

2.6 INNOVATION

"*Innovativeness reflects a firm´s tendency to engage in and support new ideas, novelty, experimentation, and creative processes that may result in new products, services, or technological processes*" (Lumpkin & Dess, 1996, p. 142). In the last two decades, innovation and its management is a key strategic issue for business organisations and environments (Baregheh, Rowley, & Sambrook, 2009). Globally, most companies are working systematically to reinvent their business processes for achieving greater speed and efficiency (Hamel, 2006). Therefore, innovation can also be linked to the phenomenon and success of co-opetition as it triggers the strategic move of collaborating with a competitor in order to foster the market and economy towards new opportunities in the future (Della Corte, 2018; Gnyawali, 2011; Park, Srivastava, & Gnyawali, 2014). As already mentioned in the introduction part, scholars of recent studies suggest that the relationship between co-opetition and innovation performance is still underexplored; therefore, this research is aiming to address this gap (Ibid). However, in order to answer the research question of this paper, this section intends to get a better understanding of innovation. First of all, the section focuses on the development of the term and proposes an integrative definition of innovation. Then, the characteristics of innovation are presented together with different types of innovation with particular attention on product innovation and service innovation, as they are central topics to this paper's research question. Finally, the last sub-section elaborates on the linkage of co-opetition and innovation by introducing further concepts of innovation networks and open innovation.

2.6.1 Development of Innovation

The interest in innovation goes across practitioners and researchers, as well as a range of business and management disciplines (Baregheh, Rowley, & Sambrook, 2009). That is why, innovation has been extensively discussed in the business literature; for example, in topics about entrepreneurship, research and development, product design, strategy, marketing and human resources (Ibid). A century ago, the term innovation has not been used extensively; however, processes in association with innovation along with technological and economic changes were already seen as particularly important (Lorenzi, Mantel, & Riley, 1912; Schumpeter, 1934). Joseph Schumpeter is often mentioned as the first economist who drew attention to the significance of innovation. Originally, he defined five different types of innovation: 1) Quality change in an existing product or introduction of a new product; 2) process innovation which is new to an industry; 3) the opening of a novel market; 4) generation of novel sources of supply for raw materials or further contributions; 5) changes within industrial organisation (Rogers & Rogers, 1998). Also, Schumpeter determined innovation as a factor of change that is an essential function of an entrepreneur. In the conceptualisation of his economic development theory, he added the process of innovation as an outstanding element to the existing elements of profit and credit maximisation (Ruttan, 1959). Borrowing the words of Schumpeter, innovation can be defined *"as the setting up of a new product function. This definition covers the case of a new commodity as well as those of a new form of organisation, merger, or the opening up of new markets …*" (Schumpeter, 1939, p. 84).

As marketplaces became dynamic, the interest in innovation, its processes, and management developed accordingly (Baregheh et al., 2009). Hence, the definition of innovation has also evolved over time and has been presented from different perspectives (Damanpour & Schneider, 2006). As Baregheh, Rowley, and Sambrook (2009) undertook a content analysis of existing definitions of the concept of innovation for proposing an integrative definition:

> *"Innovation is the multi-stage process whereby organisations transform ideas into new/improved products, service or processes, in order to advance, compete and differentiate themselves successfully in their marketplace" (p. 1334).*

This research paper adopts the presented definition because it captures the research areas of the innovative processes of this study. The authors of the definition argue that innovation is seen as a non-discrete act and as a process which is described as a "*multi-stage process*" in the definition (Baregheh et al., 2009, p. 1334). Highlighting the transformation of "*ideas into new/improved products*" not only captures all the stages that various scholars have determined or referred to in their definitions of innovation, but also demonstrates the fact that ideas are used and changed together with other means of innovation for resulting in "*… new/improved products, services or processes*" (Ibid). The terms "*competing and differentiating*" reflect both the general strategic goal of innovation and the possibly diverse environmental and social contexts in which innovation happens (Ibid).

Finally, with "*successfully advancing*" the aim of innovation is demonstrated (Ibid). If a further understanding of different definitions of innovation or the development of the integrative definition is needed, the researchers of this master's thesis refer to the analysis of Baregheh, Rowley, and Sambrook (2009). In the following, the section continues with the need and the characteristics of innovation.

Innovation is a complex construct (Damanpour, Szabat, & Evan, 1989); however, the ability to innovate at an international, national, regional and firm-level defines the wealth generation capacity of an economy (Neely & Hii, 1998). According to researchers, companies have to innovate in order to respond to changing customer demands and lifestyles, and to exploit new emerging opportunities offered by the changing technologies, structures, dynamics, and marketplaces (Baregheh et al., 2009). That is why innovation represents a central role in the creation of value and sustaining competitive advantages (Ibid). As a result, innovation increases the knowledge stock of society and pushing it up the knowledge ladder (Neely & Hii, 1998). Thereby, the ability to innovate has a direct impact on the capability to compete at the international, national, regional, and individual level (Ibid). However, not every innovation creates a competitive advantage. It is a numbers game, the more a firm does, the better the chances are of creating a valuable and competitive edge generating outcome (Hamel, 2006). Thereby, it applies that the greater the problem a company is tackling, the bigger the opportunity for innovation. Although big problems do not always generate huge breakthroughs, little problems never do (Ibid). Nonetheless, the innovativeness of a company is influenced by three sets of factors: environmental characteristics, organisational characteristics, and managerial characteristics (Neely & Hii, 1998). Thus, the whole procedure of innovation can have a large variety of outputs.

2.6.2 Innovation Types

Over the years, several authors have undertaken a classification of innovation (Neely & Hii, 1998; Baregheh, Rowley, & Sambrook, 2009; Zapfel, 2019; Lopez, 2015; Nielson, 2013; Satell, 2012 & 2017). Thereby, it has been viewed and analysed from a variety of perspectives which resulted in a diverse grouping of how to perceive innovation types. That is why in the following, an overview and a more detailed understanding of the various types of innovation are presented. From an innovation management point of view, different innovation types have process-related and strategic significance (Zapfel, 2019). Following Baregheh, Rowley, and Sambrook (2009), the *"type of innovation refers to (...) innovation as in the type of output or the result of innovation"* (p. 1331). A clear understanding of desired innovation is of particular importance for the innovation strategy outlining where an organisation wants to innovate in the future (Zapfel, 2019). A defined classification is also significant for the innovation processes as the different types have different requirements for a successful innovation process itself (Ibid).

2.6.2.1 Extent of Change

One often used classification for innovation is the novelty or the extent of change (Zapfel, 2019). By breaking down innovation into two dimensions, technology and market, then it generates four types of innovation: Architectural Innovation, Incremental Innovation, Radical Innovation, and Disruptive Innovation presented in Figure 11 (Lopez, 2015).

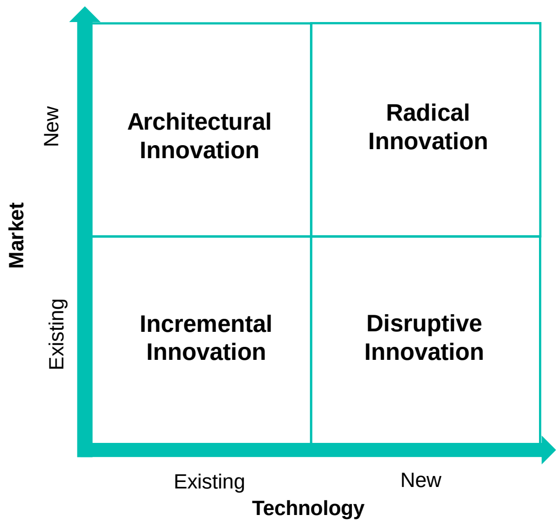

*Figure 11: Four Innovation Types with the Axes of Market and Technology (Lopez, 2015) * graphical representation adjusted to the design of the master's thesis*

Firstly, **Incremental innovation** uses existing technology and increases the value of the product or service to customers within existing markets. Almost every firm engages in incremental innovation with different forms, for example, either adding or removing features for existing products and services (Lopez, 2015). Secondly, **Disruptive innovation** engages in applying novel processes or technologies to the firm's current market. By pursuing some iterations of the newer processes or technologies that surpass the previous one, a company can disrupt all existing firms; for example, the story of Apple's iPhone took over the market of mobile phone industry (Lopez, 2015).

Thirdly, **Architectural innovation** refers to the application of skills, knowledge, and technology within different markets. This type of innovation helps to acquire new customers within a new market as long it is receptive. It is about matching the requirements of the new market (Lopez, 2015). Lastly, **Radical innovation** creates new industries and involves the generation of revolutionary technology. For example, the development of the airplane was not the first vehicle of transportation; however, it was revolutionary as it commercialised air travelling (Lopez, 2015).

A similar variety of innovation types is demonstrated in the articles of Satell (2012 & 2017) and Nielson (2013). The authors explain the innovation types using different terminology presented in Figure 12:

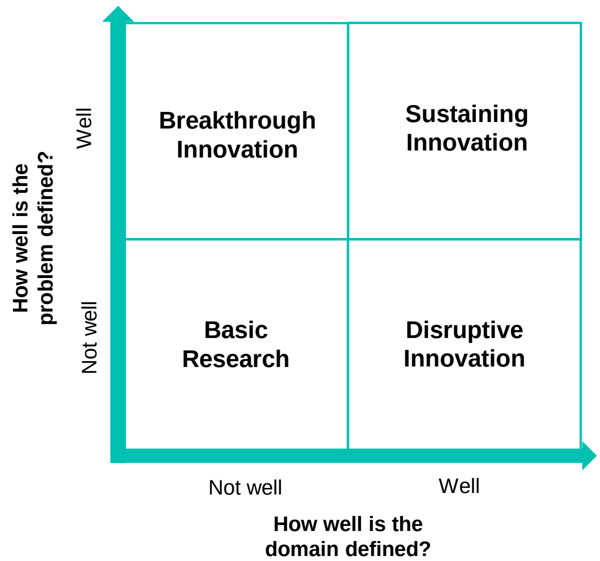

*Figure 12: Four Innovation Types with the Axes of Problem Definition and Domain Definition (Satell, 2012) * graphical representation adjusted to the design of the master's thesis*

This figure is centralised around the status of problem and domain definitions. The categories partially overlap with the previous one but not entirely similar. Therefore, **sustaining innovation** can be seen as **incremental innovation**, **breakthrough innovation** as **architectural innovation,** and **disruptive innovation** remains with the title of disruptive innovation. They introduced another category, **basic research**, that refers to the research of universities, and R&D labs, where the outcome is not clearly defined (Satell, 2017). Some might even argue that basic research is not innovation since it does not necessarily result in the creation of a new product or a service (Ibid). That is why basic research cannot be found in the other model of Lopez (2015) or paired equally with the term of radical innovation.

In addition to these, the model of Pisano (2015) should be taken into consideration. He has the same determination of axes as Satell (2012) but uses similar wording as Lopez (2015) as displayed in Figure 13. However, his understanding of disruptive, architectural, radical, and routine innovation differs from the first model introduced above.

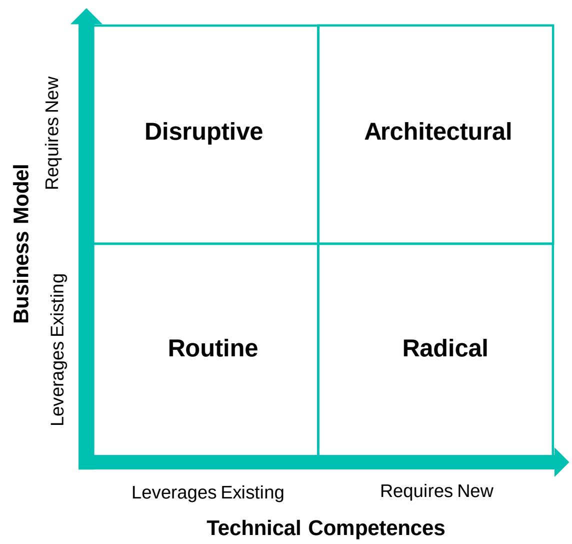

*Figure 13: Four Innovation Types with the Axes of Business Model and Technical Competences (Pisano, 2015) * graphical representation adjusted to the design of the master's thesis*

Routine innovation involves a firm's existing technological competences and matches the existing business model as well as the customer base. Thus, it can stand in line with incremental innovation. According to Pisano (2015), **disruptive innovation** involves a new business model but not necessarily a novel technology. That is why it challenges existing business models of other companies. **Radical innovation** is perceived as the opposite of disruptive innovation and requires new technical competencies. Lastly, **architectural innovation** combines the business model disruption and novel technology. This research paper aligns with the presented understanding of Lopez (2015), when mentioning incremental, disruptive, architectural and radical innovation in the following.

2.6.2.2 Place of Innovation

Another way to perceive innovation is by differentiating the place where innovation happens, either in a **closed or open** place (Zapfel, 2018). Closed innovation deals only with internal resources and expertise for generating ideas, developing, and implementing innovations (Chesbrough, Vanhaverbeke, & West, 2006). On the contrary, open innovation follows an integrative approach by which external partner such as research institutes, customers, and suppliers join the innovation process (Lopez, 2015).

2.6.2.3 Object of Innovation

One of the most common types of innovation is centralised around the **object of innovation**. Innovation can influence the performance of an organisation itself; nevertheless, it can also affect the structure of organisations (Zapfel, 2015). When organisational structures are affected, innovation is called organisational innovation in which novel methods are implemented in companies' business practices and work environments (OECD, 2005). It is performed in regard to services, products, processes as well as business models (Neely & Hii, 1998; Baregheh, Rowley, & Sambrook, 2009). For generating a better understanding of what kind of innovation classifications of the object innovation exist, the next paragraphs will give an overview of the research area.

First of all, there is **product innovation**, which is defined as an "*overarching management framework for making incremental changes and improvements to products. (…) It involves the creative responses and solutions for meeting the needs and expectations of customers and market(s), the* *driving forces in the business environment, and the strategic requirements of the organisation. Product innovation runs the gamut from improving existing products to discovering entirely new ways of satisfying customers and stakeholders*" (Rainey, 2009, p. 5). Thereby, product innovation increases the company's competitiveness (Neely & Hii, 1998).

Secondly, when engaging in services instead of products, the innovation is called as **service innovation** consisting, for example, management consulting and insurances. Even though services are not actively sold, each company still provides to some extent services to its customer. It can include areas such as sales advice, complaints, or logistics of a manufacturing company (Zapfel, 2015). Thus, service innovation is defined "*as the process of devising a new or improved service concept that satisfies the customer's unmet needs and new service development as all subsequent activities involved in bringing that concept to market"* (Biemans, Griffin, & Moenaert, 2016, p. 383). Another object of innovation is the **business model innovation** which refers to *"the implementation of a business model that is new to the firm"* (Bjoerkdahl & Holmén, 2013, p. 214). Thereby, the business model describes how the firm creates and captures value (Ibid). In the process of innovation, business model innovation undertakes improvements in the strategy, marketing, supply chain, value creation, and revenue structure (Zapfel, 2015).

Lastly, there is **process innovation** that is defined as the implementation of a novel or significantly improved delivery method or production (Gault, 2016). Development in the process of service innovation is often seen and valued internally only (Baer, 2017). Therefore, process innovation changes a company's internal capabilities in order to be more adaptive to transformations in the ever-changing business environment (Neely & Hii, 1998).

In order to answer the research question of this study, more understanding of product and service innovation is needed. In general, the boundary between products and services is extremely blurred (Spacey, 2016). Particularly in the field of marketing, it is common to refer to services as products (Ibid). However, due to dissimilar offerings and characteristics of products and services, a distinction of product innovation and service innovation is essential (Schleimer & Shulman, 2011). Despite the similar underlying mechanisms of innovation and the fact that both types intend to innovate successfully, the context of their development and the prioritisation of drivers and dimensions are different (Nijssen, Hillebrand, Vermeulen, & Kemp, 2006). Furthermore, several researchers emphasise that the distinguishment of product and service innovation is a significant step towards the success of future studies in this area. (Storey, Cankurtaran, Papastathopoulou, & Hultink, 2016; Nijssen, Hillebrand, Vermeulen, & Kemp, 2006).

2.6.3 Product Innovation

Product innovation *"includes the conceptualization, design, development, validation, and commercialization of new products for customers and markets in concert with the prevailing conditions and trends"* (Rainey, 2005, p. 5). Thus, product innovation can involve everything from the improvement of existing products to the discovery of new ways of satisfying customers and stakeholders (Ibid). From an internal point of view, product innovation relies on the knowledge, experience, resources, capabilities, and technologies of a company (Ibid). From an external point of view, product innovation depends on the customers' and other stakeholders' expectations, needs, and wants (Ibid). Thereby, product innovation cannot develop in one unit of an organisation; it needs support from a variety of departments such as engineering, strategic management, finance, marketing, production and operations, distribution channels, supply networks, and customers. The latter needs to ensure on a recurrent basis that the process of development leads into the right direction for satisfying the customer needs (Ibid). That is why, product innovation is an effective way of dealing with the integration of dispersed knowledge of different natures innovatively and hence generate novel knowledge within a company (Verona & Ravasi, 2003). The company process, the product attributes, the company strategy, and the marketplace components are important drivers for product innovation (Evanschitzky, Eisend, Calantone, & Jiang, 2012). In addition, the customers, stakeholders, markets, and other organisations in the environment of the business are the principal drivers of product innovation (Rainey, 2005).

For understanding product innovation even further, it is of particular importance to discuss the characteristics of products. A product can be seen as a bundle of benefits, either physical or psychological nature that a company wants to offer or a sum of expectations that consumers desire (Claessens, 2015). Most often products are seen as tangible units; however, sometimes researchers and practitioners refer to services also as a kind of a product known as "intangible product" (Ibid). This master's thesis perceives products as material units, which can be synthesised and be stored like manufactured products (Rathmann, Klenk, & Kreimeier, 2013). Thus, the characteristics of products are important to consider when engaging in the development of products.

Product innovation delivers novel solutions to old problems; generates new opportunities to exploit existing resources, assets, and capabilities; creates sustainable results through the regular replacement of out-dated products; and builds innovative resources and capabilities for sustaining the future (Ibid). With all that in mind, introducing new products into the market on a systematic basis is considered to be the most efficient and natural way of creating a continuous and endemic process of change (Eisenhardt & Tabrizi, 1996).

2.6.4 Service Innovation

In addition to product innovation, several academic researches highlight the increasing interest and focus on the occurring discipline of service innovation from diverse research areas (Witell, Snyder, Gustafsson, Fombelle, & Kristensson, 2015; Dotzel, Shankar, & Berry, 2013; Toivonen & Tuominen, 2009). Some authors also emphasised that vague common knowledge of service innovation and its meaning exists because the phenomenon is still novel in its field (Flikkema, Jansen, & Van Der Sluis, 2007; Toivonen & Tuominen, 2009). That is why Witell et al. (2015) undertook a systematic review of several articles from a variety of disciplines on service innovation for creating a better understanding of service innovation. By researching three different areas; assimilation perspective, the demarcation perspective, and the synthesis perspective of service innovation; they identified that a shared view of service innovation as "*new service*" is a sufficient definition (Ibid, p.2). Thereby, in the assimilation perspective, innovation typically refers to radical technical innovation; in the demarcation perspective, it often discusses smaller process changes for a company, and the synthesis perspective often means to develop skills in new service development (Ibid). Thus, the results align with the previously mentioned definition of service innovation: "*as the process of devising a new or improved service concept that satisfies the customer's unmet needs and new service development as all subsequent activities involved in bringing that concept to market"* (Biemans, Griffin, & Moenaert, 2016, p. 383).

Similar to product innovation, for understanding service innovation more in depth, it is of particular importance to discuss the characteristics of services. Services are perceived as intangible assets where knowledge will be difficult to manage, and it can be used in a tacit way (Blindenbach-Driessen & van den Ende, 2014; Johne & Storey, 1998). In addition to intangibility, services are also presumed as more heterogenic, inseparable, and perishable in comparison to products (Fitzsimmons & Fitzsimmons, 2000). Thereby, the simultaneous involvement of consumers in the development process for testing the service is common (Ibid). These characteristics of services are important to consider when engaging in the development of any service (Jaw, Lo, & Lin, 2010). They are vital factors for performing service innovation; therefore, the consideration and use of services lead to differential innovation resources and often successful innovation performance (Ibid). Moreover, this paper wants to highlight the thoughts of Santamaría, Jesús Nieto, and Miles (2012) that the changes and improvements can be made on the basis of the characteristics, the desired purposes or the intangible components of the service. Also, Storey, Cankurtaran, Papastathopoulou, and Hultink (2016) add the perspective that every impact on the service experiences can be seen as service innovation from the customer perspective.

The challenge is the integration of the needs of new service operations and process with the already existing business activities (Johne & Storey, 1998). Thereby, the right fit between new service and existing processes and system is also of particular importance (Nijssen, 2006). The better the fit of how the new service is integrated into the existing system, the better the chance to result in value creation for the organisation (Ibid). Furthermore, by developing a market-oriented culture, service companies can assure superior service innovation performance in the long run (Jaw, Lo, & Lin, 2010).

Product versus Service Innovation

Overall, both, service innovation and product innovation, aim to achieve a more innovative and efficient performance and competitive advantage within the marketplace (Jaw, Lo, & Lin, 2010); however, the different characteristics of product and services indicate a distinction between service innovation and product innovation (Cowell, 1988; Jaw, Lo, & Lin, 2010). Further, the organisational culture, as well as the market orientation, are important for product innovation but they play an even more significant role for successful service innovation than product innovation (Johne & Storey

2015). The two categories of products and services also lack an alignment which suggests that innovation in those two areas is indeed different. Also, Alam (2002), Dolfsma (2004), Stevens and Dimitiradis (2004) support the argumentation of that service innovation differs from product innovation which results in different prioritisation of the performance of the innovation for maximising their returns on investment in a product or a service company (Storey et al., 2016).

2.6.5 Co-opetition for Innovation

Authors of recent studies suggest that the relationship between co-opetition and innovation performance is still an underexplored issue, although, co-opetition can foster innovation (Della Corte, 2018). Usually, scholars refer to the extent of innovation, either incremental or radical innovation, when companies improve the current products and services, or create new ones by collaborating with competitors (Ritala, 2012; Bouncken, & Kraus, 2013). However, the authors of this master's thesis believe that based on the nature of co-opetition, the following two innovation disciplines; innovation network and open innovation, should also be taken into consideration and explained in more details.

2.6.5.1 Innovation Network

Nowadays, firms stand in the "*core of a network of interaction with different actors at more levels*" (Della Corte, 2018, p. 10) that determines various development paths. Innovation networks are collections of diverse organisations, which are able to combine new capabilities and recombine older ones without having an external function controlling the process (Rycroft & Kash, 2004). Both the process and the outcome of innovation are constellations of heterogeneous networks which demonstrate different forms of knowledge (Lyytinen, Yoo, & Boland, 2016). By considering this view, no innovation is created out of one single innovator; it rather embodies the view of innovations emerging from diverse and dynamic knowledge shared between different actors (Ibid). Nowadays, the most complex and valuable technologies increasingly innovated by networks (Rycroft & Kash, 2004). Thereby, the ideas, representations, and material artefacts get reassembled through the interaction of the diverse players into novel knowledge combinations of resources (Ibid). That is why innovation networks are organised around constant learning (Ibid). In addition, innovation in any network structure includes the translation process of cognitive and social elements during the innovation procedure (Lyytinen, Yoo, & Boland, 2016). General characteristics of innovation networks are to bring more connectivity into being along with the possibility of learning in many different ways (Ibid).

Based on that previously described view, Lyytinen, Yoo, and Boland (2016) developed a framework, presented in Figure 14, for distinguishing between four types of innovation networks: project innovation network, federated innovation network, clan innovation network and anarchic innovation network.

Heterogeneity of operant resources	Distribution of coordination and control via operand resources: Centralised	Distribution of coordination and control via operand resources: Distributed
Homogenous	**Project Innovation Network**	**Clan Innovation Network**
Heterogeneous	**Federated Innovation Network**	**Anarchic Innovation Network**

*Figure 14: Four Types of Innovation Networks (Lyytinen, Yoo, & Boland, 2016) * graphical representation adjusted to the design of the master's thesis*

The **project innovation network** is composed of a homogenous group of players and related tools within a hierarchically integrated control structure and typically within one firm. The **clan innovation network** involves a homogenous group of dynamic players who are distributed geographically and socially by not having a strong centralised, hierarchical control. The **federated network** consists of a heterogeneous group of players and tools within a hierarchically integrated control structure and typically within one firm. The **anarchic network** composed of a heterogeneous and dynamic group of actors and tools in the absence of hierarchical control and the presence of high levels of knowledge heterogeneity (Lyytinen, Yoo, & Boland, 2016).

The four different innovation network forms involve different implications for the type and the nature of innovation (Ibid). The project and clan forms demonstrate typically incremental innovation, while the federate and anarchic forms mostly deal with radical innovation (Lyytinen, Yoo & Boland, 2016). For a more detailed understanding of the different innovation types, the researchers refer to the sub-section of 2.6.2. In addition, the results from Lyytinen, Yoo and Boland, (2016) study revealed the shift towards anarchic forms of innovation networks as an "*inevitable journey*" for companies, which want to stay ahead in the area of innovation (p. 71). In general, by considering innovation networks, the possibility opens for increasing efficiency and reducing the utilisation of resources through several organisations innovating in a fast-developing environment (Lyytinen, Yoo, & Boland, 2016).

2.6.5.2 Open Innovation

Open Innovation, as already mentioned in paragraph 2.6.2.2, is considered as a novel paradigm in the management of innovation that increasingly receives attention in scientific research (Vrande, Jong, Vanhaverbeke, & Rochemont, 2009). Over time, it has also acquired multiple meanings (Chesbrough, 2012). By borrowing the words of Chesbrough, Vanhaverbeke, and West (2006), open innovation is perceived as the *"use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively"* (p. 1).

Open innovation assumes that companies should use external along with internal ideas for combining them into architectures and systems, and external and internal paths to market for advancing their technology (Ibid). Thus, the approach of open innovation treats R&D as an open system. Thereby, this paradigm places external ideas as well as external ways to market on the same level of importance as the internal ideas and ways to market which can generate new possibilities of value creation (Ibid). Moreover, Chesbrough, who developed the term open innovation, emphasises that collaboration and open innovation are interconnected in which co-operation functions as the basis of openness (Gallaud, 2013). All in all, Chesbrough (2012) predicts that the future of innovation and especially of open innovation will be more extensive, more collaborative, and more engaging with a diverse variety of contributors.

SUM UP

In this section, this master's thesis presented a general overview of innovation including various innovation types and a more detailed understanding of innovation areas regarding the research question of this paper. As a result, the authors of this paper are able to draw a clear distinction between product and service innovation by which the first one focuses on the development and improvement of tangible, synthesisable, storable and material units. In contrast to that, the latter emphasises the development and improvement of intangible and more heterogeneous, inseparable and perishable units. Furthermore, this section focused more on the interplay of innovation and co-opetition. Therefore, the paper perceives innovation network(s) as collections of diverse organisations, which are able to combine new capabilities and recombine older ones without having an external function controlling the process, arguing that it is in line with the co-opetition phenomenon. In addition, open innovation is also highlighted as another new arising paradigm of describing the connectivity and knowledge exchange between external and internal entities of companies for fostering advancing technology and creating innovations. These theories are in line with the concept of co-opetition, considering that putting capabilities together can make the market grow, even if competition exists in the market.

3. METHODOLOGY

This chapter presents the methodological considerations related to the research question of this master's thesis. It begins with the explanation of the purpose of this research, then continues with our reflections on the research philosophy, the research and reasoning approaches, as well as the strategy of the research. Finally, it continues with the description of our data collection, analysis processes, and data quality.

3.1 PURPOSE OF THE RESEARCH

The central phenomenon of our research is based on the previously demonstrated theory about the new trend of companies that are pursuing competition and co-operation simultaneously coined into one term: "co-opetition". The nature and features of co-opetition have been extensively investigated in previous studies; however, as we mentioned at the beginning of the paper, there is a lack of knowledge about its linkage with specific innovation types. Therefore, the purpose of this thesis is to contribute to the academic literature and investigate the phenomenon of co-opetition by discovering and gaining a better understanding of the concept and its determinants in the real business environment related to innovation. We intend to achieve this by introducing well-known companies and their experience in innovation through co-opetition. Based on the previously re-viewed theoretical background, we have developed the following research question:

What factors determine the success of co-opetition, and how do they differ in product and service innovation?

Considering the central topic of this master's thesis and the nature of the research question, this paper is designed as an exploratory study. Therefore, the paper is aiming to "*seek new insights*" about co-opetition, with special attention to critical success factors, and to "*assess the phenomenon* *from a new light*", which are the nature of product and service innovation in this case (Saunders, Lewis, & Thornhill, 2009, p. 139). Due to this exploratory character, the paper does not include any propositions to test and validate.

3.2 RESEARCH PHILOSOPHY

Before a more detailed explanation of this paper's research approach, a clarification of its philosophical assumptions is needed. Following Creswell and Creswell (2018) naming these assumptions as worldviews that give a philosophical orientation about the nature of the study and the world given through the lenses of the researchers. According to Saunders, Lewis, and Thornhill (2009), the way researchers view the world grounds and influences the practice of research, including the choices of what should be studied, how the study should be conducted, and how the results should be implied in the paper.

Previous researchers state that a philosophical orientation is formed by the ontological and epistemological beliefs of the researchers (Bryman & Bell, 2015; Saunders et al., 2009). Ontology concerns the nature of social entities and reality, including the assumptions that researchers have about reality, the way the world work. This reality is either considered to be external to social actors, named as Objectivism, or to be a social construction developed from the social actors' viewpoints, called as Social Constructivism (Bryman & Bell, 2015). Epistemology focuses on what is comprised of acceptable knowledge, and has three different aspects, namely Positivism, Realism, and Interpretivism (Bryman & Bell, 2015; Saunders et al., 2009). While the first two share the essence of having an observable reality and objects exist independently from the human mind, the last aspect is a contrasting view that has people and their intuitions as a central subject matter instead of objects (Bryman & Bell, 2015; Saunders et al., 2009). Since the research topic of this master's thesis examines a phenomenon involving social actors with their subjective views rather than objects, we adopted the worldview of **Social Constructivism** and features of **Interpretivism** as they are often combined (Creswell & Creswell, 2018).

Social constructivism argues that "*social phenomena are created from the perceptions and consequent actions of social actors*" (Saunders et al., 2009, p. 111). These social actors are individuals, who seek and develop subjective meanings of the surrounding world and their experiences in it (Creswell & Creswell, 2018). They perceive situations in different ways due to their worldview; thus, they establish varying interpretations that are affecting their actions and social interactions with others (Saunders et al.,2009).

Following interpretivism, different actions can be understood if researchers investigate the subjective meanings that are motivating the actions of individuals (Saunders et al., 2009). This aspect concerns the empathic sensing of human actions (Bryman & Bell, 2015). In order to understand reality, Remenyi, Williams, Money, and Swartz (1998) highlight the significance of examining the details of the situation through social actors. Therefore, the perception of reality, as well as the reality is shaped by social circumstances. As a result, reality itself is a social construct (Saunders et al., 2009).

By perceiving the world through the lenses of social constructivism and interpretivism, a wider surface of research was available, as it enables to see how each individual perceives situations differently based on their own worldview. We sought to make sense and rely on the subjective reality of research participants in order to find out their motives and actions in co-opetition. As a consequence, we acknowledged that reality and knowledge are created through the social actor's experience and perception of it.

3.3 RESEARCH APPROACH

Having outlined how the researchers of this master's thesis perceive the world and how knowledge recognition is created, the following section elaborates more on the research approach and the underlying reasoning concerning the relationship between research and theory.

Research approaches are defined as the "*plans and the procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation*" (Creswell & Creswell, 2018, p.3). Due to the philosophical assumptions and the exploratory nature of the research problem addressed in this paper, **qualitative research** was selected as an appropriate approach. According to Creswell and Creswell (2018), when researchers focus on the meaning that the study participants hold in order to explore and learn about a problem, a qualitative approach is suitable. They also suggest applying a qualitative way when studies are aiming to include the coverage of multiple perspectives and identification of various factors in a situation; hence, developing a holistic view of the studied problem as a mirror of how events happen in real life.

When choosing our reasoning approach, two primary paths within the qualitative research academia, induction and deduction, were considered. On the one hand, deductive reasoning is suggested when a study moves from theory to data and has an assumed outcome (Saunders et al., 2009). Therefore, it builds on the theory part derived from the immense amount of available literature, from which hypotheses or testable propositions are formed. The goal of this approach is to place the researcher independent from the study, then to test and verify the propositions through empirical observations at the later part of the study (Ibid). Authors argue that this approach is used more often in quantitative studies, including more measurable data (Creswell & Creswell, 2018; Saunders et al., 2009). On the other hand, inductive reasoning refers to a "bottom-up" approach, in which no assumptions are developed at the beginning (Dudovskiy, 2019). Instead, researchers make sense of the problem through the context, the process of data collection, and the analysis of findings. The aim of this reasoning is more exploratory; it is to observe patterns in the data set and build general conclusions and theories by including the researcher in the process as well (Saunders et al., 2009).

In a qualitative research, the use of theory is more varied than in a quantitative one (Creswell & Creswell, 2018). This paper utilises the **combination of deductive and inductive** approaches explicitly. Following Dewey (1910), the use of both methods can be defined as the double movement of reflective thought in a sequential manner. Deductive reasoning is used in the initial phase of the thesis to form the foundation of the paper as this approach is applicable to develop the theory review part based on previous academic literature and to shape what questions should be asked in the study and the data collection process. However, as we mentioned earlier, due to the exploratory nature of the paper, it does not include any propositions or hypotheses to test and confirm. Alternatively, in the second part of the thesis, inductive reasoning is applied to expand on the theory by identifying additional determinants of this master's thesis research phenomenon. Furthermore, the inductive reasoning is employed in the presentation of the discussion as well as the conclusion.

3.4 RESEARCH STRATEGY

There are several ways of conducting and analysing empirical data, each having different logics and procedures behind it, although they are not mutually exclusive (Creswell & Creswell, 2018; Saunders et al., 2009; Yin, 2017). However, the nature of the research topic, the form of the research question, the previously chosen philosophy, and approaches profoundly influence the selection of the research strategy (Ibid).

Since the purpose of this paper is to seek new insights and investigate the contemporary phenomenon of co-opetition in the real business context, understanding human interactions are a crucial part of this research. Through conversations, researchers get to know social actors and learn about their experiences and the environment they work in, which is in line with the chosen philosophy of social constructivism (Kvale, 2007).

Therefore, the most appropriate way to pursue the exploratory study of the co-opetition phenomenon in connection with product and service innovation is by the use of **qualitative guided interviews** and having more research participants from different companies. As part of it, each company becomes the subject of the whole study, in which both concurrent and divergent evidence are explored regarding the findings. Interviews are especially favourable for getting the story behind the informants' experiences and perceptions (McNamara, 1999). Researchers are key instruments aiming for a holistic account (Creswell & Creswell, 2018). Thus, knowledge construction occurs in the interaction between the interviewers and the respondents, and the main goal is to understand the meaning of what the interviewees share (Kvale, 2007). The flexible and open characteristics of interviews are advantageous for the explorative nature of this study; thereby, helping researchers to examine the phenomenon from new angles. Interviewers could learn throughout the investigation and reveal unexpected aspects (Ibid).

Selection of Participants

According to Creswell & Creswell (2018), the idea behind a qualitative exploratory study is to purposefully select research participants that can best help in understanding the research topic. The goal is to select potential respondents that are in the position to provide relevant insights in connection with the research topic (Rowley, 2012). Researchers call this strategy as purposive sampling (Bryman & Bell, 2015; Robinson, 2014; Rowley, 2012). This sampling has two approaches, either contingent, when the criteria for the selection evolve during the research, or a priori, when there is an established criterion at the outset of the study (Bryman & Bell, 2015). This paper applied a **contingent purposive sampling**. Therefore, we also acknowledged that it is a non-probability approach, which does not allow us to generalise and requires cautious interpretation of the results.

Based on the theoretical understanding of the studied topic, certain individuals may have a unique perspective on the examined phenomenon (Robinson, 2014). Hence, we were looking for individuals who have experience in co-opetition and engage either in product or service innovation regardless of the industry background. In consideration of contacting the potential interviewees, we have created a portfolio document providing background information of this thesis's authors and the topic of the research. The portfolio is available in Appendix 1. As an initial approach, we have sent the portfolio to possible respondents through an online business professional social network, where they could reply to us with their interest.

Altogether, we could enlist nine individuals from different companies to participate voluntarily in our research with great enthusiasm. With respect to the privacy of the individuals participating in our research, their identities and position names are concealed. Instead, the analysis focuses on the companies and the industries the participants belong. The final list of participating companies is available in Table 1. However, concerning confidentiality requests of interviewees, three organisations required to be named anonymously in this paper. More detailed company descriptions are available in the analysis, in section 4.1.

NAME	INDUSTRY	COMPANY
Company A	Consumer goods	Arla
Company B	Consumer goods	/*
Company C	Electronic Manufacturing	/*
Company D	Automotive	Daimler
Company E	Healthcare Technology	Philips HealthWorks
Company F	Banking	ING Netherlands
Company G	Banking	/*
Company H	Banking	Nordea
Company I	Banking	Klarna

* Anonymous

Table 1: Research Participant Companies (Own designed figure)

3.5 DATA COLLECTION

Qualitative research typically involves multiple forms of data (Creswell & Creswell, 2018). Thus, in order to answer this paper's research question, a combination of both primary and secondary sources was used. The collection of primary data derives directly from the first-hand experience, whereas secondary data originates from available documents, articles, and websites that have been already published.

3.5.1 Primary Data

Due to the nature and purpose of this master's thesis, the primary information gathering comes from the above mentioned qualitative interviews. Interview is a commonly used technique by which researchers talk directly to participants; therefore, they can collect reliable and insightful data and get a deeper understanding of the topic and the participants' perceptions, opinions, behaviour, and actions within their context (Bryman & Bell, 2015; Creswell, 2003; Saunders et al., 2009). When conducting interviews, we followed the underlying assumptions of social constructivism meaning that this form of data collection is actor-based; thus, knowledge is dependent on the subjectivity of each individual and the researchers make interpretations of the meaning of the data (Creswell & Creswell, 2018).

For this master's thesis, a total of nine interviews were conducted, six of them were face-to-face interviews, and the other three were through the internet. All of these interview dates were predetermined in advance to fit the schedule of the interviewees and conducted in mid-March. Each interview lasted for 45-60 minutes. In addition, throughout the interviews, notes were taken, and audio recorders were used with the permission of the interviewees to keep all the information fresh in memory afterward. The application of semi-structured interviews was considered as the most practical and useful in this research. This applied method includes themes and questions prepared in advance in the form of an interview guide for all participating interviewees but also allows having an informal conversation and ask intermediary questions when more information or clarification of specific terms are required. These additional questions and answers make the comparability of the findings easier. This master's thesis' interview guide (Appendix 2) was developed deductively with the guidance of the literature review in order to address the relevant themes and questions. This predefined template provided instructions about the purpose of the interview and ensured the structure of the cohesive questions throughout the process.

Regarding the nature of the questions, the open-ended question type seemed to be the best choice. There is no limitation; interviewees are encouraged to formulate extensive responses by their own words (Saunders et al., 2009). As a result of broad questions, participants can construct the meaning of the situation more easily, which is in line with the philosophical stance of this paper (Creswell & Creswell, 2018). As a consequence, the interviewers could listen and obtain unexpected answers. It should also be mentioned that these interviews involve questions raised in an implicit way. Therefore, the interviewers did not ask directly about the necessary information with subjective understanding, rather collect information by concluding the given answers.

3.5.2 Secondary Data

Secondary data is considered as a good additional source of information supplementing the primary data source (Saunders et al., 2009). In addition to the qualitative interviews with the research participants, secondary sources of information including company publications and reports were gathered from the organisations' websites or articles in relation with them. These additional data were used to supply background information when describing the selected companies and in order to increase the validity of the findings from the primary data. As a consequence, the risk of misinterpreting the gathered information is minimised.

3.6 DATA ANALYSIS

According to Creswell & Creswell (2018), data analysis is a simultaneous procedure that goes hand-in-hand with other parts of the qualitative study like data collection and findings identification. Unlike statistical analysis, there are only a few fixed guidelines to follow in qualitative analysis; instead, it depends more on the careful presentation of the alternative interpretations and ranges from the categorisation of interviewee responses to the process of determining connections between the categories (Saunders et al., 2009; Yin, 2017). When a qualitative approach is chosen, the challenge is to note all the rich data collected, address the critical aspects of the study, examine conceivable opposing interpretations, and demonstrate a familiarity with the prevalent thinking and literature about the topic (Ibid). This master's thesis uses an analytic technique called thematic analysis across the examined companies. In addition, the analysis process followed the sequence of seven steps suggested by Creswell and Creswell (2018) and illustrated in Figure 15.

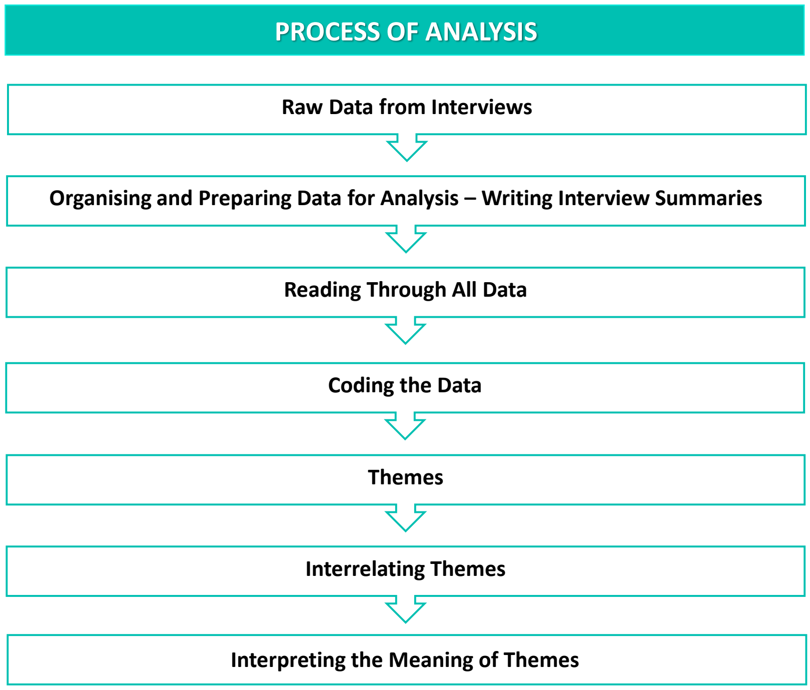

Figure 15: Process of Analysis (Own designed figure)

First of all, based on the field notes and interview recordings we have organised the data and created summaries of the nine interviews that are available in Appendix 3. Secondly, in order to get a first impression and general sense of the answers we looked through and get acquainted with all the information. Afterward, the coding process has started to impose a structure on the data set. We began the brainstorming phase of thinking about key themes and how to reflect them. The basic two categories that are going through the analysis emerged from the literature review on the topic and the research question. Since the second part of our research question is aiming to explore the differences between product and service innovation, the two main categories were labelled as Product and Service Companies, and the companies were sorted accordingly. As a next step, we were generating further themes that appear in the analysis part displaying multiple perspectives. These themes were analysed for each company both within and across the main two categories to see the interrelations. We acknowledged that participating companies come from different industry background; however, comparing across industries was not the intention of this paper. Lastly, the process involved the interpretation of overall findings compared to the literature then ended with a reflective discussion of the main points relevant to the research question. In order to address the challenge of presenting rich qualitative data, the analysis includes direct quotations from the interviewees in a contextualised way to support insights. However, we paid careful attention to avoid a series of uninterpreted quotes (Kvale, 2007).

3.7 DATA QUALITY

This thesis aims to ensure the highest possible quality of the research conducted. Due to the qualitative nature of this paper, the contextual and subjective data from the interviews can impact the **trustworthiness** of the findings (Bryman & Bell, 2015). Thus, as part of the data collection and analysis process, some quality criteria should be evaluated to ensure high data quality (Bryman & Bell, 2015; Creswell & Creswell, 2018; Saunders et al., 2009). Particularly, data quality issues in relation to reliability, validity, and generalisability should be considered in confirming the usefulness of this paper (Saunders et al., 2009).

3.7.1 Reliability

In qualitative research, reliability parallels dependability and defines the consistency and repeatability of the results under similar conditions (Bryman & Bell, 2015; Saunders et al., 2009). In order to increase reliability, we ensured an extensive description of the choices regarding the research process; therefore, others can follow the procedure. Since both authors of this paper conducted the interviews together based on their detailed interview guide, the potential observer error was decreased by having different ways of asking questions, thereby increasing reliability. Also, with the objective to reveal the full range of findings, we could avoid the potential observer bias of displaying only positive results; thus, providing a more reliable answer to the research question (Bryman & Bell, 2015; Saunders et al., 2009)

3.7.2 Validity

Validity refers to credibility, the extent to which we gain access and reflect the research participants' knowledge and experience (Bryman & Bell, 2015; Saunders et al., 2009). In other words, it refers to the accuracy of the findings, whether they present what they appear to be about (Ibid). In addressing validity, we incorporated triangulation in this thesis; therefore, we employed multiple sources of data to build and justify themes (Bryman & Bell, 2015; Creswell & Creswell, 2018). It is a highly used strategy in qualitative studies that improves the validity of the research and evaluation of findings. When gathering secondary data, we were aware of the possible bias in their contents and were critical to their origins and in their use. Furthermore, we applied respondent validation to determine the accuracy of the findings by sending out some analysis parts to research participants and giving the possibility to verify the data thereby reducing the risk of misinterpretation (Ibid).

3.7.3 Generalisability

Generalisability, which is usually called as external validity or transferability as well**,** indicates that the results from a representative sample of respondents can be applied to other research settings with different contexts and wider population (Bryman & Bell, 2015; Saunders et al., 2009; Smith, 2017). Since our primary data collection process reflects reality and context at the time of conducting interviews, the findings from it are subject to change, mainly due to the dynamic environment, in which most of the companies operate. Therefore, we acknowledge that the information gained from the interviews could not be generalised to an immense number of companies; however, the findings could be useful to decision-makers in both product and service companies that are considering the paradoxical relationship of co-opetition in order to innovate. Furthermore, despite the aforementioned fact about purposive sampling that the results from it are not generalisable, selecting companies from various industries strengthens the generalisability.

4. ANALYSIS

This chapter introduces the empirical findings from nine qualitative interviews with different companies and the supplementing secondary data. The section consists of five parts. Figure 16 below illustrates the exact structure of this research's thematic analysis across the examined companies and the subsequent discussion part.

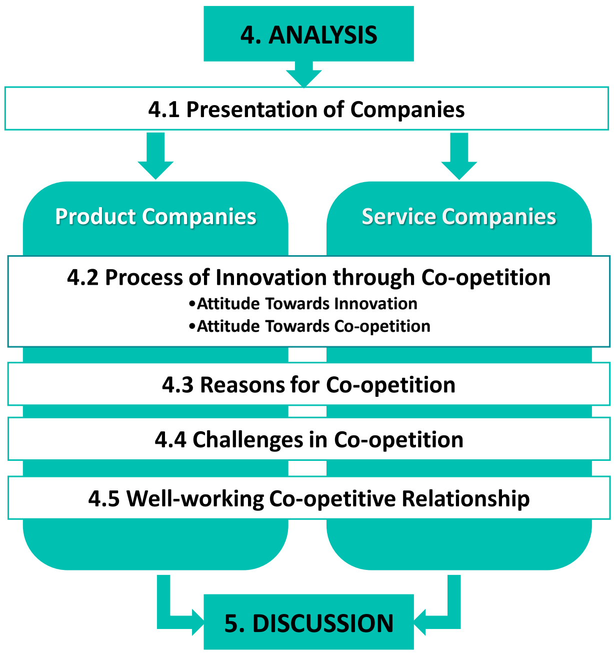

Figure 16: Overview of Analysis (Own designed figure)

It begins with a short introduction of the nine interviewed companies as well as the industries in which they operate, providing the reader with the necessary background information. It continues with the interpretation of the overall findings based on identified key themes. First, the process of innovation through co-opetition is explored to provide insights into **what** the companies' perceptions of innovation and co-opetition are. Then the next steps describe the firms' motivations **why** they pursue collaboration with competitors while also considering the possible challenges of it. Finally, the last step provides an interpretation of **how** companies apply co-opetition to make the outcome of innovation successful.

4.1 PRESENTATION OF THE COMPANIES

Since this paper's research question focuses on two objects of innovation, as preparation for the analysis, the nine interviewed companies are categorised as either product or service-oriented companies based on the different characteristics described in the theory review. However, through the process of conducting qualitative interviews, the findings revealed that some of the previously assumed product-oriented companies, namely Daimler and Philips Healthworks, focus more on services in some aspects of their businesses. Both companies sell products; however, when they engage in innovation practices, their approaches are more service-oriented (Company D & Company E). For example, Company D, which comes from the automotive industry, stated that they *"work with everything that is digital but not a car"*. Therefore, the analysis follows the separation of Product and Service Companies as presented in Table 2 below.

NAME	INDUSTRY	COMPANY
PRODUCT COMPANIES		
Company A	Consumer goods	Arla
Company B	Consumer goods	/*
Company C	Electronic Manufacturing	/*
SERVICE COMPANIES		
Company D	Automotive	Daimler
Company E	Healthcare Technology	Philips HealthWorks
Company F	Banking	ING Netherlands
Company G	Banking	/*
Company H	Banking	Nordea
Company I	Banking	Klarna

* Anonymous

Table 2: Overview of the Interviewed Companies allocated into Categories of Product and Service Companies (Own designed figure)

When the paper states the findings of “Company A, B, - I,” in the following sections, they refer to the adherent interview summaries available in Appendix 3 as the source of information.

4.1.1 Consumer Goods Industry

The industry of consumer goods focuses on industrial products, which are ready for consumption by the customer (Kenton, 2019). Alternatively called final goods, consumer goods represent the outcome of manufacturing and production (Ibid). Raw or basic materials, like copper, are not perceived as consumer goods because they need to be transformed into usable products for the consumer (Ibid). Thus, final goods are the result of what a consumer can see on the store shelf; examples are clothing, food, and jewellery (Ibid). From the consumer goods industry, two companies participated in this research.

COMPANY A: Arla Foods is the largest producer of dairy products in Scandinavia (Arla - Company, n.d.). In the past, Arla foods started as a collaborative project between several farmers in Sweden and Denmark and developed to a big corporate with around 18.000 employees (Ibid). Nowadays, Arla foods is still a farmers-owned company, which means that the majority of the animal feed used by Arla farmers is produced by the farmers themselves (Arla - Farmer owned, n.d.). Arla foods operates in more than 28 countries, and its headquarter is located in Denmark (Arla - Countries, n.d.). As a dairy company, they pursue the vision of *“creating the future of dairy to bring health and inspiration to the world, naturally”* (Company A). Through their innovation centres and their development teams in the UK, Germany, China, Sweden, Finland, Netherlands, and the US, Arla innovates from farm to plate creating the future of dairy products (Arla - Research and Innovation, n.d.).

COMPANY B: With respect to confidentiality request, the second company is represented as Company B in the paper. Nonetheless, it is in the interest of this master’s thesis to give a short and general description of the company. Company B is an international consumer goods corporation with a specialisation in healthcare products as well as personal care and hygiene products. The company classifies itself as *“fast-moving consumer goods company”* or as *“global consumer packaged* *goods"* (Company B). For their innovation strategy, the company is looking for complementary partners to innovate in the areas of products, technology, in-store, e-commerce along the value chain[1].

4.1.2 Electronic Manufacturing Industry

The second industry consists of organisations involved in the development, design, assembly, production, and servicing of electronic components and equipment (Electronic Manufacturing, n.d.). The electronics business is one of the most innovative industries due to its fast evolvement, but it is also one of the most competitive one (Ibid). The research and development of novel or improved products are of particular importance in this industry; therefore, companies often compete intensively to offer the newest technology to market first (Ibid). From this industry, one company was interviewed as part of this research.

COMPANY C: With respect to confidentiality request, the third firm is shown as Company C in this master's thesis. Similar to Company B, a short and general description of the company is in the benefit of this paper. Company C is an international electronics manufacturer with its main business focusing on lighting and the manufacturing of light bulbs[2].

4.1.3 Automotive Industry

Another interview was conducted with a firm from the automotive industry, which involves companies with the activities of developing, designing, manufacturing, marketing, and selling motor vehicles, including most components, such as engines and bodies (Rae & Binder, n.d.). The industry products are commercial automobiles, light trucks such as pickups, vans, and sport utility vehicles (Ibid).

COMPANY D: The Daimler Group is a German multinational automotive corporation and one of the biggest global producers of premium cars (Daimler - Company, n.d.). The history of Daimler Group goes back to 1886 when Carl Benz and Gottlieb Daimler independently from each other developed

[1] With respect to confidentiality request, the secondary sources are not displayed.

[2] See footnote 1

the car (Daimler - Corporate history, n.d.). Daimler's headquarter is in Stuttgart, Germany, and nowadays, they are the world's largest manufacturer of commercial vehicles with a global reach (Daimler - Company, n.d.). In addition, they provide financing, leasing, fleet management, insurance, and innovative mobility services (Ibid). By the end of last year, more than 290.000 people were employed in the different divisions of the company (Daimler - Financial Year 2018, n.d.). Daimler's objective is to *"continue to be a leading vehicle manufacturer while developing into a leading provider of mobility services"* (Daimler - Our strategy, n.d.). Thereby, Daimler focuses on innovation within the fields of future mobility in connectivity, automated and autonomous driving, flexible use, and electric drive systems (Daimler - Innovation and safety, n.d.).

4.1.4 Healthcare Technology Industry

Health technology is described as the industry that applies skills and systematised knowledge in the form of devices, vaccines, medicines, procedures, and systems developed to solve a health problem and to improve quality of lives (What is health technology, n.d.). From this industry, one company was interviewed.

COMPANY E: Philips HealthWorks is a specialised sub-unit of Royal Philips. Philips HealthWorks focuses on the area of health technology and operates as a separate department within Philips (Ibid). The company improves people's health and enables better outcomes across the health continuum of neuro diagnostics, molecular diagnostics, and personal health (Philips Healthworks - Introduction, 2019). Besides that, Philips HealthWorks is located in Eindhoven, Cambridge, Shanghai, and Bangalore and incorporates an acceleration program, a start-up program, and an internal ventures program (Philips HealthWorks - Home, n.d.). Philips Healthworks believes in accelerating innovation through collaboration (Philips Healthworks - Introduction, n.d.).

4.1.5 Banking Industry

The modern banking industry is a complex network of financial institutions, who are granted with their banking licenses by the state to supply banking services (Gale, 2008). The main service offerings are related to transferring, storing, extending credit against, or managing the risks associated with holding a variety of forms of wealth (Ibid). The comprehensive package of financial services offered to customers has varied significantly across institutions, across time due to the development of the economy, and the advances in information and communications technologies (Ibid). Most of the research participant companies belong to this industry, and altogether four interviews were conducted.

COMPANY F: The ING Group, commonly referred to as ING, is a Dutch multinational banking and financial service cooperation with its headquarters in Amsterdam (ING - Who are we, n.d.). ING has over 54,000 employees who offer banking services to 38,4 million retail and wholesale banking customers in over 40 countries (Ibid). ING Group was founded through the successful merger of the banking business NMB Postbank Groep and the insurance business Nationale-Nederlanden in 1991 (ING - Our History, n.d.). Nowadays, ING's main business areas are direct banking, commercial banking, retail banking, investment banking, asset management, and insurance services (Ibid). Their vision is to provide customers with the most effective solutions to help them best manage their financial futures, while creating long-lasting value for all stakeholders (ING - Our Vision, Mission and Value, n.d.). With its ING Labs, Company D brings disruptive ideas to market by combining their knowledge and network with the knowledge and skills from others (ING - Labs, n.d.). For their innovation approach, ING searches for partners such as corporates as well as individuals with entrepreneurial thinking, new technologies, experience in platform business models, and ecosystem designs (Ibid). For this master's thesis, the researchers conducted an interview with the sub-unit of ING Group; ING Netherlands.

COMPANY G: The second company operating in the banking sector requested anonymity in this master's thesis, hence only referred to the firm with the generic name; Company G. Nonetheless, similar to Company B, it is in the interest of this master's thesis to give some background information about the company. Company G operates as a Dutch multinational bank and financial service with its headquarters in Amsterdam[3].

COMPANY H: Nordea Bank Abp, usually known as Nordea, is one of the biggest banks operating in the Nordic countries with its head office in Helsinki, Finland (Nordea - Who we are, n.d.). In 2000,

[3] With respect to confidentiality request, the secondary sources are not displayed.

Nordea was founded as a result of successful mergers and acquisitions of Finnish, Danish, Norwegian, and Swedish banks (Nordea - Our history, n.d.). Their main business areas are personal banking, commercial banking, business banking, wholesale banking, as well as asset and wealth management (Nordea - Our organisation, n.d.). Nordea operates in 20 countries and employed 28,990 people in 2018 (Nordea at a glance, n.d.). Their vision is to lead the way, enabling dreams, and everyday aspirations for a greater good (Nordea - purpose and values, n.d.). Thereby, their guiding values are collaboration, ownership, passion, and courage (Ibid). Nordea’s innovation approach focuses on three main areas including new technology (Blockchain, mobile development), FinTechs (Partners, Accelerators), and distributed innovation (Innovation Lab, Innovation week, customer first) (Nordea - Innovation, n.d.).

COMPANY I: Klarna Bank AB, usually referred to as Klarna, is a Swedish bank that offers online financial services such as payment solutions to online storefronts, post-purchase payments, as well as direct payments (Klarna - About us, n.d.). Klarna was founded in 2005 with its headquarters in Stockholm with the aim of making online shopping easier for customers (Ibid). They are famous for bringing the innovative idea of “buy now & pay later” to market (Interviewee I). Today, Klarna is one of the leading payment solutions providers in 14 countries and employs 2500 people (Klarna - About us, n.d.; Klarna - Statistics, n.d.). Their vision is to make paying as simple, safe and smooth as possible (Klarna - About us, n.d.). According to the interviewee from the company, Klarna’s innovation is rooted in every department of the company and not formed in one unit (Company I).

4.2 PROCESS OF INNOVATION THROUGH CO-OPETITION

The first part of the analysis explores the perception and application of innovation and co-opetition respectively from the research participants’ perspectives. It presents insights about what the previously presented companies are doing in connection with innovation and co-opetition based on the data collection and theoretical reflection. It begins with the identification of findings from Product Companies and continues with Service Companies.

4.2.1 Product Companies

4.2.1.1 Attitude Towards Innovation

Having a clear understanding of the desired innovation outcome, impacts the strategy of guiding organisations towards what they want in the future (Zapfel, 2019). According to innovation literature, there are various ways of how to categorise innovation types. Thereby, these different types have process-related and strategic significance in helping business management (Ibid). Besides the focus on object classification that is applied in the research question, this thesis has introduced other categories in the theory review, centralised around the extent of change and the place of innovative activities of companies.

Regarding the **extent of change** in innovation, findings from this paper's primary data collection show that none of the Product Companies had mentioned explicitly the names of the different classifications as outlined by Lopez (2015), disruptive, architectural, radical, and incremental innovation. This leads to the assumption that Product Companies are not aware of existing distinctions and their meanings, which can be a result of the blurry terminological differences presented in theory review chapter earlier (Neely & Hii, 1998). However, by analysing the qualitative interviews of Product Companies further, it was found that all companies engage in some form of incremental innovation, as this form is also the most common one (Lopez, 2015). All Product Companies improve their existing products on a continues bases to offer an updated version to their customers.

All things considered, the generalisation to any extent of change types is more difficult as there is no specific type highlighted as a common one between each Product Company based on the interviews. Findings revealed that they do not only focus on one type of innovation, for instance, incremental innovation, but they also engage in other types of the extent of change categories. For example, Company B is involved in disruptive innovation by creating new materials for their products, whereas Company C takes part in radical innovation by shifting to the development of LED lamps. Nonetheless, it is difficult to determine and draw a distinct line between which specific types the companies are undertaking or which not. It is believed that the companies do not differentiate their innovation projects based on the categories due to the assumed lack of knowledge or interest in them.

In addition to the extent of change category, the **place of innovation** was another reviewed classification in the theory section. By analysing Product Companies, it was apparent that each company engages in both closed and open innovation types. All firms are involved in creating innovation within the company by using internal resources and expertise for generating ideas, which is understood as closed innovation (Chesbrough et al., 2006). All firms emphasised that they also practice open innovation in terms of co-operating with partners such as research institutions as well as with competitors. However, Company C did not mention the term “open innovation” directly. Company A and B indicated that they engage with established suppliers. Furthermore, Company A stated that they mainly collaborate with other companies as part of open innovation because there is much knowledge outside. Company B framed open innovation as *“rocking the field together*” with external partners to complement their own innovation capabilities and create more and faster innovation in a shared partnership.

In the following paragraphs, different ways of how Product Companies perform innovation are presented. Company B introduced **three ways to *“kick-off innovation*”**. First of all, innovative activities can be initiated through a strategic need, which usually gets defined by business leadership. Secondly, a project can start with an idea introduced by an internal employee. These ideas usually begin on a *“small scale”* with a *“messy and fuzzy”* front end (Company B). Evidence from Company C agree with Company B and outlined how such an idea develops within the company and what it needs for its survival. It requires two to three people’s commitment, much time, and support from different organisational levels. Thereby, managers would need to shield the idea from the commercial side to guarantee its survival internally (Company C). The third way introduced by Company B is through induction from an external person or company that is approaching the focal firm.

Company A highlighted the usage of the so-called **Stage-Gate-Model.** It is a model proposed by Cooper, Edgett, and Kleinschmidt (2002) for optimising business processes from the idea stage to launching. Arla (Company A) adopts the stages in the following way. Firstly, exploring new opportunities like technologies and ingredients; secondly, creating a concept; thirdly, generating a business case; fourthly, developing the product; and finally, launching it. For Company A, following the model means that *"there is a continuous iteration"* combined with a simultaneous try out of the new working styles such as sprints to verify and fail fast. By using mixed methods, Company A tries to quickly understand if they are on the wrong track of the development.

Finally, findings from Company C present another approach by framing the **interaction within innovation projects** as follows: *"There needs to be a balance between the innovation collaboration and the business commercial collaboration, otherwise it is just a nice research party which does not deliver anything"*. Company C proposed two other perspectives on how to consider innovation, one is about actually doing innovation, and the other one is about organising innovation. The latter involves the set-up and then later the scale-up of the innovation activity, but this unit would not pursue the actual innovation activity.

SUM UP

All in all, although there are various ways to categorise innovation based on the literature, findings from primary data collection indicate that Product Companies engage in various types at the same time without explicitly naming them. However, through the analysis, it is found that all of them engage in incremental innovation and both open and closed innovation. In addition, Company B is involved in disruptive innovation, whereas Company C takes part in radical. Furthermore, in analysing the nature of Product Companies' innovation, the overall response shows that the three companies are using distinct ways to perform projects. Company B and C introduced approaches to initiate innovation projects, Company A presented the Stage-Gate-Model that they use for optimising processes, and lastly, Company C highlighted two perspectives that are common when they interact with other companies for innovation.

4.2.1.2 Attitude Towards Co-opetition

As outlined in the theory review, the relationships between companies are getting more complex (Bengtsson & Knock, 2014; Dagnino & Padula, 2002; Ganguli 2007). There is a demand for steady improvement in performance and activities that extends the boundaries from a single company to the pursuit of dynamic interaction with other firms, even with competitors (Ibid). This section presents the attitude of Product Companies towards co-opetition by first introducing their thoughts about collaboration as an antecedent of co-opetition. Afterward, it continues with the complexity and dynamics of their co-opetitive relationship that they follow with rival companies, based on the classifications presented in sub-section 2.4.4 of the theory review.

In general, all three Product Companies emphasised the importance of engaging in **collaboration**. It was particularly highlighted by the two companies from the consumer goods industry as they both have open innovation as a central element of their development strategy. Company A prefers to use the term "co-operation" that it is considered as the mindset and *"DNA"* that triggers better results by having more hands and brains together speeding up processes. *"You have a great source of knowledge inside but there is still much more knowledge outside"* (Company A). Likewise, as Company B stated in connection with their understanding of innovation in the above section; collaboration is the field of *"rocking together"*; thus, the company believes in the fact that in the increasingly connected world, the biggest wins come from working together. Both Company A and B are operating an online platform to enhance collaboration for innovation. However, when the research participants were questioned on **collaboration with competitors**, the majority reflected more critically than when asked about regular collaboration. Interestingly, none of the Product Companies used "co-opetition" as a term to describe their collaborative relationship with rivals. According to Company B, *"working with competitors is really an exception, it is not the norm",* and it has to be the best option from a business standpoint. Company A emphasised the significance of business benefits and the fact that participating companies have to create something together which makes value and money for both. It is a matter of finding out how can it work for both parties (Company A). Therefore, all Product Companies agree that boundaries have to be stricter and discussed or defined in contracts in order to be clear on the areas they compete in.

Considering Luo's (2007) typology of the **intensity**, the extent to which the firms are simultaneously competing and collaborating with others, it is found that the three Product Companies primarily belong to the **Adapting Situation**, in which high co-operation and high competition are maintained. In this situation, organisations collaborate with rivals in certain areas by addressing common goals, while competing in other domains (Luo, 2007). The three analysed Product Companies are aiming to strengthen their distribution channels and expand geographically by relying on this mutual dependence. For example, Arla (Company A) collaborates with Mengniu, a Chinese dairy giant, in order to share distributions; thus, Arla has a better position in China than it would have been alone and vice versa. Even though they produce similar products, they are not seen and called as competitors due to geographic diversification. Another example is from Company C and its collaboration with a global lighting manufacturer, which sell the same products. By sharing expertise and having cross working methods, they become more efficient together (Company C).

It should also be mentioned, that findings from Company B and C can also be categorised into the **Partnering Situation**, when their collaboration relies on complementing and sharing skills depending on the product. As mentioned in the theory part, this situation is characterised by high resource complementarity and low market commonality; therefore, an increased interdependence to achieve joined synergy deepens the economic ties while easing competitive pressure (Luo, 2007). Regarding Luo's (2007) other typology about **diversity** and geographic comprehensiveness, only the primary data from Company A was sufficient to deduce another classification. Based on this, it was found that Arla (Company A) co-operates with companies in **industrial clusters and ecosystems**; for example, the network of Global Dairy Platform that includes big dairy companies of the world to discuss topics of the role of nutrition and sustainability. Therefore, the company fits the **Networking Situation,** when co-opetition occurs with more globally dispersed rivals (Luo, 2007). In addition, being part of the Danish Food Cluster can be viewed as a **Concentrating Situation,** in which companies co-opete in concentrated areas, in this case only Denmark (Company A; Luo, 2007).

When examining the Product Companies in relation to Dagnino and Padula's (2002) matrix, it was found that there is no specific strategy that companies apply to all of their co-opetitive relationships. Instead, the matrix helps to identify and analyse each co-opetitive interaction individually. For example, Arla's (Company A) collaboration example with the Chinese company can be categorised as a **Simple Dyadic Co-opetition**. However, the examples of co-operation between companies in industrial clusters and ecosystems can be classified as a **Complex Network Co-opetition** (Company A).

SUM UP

To sum up, the analysis shed light on the three Product Companies' belief that the biggest wins come from working together. Therefore, collaboration is a central element of their innovation strategies. Importantly, although none of the companies used the term "co-opetition" during the interviews, they still collaborate with competitors simultaneously. However, their approach is more distant as this relationship is not the norm. Moreover, evidence on classifications showed that the categories presented in theory are not mutually exclusive, but helpful in identifying individual co-opetition interactions. Thus, primarily all companies belong to the Adapting Situation while Company A and C also fit the Partnering Situation. Similarly, Company A's examples of clusters and ecosystems fit the Concentrating and Networking Situations, while the company also takes place in both Simple Dyadic and Complex Network co-opetition with different rival organisations.

4.2.2 Service Companies

4.2.2.1 Attitude Towards Innovation

Similar to the structure of Product Companies parts above, the six Service Companies are analysed through categorisations introduced in the theory section. Therefore, the following paragraphs present the companies through two innovation types: the extent of change and place of innovation.

Taking the classification of the **extent of change** in innovation into consideration (Lopez, 2015), the majority of Service Companies did not mention any specific classification for the innovation they practice, in common with Product Companies. Therefore, it is similarly assumed that Service Companies do not name and differentiate innovation types due to blurry terminologies and definitions

(Neely & Hii, 1998). Thus, the researchers of this master's thesis cannot generalise any of the types for the Service Companies based on the primary data collection. However, by using secondary sources, the researchers can identify that all companies practice incremental innovation in the form of improving, adding or removing features of existing services. For example, Company G engages in improving the services of their digital financial advisor service[4], and Nordea (Company H) develops its mobile payment solutions further (Nordea - Mobile payment solutions, 2018).

Notwithstanding, two Service Companies described their way of allocating their innovation with the use of the **McKinsey Horizon** method (Company G & F). This method consists of three levels (Company G & F). The first horizon deals with adding features and making services better, which is in line with incremental innovation (Company G & F). The next horizon involves the development of new products or services, markets or technologies, which can be partly seen as architectural innovation (Company G & F). Lastly, the final horizon is described as a disruptive innovation that is the same term, which is used interchangeably with radical innovation in this paper's theory review (Company G & F). Based on this, the evidence shows that Company G and F undertake different types of innovation at the same time; thus, the levels are not mutually exclusive. Likewise, Klarna (Company I) acknowledged that in their department they focus on more types simultaneously, namely incremental innovation and disruptive innovation, but they do not engage in the creation of new business models in unexplored areas, which is perceived as radical innovation.

Regarding the categorisation of the **place of innovation**, the observed findings are identical with the ones from Product Companies. All Service Companies practice both open and closed innovation forms. However, often they describe what they do which in turn corresponds to closed and open innovation respectively, instead of applying the terminology used in academia. Closed innovation is already validated through the performance of incremental innovation whereas open innovation needs further analysis. All Service Companies are involved in some form of exchange with various partners like start-ups, FinTechs, suppliers, as well as competitors. For example, Nordea (Company H) mentioned their interaction with other companies as part of open banking. Open banking de-

[4] With respect to confidentiality request, the secondary sources are not displayed.

scribes a system where users get provided with a network of open application programming interfaces (APIs) that qualifies third-party developers to build services and applications centred around the financial institution (Frankenfield, 2019). Company G adds to it that open banking often includes a massive amount of players where the interactions are highly regulated.

In addition to the previous two innovation types, this master's thesis highlights different approaches to how Service Companies pursue innovation. Based on the interviews, the overall response to the question about the nature of Service Companies' innovation projects differs from the Product Companies' replies. While Product Companies focused more on how an innovation project can start, some Service Companies describe the **drivers** behind such a project (Company E, F, & G). Company E mentions that an innovation project is usually driven by a specific pain, a new market entry decision, a strategy change with the organisation or with the contest of keeping up with the solutions of the competition. Thereby, Company E and F agree that new technology such as Blockchain, Artificial Intelligence, and Machine Learning can lead an innovation project. That is why Company F recommended having dedicated teams, which only work with novel technologies and their implementations. Company F also explained that it is helpful to share stories about both successful and failed innovation processes for triggering innovations and facilitate learnings from each other within a company.

In the Product Companies section, the **Stage-Gate-Model** was described as one additional method for performing innovation. Company F, G, and H also named the same model. With that in mind, for Company G a sophisticated process pace includes strict stages for guiding the innovation development. Moreover, Company F mentioned the perspective of involving customers into the decision process for validating if the developed solution still fits the market needs.

In addition to the Stage-Gate-Model, Company F introduced the **Innovation Funnel** which is a common model for evaluating ideas and conceptualise products (Barber, 2011). In three funnels a market opportunity is pinpointed, an offering for that market opportunity is created and operations are codified (Martin, 2010). Through the innovation funnels, Company F asses and measures the current innovation projects to explore new opportunities and the way of scaling these.

In contrast to having separated innovation units inside a company, Company I stands for having innovation implemented in the **DNA** of the organisational culture. Internally, Company I do not use the concept of "innovation", and there is no separate unit for performing innovation. Instead, they try not to label it at all because they believe in that new growth should be the task of every unit in an organisation. Labelling and separation would kill the innovative DNA of the company resulting in only specific parts try to drive innovation which creates an imbalance within the firm and slows it down (Company E).

SUM UP

Overall, similar to findings from Product Companies, generalising an innovation category for each Service Company is difficult. All six companies pursue more innovation types simultaneously mainly without explicit referring to the classification. Exceptionally, Company G and F use the McKinsey Horizon method for distinct innovation types by dividing it into three levels. However, through the analysis, it was found that they all engage in incremental innovation, and participate in both open and closed innovation. On the contrary to Product Companies' innovation initiation focus, three Service Companies' attitude points towards innovation drivers. Furthermore, two models, Stage-Gate Model and Innovation Funnel, were identified as a guiding method of innovation by Company F, G, and H. Additionally, Company I highlighted that by contrast to most of the Service Companies' separated innovation units, they refer to innovation in every part of the organisation as a DNA.

4.2.2.2 Attitude Towards Co-opetition

Similar to sub-section 4.2.1.2 regarding Product Companies, this sub-section aims to describe the complex relationships and dynamic interactions with the competitors of the interviewed Service Companies. Overall, the six Service Companies' approach to co-opetition was analysed by examining their regular collaboration first and then, how they perceive co-opetition. Besides, the following paragraphs also focus on how their shared examples can be classified according to the models presented in sub-section 2.4.4 of the theory review.

Even though all examined Service Companies engage in **collaboration**, findings from four of them agree that there is a reluctance to defining the term explicitly (Company D, F, G, & H). It is argued that the concept is *"fluffy"* and broad; thus, there are many ways of doing it (Company D, F, & H). However, the pieces of evidence we found point to the movement towards a dense network of inter-organisational relationships, in line with the concept proposed by Hoffmann (2005) and Gomes-Casseres (1998). As Company E stated: *"There is always a place for collaboration".* Thus, these findings are also in line with the theory of Bengtsson & Kock (1999) by emphasising the importance of collaborative horizontal and vertical relationships for activities in a network context. Coming from the open banking business environment, Company G and I view co-operation as a foundation and precondition of success. It is getting more common to measure accomplishment by way of looking at how good a firm is at is a firm in collaboration (Company G).

As part of the dense network of co-operative relationship, all Service Companies mentioned the **collaboration with competitors** as a collective phenomenon too. However, surprisingly, none of them used the term "co-opetition" to describe the relationship. Company H even highlighted, as an additional comment at the end of the interview, that there is no vocabulary for expressing collaborative interaction with rivals. Therefore, it is believed that although companies engage in co-opetition, there is lack of knowledge about its literature in the real business context.

Nevertheless, when defining their co-operative interactions with rivals, similar to Company A's case from the Product Companies, some Service Companies emphasised that they select competitors that are not fully overlapping and rather call them partners (Company E, H, & I). Otherwise, it is extremely tough to have a win-win situation (Ibid). Therefore, based on the findings, effective management is a key element in co-opetition that supports employees from all participating companies to act as a joint operation and benefit mutually (Company D & I). This requires a *"good click between the management"* of the co-opeting companies (Company E). Company G even suggested having a third party involved, such as a consultancy firm, that can act as a facilitator by leading meetings, bringing people together, and managing administration.

Starting the classifications with Luo’s (2007) typology again, when analysing the co-opetition **dynamics** of Service Companies, the findings are very much alike to the results of Product Companies. All things considered, there is a tendency towards **Adapting Situation**. For example, both Klarna (Company I) and Nordea (Company H) are collaborating with non-direct competitors, which serve different geographical locations, with the purpose to share distribution channels. Nordea (Company H) co-opetes with the American Global Investment Management company, BlackRock, to better serve customers, whereas Klarna (Company I) works together with Adyen, a Dutch e-commerce company, to reach their customers and merchants. Nordea (Company H) further belongs to the Adapting Situation by taking part in a bank sector collaboration. When a Nordic bank realised that they cannot innovate mobile payment solutions alone, more Nordic banks joined their forces and worked collectively to create sector solutions like the shared payment platform called MobilePay. Likewise, the sector collaboration situation of banks in the Netherlands is also advantageous since there are only three leading banks in the country; hence, it is easier to shift the industry towards new solutions (Company F & G). Lately, these three biggest Dutch banks invested in the development of a shared ATM network that incorporates uniformly and equally distributed ATMs to create a long-term way to keep cash available and accessible (Company F & G). In addition, by expanding their co-opetition to combine forces with more banks from the Netherlands and neighbouring countries as well, iDeal and Payconiq were born as new payment solutions (Company F; iDeal - What is iDeal, n.d.; Payconiq - About us, n.d.).

Besides the banking industry, from the remaining companies, Daimler (Company D) mainly belongs to the Adaptive Situation. Philips HealthWorks (Company E), however, represents an exception since it is a sub-unit with fewer human resources. Therefore, Company E cannot be categorised using Luo’s (2007) typologies in the context of bigger multinational enterprises. Regarding Daimler, they most recently started co-opetition with BMW Group, for the first time in the history (YourNow - Home, n.d.), to pool and offer their multiple mobility services and provide sustainable urban mobility for customers (Company D). *“Mobility is a network game, the more, the merrier”*; therefore, they share network and customer base (Company D). Consequently, considering the **diversity** and geographic comprehensiveness typology, Service Companies tend to fall into the category of **Concentrating Situation**, in which few rivals co-opete in concentrated markets like sector collaborations

(Luo, 2007). Also, more Service Companies fit in the **Networking Situation**, when co-opetition occurs with more globally dispersed rivals through contractual obligations including the distribution-sharing examples (Luo 2007).

Furthermore, when examining Service Companies and concerning Dagnino and Padula's (2002) matrix, it is found that similar to Product Companies, the identified categories are not mutually exclusive and each Service Companies' co-opetitive relationships vary. Nonetheless, based on the earlier described examples, it is identified that there is a general movement towards the forms of **network co-opetition,** both **Simple and Complex Network Co-opetition**. Hence, co-opetition occurs among more than two firms at the same time and along with either a single level or several levels of the value chain (Dagnino & Padula, 2002). All Service Companies are aiming to participate in and contribute to **ecosystems and clusters**.

In the past, organisations were aiming at operating and achieving everything by themselves; however, nowadays, firms can specialise in an area of the ecosystem; thus, *"multiple companies provide a little piece of the whole"* (Company I). In the banking industry, companies actively engage in co-opetition as they work within the ecosystem of sector collaborations, including FinTechs as well, which usually provide add-ons to traditional banking solutions but lack other resources (Company F, G, H, & I). In the same way, Philips Healthworks (Company E) boosts their innovation through establishing ecosystems with start-ups, who have competitive technology but require access to capabilities, expertise, distribution and sales channels, and business networks to make their ideas a commercial success. Philips Healthworks provides this resulting in a win-win situation for all parties. Another example from the automotive industry, besides the Daimler-BMW co-opetition networking example (Company D), Daimler established the so-called Startup Autobahn innovation platform that supports an ecosystem in the area of Stuttgart. It brings together technical know-how with extensive automotive expertise to share the costs of new inputs that is beneficial for everyone (Company D; Daimler - Startup Autobahn, n.d.).

SUM UP

All in all, the collaboration-oriented attitude of Product Companies can also be observed in Service Companies, but Company D, F, and H also expressed the broad meaning of the concept. Moreover, it is found that similar to Product Companies, there is a lack of knowledge about the concept of "co-opetition". Company D, E, G, and I mainly pursue the relationship with non-direct competitors and highlight the need for effective management. Evidence on co-opetition classifications demonstrated results alike to Product Companies regarding the absence of mutual exclusivity. Thus, except for Company E, the other Service Companies' examples tend towards the Adapting Situation, and some of them also fit the categories of Concentrating and Network Situation by participating in ecosystems and clusters. Therefore, these companies also fall into the categories of Simple and Complex Network Co-opetition.

4.3 REASONS FOR CO-OPETITION

Co-opetition literature highlights that similar to regular collaboration paradigm, companies participating in the paradoxical relationship of co-opetition have to strive for mutual benefits to be successful (Dagnino & Padula, 2002; Gnyawali et al., 2016). Therefore, the phenomenon is considered as a variable-sum game with overlapping interests (Ibid). Ritala (2012) also emphasised that as a result of co-opetition, the payoff for each company is greater than it would be by operating alone in the market. In addition, previous researchers are suggesting firms to evaluate the potential benefits before entering co-opetition (Cullen, Johnson, & Sakano, 2000). The following paragraphs describe the reasons behind the adoption of co-opetition through the lenses of the research participants from the Product and then Service Companies and compare it to the reasons identified in the theory review.

4.3.1 Product Companies

As already touched upon in the attitude towards co-opetition sub-section, for Company A and B, delivering preferential financial results for all parties in co-opetition, is a fundamental objective. Furthermore, for Company A, the goal of any co-opetition relationships is forming the synergy effect of *"one plus one equals three"*, referring to the fact that organisations can benefit more from working together with the rival rather than operating individually. They bring together different competences to find the best and most outstanding solutions (Company A). This is consistent with **complementarity** explained in sub-section 2.4.2 of the theory review. It means that the relationship enables a new resource combination; thus, firms can jointly develop new products and technologies (Cygler et al., 2018). Company B adds to this view by acknowledging that they do not have all the knowledge and capabilities available to drive innovation alone. Also, they create better overall category experience and more value for customers together with co-opetitors than the company would be able to do alone (Company B). In the same way, the interview with Company C revealed that they mainly work together with competitors to get skills and capabilities, especially when the companies are doing the same technology but in different areas; for example, combining camera technology and health.

In addition, Company B and C expressed that their motivation towards co-opetition is also inspired by the benefits of jointly delivering more **efficiency** and productivity versus operating alone. Company C, for example, shares factories with a rival. This evidence confirms previous findings in the resource-based theory stating that the exchange of a common pool of resources leads to fewer resource utilisation individually; thus, risks and costs are shared to increase efficiency (Ritala, 2012; Cygler et al., 2018). Lastly, Company A approached the motives from another point of view focusing on having an ultimate goal of solving potentially more significant issues or pursue substantial opportunities that the industry faces. The findings indicate that Arla (Company A) co-operates with rivals to overcome big challenges together rather than alone, so it is mutually beneficial for them. As suggested by the theory as well, companies in co-opetition **address common problems,** especially when it is outside the scope of competition and influences the whole market environment (Tether, 2002; Cygler et al., 2018).

SUM UP

Overall, the results show that all three Product Companies' intentions are driven by the mutual advantages derived from complementarity and strengthening their distribution channels. Whereas Company B and C highlighted increased efficiency additionally, and interestingly, only Company A indicated the opportunity to face industry challenges jointly. However, in contrast to the theory, none of the Product Companies mentioned the driver of increasing market position together.

4.3.2 Service Companies

Firstly, all Service Companies acknowledge that collaboration between competitors has to develop into a win-win situation, in which all sides contribute to the total value generated and is equally beneficial in the long-run. *"In the end, we want the same"* (Company F). Preferably, performance outcome is measurable either from financial or data-driven aspects (Company E & I). As a result of co-opetition, some opportunities become possible that were not possible before (Company H). Therefore, Service Companies join their forces with rivals to create value that could not have been done alone, which is in line with co-opetition literature and the findings from Product Companies (Company E; Ritala, 2012).

In common with Product Companies, **complementarity** and **efficiency** were also mentioned by some of the Service Companies as potential benefits of co-opetition (Company D, E, & H). Both, Daimler (Company D) and Philips Healthworks (Company E) mentioned cost sharing as well as with being part of an ecosystem involving competitors like in the example of Daimler's Startup Autobahn Platform described in paragraph 4.2.2.2. Co-opetition enables a cheaper way of doing innovation as compared to doing it alone (Company E). Furthermore, companies sometimes pursue co-opetition in order to better serve customers by capability and competency matching (Company D, E, & H). It provides a better customer experience, through which the execution of business becomes easier

(Company H). These advantages of complementarity also include the sharing of distribution channels mentioned in the examples of Company D, H, and I; co-opetition with BMW Group, BlackRock, and Adyen respectively.

Particularly, co-opetition is perceived as more content and opportunity driven (Company G). The majority of Service Companies are motivated to engage in co-opetition to maintain strong and robust power together that can drive changes in society (Company F, G, & H). For example, as part of sector collaboration, competing banks work together because sometimes *"opportunities or problems are too big to handle by themselves"* (Company G) and solutions can have a significant social impact (Company F & H). These findings confirm literature stating co-opetition **addresses common challenges** that can influence the whole business environment (Tether, 2002; Cygler et al., 2018).

Nevertheless, in contrast to Product Companies, another reason behind the adoption of co-opetition, mentioned by some Service Companies, is expansion (Company D, E & I). Not only in a geographical sense that Product Companies mentioned as well, but also in terms of the market size. Also, there is an interest in **growing the business** of the co-opetitive companies (Company I). As stated in the theory part, the logic of co-opetition is that companies collaborate for increasing the size of the business pie while compete for dividing the bigger pie up (Brandenburger & Nalebuff, 1996).

SUM UP

Overall, the findings show that most of the Service Companies' intentions are driven by the mutual advantages derived from addressing industry challenges that can lead to social change. On the one hand, some companies highlighted increased efficiency and complementarity; thus, strengthening distribution channels as drivers. Whereas, interestingly, on the contrary to Product Companies, some Service Companies indicated market size expansion as a reason for co-opetition as well. Therefore, it is completely in line with the drivers presented in the theory review. The results of Product and Service Companies' reasons for co-opetition are presented in Figure 17.

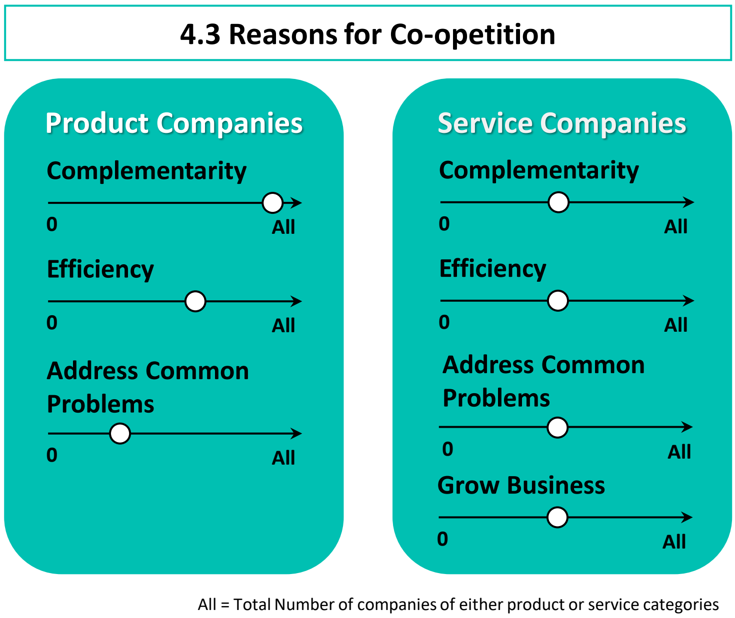

Figure 17: Findings of Reasons for Co-opetition (Own designed figure)

4.4 CHALLENGES IN CO-OPETITION

Theory on co-opetition stresses the importance of careful management attention since potential risks are inherent features of any forms of inter-organisational relationships (Cullen et al., 2000; Cygler et al., 2018). The next paragraphs present the possible challenges that companies face in a co-opetitive relationship and factors in managing the process leading to failure. Following the sequence of the previous parts, it starts with the Product Companies' perspective followed by the Service Companies' point of view based on our research.

4.4.1 Product Companies

First of all, the majority of Product Companies confirmed literature stating that co-opetitive relationships usually begin with **contradictory views** (Gnyawali et al., 2016) that need to be understood beforehand (Company A & B). However, surprisingly, Company B contributed less to the topic of challenges due to the minimum personal experience in failures. The two big corporations from the consumer goods industry, Company A and B, highlighted the challenge of different organisational cultures that might not be entirely envisioned at the beginning, including diverse agendas, workings styles, and approaches to risk-taking. However, it is assumed to be a challenge partially due to the size and complexity of their organisations. Generally speaking, due to asymmetries *"it can be difficult to work with your own colleagues, so it can be even harder with competitors"* (Company A). Company B even emphasised the significance of recognising distinct decision-making methods that each participating company applies before jointly doing it.

In addition, **changes in circumstances** seem to be a common denominator for Product Companies in connection with risks (Company A & C). Theory suggests that modified expectations, behaviours, and unequal contributions have a negative effect on the process of collaboration with competitors (Cygler et al., 2018; Kraus et al., 2018). The respondents added on to these with the examples of changes in personnel, business priorities, and strategies (Company A & C). Sometimes, *"the opportunity why you get together is changing"* or not as great as it was expected (Company C). Company A further stressed the possible structural reorganisations in any of the companies that modify the proximity of their relationship; thus, disturbing the pace of the process.

Furthermore, according to these two companies, Company A and C, the various parties in co-opetition have to be very cautious in drawing boundaries for discussion areas, since certain business topics should not be discussed with the other party. It is in line with the risk of unintentional **information leakage** from the theory review (Cygler et al., 2018). Consequently, Arla shared the existing risk of **opportunism** as well, since there is a chance that their suppliers go to Arla's direct competitors and share information about them. Vice versa, Arla can also approach other suppliers and display the knowledge gained from rival suppliers. Even though, findings from the primary data collection show less extent of commonality about mentioning opportunism among the three Product Companies.

Nevertheless, further factor was identified, particularly the challenge of **maintaining** such a collaborative relationship with competitors in the long run, and finding who is the responsible counterpart for a given topic (Company A, B, & C). For example, Company C worked together with a rival company that provides similar services to cities like smart and connected street lightings and looked for complementarity advantages. It turned out that their intentions were not equal, and trust got lost over time, the termination of the strategic relationship ensued (Company C).

SUM UP

All in all, the three Product Companies' responses to questions about challenges and failures in co-opetition covered the risk items identified in the theory review, namely opportunism, information leakage, contradictory views, and changing conditions. Also, they agree that balance is required (Slywotzky & Hoban, 2007). However, further attention should be paid to avoiding threats derived from selecting the right counterparties and maintaining good relationships with them.

4.4.2 Service Companies

When Service Company interviewees were asked about their experience in failures and challenges in the process of innovation through co-opetition, the overall response highlighted that there are many reasons for failing originating from either side of the co-opetition relationship, and any of the organisational levels. Furthermore, these pitfalls can happen at any point in the process (Company H).

Similar to Product Companies, findings from most of the Service Companies (Company D, E, G, & H) further validated theories about the challenges of initial organisational and operational **contradictory views** in co-opetition (Gnyawali et al., 2016). According to the interviewee from Company H, these asymmetries involve *"information, which are not in the system"* (Company H) like different processes, pace, maturity stages, decision-making techniques, performance measurement, and risk-taking willingness, or even controversial personality types (Company D, E, G, & H). Therefore, the working relationships have to be translated and dealt with more complex stakeholder management (Company G) to answers the following questions *"where is the mismatch?"* and *"how to work together?"* (Company D). These make the process more time-consuming (Company G).

Even more Service Companies agreed on the threat of **changing circumstances** that can take place in any of the companies (Company D, F, G, H, & I), while going through co-opetition. This factor was also presented as the second largest challenge denominator in case of the Product Companies. *"Plans change all the time"* (Company I); therefore, underlying premises might not work out at the end (Company H). There can be co-opetition situations, in which one party loses energy and progresses less; thus, the resulting benefits will be uneven (Company D & G). Not spending enough time discussing these problems can make the situation even worse (Company I).

Concerning previous sources of challenges, **failing to understand all parties** throughout co-opetition is also a common mistake (Company D, F, & I). Companies may have initial reputation biases and are unclear on how to achieve win-win situations and common benefits (Company D & I). For example, at the beginning of the 2010s, Company F participated in a co-opetition with five companies to find a scanning solution for invoices. However, some co-opetition partners failed to understand the requirements and deliver results within the promised time frame (Company F).

As opposed to the earlier explained challenges found in analysing Product Companies, proportionally less Service Companies referred to **information leakage** explicitly (Company F & H). Company F and Company H approached it from distinct angles. The former highlighted the caution to the subject matter, in other words, companies have to be careful and specific on who talks about what; and the latter focused on the degree of information sharing, such as how much information to share and how much competitive share to give up (Company F & H).

Additionally, most companies from the banking industry indicated the potential problems related to the **structural complexity** of the organisations; thus, concerning size differences in both the number of employees in each company in general, and the number of people involved in the co-opetition projects (Company D, F, H, & I). For example, when co-opetition happens between a large bank that has twelve representatives in a meeting and a Fintech company that altogether comprises eight people (Company F), then balancing what each party brings to the table is harder (Company D & F). Even though, there is a higher chance in sector collaborations to have the same amount of people in the process, the number of people involved in the decision-making is still decisive (Company F & H). *"The more people, the more ego"* (Company F), so stronger opinions may appear and cause tensions (Company E & F). Likewise, the interviewee from Company H said, *"the bigger the number, the slower the process"*. Despite the fact that companies in co-opetition address core industry and socially broad problems or opportunities together, the political background and slower pace of the process makes finding solutions difficult (Company H).

SUM UP

Overall, with regard to challenges in co-opetition, the recognised commonalities between Product Companies and Service Companies include organisational asymmetries, changing conditions, and informational leakage. Yet, in contrast to Product Companies and the theory review, Service Companies did not mention opportunism. However, additional problem sources are determined and highlighted, such as failing to understand mutual beneficial areas or balance organisational structure differences resulting in slower processes and tensions. The results of Product and Service Companies' challenges in co-opetition are presented in Figure 18 below.

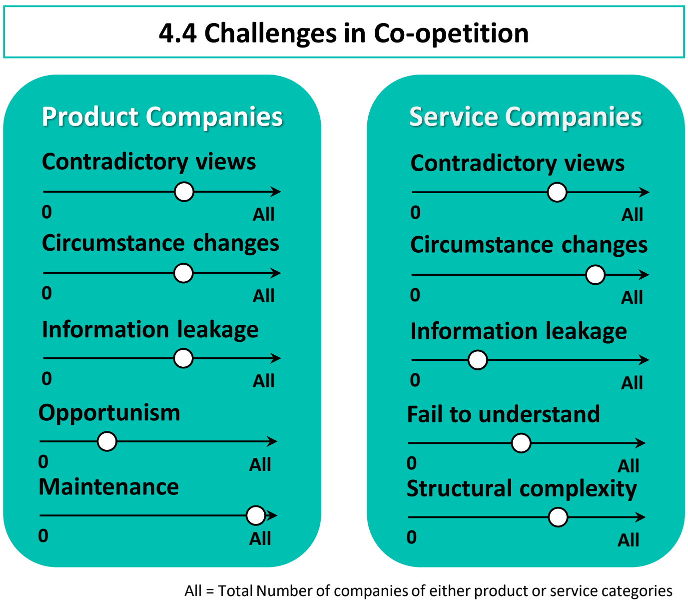

Figure 18: Findings of Challenges in Co-opetition (Own designed figure)

4.5 WELL-WORKING CO-OPETITIVE RELATIONSHIP

As stated in the literature review, the exploration of specific determinants and significant elements of a co-opetitive relationship influences its overall performance and successful outcome (Chin et al., 2008; Evanschitzky et al., 2012; Petter et al., 2014). The next paragraphs analyse well-working co-opetitive relationships starting with Product Companies and secondly, Service Companies. For each category, it starts with the earlier identified determinants in the theory review chapter and then explores additional components based on the primary data collection.

4.5.1 Product Companies

4.5.1.1 Trust

Based on the two models of Chin et al. (2008) and Petter et al. (2014) presented in the theory review, one of the most significant elements of a well-working relationship is trust. According to Lewicki, McAllister, and Bies (1998), who perceived trust as the essential ingredient of a healthy interpersonal relationship. Likewise, all Product Companies agreed that trust is one key element of building and maintaining a relationship, especially in regards to working with competitors. When the interviewees were asked about factors endorsing interactions between rival companies, both consumer goods companies (Company A & B) underlined trust as the first element of establishing a co-opetitive relationship. Similarly, Company C highlighted throughout the interview that trust is the *"most important ingredient"* because co-opetition "*is about relationships".* As soon as the co-opetition participants have developed trust, the firms get the indirect approval of using the research collaboratively, and that is when *"things can start to fly"* (Company C).

In addition, Company A also outlined that it is crucial to keep trusting after a meeting *"when going back to [the] home base"* because sometimes everything seems to work in a meeting but doubts appear afterward. In connection with that, Company C stated: *"when you have trust, you are able to share what is going on"* by talking about problems or obstacles of the progress. However, Company B described that with competitors it might be easier to fall into *"anti-trust problems"* due to the complexity of this paradoxical relationship. Hence, trust is especially needed when it comes to the fear of information leakage that is mentioned as one of the challenges in sub-section 2.4.3 (Company A). All parties involved need to make sure that none of the sides is falling into opportunistic or egoistic behaviour, so that just one party would benefit from the partnership. That thinking is consistent with the previously described view of Cullen et al. (2000) of trust playing the relevant role of making sure that the quality of input is equal from all sides and with that ensuring a well-working process. Thus, it is important to question: *"What is the trust level and does your partner really help in bringing the business forward?"* (Company A). Furthermore, Company A not only mentioned trust between the co-opeting companies as significant but also the trusted relationship between the employees within a company. It is essential to note that employees need to trust each other in managing the communication with the other party well (Company A).

4.5.1.2 Commitment

According to Petter et al. (2014), trust and commitment are directly correlated with each other. A high level of trust between co-opeting partners reflects the level of co-operative commitment among them (Ibid). Thus, both elements are seen as the superior catalyst for structuring and forming competence between the network actors. Due to the strong interconnection of trust and commitment, it is surprising that Product Companies did not emphasise the importance of commitment as part of co-opetition as they did it with trust. Exceptionally, Company C emphasised mutual commitment by reviewing the need for common goals and consistency of several people involved in translating the *"own language"* of a company to the other party and vice versa. Also, when Company A described the significance of a good understanding of the reasons behind decisions and timelines the interviewee touched upon business commitment as a result. However, this business commitment stands partially in contrast to the definition of commitment in part 2.5.3.2 of the theory review chapter, which refers more to the intentions and pledges of a valued relationship (Gundlach, Achrol, & Mentzer, 1995).

In addition to the previously defined and expected two elements, other well-working co-opetition relationship components are identified based on the primary data collection that the following paragraphs explain.

4.5.1.3 Alignment

All Product Companies highly value the alignment of priorities of both parties upfront as well as continuously during the process of co-opetition. Thus, talking about expectations from the beginning (Company C), aligning on important matters upfront (Company A), as well as the fact that co-opetitive relationships have to be much more aligned than regular collaborative ones (Company B) are just a few cases, which were stressed by all participants. Alignment was even a recurring subject throughout each interview process as Product Companies were mentioning it several times in different contexts. For example, findings like proper planning and alignment are relevant to avoid failures (Company A) as mentioned in section 4.4, or having several "*touchpoints*" to see if both parties are still on the right track (Company C). Moreover, Company B introduced the perspective that as all decisions become joint in a co-opetitive relationship, favourable alignment becomes even more crucial. Thus, the closer the values of the participants or companies are already aligned, the better the relationship can work (Company B). Another way of viewing alignment is from a leadership perspective where high-level managers should engage in the process in an early stage to *"mirroring the attitude of each other"* (Company B). Thereby, executives to executives should communicate directly and align on the process before the actual work is done (Company B). The salient question is: Why alignment is such an essential factor to Product Companies? Company A answered it by explaining that when all things are aligned, the opportunity becomes more visible for all parties. Thus, the objective to work together and combine forces is more transparent and therefore more comfortable to reach (Company A).

4.5.1.4 Openness

In addition to alignment, Product Companies also highlighted the importance of openness in their communication with the involved parties as well as within the teams. As Company A stated, *"talk, so you cannot be surprised and disappointed later on*". In connection with openness stands transparency (Company C), as well as honesty (Company A) for interacting with competitors. When these elements are given, the door for working together opens up (Company A). However, openness is questionable when interacting with competitors including more sensible topics. Deriving from the challenges of information leakage, every Product Company highlighted the limitation of interaction when engaging with competitors because every employee needs to be careful about what to discuss. Therefore, it is essential to understand which topic areas are closed and which topics can be shared, that is again in line with the risk of information leakage (Company A). Besides, Company B also stated that it is all about *"communication, communication, communication, it is the process that feeds trust."* Thereby, communication is understood as openly talk with the other party to understand what is going on for the partner and make adjustments to the process if needed. In addition, Company A presented a concept of how a good interaction should look like to **avoid bottleneck behaviour**. They believe that people do not start talking to each other; instead, they often communicate through an intermediary person, demonstrated in Figure 19. However, this communication flow can cause various problems; therefore, a good co-opetitive relationship should be as presented in Figure 20, in which more people coordinate the interaction and various experts work together as companies benefit the most from direct knowledge exchange.

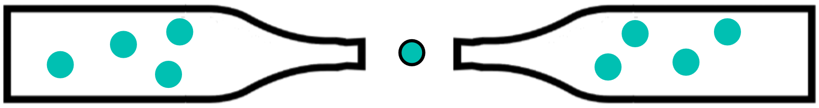

Figure 19: Bottleneck Behaviour (Company A), (Own designed figure)

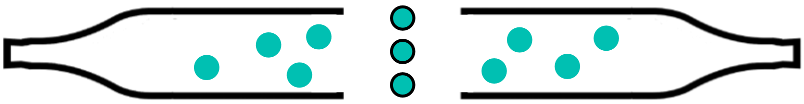

Figure 20: Avoiding Bottleneck Behaviour (Company A), (Own designed figure)

4.5.1.5 Understanding

Another vital element in establishing and sustaining a well-working relationship with competitors for Product Companies is understanding. The Product Companies outlined three different areas for understanding the counterparties. First of all, it is crucial to get to know the other company's business model as well as the organisational structure (Company C). Without recognising the details of the other firm, the relationship can face the challenge of contradictory views mentioned earlier. Therefore, a well-working relationship can result in slower progress and misunderstandings which can lead to the end of the partnership in the worst case. Company C summarised this area by suggesting to *"do your homework"* before a co-opetitive project begins. Secondly, Company A and B emphasised the importance of knowing the points of contact in the other organisation. Due to the fast nature of innovative projects, the earlier described threat of changes is more common, thus, finding who are the specialists as well as the decision makers in the collaborative company is of particular interest for the collaboration evolvement. Thereby, a right set up between the different functions allows unit experts to work smoothly together (Company A). Finally, Company B went even further by emphasising the process of how to drive the decisions. As the companies of co-opetitive relationship need to take joint decisions, it is important to understand the procedure and mechanism of the counterpart to creating united decisions.

Although previous literature suggests and prioritises soft factors concerning the human interactions in strategic alliances like co-opetition, findings still present **additional components from the hard side** (Bóna & Lippert, 2015; Cullen et al., 2000). Based on the primary data collection, there is a tendency towards mentioning hard factors in the first instance such as regulation (Company B) and contracts (Company C) as well as the sustainable business model (Company B) where money is central. *"We are still a business"* (Company B).

SUM UP

Overall, the analysis shed light on the high interconnectedness of most well-working relationship characteristics. Although previous literature considers trust and commitment as the most significant factors influencing the successful outcome of co-opetition, surprisingly, findings show that Product Companies value commitment less than expected. However, all highlight the importance of trust. Besides, the three Product Companies agree on the relevance of additional critical factors, namely alignment, openness, and understanding.

4.5.2 Service Companies

Similar to the structure of the Product Companies, the following paragraphs for Service Companies also begin with the significant elements previously identified from the theory review; trust and commitment.

4.5.2.1 Trust

Trust plays an important role in Service Companies' co-opetition, just as in Product Companies, but to a lesser extent. Company D emphasised that trust helps to smoothen the work on both sides because usually, every counterparty wants the best for themselves, but trust can re-align such behaviour. Company E highlighted that trust builds up through *"experience"* and Company H added that it is one thing to build trust, but another one to maintain it. Therefore, the interviewee from Company H suggested that regular visits at both companies to sustain the relationship. Nonetheless, Company D stressed that trust is the most difficult element to achieve in a co-opetitive relationship; however, at the same time, it is a key asset. Trust plays an essential role in avoiding the earlier mentioned knowledge leakage and it contributes to the success of innovation through co-opetition. Company I expressed metaphorically: *"We are opening the door, and we have to trust that they do not use it as a back-door".* Consequently, trust assists Service Companies in forming a well-working relationship; however, it is not valued equally among all interviewed Service Companies.

4.5.2.2 Commitment

Based on the theory review, another feature that should be a significant common feature for companies is commitment (Chin et al., 2008; Petter et al., 2014). However, unexpectedly, only two out of the six Service Companies highlighted the significance of this element in the interviews (Company D & G). For Company D, commitment plays an important role as the firm refers to it in several situations; for example, being in a constant interaction to sustain personal relations, as well as finding a balance between values that each party brings to the table. The same participant also added the perspective of avoiding the *"feeling of being left behind"* and that even if one party is not successful, help is there from the counterparty (Company D). A co-opetition project can be safeguarded; however, ensuring that one party does not just quit can cause other problems (Company D). Besides

Company D, Company G also mentioned commitment in connection with keeping track of the process together with the partner.

Similar to the structure for Product Companies, additional well-working relationship elements are identified based on the responses from Service Companies, which are further explained in the next paragraphs.

4.5.2.3 Alignment

In common with Product Companies, the majority of Service Companies stress the significance of alignment as well (Company D, E, G, H, & I). However, every Service Company mentioned it either directly or indirectly. Therefore, in contrast to the aforementioned elements, it is believed to be a more central determinant in forming well-working co-opetition relationships. Alignment can be understood from various perspectives. First of all, by aligning the shared goals and objectives of the players in co-opetition (Company I & H). One part of this goal alignment is also the process of finding mutual beneficial areas to work together (Company D). Thereby, *“alignment on [the] road map”* creates prospects of what to expect from co-opetitive relationship. Secondly, Company G also stressed making a concrete agreement plan by sitting side by side in the beginning and keeping track of it afterward, as mentioned in the commitment part. In line with this finding, Company I highlighted consistency in understanding of what is happening in the process of co-opetition because of the challenge of changing circumstances previously mentioned in section 4.4. Therefore, organising weekly “*touchpoints*” to get the priorities straight is one way of aligning in co-opetitive projects (Company I). Company H suggests that co-opetition participants should reflect together over the process and check if they are still on the same page. Another perspective can be the alignment of the contractual fundamentals as they need to be transparently discussed from the beginning of the relationship (Company E) as further described in the next paragraph. Besides this, Company H also highlighted the importance of internal alignment with employees, when as such in place, dealing with external people becomes more effortless.

4.5.2.4 Openness

Similar to Product Companies, openness is mentioned by half of the Service Companies (Company D, H, & I). Openness gets set in connection with honesty and transparency as components of a co-opetitive relationship (Company I, D, & H). In mentioning this, Company D also highlighted two different sides of openness within such a project; the openness between the co-opetitive partners as well as the openness of the employees with regards to working with competitors. The first one focuses on the transparency of business issues within the co-opetitive relationship. The latter one deals with the selection of employees, who should and could participate in co-opetitive projects. In general, people who are open to change should be considered in the selection process for working with a competitor (Company D). However, people who have been worked for one company in the last 30 years, may have difficulties with suddenly implementing a new working style with a competitor (Company D). In addition, Company H emphasised that openness goes hand in hand with paying attention to reflections and have the freedom of speaking what is working and what is not. Company D also summarised openness under the category of engaging in every action with *"open communication"* to your partner as well as your employees.

4.5.2.5 Time

Instead of the "understanding" determinant identified in Product Companies, the majority of Service Companies mentioned the importance of time in order to build a co-opetitive relationship (Company D, G, H, & I). Findings with respect to the time factor are also perceived from two different angles. First of all, it can be understood as spending time with the co-opetitive partner to build trust (Company G). In line with this thinking, it is found that much time is needed in the early phases of a project to create the right setting and bringing the *"right things"* together (Company I). Consequently, maintaining a good relationship requires spending time and asking each other questions, particularly in relation to areas where help is needed (Company D). Secondly, time also matters; it takes time until the participants see the success of a co-opetition project (Company I) and to bring a solution to market (Company H). This supports the additional findings from Company H that highlighted that learning takes time and *"sometimes you do not realise that you realised something"*. Therefore, the learning journey of a co-opetitive process is time-consuming.

4.5.2.6 Size Balance

Besides the previous determinants, half of the Service Companies underlined the importance of balancing the size of the participating companies that is also in connection with the structural complexity challenge of co-opetition explained in sub-section 4.4.2 (Company D, F, & H). Company F and H stressed the fact that it is easier to work with the same sized partner, which is consistent with previous results from our discussion about the sizes of egos, the number of actors in co-opetition, and how these affect the process. The interviewed companies are mostly international operating firms which contextualises the statement: *"the bigger the partner, the more equal the relationships"* (Company F). Thus, the size of a company correlates with the maturity level of the firm because a co-opetitive project between a company consists of two to three people versus a big corporation might be problematic due to the rapid changes of direction in smaller sized firms (Company H). Likewise, Company D get to the heart of it by framing that they usually have regular collaboration with smaller companies but collaborate with competitors that are most often the same size.

Lastly, it should be mentioned that some Service Companies' overall responses to the question about the characteristics of a successful co-opetition were surprisingly critical. Similar to Company B and C from Product Companies, two Service Companies emphasised the relevance of the **hard side** of co-opetition instead of the soft (Company F, G, & H). According to Company F and G, a relationship with a competitor should be legally assessed and defined by laws. Furthermore, both Company G and H believe that co-opetition is less dependent on personal relationships and more driven by the content and opportunities as identified in paragraph 4.4.2. Therefore, the earlier suggested soft factors in the theory review are considered as secondary. According to Company H, *"soft factors are between the lines of the process*"; thus, it is less about the person and more about what they are doing. However, their experiences still count in the analysis of well-working co-opetition to avoid positive result bias.

Overall, the analysis of well-working co-opetitive relationships demonstrated that similar to Product Companies, commitment is not seen as an outstanding factor for Service Companies. In comparison with Product Companies, Service Companies value commitment to an even lesser extend ceteris paribus. Although trust plays a significant role in Service Companies' well-working co-opetition relationships, they value the additionally identified determinants more. These additional elements include alignment and openness in common with Product Companies, and they also unexpectedly value time and size balance as key determinants. The results of well-working co-opetitive relationships form Product and Service Companies are presented in Figure 21 below.

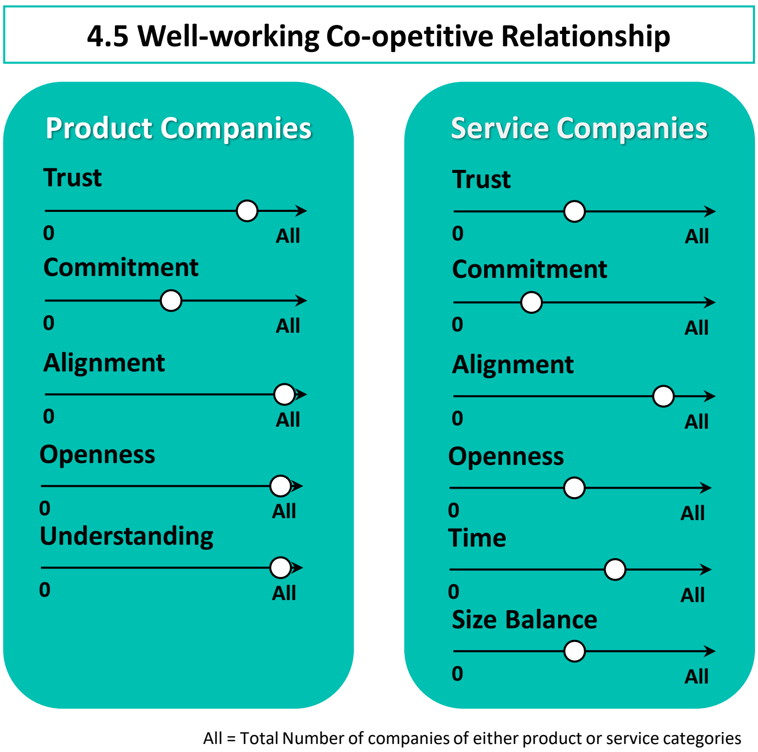

Figure 21: Findings of Well-working Co-opetitive Relationship (Own designed figure)

5. DISCUSSION

Based on qualitative data of nine well-known companies, this master's thesis analysed co-opetition in connection with product and service innovation in the real business environment. With the aim of answering the research question, special attention was paid to the exploration of critical factors enhancing the successful outcome of co-opetition between rival firms innovating together, and the comparison of those factors between product- and service-oriented companies. Therefore, this section describes and assesses the major findings of the study concerning the research question. The following paragraphs present seven results of the study with more explanations and critical reflections.

MAIN FINDINGS

THERE IS AN APPARENT LACK OF KNOWLEDGE ABOUT CO-OPETITION TERMINOLOGY.

Co-opetition literature first received attention at the beginning of the 1990s (Fisher, 1992) and there has been a growing interest in pursuing the relationship as a strategic move (Muijs & Rumyantseva, 2014). However, evidence showed that none of the research participant companies refers to the term "co-opetition" explicitly, although, all of them still collaborate with competitors simultaneously. The reason behind this fact is assumed to be the multifaceted nature of the concept and the lack of a commonly accepted definition for co-opetition (Dagnino & Padula, 2002). Furthermore, the finding confirms the relevance of this master's thesis since the topic of co-opetition is in the process of development.

THERE ARE SEVERAL TYPES OF INNOVATION AND CO-OPETITION CLASSIFICATIONS CARRIED OUT CONCURRENTLY.

Theory suggests that various innovation and co-opetition categories are identified and applied to help analysing projects, strategies, and relationships (Dagnino & Padula, 2002; Luo, 2007; Lopez, 2015; Chesbrough, 2006). This paper used classifications for analysing the extent of change and place of innovation, and typologies examining the structure, intensity, and diversity of co-opetition. The results in practice, point to the possibility that companies, regardless of the product and service orientation, engage in various types of innovation and co-opetition at the same time without particularly naming them. Thus, there is evidence that each type within classifications is not mutually exclusive. A possible explanation of the lack of naming and mutual exclusivity may be the blurriness between the various category types' definitions. For instance, Satell (2012) proposed the name of Sustaining Innovation which has a similar meaning as Lopez's (2015) Incremental Innovation. Therefore, it is difficult to have commonly accepted classification names and meanings that are generalised among organisations. Instead, firms tend to use company-specific methods and groupings. For example, findings from two Service Companies (Company F & G) show that companies value the usage of other innovation categorisation for instances the McKinsey Horizon method.

THERE IS A TENDENCY TOWARDS PARTICIPATING IN NETWORK CO-OPETITIONS BY BELONGING TO ECOSYSTEMS OR INDUSTRIAL CLUSTERS.

Innovation network theory states that nowadays, firms stand in the *"core of a network of interaction with different actors at more levels*" (Della Corte, 2018, p. 10). Thus, networks increasingly innovate more complex and valuable solutions (Rycroft & Kash, 2004). Co-opetition theory involves many dyadic relationship examples; however, when considering innovation, the empirical results from Product and Service Companies show that most organisations actively participate in Concentrating and Networking Co-opetitive Situations. In the former situation, more rivals co-opete in concentrated markets as part of sector collaborations and ecosystems like the Nordic banks, Dutch banks, and Danish food companies. In the latter one, the participant companies share distribution channels in globally dispersed markets such as the co-opetition between Company A and its Chinese rival. With a networking effect, co-opetition is not a one-to-one relationship anymore; it is rather multilateral in nature (Company B). A possible explanation, suggested by innovation network theory (Lyytinen, Yoo, & Boland, 2016), is the trend of companies shifting towards Anarchic Innovation Network which is composed of a dynamic group of actors and tools in the absence of hierarchical control and the presence of high levels of knowledge heterogeneity. Another cause of this tendency is assumed to be that all research participant companies engage in open innovation that suggests the use of external resources through networking as well as internal ideas to advance innovation (Chesbrough, Vanhaverbeke, & West, 2006). Based on open innovation, the capacity and resource boundaries of a single company are extended to incorporate dynamic interactions with other firms (Bengtsson & Knock, 2014).

TRUST AND COMMITMENT ARE LESS SIGNIFICANT CRITICAL SUCCESS FACTORS IN A WELL-WORKING CO-OPETITIVE RELATIONSHIP THAN ADDITIONAL DETERMINANTS PROPOSED BY BOTH PRODUCT AND SERVICE COMPANIES.

Theory suggests that Trust and Commitment are directly correlated and form the essence of healthy interpersonal relationships (Chin et al., 2008; Petter et al., 2014). Therefore, in a riskier relationship between competitors, the two determinants are even more significant contributors to success (Ibid). Findings revealed that most Product and Service Companies value building Trust as an important component securing co-opetition and reducing the risk of taking advantage of sensitive information. As a result, the challenges of information leakage and opportunism are addressed. As Company I expressed metaphorically, *“We are opening the door, and we have to Trust that they do not use it as a back-door”*. Notwithstanding, Trust was indicated less frequently as a critical success factor as expected. More surprisingly, Commitment was identified as the least mentioned determinant in a well-working co-opetitive relationship for Product and Service Companies. These results were not predicted; however, a probable reason behind them is that some companies believe, co-opetition is less dependent on personal relationships or human interactions, but more driven by content and opportunities. The Product Companies participate in innovation through co-opetition to gain complementarity strengths (Company A, B, & C), increase efficiency (Company B & C), and address common problems (Company A). Similarly, Service Companies pursue innovation through co-opetition to gain complementarity strengths (Company D, E, & H), increase efficiency (Ibid), address common problems (Company F, G, & H), and additionally grow the business (Company D, E, & I). Another possible explanation for the unexpected results is the interconnectedness of all identified critical success factors; thus, Trust and Commitment can be inferred between the lines of each interpretation.

ALIGNMENT AND OPENNESS ARE ADDITIONAL CRITICAL SUCCESS FACTORS IN A WELL-WORKING CO-OPETITIVE RELATIONSHIP FOR BOTH PRODUCT AND SERVICE COMPANIES.

Since co-opetition involves at least two competing organisations, the relationship between participating firms is considered more complex than in regular collaboration. After studying three Product and six Service Companies, it can be concluded that aligning expectations and mutual beneficial areas upfront and throughout the innovation process is crucial in co-opetition. Alignment is the most common critical success factor among the nine companies regardless of being product- or service-oriented. Furthermore, this element was the most recurring topic throughout each conducted interview. Companies highlighted that appropriate planning and tracking of the innovation process through co-opetition is relevant; thus, Alignment can be considered as a prerequisite to co-opetition. In addition, Openness is identified as a highly valued shared determinant of a well-working co-opetitive relationship for both Product and Service Companies. Open and honest communication plays an essential role between counterparties to avoid potential surprises and disappointments. The supposed consensus about Alignment and Openness can be attributed to the earlier identified possible challenges in co-opetition. Particularly, the organisational differences, contradictory views, and changes in circumstances. However, a co-opetitive relationship is limited due to its competition aspect that requires careful attention to sensible topics between the opposing parties in co-opetition. Moreover, the frequent allusion of Openness can be interpreted as the result of the novel paradigm of open innovation introduced by Chesbrough (2003) that the nine companies apply in their innovation.

UNDERSTANDING IS AN ADDITIONAL CRITICAL SUCCESS FACTOR IN A WELL-WORKING CO-OPETITIVE RELATIONSHIP FOR PRODUCT COMPANIES.

The outcome of analysing three Product Companies in this research outlined the importance of getting to know the counterparties in co-opetition. The recognition of different organisational structures, cultures, and procedure's details assist the process of innovation through co-opetition, especially in the set-up phase. In order to overcome and address the earlier mentioned challenges of contradictory views and organisational symmetries, it is likely to add Understanding as another critical success factor. Furthermore, its identification as a significant determinant is justified by the hierarchical model of co-opetition strategy management as presented by Chin et al. (2008) in the theory review. Their model involved "organisational learning" (Ibid), as a critical success factor. Chin et al. (2008) defined it as a process of detecting errors, which is partly in connection with Understanding. The probable reason for Service Companies not outlining Understanding as a significant factor is due to the different attitudes of Product and Service Companies towards innovation. Overall, Product Companies' innovation attitude addressed the initial phase and interactions within the process, while Service Companies approaches innovation processes by viewing drivers and tracking methods. Therefore, prior understanding seems to be vital for Product Companies.

TIME AND SIZE BALANCE ARE ADDITIONAL CRITICAL SUCCESS FACTORS IN A WELL-WORKING CO-OPETITION RELATIONSHIP FOR SERVICE COMPANIES.

Results of the analysis indicate that Service Companies address Time and Size constraints. Since it is likely that seeing the outcomes and benefits of co-opetition takes longer, the learning journey of innovation through co-opetition receives more attention, especially in the starting phase. It is crucial for firms to spend much time together with the counterparties on building trust and aligning expectations with caution so that misunderstandings will not occur in a later stage. Furthermore, pursuing co-opetition with a rival of a similar size is indicated as an advantage in a well-working co-opetition relationship because balancing the size differences between participating organisations is essential for success. These results point towards the likelihood of challenges centralised around structural complexities, concerning the Size of an organisation or the number of people involved in a co-opetition process. For instance, when co-opetition happens between a large bank that has twelve representatives in a meeting and a Fintech company that altogether comprises eight people, then balancing what each party brings to the table is harder. Another reason behind these additional unanticipated determinants, Time and Size Balance, can be the aim of avoiding risks related to changing circumstances. While a smaller company can adapt to changes more rapidly, it takes more time for a larger corporation; hence, the co-opetition process' pace is not equal. The explanation of why Service Companies rather than Product Companies indicated these is still not entirely clear, but one possible reason is that successful service innovations are easier to copy than product innovations (Carman & Langeard, 1980); thus, Time is crucial for building trust. Furthermore, findings from the analysis show that the Product Companies' examples present co-opetition between similar-sized firms while Service Companies' co-opetition examples include smaller companies as well. Therefore, it is assumed that Service Companies have more experience in co-opetition with smaller organisations.

6. CONCLUSION

This exploratory study aimed to gain a better understanding of the interplay between co-opetition and specific innovation types; to address the gap in the literature and provide practical implications. While previous studies extensively investigated the nature, types, and intensity of co-opetition regardless of innovation, this paper discovered new insights about the concept and its determinants in the business context of product and service innovation.

In the first part of this academic paper a theoretical review of concepts and theories relevant to the topic of this master's thesis were introduced, to facilitate a general understanding of the essence of co-opetition and innovation. Therefore, in the beginning, the notions of competition and co-operation were outlined as antecedents that pave the ground for co-opetition and its success factors, based on previous studies. Afterward, the development of various types of innovation and its linkage to the co-opetition phenomenon were presented.

In the empirical part of this thesis, a qualitative approach was applied to analyse innovation through co-opetition in a real business environment. Qualitative interviews were used to investigate research participants' perceptions and experiences in the studied phenomenon. Therefore, meanings were developed through the interaction between interviewers and respondents, which is in line with this paper's research philosophy of social constructivism. Altogether, nine semi-structured qualitative interviews were conducted with individuals from different well-known companies that were later categorised as either product or service companies based on the different underlying characteristics.

With the purpose to answer this paper's research question about factors determining the success of co-opetition and differences between product and service innovation, four themes were analysed. These themes are the process of innovation through co-opetition, the reasons and challenges of co-opetition, as well as the well-working co-opetitive relationship. As a result of the analysis process, the main findings were identified and presented in the discussion chapter.

In answering the research question, five critical success factors of a well-working co-opetitive relationship were identified for Product Companies and six for Service Companies. As expected from the theory review, Trust and Commitment were identified for both company categories; however, Commitment was surprisingly indicated as the least mentioned determinant in a well-working co-opetitive relationship for Product and Service Companies. The two company categories share additional critical success factors, namely Alignment and Openness. Alignment is the most common critical success factor among the nine examined companies, and this element was the most recurring topic throughout each conducted interview. Besides the common critical success factors, in contrast to Service Companies, Product Companies outlined the importance of Understanding; thus, getting to know the counterparties in co-opetition. Furthermore, only Service Companies revealed Time and Size Balances as supplementary critical success factors of a well-working co-opetitive relationship.

Additionally, the main findings of this paper revealed that regardless of whether the company is product- or service-oriented, there is a general lack of knowledge about co-opetition terminology among practitioners. Another central finding is that both company categories simultaneously carry out various types of innovation and co-opetition classifications. Lastly, there is a tendency towards participating in ecosystems that enhance the emergence and pursuit of co-opetition.

It is concluded that there are similarities between product and service companies in performing innovation through co-opetition, due to the assumed disappearance of boundary lines and blurriness between the two terms and their meanings behind them. However, this study was also able to successfully display different critical success factors of a well-working co-opetitive relationship for Product Companies, namely Understanding, and for Service Companies, particularly Time and Size Balance. Thus, results confirm that the identification of success factors enhance innovation through co-opetition, and a distinguishment of product and service innovation is a significant step in pursuing successful co-opetition. Besides, empirical results indicate the increased relevance of the interplay between innovation and co-opetition, especially when companies engage in open innovation and join innovation networks. Overall, the findings of this master's thesis contribute to the academic literature and practice of co-opetition and innovation.

6.1 THEORETICAL IMPLICATIONS

Co-opetition and innovation literature has so far been scarce concerning the interplay of the two phenomena in the business environment. Moreover, there are only a few previous studies centralised around the critical success factors of co-opetition, and they are not in relation to the object types of innovation. Therefore, the first contribution to academic literature is the scope and empirical insights of successful product and service innovation through well-working co-opetitive relationships. The emergence of open innovation and innovation networks increase the intention to pursue co-opetition, if companies want to innovate and gain competitive advantage in today's interconnected business environment. The second contribution is the discussion of additional reasons for and challenges in co-opetition that adds to the literature. Thirdly, by identifying critical success factors through the lenses of product and service innovation, the thesis unfolds different elements with respect to each category. Particularly Understanding for Product Companies, and Time and Size Balance for Service Companies. Lastly, the final contribution concerns the relationship between co-opetition and ecosystems. The analysis of companies undertaking innovation through co-opetition revealed a tendency towards engaging in co-opetition when companies take part in ecosystems.

6.2 PRACTICAL IMPLICATIONS

This master's thesis provides guiding elements that companies should consider when pursuing collaboration with competitors for innovation. First of all, this paper brings awareness of co-opetition terminology and its underlying fundamental dualities that managers can assess, as part of their decision-making. Moreover, besides the primary goal of mutual benefits and innovative solutions that cannot be achieved alone, empirical findings present several other reasons for co-opetition. These motives include complementarity strengths, increased efficiency, addressing common problems, and growth opportunities. Thus, it is beneficiary for managers to recognise the advantages of co-opetition and implement it in their business operations, especially in innovation activities. In addition, both theory and findings outline the possible challenges managers should be aware of, such as contradictory views of the involved parties, changing circumstances, information leakage, as well as opportunism in a co-opetitive project. Through the analysis additional potential risks of co-opetition were also determined; for instance, maintenance of a co-opetitive relationship, structural complexity, and failure to understand counterparties. This implies that managers should also put effort into identifying and prioritising critical success factors to address challenges and avoid failures as the findings of this paper suggest. Therefore, this thesis emphasises the notion of effective management and careful attention in a paradoxical relationship like co-opetition. Furthermore, the interrelationship between innovation networks and co-opetition indicates that companies should consider the pursuit of co-opetition as part of ecosystems if they intend to innovate in the interconnected global environment.

6.3 LIMITATIONS

Although this exploratory study was thoroughly conducted, potential limitations regarding its empirical findings should be acknowledged. First of all, in correspondence with this paper's philosophical orientation, social constructivism, the applicability of the discussed findings is delimited to the research scope. Therefore, the findings of this paper cannot be generalised to other product- and service-oriented companies without further analysis of their context.

Initially, the researchers of this paper thought that out of the total nine participant companies, five were to be considered as Product Companies and four as Service Companies. However, the data collection process revealed that two predicted product companies' innovation activities were more service-oriented. Therefore, due to the reallocation of these two companies, there is a risk that more commonalities are likely to occur among three Product Companies than between six Service Companies. Based on this odd number of companies representing the two categories the results of this master's thesis should be treated with careful attention.

Another shortcoming stems from the industry differences of companies. To obtain the sample of Service Companies, the researchers interviewed four organisations from the financial industry; hence, potential bias towards one industry might be given in contrast to Product Companies, whose industrial demographics were more diverse. Furthermore, the study is limited by the country of origin of participating companies. The majority of the examined companies are based in the Nordics and the Netherlands, which are more concentrated areas. Therefore, co-opetition is assumed to be easier to achieve, as the market is already divided among fewer players. In addition, it should be highlighted that the researched business environment is not static; thus, the findings are subject to potential changes in a fast-changing context. Finally, due to the qualitative nature and philosophical stance of this paper, the authors relied on their interpretation of gathered information, creating a degree of subjectivity.

6.4 FUTURE RESEARCH

Theory about the interplay between co-opetition and innovation is still at an early stage of development. The results of this explorative study are based on a limited number of companies. Therefore, concerning the validation of findings, future research on a wider level is suggested among more co-opeting companies, to assess the identified critical success factors of innovation through co-opetition for product and service companies. Thereby, future studies should also target the limitation of the companies' country of origin in this paper. Besides, it is recommended that future research aim at a more in-depth study of firms pursuing innovation through co-opetition. For instance, research comparing four organisations where two Product Companies and two Service Companies co-opete with each other would add fundamental knowledge to existing literature. In connection to this, it would be of particular value for current theory to observe co-opetitive innovation projects from the beginning of the relationship through an extended period. Lastly, the findings of this master's thesis suggest addressing the opportunities derived from the interplay between co-opetition and ecosystems. Thereby, it would be a significant matter for professionals to explore how ecosystems enhance innovation through co-opetition and vice versa.

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APPENDICES

APPENDIX 1: PORTFOLIO

MASTER THESIS

WHO ARE WE

Graduate students in the Master's Program Organisational Innovation and Entrepreneurship at Copenhagen Business School: We are two pro-active students who have a high interest in innovation management and are eager to deepen our knowledge within this field by collaborating with You for our master thesis.

THESIS TOPIC

WHAT DO WE WANT TO RESEARCH?

Our aim is to analyse how your company manages and incorporates innovative activities. We want to define factors that promote collaboration resulting in higher value creation and unique competitive advantages in the future. Do you have another burning point? We would be glad to talk about it..

WHAT ARE YOUR BENEFITS?

Presentation of our findings:

1. Analysis of innovation performance
2. Factors enhancing innovative collaboration
3. Proposal for future innovation orientation.

WHAT DO WE NEED FROM YOU?

1. Interviews with relevant managers
2. Ethnographic research: Permission to follow and observe the daily work at the/your innovation unit

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MASTER THESIS INFORMATION

Period of interviews: February/March
120 pages of academic research
Date of Submission: 15 May 2019
Oral Defense: June 2019

APPENDIX 2: INTERVIEW GUIDE

Aim of the interview: to get insights and better understanding of collaboration with competitors based on the relevant manager´s experiences and opinions from a company's innovation team that engages in collaboration with competitors in order to achieve either product or service innovation. In the following questions, we refer to the innovation team when we ask about "you".

General Introduction

- Could you please introduce yourself and your role in the firm?

Innovation

- What type of innovation do you engage in?
- How does the innovation team start an innovation project?
- What are the most important decision making elements when starting a new innovation project?

Collaborative Relationship

- Do you collaborate with other companies? With whom do you collaborate and why?
- What are the most important determinants in forming a well working collaboration relationship?
- Do you also collaborate with your competitors? With whom and why or why not?

If you currently do not collaborate with a competitor, the following questions refer to earlier experiences with collaborating with other stakeholders or working and somehow interacting with competitors.

- How do you decide that you want to engage in collaboration with your competitor?
- What are the most important determinants in forming a well working relationship with your competitor?

- What are the main inter-relational characteristics of your collaborative relationship with your competitor?
- What are the biggest challenges in a collaborative relationship with your competitor?

Process and Outcome

- What do you consider as a successful collaborative project with your competitor?
- How does innovation performance change due to collaborating with your competitor in your past experience?
    - What factors facilitate that change the most?
- How does an effective management of a collaborative project with your competitor looks like?
- What factors in managing the process lead to the failure of a collaborative project with your competitor?
- What do you do for avoiding failures in a collaborative project with your competitor?

Further comments

- Do you want to add something or is there any point that we haven't discussed in this interview and you want to discuss it?

Thank you for your participation.

APPENDIX 3: NINE INTERVIEW SUMMARIES

COMPANY A

Time	Location	Names	Length
20.03.2019 10:00	Arla Office, Co-penhagen	[redacted]	1:00

General Introduction

Could you please introduce yourself and your role in the firm?
• Arla is a dairy company with the vision of “creating the future of dairy to bring health and inspiration to the world, naturally.” - They focus on healthy, natural, and inspiring products [redacted] • “We are aiming to leverage collaborative partnerships on innovation in the best way” [redacted]

Innovation

What type of innovation do you engage in?
• Knows the vision of the company by heart • "Innovation is very much around creating healthy products for our consumers, it is about the process (new technology and machinery) and also how do we activate our sustainability agenda through innovation." • Innovation is often driven by product developers and they are aiming on new products and also processes (new technology, machines) • Within open innovation they have a special focus on collaboration with universities, strategic suppliers, startups and engagement innovation networks and clusters.

How does the innovation team start an innovation project?
• They are using the Stage-Gate Model to optimize speed – sprints – verify and fail fast 1. Explore- research new technology, ingredients, ways – what is happening outside 2. Creating concepts – how a great idea can look like 3. Create business case – feasibility 4. Develop product 5. Launch • "There's a continuous iteration" • Try to use new ways of working like sprits → how can we speed up and optimise the process • Quickly understanding if we are on the wrong tack

What are the most important decision making elements when starting a new innovation project?
• Likelihood of success • Conscious about the costs and feasibility – With what can we actually make money? • Program of saving 300 Million within Arla • Think about what are Arla's priorities • 12 "must win battles" areas – looking as products and markets - we want in or are strong already • Then we identify the certain area and then we make what we are really prioritising • See the business context – what can it lead to, what do we have to do - having the right solution, marketing, process etc. to become the best in the areas we have identified • Also look from research perspective: • What are the main technologies which we need to master • For initiating the right research with universities or partners

- “For becoming consistently better and better in those areas”
- Different areas:

1. Processes – make them faster
2. Properties – “right crispiness of the pizza” – can vary country to country e.g.: Skyr products are very successful
3. Lactose free area “new dairy” – plant-based milks, how to maintain position – they can benefit from that people in general shift away from meat to protein

Collaborative Relationship

Do you collaborate with other companies? With whom do you collaborate and why?

- Mainly at the area of open innovation – there’s lot of knowledge outside – that’s a matter for speeding up, more hands and brains together
- “Our best results are created in collaboration/cooperation.” (prefer cooperation)
- They prefer to use the term cooperation, which is true collaboration and they are doing it since 1800s when farmers got together
- According to the CEO: “It is in their DNA to collaborate to achieve better results” - mindset, mentality
- Always when they would enter a new market then together with a local partner
- They collaborate with suppliers, universities, start-ups, competitors as well but sometimes they don’t see them as competitors even though they produce similar products
- Why? → “1+1=3” they produce milk but for the final product they also need machines, other ingredients, expertise etc.
- “Typically in open innovation we would say like that 99% of your expertise is found outside of your own company.”
- “You might have great force of knowledge inside but there is still much more knowledge outside.”

Reason for collaboration:

- access to certain areas
- Speeding up

What are the most important determinants in forming a well working collaboration relationship?

- The most important factor is openness- “talk so you can’t be surprised & disappointed later on”
- Both sides have wishes and desires to make something happen together
- “But trust becomes really important therefore align on the expectations so that both partners see the opportunity in it.”

- Align on matters and expectations upfront
- Trust
- Share knowledge and competences
- Supplier view: what's the business case for them?
- Make sure to avoid having the fear that suppliers go to Arla's competitors and share information and vice versa, suppliers go to our competitors = trust
- New platform for challenges (since October)- to reach out to people with the right knowledge – post challenges and scouting
- "It is about bringing together different competences in order to find the best solutions."
- Understand the topic area which are closed, can be shared only within the company and topic areas that can be shared

Do you also collaborate with your competitors? With whom and why or why not?

- Industrial associations or other kind of networks - different players from the industry gather together to work on bigger challenges which the industry is facing
- GDP (Global Dairy Platform) - all big dairy companies of the world- network to discuss topics like the role of milk, nutrition, sustainability
- International Dairy Federation – related to the standard of milk products
- EDA (European Dairy Association)- regulation from EU discussed, recognizing players, for understanding that regulations not become an issue for our industry and how can we impact it.
- In china – Collaboration with Mengniu, leading players as the 2nd largest dairy company in the Chinese dairy industry – Arla already existed in China but wanted to sell more – agree and share on distributions
- Find good balance and discuss in what areas can you discuss and what areas cannot
-

How do you decide that you want to engage in collaboration with your competitor?

- Why? Benefits – it is matter of finding out how can it work for both parties
- "Most often both companies do it when it has a positive effect on their business otherwise I think they would not collaborate with a competitor and rather do something else."
- It is about thorough analysis- what is possible?
- either Arla reaches out or competitors start the communication
- Both soft and hard values are taken into consideration
- Is there a right chemistry? = "What is the trust level and does your partner really help in bringing the business forward? Different analysis levels of how such a partnership can look like."

What are the most important determinants in forming a well working relationship with your competitor?
• Understand who are the point of contacts in the organization • Having the right decision-makers, set-up and engagement • Intentions are matching from both sides • A sufficient contact and are there aligning • "Everything is about humans by the end of the day" • Make sure that intentions are matching from both sides

What are the main inter-relational characteristics of your collaborative relationship with your competitor?
• Trust and open enough relationship • Closeness & Honesty is there when accessing the other organization • There's a structured way of working • Aligned priorities

What are the biggest challenges in a collaborative relationship with your competitor?	
• It is to find the right balance – have common theme (topics like regulation and sustainability) • "Where can we benefit from doing something together rather than trying to solve issues alone." • "Strengths by standing together rather than operating individually" • Maintenance: (true for any kind of collaborative relationship) - Understand the different organizational cultures, agenda and thinking as well as working style - "It can be already difficult to work with your own colleagues so it can be even more difficult to work with a competitior." - Keep trust: after a meeting both sides go back to their "home base" - "Closeness, openness and trust becomes key" - Always make sure that you are align on priorities	More difficult to answer this

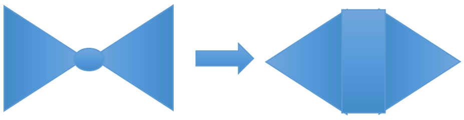
Process and Outcome

What do you consider as a successful collaborative project with your competitor?
• Business benefits: Manage to create something together that makes value and money for both (we are still businesses) Why? Benefits – it is matter of finding out how can it work for both parties • It depends on what is in for the parties • Highly depends on the ultimate goal like better processes, new exciting product, generate knowledge so that consumers are less confused – social media example • Nature of being – what's the reason of being, what is in it from both sides • "Depending on the nature of the partner we work with – what is the reason of being and what is our reason for being."

How does innovation performance change due to collaborating with your competitor in your past experience? a. What factors facilitate that change the most?
• Driving innovation with a partner e.g.:China • Take all aspects and concerns • Closer understanding for regulatory scene • Setting up local product facilities together and tackle regulations together • Business Setup- no competition but partnership • "Often competitors would go more together on the more pre-competitive areas – so the big challenges that are facing your industry and how can we overcome them by standing together" • But when it comes to a product e.g. a new butter then they would rather use a partner or someone from another country.

How does an effective management of a collaborative project with your competitor looks like?

- "An effective management is always important no matter what you do."
- Effective decision-making: understand next steps and goals
- Having the right set up between different functions management level and expert levels
- So that everybody has the possibility of collaborating well together
- Allow experts to work together -› open collaboration – trust colleagues that they manage communication and they know what to share or not
- Forms of collaborating:
- Avoiding bottlenecks: that people do not start talking to each other rather that it goes all though one person
- Good partnership: some people coordinate but the different expertise work together and they benefit the most in exchanging knowledge directly
- Important to explain what to share and what not



What factors in managing the process lead to the failure of a collaborative project with your competitor?

- High ambitions that is not possible
- Market is not ready- that's why sprint is important
- Business priorities changing
- Structural reorganization – not the same closeness – disturbs the process
- "Most often you are engaging a partnership when you have a challenge you cannot crack alone." "When you know how to do it then you reach out for speed or getting more expertise in"
- No alignment of expectations

What do you do for avoiding failures in a collaborative project with your competitor?

- Good planning and alignment
- Good understanding of reasons: decisions, timeline = business commitment

Further comments

Do you want to add something or is there any point that we haven't discussed in this interview and you want to discuss it?
• Focus on clustering – industrial clusters/ecosystems for networking and exchange • Like in Silicon Valley – help also smaller companies • E.g.: Danish Food Cluster – political agenda • Industry wants innovation: originally, Arla foods together with industry association and universities initiated the idea of gathering companies to talk about innovation • Near future- Danish government wants to focus more on this and help • Purpose: players benefit from the network- they see what they can achieve instead of being concerned

COMPANY B

Time	Location	Names	Length
18.03.2019 15:30	Skype	[redacted]	37 mins

General Introduction

Could you please introduce yourself and your role in the firm?
[redacted] ● "Open innovation is the field of "rocking together" with external partners to complement own innovation capabilities and create more innovation faster and share in the partnership"

Innovation

What type of innovation do you engage in?
Due to the size of the company, they engage in many types • Research academia • Joint development with e.g. engineering providers • Innovation with established suppliers e.g. innovations in new materials • Innovations with other companies on completely finished products up to with competitors Innovation is broad so it can be: • Technology • Product • Packaging • Business models • Service models • Digital innovation

How does the innovation team start an innovation project?
1. It is driven by strategic need – originating and defined by the business leadership

→ that generates leads

2. There's somebody within the company with an idea – opportunity
3. External person/company with an idea or solution approaching the company: it can match internally and decision can be made together whether to pursue it or not

What are the most important decision-making elements when starting a new innovation project?
Consumer goods: 1. Benefit/proposition for end-user • Does it deliver need/benefit? • Irresistible experience • Performance benefits 2. Will there be a sustainable Business Model/ Revenue Model? • Will it be something where you can expect to generate profit • Good size of proposition -› across the globe or serve one market only → second one is probably not an opportunity for a global company • It is about the balance

Collaborative Relationship

Do you collaborate with other companies? With whom do you collaborate and why?
Collaborate with the whole spectrum of companies, e.g.: • Manufacturers • Innovation consultants • Competitors in dedicated fields of interest Why? "Acknowledge that we don't have all the knowledge & capabilities available to drive the innovation needed to sustain the business"

What are the most important determinants in forming a well working collaboration relationship?
• Trusted relationship is a key element • Both parties should be convinced about a win-win situation – it cannot be that one is losing and suffering

Do you also collaborate with your competitors? With whom and why or why not?
• Collaborating with a competitor can come from different product solutions in a given benefit space • e.g.: drinks: soda vs. healthy water partnering as competitor to complement • Strengthen distribution channel in different countries, regions • "sometimes it also can mean that we have with a competitor in the same benefit space different technologies and they can be beneficial or preferred by the one or other consumer segment, then it makes sense that not every company inventing the set of solutions but decide to play jointly in certain segment. Still the products branded as each company but using same/similar assets which can lead to more efficient operations" - region, distribution and technology

How do you decide that you want to engage in collaboration with your competitor?
• "working with competitors is really an exception, it is not the norm " • Landscaping • Thinking of innovation strategies • Assessing: what is the best option cost wisely? • The goal is to deliver preferential business & better financial results • "Partnering with a competitor really needs to be the best option from a business standpoint." • "I would never recommend partnering with a competitor but in the end, it is the decision of the senior management." • partnering with competition is always a bit critical – top level has to decide

What are the most important determinants in forming a well working relationship with your competitor?
• Establishing trustful relationship (again) & mutual interest, benefits • Be clear on what the participant can & cannot talk about • It is more complicated to set-up contracts (IP relation, not falling to anti-trust problems and compliance issues) • Being even more clear than in a regular collaborative relationship

What are the main inter-relational characteristics of your collaborative relationship with your competitor?
• The participant companies have to be much more aligned • being even more clear of who is the discussion leader → how do you drive decision in a joint team?

What are the biggest challenges in a collaborative relationship with your competitor?
• who is the responsible counterpart on a given topic? • How do you drive decisions? → in the end they are join decisions → need for more alignment • More flexibility of working with partners then with a competitor, not so much back and forth possible

Process and Outcome

What do you consider as a successful collaborative project with your competitor?
• Creating more value than each creating alone • Creating better overall category experience for the consumers and retailers vs. each company is able to do alone

How does innovation performance change due to collaborating with your competitor in your past experience? a. What factors facilitate that change the most?
• Innovation outcome per organization (per budget or per people involved) increases • Split the burden of creating new innovation by half or by negotiated ratio • “but in a partnership, there is never just one part who takes all the burden, you are always in a boat together” • “jointly you are more efficient and productive versus doing it alone” Factors facilitate the change: • Facilitated by similar core values & principles • e.g. What is the quality expectation is there? or What is the experience or benefit

you like to provide with the solution? → "the closer your values are already aligned, the better it is."

- Need "common denominator that is big enough to make it successful"

How does an effective management of a collaborative project with your competitor looks like?
Project Management level • Stricter and more documented with follow-ups • Teams suffer more if something goes wrong Senior management Level • They're more involved • Agreeing upfront about general interest is important • First alignment of the company, then c-level to c-level before you start working • More clarity is needed about the direction communicated to the working team Employees enjoy more connection and engagement with the senior management than in general

What factors in managing the process lead to the failure of a collaborative project with your competitor?
• No personal experience in failures • Confidentiality & legal sides are the most critical areas • Egos • "Cultural challenges that are not envisioned in the beginning" like different approaches, risk taking

What do you do for avoiding failures in a collaborative project with your competitor?
• Being clear and transparent about expectations from the beginning -› having them written down • Once the shared information is there- surprises can't be blamed about the quality expectation and legal expectations • all these "contractual fundamentals" have to be discussed and transparent at very early stage • "without having everything sorted out with the partner is a no go"

Further comments

Do you want to add something or is there any point that we haven't discussed in this interview and you want to discuss it?
• Automotive industry- nicely documented cases e.g.: electric cars Mercedes owned 10% Tesla to learn then quite to work on its own technology e.g.: car sharing: companies do it together • Have a look on TRL 1-9 Europe 1- Mock up 9- technology proven – in between is prototyping Research programmes Companies usually develop technology together on low TRL levels- platform development (big challenges & sustainability" then do level 9 , final part by themselves It is hard to do it alone Dedicated collaboration areas are needed The interviewee has experience mainly in physical products Probably services don't have IP

Company C

Time	Location	Names	Length
14.03.2019 09:00	Skype	[redacted]	1 hour

General Introduction

Could you please introduce yourself and your role in the firm?
• Had different roles • [redacted] • Emerging business area: Start-ups and scale ups • [redacted] • Strategy, new business development and solutions • [redacted]

Innovation

What type of innovation do you engage in?
• 2 ways of looking at it: Actual doing innovation and organising innovation • organising innovation → how do you set it up, scale ups (later), not involved in engaging in doing innovation • E.g. light solutions for example [redacted] • Got replaced by LED (2007) • Worked together with universities + clients + corporate development + banks = ecosystem → they were different • Partnership needed to evolve over 4 to 5 years • Important to have a win-win and trust → benefits for each other otherwise the partnership is not good

How does the innovation team start an innovation project?
• Starts with an idea • Starts also in a small scale • Messy and fussy at the front end • Need 2 – 3 people committed • It sounds good in the beginning, but takes time to know everything • Managers shield the generators from the pressure of generating revenue because it was unclear when they could convert in to something that sells • It takes also time to support ideas: e.g. some ideas were pitched and then missed support, it went underground, after some years it got pitched again and it went underground again but at the third time it was approved by the management – ordered containers and the items were sold out within 2 weeks • Ideas need timing and support • Ideas also need to have luck for survive within the organisation

Collaborative Relationship

Do you collaborate with other companies? With whom do you collaborate and why?
• Don't underestimate the internal collaboration ➔ Usually more difficult • External can be easier because you are two different companies there are boundaries and you can define things in contracts • If you don't have a commercial collaboration, then the innovative collaborations are difficult if you don't have a selling use case • You need to balance the innovation act • Talks about an example collaboration with [redacted] • [redacted] vision: "everything is connected" • Pitch the solution of a smart controllable light to a client • Was not successful it was too target and not interesting for the company • "*There need to be a balance between the innovation collaboration and the business commercial collaboration otherwise it is just a nice research party… (which does not deliver anything).*"

What are the most important determinants in forming a well working collaboration relationship?
• *"Most important ingredient is trust"* • It is about relationship • Consistency of several people involved in the process which are able to translate the language of the companies [redacted] • Most often the companies do not understand each other • If they trust each other and thy have the approval of using resources from both companies then things can start to fly • Example [redacted] • highest level of executers engaged in the collaboration • commitments were made on this level and push down (forced top down approach) • Much stronger when ideas come from employees • Example: French company → competitor in the sense of providing services to cities • Smart connected street lightning • Created a joint venture • Trust lost over time • The French company wanted to find a cheap supplier→ had no intention of an equal partnership • Collaboration stop from [redacted] side • You need to have many initiatives running because many will fail and just some of them will fly • More and more companies move into the area of providing services • Who will be the main contractor and who will be the subcontractor?

Do you also collaborate with your competitors? With whom and why or why not?
• [redacted] • Competitor because sell the same products • Collaborate when it comes to patterns and licenses → Cross working methods, what is available to [redacted] is at some point available to [redacted] • the benefit is that both can develop the market and generate higher value • Developing the market alone is costly • LED related patterns • [redacted] • [redacted] generated a license program • Sold licenses for a reasonable price to their competitors and managed through it that the whole market evolved

How do you decide that you want to engage in collaboration with your competitor?
• Mutual benefit must be generated • E.g. Japanese competitor approached [redacted] for collaboration (marketed only in Japan) • Competitor wanted to expend in Europa and [redacted] in japan • Competitor had more advanced LED lightning • Both took parts over from both markets • However, did not work out in the long run

What are the most important determinants in forming a well working relationship with your competitor?
• You need to careful what you discuss – rules and regulations (prices and clients) • Cost leadership is important • What also often happens is that one company moves into the business where you have been partners but become competitors. There it would be possible that one specialises in one area and another one in another area.

What are the main inter-relational characteristics of your collaborative relationship with your competitor?
• Not with direct competitors • Mainly work together with companies to get skills and capabilities • E.g. same technology but different area (automotive and health or camera and health) • Also shared factories with [redacted]

What are the biggest challenges in a collaborative relationship with your competitor?
X

Process and Outcome

What do you consider as a successful collaborative project with your competitor?
• You have a well-established protocol • You have experimented and shared cost

How does innovation performance change due to collaborating with your competitor in your past experience? a. What factors facilitate that change the most?
• Difficult, need to have clear expectations • You need to be clearer on legal terms and set up rules which both need to follow • You need to be clear what the business models are like • Different business models with partners • With competitors you have more the same business model, therefore it is even more important to understand the rules and regulations, you need to be very strict and transparent at the same time • E.g. sharing facilities or resources • Trust can come from knowledge as well as the personal level – both are important for collaborating with competitor

How does an effective management of a collaborative project with your competitor looks like?
• Open and transparent • Clear what do you want to get out of it • Review it (yearly) • Are we still on a right track? Do we get enough out of it? How do we keep the balance right? • Mirror the attitude of the team from the other company • balance out what is expected • you need to have a daily operating team, 2 people who make sure that things happen • trust on personal side – need of level • be prepared = do your homework before actually getting together → what, with who, why? • Make sure that you have plan & review, monitor • Have commitment from both sides • “Sometimes you need a neutral person who can set it up and get it going” • *“You need to work on each other in order to make it [the collaboration] work for both parties.“*

What factors in managing the process lead to the failure of a collaborative project with your competitor?
• changes in personnel • connections which are starting to fall apart • changes in strategy • *“The opportunity of why you got together is changing.”* • Then it turns out that the opportunity is not as great as it was perceived in the beginning, then you stop. • *“It should not be that it lasts forever, let’s make sure that it works at some point and let’s also be clear when it does not work, and it is also great to stop at some point in time.”*

What do you do for avoiding failures in a collaborative project with your competitor?
• “Communication, communication, communication is the process that feeds the trust.” • “And if you have trust you are able to share what is going on.”

Further comments

Do you want to add something or is there any point that we haven’t discussed in this interview and you want to discuss it?
• Define of innovation • “Two companies working together on the commercial side is also innovation” • Challenge: how to deal with platforms & ecosystem → more co. • How do you make sure that you come up with the platform of 2 or 3 companies? And then how do you make sure that other companies can benefit from the platform? So to say facilitating the ecosystem. • “It is not a one to one relationship, so it one to a couple and the couple to the many.” • E.g. Apple & Samsung 1 to 1

COMPANY D

Time	Location	Names	Length
18.03.2019 15:30	SKYPE	[redacted]	1:00

General Introduction

Could you please introduce yourself and your role in the firm?
[redacted] ● [redacted] to source innovation through collaboration both internally and externally ● Collaboration is a broad concept- it can range from supplier agreement to investment ● "We work in everything what is digital but not a car" ● The main focus is on getting new business opportunities to regular business – get business owner competitive edge

Innovation

What type of innovation do you engage in?
● Mainly digital- somehow service – not touching physical products only software ● Different scopes: ● Incremental improvement ● Supporting disruptive business ● Not looking for new Business Model (but that can happen as well)

How does the innovation team start an innovation project?
● Operating in meta-level ● Bridge builders for start-ups- understand all different areas (marketing, strategy etc.) ● Try to source the right company and bring them into the company ● requires understanding all the different areas from marketing, sales, finance, strategy, innovation teams etc.

- Understand existing project and find pain points and then find a fitting external company with a solution
- Bring the right company to the right team in the organisation
- Consistent iterations
- That is why they usually do on the external side

3. Sometimes also build own products

- not common to do in their team
- taking in the external knowledge into consideration
- doing MVPs and see the market feedback
- talking to more 100s of companies

Main Goal: Aiming to integrate external entity with right scopes that is easily digestible and fits within the company

What are the most important decision-making elements when starting a new innovation project?
X

Collaborative Relationship

Do you collaborate with other companies? With whom do you collaborate and why?
• There a lot of collaboration potentials- they can be differentiated by the intensity level - supplier or deeper investment/acquisition • They are looking for ready products & customers in limited markets and help them scaling by giving support • It is an "interesting space to be in" • Do not focus on a too small entity because it could be too dangerous for the company to engage with as such a huge company. • Investments: market validation and more mature companies • E.g.: with BMW: much more impact can happen, but more regulation is needed • Access to geographically new places

- It is very tempting for start-ups to do: they can ask for money and even charge more although chance can still be around 60%

What are the most important determinants in forming a well working collaboration relationship?
- Be on the "eye level" - Mutually beneficial relationship - Trust - Mutual respect - Show value: *"put something on the table that the other guys need" otherwise it is a supplier relationship"* - Open communication and constant interaction = sustaining personal relations - All about human interactions - Create helpful dynamics- both sides want to be the best - you try to help them; they see you value and then they try to help you

Do you also collaborate with your competitors? With whom and why or why not?
- Most recently: work together with BMW and providing all the mobility services as a company (merge in the last month) - why do they do it? - "mobility service is a network game, the more the merrier" - Share network and customer base - Safeguard us against new players - build up a specific skill set - Start-up Autobahn platform – innovation platform with open doors for entrepreneurs from the area of mobility (Stuttgart area) - Source companies through different topics of interest - organize pitch event for them - Why? They believe in the location and want to support it, it is good for the ecosystem in the area – sharing the cost - The biggest threat: new digital companies come up with e.g. a better self-driving car, therefore bundling forces between the car competitors is needed, a new business is threatening our old business - old competitors can be more predictable - "support the ecosystem and share the cost of the new input so that everybody can benefit from it"

How do you decide that you want to engage in collaboration with your competitor?
● Cases are individual ● Network effect ● Scale ● try to cut cost ● Mostly the board level decides due to legal considerations (cartel complexity potential) - super sensible decisions because you can run into a cartel complexity ● really complex e.g.: investment in VIA- Uber competitor, BMW collaboration ● The biggest question is the legal perspective: what is allowed to share? How to engage? How to get market insights? ● The discussion is messy and complex and because of the legal side, people are really reluctant

What are the most important determinants in forming a well working relationship with your competitor?
● “similar determinants but much harder to achieve” ● Key asset: trust generation as everyone wants what is best for itself – It is a critical region ● Most difficult one as well as building up this trusted relationship thereby → Different levels have to be considered: employee level is easier- you can have coffee together and talk ● Diverging target situation which can be complicated ● Takes time to generate trust ● Win-win situation is needed ● It can be more complex with a similarly structured company ● Partnership: can be your size but most often smaller ● Competitor: same size

What are the biggest challenges in a collaborative relationship with your competitor?
● Level of trust ● Finding mutual beneficial areas of work ● Finding balance what each party brings to the table ● Navigate organizational structure- where´s the mismatch? How does the two parts work together?

Process and Outcome

What do you consider as a successful collaborative project with your competitor?
● Beneficial for both sides in the long-run ● In case the other part is not as successful, help is still there

How does innovation performance change due to collaborating with your competitor in your past experience? a. What factors facilitate that change the most?
● Can´t measure all the insights – "if there´s an external entity, you always lose a bit of control" ● need to understand the outcome → input-output ratio → needs to be even - balance ● There´s not too much measurement difference between non-competitor collaboration and competitor collaboration ● Security- a party can't just quit ● Gets difficult when a collaboration is safeguarded ● You need to make sure that the interest is aligned ● It is more tough to do innovation performance – can't compare who's better – there are specific cases

How does an effective management of a collaborative project with your competitor looks like?
● "eye level approach" e.g.: BMW collaboration with significant customer base → suggestion: have a look on the CEO and CFO within the new entity with BMW etc.

- Balanced power
- “how those guys can play together” “and how do they execute jointly as the new entity to the benefit of all participants involved”
- key is a management that supports from all employees from both sides of the collaboration and also acts as a joint operation

What factors in managing the process lead to the failure of a collaborative project with your competitor?
• Pitfalls can happen both staff and management levels • Lack of trust and respect, which normally help to smoothen the work on both sides • Uneven benefits • Feel left-behind • Lack of transparency • Not having the right manager with specific skills that is needed in an uncertain innovation environment • Lack of openness form the employee side (e.g. employees who have always been with the company might not be the best choice for a joint venture of BMW and Mercedes)

What do you do for avoiding failures in a collaborative project with your competitor?
• Personally: maintain a good relationship with all partners, spend quite a lot of time on it, ask if there´s a question & help if needed • Balance the needs between the partners • Larger scale: present equally represented sides

Further comments

Do you want to add something or is there any point that we haven’t discussed in this interview and you want to discuss it?
• It is an interesting space we are looking into • There are differences between normal and competitive collaboration • How to establish and maintain trust? Is there an additional edge? • Another example: Automotive grade Linux Project: how to build OS – open source • “you can´t do yourself, you have to join the forces”

COMPANY E

Time	Location	Names	Length
15.03.2019 17:00	Ibis Hotel-lobby	[redacted]	45 Minutes

General Introduction

Could you please introduce yourself and your role in the firm?
• Philips Health works – small unit within Philips which is not part of the business unit, it works as a separate unit within Philips • International team (around 25 people) • [redacted] • part of the business and innovation unit and not part of a country • Focuses on EU Startup engagement and internal accelerator 1. Accelerator: internal early stage innovation • They do it in cohorts = 5 to 10 people per team • 2x times per year happens the program • Internal incubator • Growing it "under our umbrella" 2. Internal prototyping team: • makes digital prototypes in a quick way • Quickly assess and show to customers 3. Program (12 weeks): • Joint VP → strategic options to work together • 2x a year • working on a joint value proposition, with the hope of a strategic purpose of partnering together • [redacted] running the European start-up program and the internal accelerator • also worked in different industries for setting up innovation departments

Innovation

What type of innovation do you engage in?
• Digital (pure) hardware & software & service all in health • Engages in B2B and B2C • Ai solutions healthcare combinations • Personal care • Involved in early stage → not scaling • Searching for viral model → To find new business models • doing product and service innovation, most often it is a combination of bot

How does the innovation team start an innovation project?
X

What are the most important decision making elements when starting a new innovation project?
• They never initiate something at Healthworks • The concept is already there or some proof points • Usually the business unit starts In general (incremental innovation) triggers: • Pain • Keep up with solution that competitor has • New technology • New market • Strategy change (another domain) → main reasons for starting a project

Collaborative Relationship

Do you collaborate with other companies? With whom do you collaborate and why?
Healthworks view: • Collaborate with start-ups, hospitals, investors (co-investment) • also collaborate with partners who find start-ups • External accelerators & incubators can be competitors, but they don't see them as competitors • From an accelerator perspective they focus on companies who provide the right service/solution • Ecosystem with start-ups is important – work together but also compete in other areas (around 55 start-ups) Philips view: • Patient monitoring (hardware) • Market places • Distribution partners • Universities • Outsourcing "In a lot of areas are we working with partners of the ecosystem"

What are the most important determinants in forming a well working collaboration relationship?
• With start-ups: there is a future for the company, is it going to exist? • Best globally • IP driven (legal) • Joint value (cannot do ourselves) • *"good click between management"* 12 weeks start-up program view • Mutual respect • Build trust over experience • Validate proposition

- Alignment on roadmap
- Clear knowledge what to expect
- alignment on the vision- mission
- Deliver the promise
- Avoiding unethical actions
- Clear expectations setting

Do you also collaborate with your competitors? With whom and why or why not?
Philips view: • Amazon is included in building digital healthcare platforms while it is looking for specific healthcare services • Same situation with Google • e.g.: monitors: it is common to sell equipment from others together with the Philips product to have a FULL product while competing in other channels → “we want to generate a full experience for our customers” Healthworks: • typically, don’t see accelerators as competitors • but maybe some start-ups are competitors • work with external accelerators • sometimes stop and engage in another area in a partial engagement “I think in an ecosystem the more and more you will see that they are parties with you work together with and in other area you will compete. It is a little bit given now and it will happen more and more.” “The provided to the customer is a solution and maybe we can deliver it or maybe not, but we want to make sure that we can deliver the full experience and sometimes it means bringing other solutions in.” “One the one end we are competing but on the other end we have a marketplace where we offer competing solutions” → it is like Google, they have their spreadsheet but on google play you can also get Microsoft excel

How do you decide that you want to engage in collaboration with your competitor?
• Give choice to customers - full-service providers • Start-ups may be at the market place already with similar services thus competing with Healthworks e.g.: Google spreadsheet vs Microsoft Excel

What are the most important determinants in forming a well working relationship with your competitor?
Philips view • There's always place for non-competing collaboration • But collaboration with very similar company or company doing the exact same as GE cannot happen -› that's not fair -› companies would prioritize their own product Healthworks view • Start-ups work on similar products, but a way can be found to still have benefits for both • "Be open and clear about the area you compete but still work on models that allows benefits for both."

What are the main inter-relational characteristics of your collaborative relationship with your competitor?
X

What are the biggest challenges in a collaborative relationship with your competitor?
General view • With direct competitor: tension, legal issues, regulations • it always becomes a legal partnership

With start-ups – early stage partners • Convincing internal - what the actual value is • Judge – good or not • Assess – validate technology/business model/ customer needs • Lot of time is needed • Controversial between the types of people: early stage start-ups vs. Healthworks with scaling • work also with a different clock speed - align the two partners

Process and Outcome

What do you consider as a successful collaborative project with your competitor?
• Both sides generate value • Revenue and profit increasement – that could not have been done alone • Faster market entry • Cheaper way to create something than alone • validating markets in different areas in a cheaper way

How does innovation performance change due to collaborating with your competitor in your past experience? a. What factors facilitate that change the most?
X

How does an effective management of a collaborative project with your competitor looks like?

12 weeks programme – validation

AFTER

- Agree on milestones: doing what by when
- Buying the start-ups
- Healthworks keep distance and does not force exclusivity
- They believe in the strengths of the start-ups and do not kill them
- They want to learn from them therefore they leave them and facilitate them
- we believe in the strengths of the start-up and want to make use of it in a joint partnership

What factors in managing the process lead to the failure of a collaborative project with your competitor?
• Happens very often • Demanding too much and exclusivity • Take over • Take away elements that make them quick

What do you do for avoiding failures in a collaborative project with your competitor?
• Contracts • Not forcing anything • Day-to-day approach • Minority stakes • Same conditions as VCs -› keep them independent • Want successful partners

Further comments

Do you want to add something or is there any point that we haven't discussed in this interview and you want to discuss it?
• Different dynamics

COMPANY F

Time	Location	Names	Length
15.03.2019 09:00	ING office lounge	[redacted]	1:00

General Introduction

Could you please introduce yourself and your role in the firm?
• ING- Netherlands – subsidiary, larges subsidiary [redacted] • Tribe structure – "Spotify model" - autonomy – Center of expertise, support the tribe to be efficient to deliver innovation, I don't do innovation I support it.

Innovation

What type of innovation do you engage in?
• Depends on the ING level • ING Group level they have different innovation teams • McKinsey Horizon Model • ING Netherlands focuses on level 0 & 1 – specifications – add features to payment requests – making products better – upgrade to real-time system • Do not touch often upon horizon 2, just sometimes with their accelerator • Currently- implement loyalty in mobile banking Horizon 3 – not tailored to local banks e.g.: mobility system – more marketing and distribution power – potentially open new revenue model

How does the innovation team start an innovation project?
• Teams are not initiating- they can get room to work on opportunities or on pains, from there finding the solution • To trigger/ “kickstart” innovation: talk to leads of tribes- collect list of stoppings from innovation and share it with e.g.: fintech who can potentially solve it, use their corporate accelerator for this • If a project is successful, then they send it to one of the tribes

What are the most important decision making elements when starting a new innovation project?
x

Collaborative Relationship

Do you collaborate with other companies? With whom do you collaborate and why?
• Collaboration is a fluffy word – when is someone a collaborator? • Fintechs – “Fintech Village” (https://www.ing.com/Newsroom/All-news/-Breaking-Barriers-Fast-learners-will-be-the-winners-.htm) • Netherlands: not too many banks so it is easy to collaborate – 3 main banks- the 3 banks together can have societal impact • Other smaller banks are not so important to drive social change • Consequence: Payment system is far ahead – innovation together • Easier to shift the market standard easily • Different collaboration projects: • iDEAL – online payment platform • Tap & Go • Payconiq – across banks (QR codes) – banks realized they need to grow the market in order to apply it • YOLT – biggest spin.out at the moment – aggregation of bank accounts- collaboration with technical partners – getting data from other banks – comparison -optimize finance • “We work really often with banks together when it has sociable impact.”

What are the most important determinants in forming a well working collaboration relationship?
• Hard to generalize • Banks are big- bargain power – influence relationships • “bigger the partner- the more equal the relationship” • Legally assessed

What are the most important determinants in forming a well working relationship with your competitor?
• Work of humans • Start- building personal relationships • Find a way to understand each other – there are expectations from each side • Continuously respect each other • We want them not fully to depend on us

What are the main inter-relational characteristics of your collaborative relationship with your competitor?
• Nothing to do with innovation like doing project management • in the end we want the same • Competitors- see that we can change the society • Strong power together • Based on equality and there is no need for edge • Human aspect: interest, respect is needed

What are the biggest challenges in a collaborative relationship with your competitor?
• Specific on who talks about what • Complexity of the organization – quantity of people • Meeting fintechs: company comprises 8 people, ING sends 12 people as representatives • Meeting of 3 banks: same amount of people • What is the value we can bring to the market? • *“the more people, the more ego”* – stronger opinions • Check whether we still satisfy customer needs • Pay attention to vision

Process and Outcome

What do you consider as a successful collaborative project with your competitor?
• it takes long time to see the success (10-15 years) • Geldwereld- generic ATMs – technology and marketing is there already • Hard parts • Meet it in time • Budget constraints

How does innovation performance change due to collaborating with your competitor in your past experience? What factors facilitate that change the most?
• ING approach- innovation methodology - Use “funnel” to measure the current projects • Explore Opportunities--› Scaling • Stage gate- check with customer-› pain-solution-› market-fit -› can we build it ourselves? • With competitors- still try to follow the funnel- happy to share it – otherwise each part measures it on their own way • Most important- feel comfortable with the method

How does an effective management of a collaborative project with your competitor looks like?
• Taking enough time to discover the needs of parties • Check on those regularly

What factors in managing the process lead to the failure of a collaborative project with your competitor?
(bit guessing) • Failed to understand the needs of all parties • E.g.: (earlier 2012/3) 6packs? 3 banks + 3 telecoms? – failed – it’s ok but customers were sad • E.g.: scanning solution – try to build a solution to help accounting/VAT/TAX related area-

pull out tax relevant information from a snap picture of invoice • The partner promised things (doing it in 6 weeks), however after 3 months they were done with only half of it • Failed to understand the requirements – lack of knowledge of their own • “aspiration of goals” issue • This scanning app wasn’t successful as the technology wasn’t there yet- build technology

What do you do for avoiding failures in a collaborative project with your competitor?
• Effective management • Clear & sharp as possible and as soon as possible

Further comments

Do you want to add something or is there any point that we haven’t discussed in this interview and you want to discuss it?
Not different from PM Be strict & clear at the stage gates Innovation = uncertainty – feasibility? Clear indicators

COMPANY G

Time	Location	Names	Length
14.03.2019 12:30	[redacted]	[redacted]	1 hour

General Introduction

Could you please introduce yourself and your role in the firm?
[redacted] • New EU regulation: PSD2 = banks need to share their clients' data with 3rd parties for free – preparing for this - this Monday: roll out first APIs -› new open banking era will start his role: lead the center of expertise

Innovation

What type of innovation do you engage in?
Different groupings/axes: 1. Consumers /SMEs/corporates – client focus 2. McKinsey Horizon Model • 0: nearby innovation, fixing the system, new version of an infrastructure • 1: small changes, small improvements (no new product/market) • 2: new product/market/technology • 3: disruptive innovation -platforms beyond banking 3. Driven by technology (API, blockchain, data analytics, AI, robotics) – focus on specific technologies

How does the innovation team start an innovation project?
Quite structured by now (after 7 years) – new innovation era 1. *"every innovation project starts with an idea"* – innovation bootcamp yearly- [redacted] – from more hundred ideas usually 3 become a real project 2. Define strategic value spaces- focus on where to start- teams ideating and exploring opportunities 3. Set up a team 4. Innovation fund: teams pitch their idea if it has a strategic fit then they get budget for the project • Sophisticated innovation process pace including strict stages

What are the most important decision making elements when starting a new innovation project?
• Strategic fit? • Good team? • Business sponsor? • Horizon 2-3?

Collaborative Relationship

Do you collaborate with other companies? With whom do you collaborate and why?
• Shortest answer: Yes, of course more and more as the banking is getting more open • Many partnerships and many ways to collaborate • World of banking is changing, and a bank cannot do thing on its own • It's getting more common to measure success by the way looking at how good are you in collaboration "we have to"

What are the most important determinants in forming a well working collaboration relationship?
Different collaborations • Active venture-fintech approach: [redacted] scouting around the globe and looking for fintechs, good opportunities – work along with the business to set up collaboration • Collaboration can be investing, exchange of knowledge, help to scale up by using the [redacted] client base • Around 150 partnerships • Assess them like a venture capitalist – same criteria • Set up an **environment:** 3 Innovation Labs – similar atmosphere as accelerators, environment where start-ups flourish where innovation teams can mix [redacted] and non [redacted] people from separate start-ups while feeling comfortable • "Google like" innovative environment – truck as coffee bar • They try to **"level"** with these fintechs (banks: more thousand people, more billion assets vs 3 people fintechs and no assets) • Build teams based on start-up methodologies – start-up mind-set

Do you also collaborate with your competitors? With whom and why or why not?
• Collaborate with other banks "opportunities or problems are too big to handle by themselves" • E.g.: at blockchain works always between 2 or more parties (around 3 leader banks9 • 45-68 banks partnering to work together on the technology – it only works If you collaborate • KYC "know your customer" while lot of regulations exist • Lot of external reasons why to collaborate

How do you decide that you want to engage in collaboration with your competitor?
Different levels of decision-making • Strategic level: innovation council – board level – decisions on investment • Tactical level: innovation fund • Operational level: up to the teams • Formal decision making: only senior manager can sign a real contract with a fintech – formal procedure

What are the most important determinants in forming a well working relationship with your competitor?
• Law that defines if collaboration is yes or no (support functions: legal/compliance) (pricing issues) • Networking • Less depending on personal context than other collaboration • More driven by content and opportunity than personal relationship • Sharing and communication is “difficult, difficult, difficult” • Technology focus = “same level of technology appetite” is needed • [redacted] among top 5 banks within blockchain and they want to do business with the other among the top5 • Do research and show off that “we are very good”- if they are in the top5 then the top5 also want to work with them

What are the main inter-relational characteristics of your collaborative relationship with your competitor?
• Key= Inter-mediate role – consultancy firm that takes the lead and brings people together – 3rd independent party • Inter-relation is not that important • Meeting participants are not deciding about their $ to spend – bank’s $ • Holiday example with us • How we gonna act with each other? • How to achieve trust? (hard to answer) normally as people do- Time consuming as a large company, socialise (lunch, dinner) • Collaboration starts with people who are into the context e.g. blockchain experts • How to review? Sit together as an innovation team • The value is still there? Still meeting/aligning strategic goal? (strategies and priorities can change) Assess investment, outcome, & speed

What are the biggest challenges in a collaborative relationship with your competitor?
• Keeping the same pace • Sit together in the beginning and make agreements (Plan) and deliver in 3 months. Some do some don’t • If not performing? It’s a problem – you can’t kick it out- what happens: get disconnected and go on own pace • Instead of being a front runner- step back- become a follower

Process and Outcome

What do you consider as a successful collaborative project with your competitor?
• Dutch situation: good collaboration, banks in the payment side-digitalised due to collaboration • 3 leading banks: if 2 collaborate the 3rd one has to follow- easier than in Germany • White labelled ATMs – not bank specific (bank cards are not used that much- thanks to digitalization)

How does innovation performance change due to collaborating with your competitor in your past experience? b. What factors facilitate that change the most?
• You can follow project performance more easily in-house ING teams (smaller project on your own – agile, design thinking) – decision-making- you can decide to stop or speed-up • With fintech it's easy as they don't have their own process • Competitor- harder as they have their own different processes, profile, speed and decision-making- another way of working- you don't have decision power- more complex stakeholder management – translate the working relationship • Measure performance: internally easily, more time is needed and more difficult to measure with competitors

How does an effective management of a collaborative project with your competitor looks like?
• Consultancy firms in between- document management, administration, setting up meetings • Team that work together actually – content-based people • Decision makers- board

What factors in managing the process lead to the failure of a collaborative project with your competitor?
• Loosing energy – one party • Team is making less progress

- Many times, you cannot stop due to regulation- although it is difficult to go on
- Every bank assesses their own investment

What do you do for avoiding failures in a collaborative project with your competitor?

- Keep track of commitment front – meet up these expectations?
- Does anybody come up with things they promised?

Further comments

Do you want to add something or is there any point that we haven't discussed in this interview and you want to discuss it?

- Try to make a framework. What kind of collaborations you have between competitor- different ways – project based – money based with different dynamics
- Avoid cartel forming

COMPANY H

Time	Location	Names	Length
18.03.2019 10:00	Nordea HQ-CPH	[redacted]	1:00

General Introduction

Could you please introduce yourself and your role in the firm?
● In the past 4 years, banks were mainly characterised by the “buzz” of digitalisation – therefor Nordea invested in and focused more on regulations and digitalisation and see innovation as an expensive internal process transformation ● There´s no innovation unit - In general, there are 4 customer divisions at Nordea ● There´s a light level of coordination in the divisions [redacted] ● More systematic process was established in September 2018 to have better strategic understanding and resource allocation ● The team did a research/learning trip in Silicon Valley

Innovation

What type of innovation do you engage in?
Core, Adjacent & Transformational innovation Overall Nordea has • Entrepreneurship programme • 3 Hackathons • 4 accelerators – not working that well, feels like “corporate charity” • Venture funds • Small labs for innovation & customer co-creation • External Hackathons: ask companies to engage in a problem • Open banking with 3rd parties: highly regulated – around 1000 companies involved • Configuration process- product development focus on Business Models and lifecycle

How does the innovation team start an innovation project?
It depends on the process ● Early stage ideation is not the best due to a lot of resourcing it and going to market ● Working with fintech partnerships starts with defining the problem space e.g. new technology ● Like more of core transformational changes rather than 5 to 10 years changes - seeing fast results and remaining control ● Pro-active – Reactive approach is needed

What are the most important decision-making elements when starting a new innovation project?
● The team has already tried to define a framework- stage gates model → internal and external entrepreneurship ● "In the beginning it is about a problem and need definition - so a strategic assessment of where we have gaps or where we would like to move. Then going through ideation, creation, testing and alignment questions." → stage gate model - Does it always get followed? Definitely not? ● The best is to be problem driven, problem seekers - "We want to be the problem seekers. So we know what problems there are internally and we try to define that and use that for finding the right solutions." ● can be run from employee bottom up or from the management introduced Competitor: ● This doesn´t always get followed- depends on maturity – main problem with competitors & networks "sector collaboration" ● "We do some stuff within the ecosystem around us because financial services do not exist in a bubble. Usually there is a clearly defined space of who does what and some of these spaces we have been actively engage with competitors. Usually referred to sector collaboration."

Collaborative Relationship

Do you collaborate with other companies? With whom do you collaborate and why?
● There´s a struggle with defining collaboration and partnership how to define it? ● Partnership? What is it? Does it add value? ● Another spectrum: Internal? Outsourcing? ● Partnership = "Small customer facing front-end values" ● "What kind of business opportunities do smaller companies offer which have been previously overlooked?" ● Collaboration with universities (DTU, ITU)

What are the most important determinants in forming a well working collaboration relationship?
● Taking into consideration the maturity in size: 2-3-person company vs. big corporation – there´s a struggle with small partners – usually like their idea but the smaller companies are changing a lot quickly Softer: • Openness & transparency • Listen to feedback • Trust • Promising

Do you also collaborate with your competitors? With whom and why or why not?
2 spaces/tracks 1. Sector collaboration: Doing something collectively in the sector (lot of investment) • It is expensive – local collaboration is needed, exchange is there • Market place – regulated by participants • "Bank collaborations around sector solutions" e.g. Dankort and mobile pay • MobilePay example: • Originally the sector collaboration worked on "SWIPP" but Danske Bank withdraw from that and created MobilePay • Therefore, there were 2 competing sector solutions • normally the sector solutions take kind of a long time to go to market

- However, Danske Bank had problems with part of their solution (Nets)
- Nordea left the sector collaboration and gave a solution to Danske Bank
- In the end the whole sector collaboration shifted
- “you need something that works together and what is really expensive of doing it alone”
- “there is always some marketplace. that marketplace can be regulated by the parties or you empower a third party for the collaboration.”

2. Commercial Opportunistic Collaboration – Investment Management
   - Fill in the gaps
   - Products from external partners to distribute - we do not have to do that but to better serve customer we rather have those external partners
   - It is about “capability matching”
   - It is a different angle- they are not direct competitors e.g.: BlackRock in London, India – serve different geographical locations

How do you decide that you want to engage in collaboration with your competitor?
Formal sector: technology lobby group / working group e.g.: pension, NemID

What are the most important determinants in forming a well working relationship with your competitor?

- Explaining the model
- Agree in terms (information flow, knowledge sharing)
- agreeing to price
- Aiming on stability – „minimizing stomach gut feeling“

The team does relationship management

- Goal accomplishing? Selling enough?
- Understanding How the other participants think & act is fundamental then “soft factors are between the lines”
- Generally, it is not about the individual, but it is by the end of the day

What are the main inter-relational characteristics of your collaborative relationship with your competitor?
● Start: need, problem → then identified gap (technical) e.g. bounds etc → then use our research and consultant research of finding out who is the best in it → then you tried to get in contact with those people and find out how the work, what are they good at, how do they grow etc. (evaluate the people) → Agree to the relationship ● Is there a room for growth? ● Do research and analysis of the other companies ‘past ● Visit each other- build relationship ● Then flips to maintenance – operational flow – based on performance data ● have a relationship team of assessing the relationship team, visiting each other on a regular basis ● “The soft stuff is between those lines of the process; it is less about the person itself but more about how the person describes what they are doing. And if they describe it and going clearly around something what we think is important then it could mean that we do not chose them. ” ● “But generally, it is not an individual thing. But in the end of the day those individuals will be met because you buy into a person who is managing a portfolio.” ● “there is a lot done in that process a minimises a stomach gut feeling in that process that becomes really systematic. Smaller partners vs. competitor partnership • smaller partners: a lot different, talking to people who still try to figure out what are they doing.

What are the biggest challenges in a collaborative relationship with your competitor?
● review processes ● Operational sides work differently – politically, risk willingness to take on, dynamics e.g. information which are not in the system ● Underlying premises do not work out Sector collaboration: ● Number of people involved in decision-making – the bigger the number, the slower the process ● MobilePay example: not pushing the risk boundaries enough – doesn’t the customer trust?

- Sector collaborations tend to be: slow, political, difficult, time consuming etc.
- “they can hit the core problem, but they are really difficult to give birth to”.

Process and Outcome

What do you consider as a successful collaborative project with your competitor?
● Well-integration E.g.: NemID ● The digital area at Nordic markets like e-signing is already well-established and good for the customer ● Looking at other markets and compare – international perspective- e.g.: UK is different with hundreds of banks; they don't even know how to start - share information with them ● It makes it easier to do the business ● “fractured ecosystem does not even know where to start” e.g.UK Banking sector ● It is easier to just align some big players when the market is smaller, you have more power to move thing and make it happen, then in fractured markets ● “It is easier to identify your successes when you look at other companies” ● “it is good for consumers, but it is also easier for us to do business.”

How does innovation performance change due to collaborating with your competitor in your past experience? a. What factors facilitate that change the most?
● Funnel / stage gate → Start with activities and end with the impact & results ● What is the purpose of the partnership? usually we are trying to get an output ● E.g.: cofound the Fintech Hub ● Bring together competencies ● profiling small business ● Attract talent ● Share profiles ● share and learn ● Learn on the way ● Change name of reference ● „Something is possible that was not possible before“ ● E.g.: open banking ● Lean startup approach, service design, design thinking are more accepted and impact the process

→ impact matrixes How does it actually change? • changes the reference frame • changes their thing of seeing things as possible which have not been possible • It got provide an idea for other business divisions e.g. open banking who want access and why? → get expressed an interest • lean start-up method becomes more accepted internally • I would say it is not a direct result of working with a competitor or collaborator

How does an effective management of a collaborative project with your competitor looks like?
We with one • Be specific about the goal: „shared objectives“ • understanding each other's goals and ambitions • Honesty • agree on the steps on the way • Agree on how to operationalise • It is an ongoing dynamic process- one or many • we with many: • different • more about engaging in a group • understanding the dynamics where support is there and where is not support • management of the dynamics is different when there are many

What factors in managing the process lead to the failure of a collaborative project with your competitor?
• There are number of reasons from either side • Different preferences or purposes • how many information do you share or how much of competitive share do you give up • Not the same understanding, trust or maturity • Failure can come at any point in the cycle • Learning takes time „sometimes you do not realize that you realized something“

What do you do for avoiding failures in a collaborative project with your competitor?
● Talk ● Be open and pay attention to reflections: what is working what is not? ● Technical feasibility is there? ● reflect together and see if you are on the same page ● share the learning with the colleagues ● having the internal processes align makes it easier to deal with external people ● There is a learning journey ● Fit the purpose and the size and fit for risk assessment (simplifying process) - E.g.: In a small- big company relationship there´s complexity- usually the bigger company makes the process worse for the smaller one - Nordea focused on the simplification of most of the processes the past few years - e.g. NDA - they do not hire a lawyer, they can understand it themselves

Further comments

Do you want to add something or is there any point that we haven't discussed in this interview and you want to discuss it?
Framework is needed as there´s no vocabulary for the phenomena and there´s no clear line There´s a need for a better way systemically Together as a joint? In general, you tend to approach problems individually

COMPANY I

Time	Location	Names	Length
13.03.2019 15:30	Klarna Amsterdam office	[redacted]	1:16

General Introduction

Could you please introduce yourself and your role in the firm?
● Klarna- related to Internet/e-commerce - making it easier to shop online – make paying as simple and smooth as possible – payment solution. Originally, people had lack of trust in online shopping ● “buy now & pay later” innovative idea – successful – many companies are doing the same by now ● Another product: split payments over time called as “slice” ● Serve mostly merchants who sell via internet but also consumers ● They also become a bank- not a traditional one ● New idea recently: cards [redacted] ● Find a new way to distribute Klarna products

Innovation

What type of innovation do you engage in?
● “99% product innovation” both for consumers like us and merchants – internally says products ● Focus on products that create value - user/consumer experience ● (other banks can have more process/technology related innovation e.g.: blockchain) The company has to be innovation – product aspect is not enough Innovation is broad – great product is not sufficient - most innovative part is marketing – they think out of the box- grab the consumers’ attention – marketing competition

e.g.: change the look of the credit card instead of the boring ones- launching them

How does the innovation team start an innovation project?
● Consumer approach ● Internally they don't have the concept "innovation" instead they refer to it as "new growth" ● No label because that kills the DNA because that can mean the other parts of the org. are not innovative- not true ● The whole company is innovative and focusing on new growth ● How can we evolve to something next – EVOLUTION is part of day-to day ● 1st step: propose idea. What? Why is it going to be nice for consumers? Expected performance? – › pitch and present to leading teams who give feedback also sometimes pitch externally as well (partners, merchants) also research on consumers to validate the hypotheses

What are the most important decision making elements when starting a new innovation project?
● How can we evolve? ● Human centric approach 1. Consumers going to love it? 2. Performance 3. Can we have competitive advantage? Is it in the core of the business? (can't start doing lighting as they probably can't be better than Philips) - Why should we do it?

Collaborative Relationship

Do you collaborate with other companies? With whom do you collaborate and why?
● With hundreds of companies (website) ● *"You have to depend on collaboration to be successful"* ● Mostly focus on e-commerce ● Help distributing products – reaching their customers & merchants

What are the most important determinants in forming a well working collaboration relationship?
<u>Work aspect - makes sense</u> ● Reach more ● Create better consumer experience together ● More transactions/business if we join the forces ● Measurable (matrixes/KPIs) <u>Subjective aspect</u> ● Focus on energy ● Giving attention and get involved ● Spending time & Building trust like in any type of relationship

Do you also collaborate with your competitors? With whom and why or why not?
● Digital businesses ● Not with very serious/direct competitors with 100% overlap – cuz it is difficult to have win-win situation (PayPal) – ● Nature of the business- create better consumer products – Avoid negative type of collaborations "lobby" "cartel and close industry" purposes ● Collaborate with companies with not 100% overlap- "less extent competitors" They don't call them competitors anymore -› partners ● Biggest partner – Adyen (payment platform built for growth) (https://www.adyen.com) - Core product- "buy now, pay later"- Klarna relies on them to distribute to their merchants ● You can still compete by going to merchants separately

How do you decide that you want to engage in collaboration with your competitor?
● Both can grow their business – have something better ● Win-win ● Exploration- realisation= long journey You can specialise – you can't be good in everything in the same time – we're good in something and we need something that is not core business. In the past companies wanted to everything by themselves. Now multiple companies provide a little piece of the whole. E.g.: Uber: 70% partners 30% Uber

What are the most important determinants in forming a well working relationship with your competitor?	
● Transparency – be open ● Honesty ● Spend time on talking – paying attention ● Clear on the intentions ● Building trust	"we're opening the door and we have to trust that they not use it as a back-door"

What are the main inter-relational characteristics of your collaborative relationship with your competitor?
● Start as biased with judgement- forming opinion about the competitor-Protecting the business- see you as a competitor- associate with negative things --› reverse it – "let's change the image" ● 1 step: changing perception – evil competitor How? ● Building good relationship ● Right people - trustable, likable ● Convincing 1 person is not enough- bias is there all levels of org ● Create multiple connections in multiple layers -› powerful to solve the problems on the way

What are the biggest challenges in a collaborative relationship with your competitor?
● reputation biased ● fear that growth won't happen ● clear on the common benefit ● Bad experience: only one side is profiting – lifetime of collaboration - lack of continuous value/ sustainability – what is next step? Constantly How to facilitate win-won situation / both sides generate value? 1. Convince- commercial related- pitching 2. Execution- day-2-day- outstanding people who are interacting

Process and Outcome

What do you consider as a successful collaborative project with your competitor?
● Both sides have benefit in a measurable way – analysis on performance ● Dashboards: data focus- obsessed in these

How does innovation performance change due to collaborating with your competitor in your past experience? a. What factors facilitate that change the most?
● Depends on what to measure- define beforehand- what to achieve together? Define goals ● Data focus vs intuition focus companies ● Let's try and see what performs well – easier with internet businesses – launching an app or website "ABtesting"- 2 versions ● Works with data-driven partners ● Able to track performance (only tracking performance is not sufficient) ● still rely on consumer research as well- understand demand- do we serve it well?

How does an effective management of a collaborative project with your competitor looks like?
● Outstanding partner managers are needed – soft skills ● Executive approval

What factors in managing the process lead to the failure of a collaborative project with your competitor?
● Not spending sufficient time ● Important to understand what's happening – plans change all the time ● Weekly touchpoints (partner manager) – focus and get the priorities push up constantly ● Personal experience with big giants (apple, google) –competitors as some extent- solutions apple pay & google pay- they want to have transactions into their eco-system- manage Klarna product behind it – reach out and connect similar pools of consumers- hard to work with them as they're so big like having 20 different mini companies inside it

What do you do for avoiding failures in a collaborative project with your competitor?
● Spend enough time at the early phases – have the right setting and bring the right things together ● Risk averse – don't avoid it – risk it ● "it's fine" – of course you don't have to celebrate it ● *"it is not black and white what is failure & success"* – more about disappointment

Further comments

Do you want to add something or is there any point that we haven't discussed in this interview and you want to discuss it?
Innovation is broad not only about product and service – organizational innovation- organize internally- push the boundaries - part of day-to-day - imbedded Calling something as innovation team is isolating – innovation is "hobby" Old fashioned big orgs 1st step: creating innovation team 2nd step: imbedded that to their flow More about culture and mindset **Why competition is an important thing for the innovation side?** Benefit of network effect: common to hire people from competitors- exchange of knowledge – go & get them California – anti competition