Coopetition in supply management, a means to increasing a company's competitiveness.

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ABSTRACT, the research will be a literature review. The paper will explore the use of coopetition in supply management. The research will aim at answering the following question: 'how does coopetition increase the competitiveness of a company? Based on this answer the paper will go further in how to implement coopetition. The paper will introduce a framework for the implementation of coopetition. During the research the focus was on papers that were focused on coopetition, however a selection needed to be made since many of these papers were about the use of coopetition in innovation. With the literature review I wanted to discover the advantages coopetition offers to supply chains, since this would provide managers with an argumentation to implement coopetition. With the advantages mentioned I went on the answer the question how these advantages and disadvantages influenced the company's competitive advantage. The benefits of coopetition outweighed the disadvantages and if implemented properly would provide the company with an competitive advantage. The question that then remained is: "How do managers ensure that coopetition is successfully implemented." To ensure the successful implementation coopetition the paper reflects on two sides, the things that managers should always do and things managers should avoid. Examples of this are contracting, partner selection and evaluation. Within these two there are certain specific cases in which managers should act differently, because this could potentially lead to problems, This is mostly based on information sharing. Based on the things managers should do I have developed a framework for the implementation of coopetition. This framework is called the coopetition implementation framework (CIF). The framework describes a path managers should take, following the framework will aid them in successfully implementing coopetition and limiting the risks it could bring.

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Coopetition, supply management, horizontal alliances, advantages, coopetition implementation framework

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1. INTRODUCTION

Business environments have become dynamic and highly innovative; this is a result of globalization and fast changing technological capabilities. Due to this, more companies are nowadays involved in multi-firm alliances (Lavie et al., 2007). One example of such an alliance is a coopetition or horizontal alliance. Coopetition is defined as the simultaneous pursuit of cooperation and competition between firms (Bengtsson and Kock, 2000; Brandenburger and Nalebuff, 1996). As Bengtsson and Kock (2014) state this cooperation is a paradoxical relationship because it is between competitors. One example of this is Yahoo's alliance with Microsoft to use its Bing search engine, yet both companies compete with each other to sell search ads. On April 16th of 2015 Yahoo and Microsoft renewed their partnership. The basic fundamental of the partnership remained intact: Yahoo is using Bing ads for its desktop searches and Microsoft provides the algorithm for Yahoo's desktop search (Business Insider UK, April 2015). Besides this example there are more like it e.g. Amazon, AIM (Apple, IBM and Motorola). These coopetitions were aimed at preventing a third competitor getting a too large market share. This are examples of what Pulles (2014) described in his paper. According to Pulles it may be in the interest of two competing buying firms to jointly support a financially distressed supplier. Or two competing firms may decide to join forces against a third competitor by means of a joint supplier development program that excludes the competitor from the benefits achieved. Going back to the example of Yahoo and Microsoft, an article in 'het Financiele Dagblad' (Toet, D; 2016, March 25) stated that Microsoft is willing to support companies who want to take over Yahoo. The idea behind this is that Microsoft needs to protect a current partnership with Yahoo to fend off Google from absorbing an even bigger share of the market for Internet searches, say analysts. It's a situation that reflects the shifting fortunes of two generations of Internet companies, and the alliances inked to fight fast-growing rivals (USA TODAY, March 2016).

The use of coopetition in innovation has been researched extensively, this paper will therefore explore the use of coopetition in an area in which coopetition is not yet researched extensively. This paper will focus on the use of coopetition in supply management, since this area is not yet explored that much the paper will be an useful addition to this area of study and the subject of coopetition. The aim of the research is to find an answer to the research question and provide an argumentation for the implementation of coopetition or not. So the aim will be to provide managers within a company with a paper that will describe the factors that determine coopetition success and to provide answer to whether coopetition enhances a company's competitiveness. The research will thus aim at answering the following research question: 'how does coopetition increase the competitiveness of a company'. Factors determining the success of coopetition have a wide range; they could consist of the following: the coopetition partner, synergy, trust, long-term partnership and leveragability.

This research is important because it will provide managers with a reason to implement it, a framework that will aid them in implementing coopetition and with the action's they need to take and avoid. Therefore it will aid companies in further increasing their competitive advantage and growth of the company. Furthermore it will be an addition to the literature since there is no framework like it.

2. COOPETITION

2.1 What is coopetition

Brandenburger and Nalebuff (1996) have defined coopetition as a value-creating synergy between the firm and its stakeholders which include among others their customers, suppliers, competitors and complementors. Bengtsson and Kock (2000) narrowed down the definition to "the dyadic and 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." Actors involved in coopetition are involved in a relationship that on one hand consists of hostility due to conflicting interests and on the other hand consists of friendliness due to common interests. These two logics of interaction are in conflict with each other and must be separated in a proper way to make a co-optative relationship possible. (Bengtsson & Kock, 2000). In this thesis I will use the latest definition of Coopetition as defined by Bengtsson and Kock (2014): "Coopetition is a paradoxical relationship between two or more actors simultaneously involved in cooperative and competitive interactions, regardless of whether their relationship is horizontal or vertical.

Contrary to value-adding partnerships, co-opetition includes also horizontal collaborative relations as well as at the same time competitive relations in vertical and horizontal directions. Brandenburger and Nalebuff (1996) suggest therefore the concept of value net, which places a single company between customers and suppliers (= vertical dimension) who can be either complementors or competitors (= horizontal dimension). See figure 1

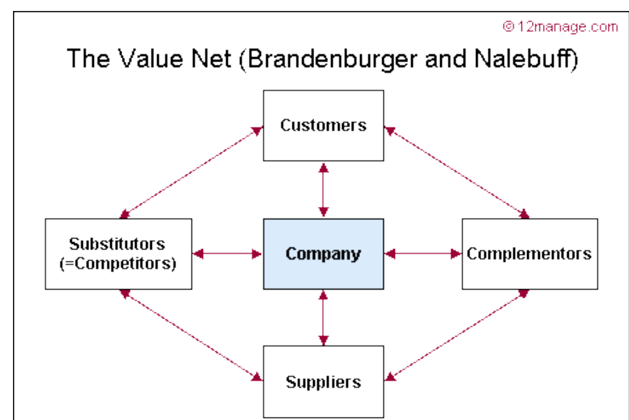

Figure 1: The value net

By building on Emden, Calantone, and Droge (2006), Gnyawali & Park (2009) suggest that a firm's decision to collaborate with a particular competitor will depend on the technological alignment in terms of technological capability, resource complementarity, and resource similarity. In the next sections we will go into depth on these advantages, after these advantages we will also look at the possible disadvantages of coopetition. Further on in the paper we will present a framework for managers that will aid them in how to implement coopetition and what managers need to do in general and what they need to do in specific cases.

Before mentioning the advantages of coopetition first a choice needs to be made on which model of coopetition we are going to focus. Chin et al (2008) introduced four types of coopetition models. These are the (1) the Monoplayer which had low competition and low cooperation. (2) The Contender, it had high competition and low cooperation. (3) The Partner, low

competition and high cooperation. And lastly (4) the Adapter which has both high competition and high cooperation. In this paper I will focus on the fourth model the adapters. Adapters are organizations that mutually depend on one another to achieve their respective goals, maintaining a high degree of competition as well as a high degree of cooperation.

2.2 Coopetition advantages

Coopetition gives the coopeting firms the opportunity to distract value and to benefit from the features of competition and cooperation in their relationship by merging these two forces (Luo, 2007). The synergy of coopetition has been theorized to produce various benefits, including learning, cost savings, resource sharing, and innovation (Lado, Boyd, and Hanlon 1997). These advantages are the result of cooperating with a second or more companies. In the case of coopetition these companies would be competitors. There are a variety of categories to which these advantages can be classified. In the next section we will look at these advantages per category. I have identified the following categories of coopetition advantages: Risk and uncertainty reduction, access to resources, cost reduction, knowledge sharing and advantages in product development. For this thesis we will focus on the supply side of coopetition, this means that further on we will not be using all of the advantages mentioned but only the ones that provide an advantage on the supply side of a company or companies. Four advantages will be used, the reason for using these four advantages is that they are described in most paper and are also confirmed to be advantageous to a firm. Also I assume that these advantages have the biggest influence on the competitive advantage of a firm and the benefits of these advantages could be reaped early on in the coopetition partnership.

Ritala (2012) outlines four motives for coopetition: (1) The increase in the size of the current market, (2) the creation of new markets, (3) the efficiency in resource utilization and (4) the improvement of a firm’s competitive position are all reasons for firms to collaborate with a competitor.

2.2.1 Capabilities

Capability provides a firm with the capacity to compete (Chen, Su & Tsai, 2007). An advantage of coopetition is that firms can grow and evolve because of the collaboration features or assets such as knowledge or technologies of the other firm in order to create value (Morris, Kozak & Özer, 2007). Bengtsson and Kock (2000) further analyzed and argued that to be advantageous firms’ resources and capabilities can be combined and used in competition with others. (Bengtsson & Kock, 2000). Resource complementarity is important for several reasons. First, due to reciprocal commitment, partners with complementary resources are less likely to be opportunistic with each other and learn more from the relationship (Sarkar et al. 2001). Second, rapid convergence of technologies adds risk and uncertainty to firms, collaborating with competitors having complementary resources is likely to help firms mutually reduce the risks and uncertainties by working together. (Gnyawali & Park, 2009)

A good example is the joint venture between Sony and Samsung for the development and production of LCD panels for flat screen TVs (Gnyawali & Park, 2011). Both firms were rivals in the LCD market. The combination of the unique capabilities of both firms and the establishment of joint manufacturing facilities in South Korea helped the firms to become market leaders in the LCD TV market. Sony provided the superior technological know-how while Samsung provides their superior marketing abilities. Besides this the coopetitive relationship shared costs and risks by establishing joint manufacturing facilities. In summary, main reasons for the formation of this co-opetition relationship included important factors related to the industry and technology, the nature and strategies of the firms, and resources and capabilities they had to offer to each other. The firms not only felt that they could overcome their vulnerability but also enhance their individual strengths and combine their strengths to create a positive impact on the LCD technology and the flat-screen TV industry. Besides combining capabilities coopetition also offers firms the option their supply risks and uncertainties.

2.2.2 Risk and uncertainty reduction

A reason for firms to choose a coopetition strategy is to reduce their supply uncertainty. Cooperating with a partner, in this case a competitor, can reduce risk and uncertainty in several ways.

The main source of uncertainty in supply management is, according to van der Vorst et al. (1998), total order forecast horizon, where we refer to the time period from placement of an order to the receipt of goods of the following order. A way of reducing the total order forecast uncertainty could be achieved be cooperating with you competitors and combining your order forecast horizons. By combining both horizons the firms are able to have more data on which they can base their orders.

Demand patterns at the end consumption level could be flat with small variations, however orders placed by producers to their suppliers show more fluctuations, this is known as the bullwhip effect (Lee, 2002). The bullwhip effect could be reduced by coopetition. By cooperating with each other competitors can reduce the causes of the bullwhip effect. Lee et al. (1997) identified four major causes during his case studies: (1) Demand signal processing, (2) order batching, (3) price variations and (4) shortage gaming. Not all of these causes can be solved through coopetition, for example order batching and price variations are likely to increase through coopetition. Price variations are the result of firms gaining discount when placing a large order. When firms are cooperating on purchasing they are likely to combine their orders thus gaining a larger discount further encouraging price variations. A consequence of these larger orders is order batching; the aim of order batching is to reduce order costs by taking advantage of transportation economics. So, coopetition will not aid in solving these causes of the bullwhip effect directly, but it can aid in solving or reducing the other two causes of the bullwhip effect, demand signal processing and shortage gaming. Because firms are cooperating instead of competing on purchasing they can coordinate they purchasing activities and not create an artificial high level of demand, which is the root problem of demand signal processing. Shortage gaming is the result of firms placing high orders in times of short supply in the hope of gaining a larger portion of the supply. Again if the companies cooperate in the purchasing of resources they will coordinate their purchasing activities and thus reduce shortage gaming and ensure an even distribution of the available resources. According to Lee (2002) only through information sharing and tight coordination can one regain control of supply chain efficiency. Sharing of demand information and synchronized planning across the supply chain are crucial for this purpose.

Researchers have looked at the information available to supply chain partners and the speed at which it is available, because this has according to them the potential to radically reduce inventories and increase customer service (Moinzadeh and Aggarwal, 1996; Cachon and Fisher, 1997; Bourland et al., 1996; and Kreuwels, 1994).

Supply Uncertainty	Demand Uncertainty: Low (Functional Products)	Demand Uncertainty: High (Innovative Products)
Low (Stable Process)	Efficient supply chains	Responsive supply chains
High (Evolving Process)	Risk-hedging supply chains	Agile supply chains

Figure 2: Lee (2002) supply chain strategies

Lee (2002) identified four supply chain strategies of which two can be contributed to a coopetition strategy, see figure 2. These are both in the lower segment of the table, thus with high supply uncertainty. Lee defined these two strategies as follows:

1: **Risk-hedging supply chains:** These are supply chains that utilize strategies aimed at pooling and sharing resources in a supply chain so that the risks in supply disruption can also be shared.

2: **Agile supply chains:** These are supply chains that utilize strategies aimed at being responsive and flexible to customer needs, while the risk of supply shortages or disruptions are hedged by pooling inventory or other capacity resources.

During their case study Gnyawali & Park, (2011) have shown how firms can defend against competing products and technologies. Firms can do so by combining their complementary technologies in order to have a large set of capabilities. Another example of risk reduction can be found in the paper of Bengtsson & Kock (2000). During their study they looked at the Finnish dairy industry. The few actors in that specific industry founded a pool to share the transport containers needed for the distribution of the products, every firm has provided resources to this pool. The advantage of this is that if one firm in the pool is short of those transport containers, it can get in touch with another actor and borrow a container. By pooling their resources the companies involved do not run the risk of not having enough containers. A result of a shortage on containers is that the firm runs the risk of losing customers because it cannot supply them. By pooling the containers the companies can ensure a better delivery and can better comply with customer demand. This will reduce the dairy firm's uncertainty related to delivering its products to customers.

2.2.3 *Cost reduction*

Firms are always looking to cut costs, coopetition offers firms the possibility to reduce their cost. There are several ways to do so, these will be explained in this section. The first way to reduce costs are through economies of scale. By cooperating with a competitor a company is able to purchase on a larger scale. Buying in larger volumes companies are able to bargain better deal with suppliers. By ordering larger quantities companies are also able to reduce the supply costs like transportation. For example by ordering in larger quantity a company can better exploit their transportation modes, a full truck is cheaper than a truck that is only half full. Throughout the years there have been some examples of firms that have implemented coopetition to some degree to reduce their purchasing costs.

San Benedetto SpA started mid 1990's a range of coopetitive relations with its main competitors. The aim of the relationship was three-way: coproduction, joint new product development, and joint new factory development. The industry main requirements were high levels of economies of scale in production. At the same time, the relatively low-margin product pushes companies towards more efficient, low-cost operations and production yield continuous incrementation through technical excellence and saturation of production capacity, whereas costly logistics for these bulky yet low-margin products call for multiple production locations (Bonel, 2008).

Another example of cost reductions as a result of coopetition is presented in the Sony and Samsung case. The two competitors partner up in a joint venture to produce S-LCD televisions. Because the partners put heavy investments in the S-LCD, it was possible to reach economies of scale and produce panels with lower costs.

Another way of reducing supply costs is through better information and the development of suppliers. The information availability and transparency in the supply chain has the potential to radically reduce costs and increase customer service (van der Duyn Schouten et al; 1994). A way for companies to reduce purchasing costs is by developing their suppliers. The buying firm tries to develop the supplier by, for example, offering training or personnel. In doing so the buyer hopes that the supplier improves its performance and works more efficiently, which in turn will result in reduced costs for the supplier. This relationship could also result in reduced costs for the buyer through logistical improvements or could reduce risks through better forecasting (Li et al., 2012). The disadvantage of supplier development is that it requires a large amount of corporate resources such as knowledge and financial resources as well as time (Krause & Ellram, 1997). By partnering up with a competitor both firms can contribute the before mentioned resources such as knowledge and time. By sharing this investment in the supplier the partner can reduce their risks and level of investment, while still reaping the benefits of supplier development.

2.2.4 *Resource synergy*

Resources are an important aspect of every company, according to the Oxford dictionary resources are: "A stock or supply of money, materials, staff, and other assets that can be drawn on by a person or organization in order to function effectively" A company does not always possess all the resources it needs by partnering with a competitor a company is able to acquire the resources it needs. Sometimes a resource is less useful on its own, but when it is combined with a second resource it is worth more than just the two combined. This is known as resource synergy, a simple calculation can explain this: resource synergy comes down to 1+1=3, the combined resources are worth more than the resources separate. The productive combination of resources gives rise to the capture of rents which underpins competitive advantage (Peteraf, 1993). An example of resource synergy is bronze, bronze is an alloy of copper and tin. On their own copper and tin are not worth that much but combining them creates bronze which is more valuable than the copper and tin needed to create it.

By forming alliances, interconnected firms that lack foresight or good fortune can gain access to resources without paying their full acquisition costs (Lavie, 2006). Eisenhardt and Schoonhoven (1996) argue that firms enter into strategic partnerships either to gain access to or acquire unique and valuable resources that they lack, or to leverage ''social'' resources, such as reputation, status, and legitimacy.

Emden, Calantone, and Droge (2006) suggest that the potential partner's unique competencies, such as innovative technology and expertise in a certain field, are very important factors in partner selection. This is consistent with the RBV, which claims

that firms search for partners who have unique technological resources (Barney 1991) that they can leverage (Hitt et al. 2000). Gaining the knowledge from your coopetitive partner can be considered as stealing their abilities but as Hamel et al. (1989) argued "Using an alliance with a competitor to acquire new technologies or skills is not devious. It reflects the commitment and capacity for each partner to absorb the skills of the other." Focusing on their core competencies, organisations seem to have grown more dependent on each other. In particular, they are dependent on each other's knowledge and capabilities (Khanna et al; 1998).

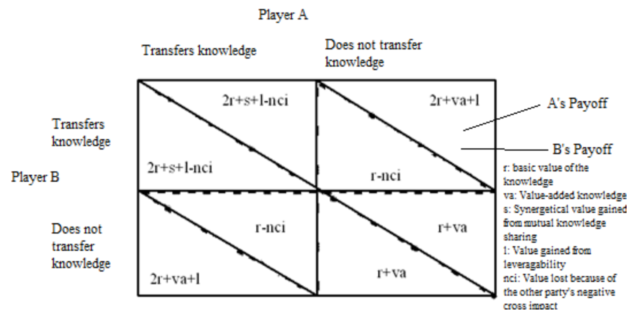

Figure 3: Game theory on knowledge transfer.

2.3 Coopetition disadvantages

2.3.1 Opportunistic behaviour

Besides the advantages that coopetition offers, there are also disadvantages to coopetition. If your company implements a coopetition strategy you have to remember that you are partnering up with one of you competitors. Instead of improving each other coopetition also has the risk that your partner turns his back on you, this is known as opportunistic behaviour. An example of opportunistic behaviour is

Although co-opetition is considered a win-win strategy, firms struggle with a dilemma between the need to work together in order to create value and the temptation to be opportunistic in order to appropriate a greater share of the created value (Gnyawali and Park, 2011). Co-optative relationships are unstable (Park and Russo, 1996) and dynamic in nature (Luo, 2007), which can cause high levels of tension for firms. Leading firms pursuing co-opetition with rivals confront a dilemma: the existence of attractive opportunities and risks of misappropriation by the partner. If a firm is not quite careful or happens to get an opportunistic partner, it could lose its secret and proprietary knowledge to the competitor-partner. When partnering with larger firms, SMEs might be appropriated unequally by the partners (Alvarez and Barney 2001). For each individual organisation it is 'rational' 'to pursue the maximum organisational share of the joint learning by taking more than it gives'. While at the same time, this lack of openness towards the other reduces 'the total amount of joint learning from which the organisation attempts to appropriate its share' (ibid.). Therefore, the collective knowledge development and mutual learning in the competitive alliance are limited by the (natural) opportunistic behaviour of organisations. (Soekijad and Andriessen, 2003)

Transaction cost economics suggests that adopting an equity joint venture structure mitigates the hazards of opportunism because incentives are more closely aligned (Oxley, 1997; Sampson, 2004). In the long run, the invisible hand of the market favors firms whose behavioral repertoires support trust and cooperation rather than competition and opportunism. Such behavioral repertoires enable manufacturers and suppliers to work together on designs that will improve the quality of parts and lower assembly costs, and increase the likelihood of future cooperation to reduce costs and/or enhance product quality through relationship-specific investments (Hill, 1990). This is also applicable to coopetition; by misusing the trust of your co-optative partner you gain short term benefits. But by developing the coopetition, the benefits in the long-term will be higher and improve your purchasing performance.

2.3.2 Power imbalance

When cooperating with partners that are bigger than you there are risks. The larger partners have more power and control and can force smaller ones to take on more of the risk (Sulej, Stewart, and Keogh 2001). Also, increased dependency on a dominant partner, over dependency, will limit the flexibility. When partnering up with a company larger than your own there is the risk that you become dependent on this partner. According to Osarenkhoe (2010) the relationship may become tense as resource dependence may lead to a power imbalance. A case example of this was the cooperative relationship between Fujitsu Services and Microsoft was used in Osarenkhoe (2010): 'Fujitsu Services sees the potential benefits of getting access to new markets, new distributors, information, knowledge or competence. At the same time, it is forced to comply with the dominating partner's (Microsoft) directions, and may need to give full access to product data and share core competence in order to obtain guaranteed orders and other valuable things. The risk is that the relationship can weaken further, and what began as a healthy relationship can end up being a controllable relationship. An even higher risk is that when the dominating partner gains access to the smaller firm's core competence, it becomes easier to replace the small company with a low-cost producer. '

2.3.3 Information

Besides the resources a firm has, information can also provide a competitive advantage. But when cooperating with a competitor you run the risk of losing this competitive advantage, or even worse your partner misuses the information. According to Powel (1998): "the core capabilities of organisations are based increasingly on knowledge-seeking and knowledge-creation" The competitive aspect refers to the use of shared knowledge to make private gains in an attempt to outperform the partners (Khanna et al. 1998). The joint impact of cross-functional cooperative ability and competition on firm performance, could lead to a possible negative effect. Rindfleisch and Moorman (2003) show that a firm's customer orientation may deteriorate if the firm is engaged in a cooperative alliance with competitors; one reason for this decline is a low level of trust among alliance members. Interfunctional rivalry decreases the level of trust in information. Maltz and Kohli 1996, suggests that cross-functional competition coupled with cooperative ability could decrease a firm's customer-based performance.

2.4 What is missing?

With these advantages and disadvantages the question is: what is missing? In this section we will take a look at what is currently missing in coopetition. The thing that is missing is a clear overview for managers to determine whether they should implement coopetition within their company. In this paper I will introduce the Coopetition Implementation Framework (CIF), which will be a framework with the goal of aiding mangers in determining whether to implement coopetition and what mangers should do to reap the benefits of coopetition. This framework will be made up of two parts, the first part will

discuss the generic things that are always applicable and that offer an advantage to the companies. The second part will focus on specific cases, for example in some cases when a company has a very new product it might not be wise to share all your information with your coopetition partner. Although in most cases sharing information improves the performance of the coopetition, in this specific case it might encourage opportunistic behaviour from the partner. In chapter six the CIF will be described in more detail and it will provide the managers with the much needed information and clear overview.

3. LITERATURE BACKGROUND

This chapter described the theories on which this paper is build. The paper is built on two theories, these are the game theory and the resource based view. Furthermore the literature background aid in identifying the aspects associated with coopetition. The first theory described in the literature background is the game theory, in this paper the game theory paper used is the one by Schrader (1990) who took a game-theoretic approach and analysed knowledge exchange between competitors using Axelrod's prisoners' dilemma paradigm (1984). Schrader used a few assumptions and applied these to the basic structure of the prisoners' dilemma. This shows that IOKS (Inter Organizational Knowledge Sharing) is beneficial if the knowledge has a high basic value and a low "value-added". Competitive behaviour on the other hand, is increased in case of low basic values and high "value-added". Further Schrader (1990) concluded that cooperation only takes place based on long-term perspective and with an appropriate level of trust between players. Loebbecke & van Fenema (1998) introduced three additional dimensions of IOKS: "synergy", "leveragability", and "negative reverse-impact".

From the relational point of view Dyer and Singh (1998) suggest that a firm's critical resources may span firm boundaries and may be embedded in interfirm resources and routines. Dyer and Singh (1998) define complementary resource endowments as distinctive resources of alliance partners that collectively generate greater rents than the sum of those obtained from the individual endowments of each partner. Thus providing the alliance with a stronger competitive position than that of the firms individually. By bundling similar resources such as capital and manufacturing facilities and capacity, competitors are able to achieve benefits of scale and scope (Ritala, P., 2012). The strategy literature notes the importance of bundling VRIN (Valuable, Rare, In-imitable and Non-substitutable) resources and properly managing the bundle to effectively realize competitive advantage (Adegbesan, 2009; Sirmon et al; 2008). Ellram et al. (2013) only describes its effect within a firm but by cooperating competitors have the ability to bundle their VRIN, which could lead to an increased competitive advantage. A firm's resources at a given time could be defined as those (tangible and intangible) assets which are tied semi permanently to the firm (Caves, 1980). The reason to choose for a resource based view is that my paper will focus on the supply side of the firm. The thing that is mostly tied to the supply side of a firm are the resources. This paper will be focused on coopetition in supply, therefore I have made the choice to focus on the resource based view. A resource-based view of the firm has prevailed as a dominant paradigm in understanding firm performance, particularly in explaining how firms develop and sustain competitive advantage (Barney, 1991 & Mahoney and Pandian 1992). The resource based view states that resources are key to superior firm performance. The resource based view therefore has close similarities with capability transfer and resource synergy. The reduction in supply and purchasing costs are reflected in the total cost ownership theory. As mentioned before these are the costs associated with the acquisition of the resources, not only the purchase itself but also transport, the quality of the product and obsoletes. These are only a few examples of Total Cost of Ownership. According to Wernerfelt (1984), what a firm wants is to create a situation where its own resource position directly or indirectly makes it more difficult for others to catch up. A resource based set of acquisition strategies according to Salter and Weinhold (1980) are:

1. Related supplementary (to get more of the resources you already possess)
2. Related complementary (to acquire resources that effectively combine with the resources that you already possess)

Salter and Weinhold's study focused on acquiring the firm that possessed these resources, a coopetition strategy does not focus on acquiring the firms but acquiring their resources instead. The acquisition needs to be done through cooperation instead of a merger. According to Wernerfelt (1984) one's chance of maximizing market imperfection and perhaps getting a cheap buy would be greatest if one tried to build on one's most unusual resource or resource position. Doing so should make it possible to get into buying situations with relatively little competition, but also with relatively few targets. By cooperating with your competitors you also limit your competition and will gain the possibility to gain the best buy.

According to Oxley, et al. (2009), there are two explanations why coopetition can increase firm performance: (1) some alliances 'soften' the competition in the industry, making the business more profitable for all, and (2) alliances may lead to increased competitiveness only among the partnering firms, increasing their performance in relation to that of all other firms. The second explanation could build on a statement in the article of Freytag and Young (2014) "competitive advantage through cooperation in networks is not only a matter of having the competencies to take advantage of the opportunities available, but is also a matter of the way competencies are combined." The Morris et al. (2007) article could prove useful to determine what the influence of coopetition is on firm performance.

4. METHODOLOGY

The research method used will be a literature review. The literature review will be used to answer the research question by using the different viewpoints and contents of the papers. The papers will be found using Google Scholar, Scopus and Web of science. For the literature review I started off with many search terms which lead to a huge amount of papers. To filter the amount of papers I decided to set a few demands on the paper that came up, by doing so I was able to get better results that would fit my research. The first thing I did was filtering out the papers that focused focus on combining knowledge of competitors on innovation. Although there was some useful information in these papers they did not aid in providing an answer to my research question. By doing so I was able to narrow down the amount of papers, to further reduce the amount of papers I scanned most of them on the subjects of coopetition, supply management and purchasing. As a result of this scanned I was able to further reduce the amount of papers and I was left with about 50 papers which could prove useful

for my paper. Of these 50 papers I read the introductions and the first chapters of the papers, based on this I was able to further reduce the amount of useful papers. I read the papers that were left completely and they are the papers on which my research is based and form the basis on answering my research question. The papers were filtered through the use of keywords, the abstract and later on the introduction. The keywords aided in determining whether the article was applicable to my research. If this was the case I went on reading the abstract to determine if the paper could possibly contain content which would aid my research. The last filter I applied was the introduction, if this was satisfying to me I proceeded to read the whole article and use it for my research.

Papers that describe the possible advantages of coopetition will be used to check what the advantages of coopetition are on a company's supply management. By finding these advantages further research needs to be done on how to create these advantages within the companies. Papers that describe these advantages are: Gnyawali & Park (2009, 2011), Quintana-Garcia & Benavides-Velasco (2004) and Ritala et al. (2014), and Navaratnam (2015). According to Schrader (1990) there are also prerequisites that need to be fulfilled before coopetition can be adapted. So research needs to be done on how to create trust between partners and establish a long-term relationship.
Oxley et al. (2009) have done research on the effect of coopetition on innovation and the resulting market performance. Aspects of this paper could be adapted to be used to check what the effect of coopetition in supply management is on the competitive advantage. Besides this paper, more literature review on increasing competitive advantage through coopetition needs to be done. Papers useful for this are: Morris et al. (2007), Ellram et al. (2013), Harvard Business Review also posted articles about coopetition on their website. Garg (2012) wrote a book: "cases on Supply Chain and distribution management: Issues and principles" in this book also cases of coopetition are included and it provides insights into the implications of it on supply management.
Other literature used will consist of newspaper articles on coopetition and books. Previous case studies on coopetition examples of this are the case studies on Amazon, an American e-commerce company, whose coopetition strategy is well documented, the cooperative relationship between Yahoo and Microsoft, and the collaboration between Apple, IBM and Motorola whose aim was to outcompete Microsoft and Intel.

By identifying the advantages and disadvantages of coopetition I was able to determine how companies should attain these benefits and also how to reduce the risks involved with coopetition. These actions a company should take and the firm should avoid provide the steps in the CIF. So the CIF is based on the action managers should take to attain the benefits of coopetition and make coopetition more successful and thus increasing the competitive advantage of the company

5. THE INFLUENCE OF COOPETITION ON FIRM PERFORMANCE

5.1 How does coopetition increase competitiveness

We now know the advantages and disadvantages that coopetition offers, but how does it increase the competitiveness of the firms involved. I will describe the increase by using the advantages that coopetition offers, the advantages form the basis of the competitive advantage but do not stand on their own. While each advantage has the possibility to offer a competitive advantage to the company, combining the advantages can give an even greater competitive advantage. Luo et al. (2006) expect that the joint occurrence of crossfunctional cooperative ability and competition has a positive effect on a firm's customer performance and financial performance. A combination of cross-functional cooperative ability and competition. according to Brandenburger and Nalebuff (1996); Lado, Boyd, and Hanlon (1997) and Uzzi (1999), may nurture productive interactions that can facilitate internal efficiencies and sharing of best practice for successful deployment and exploitation of knowledge.

The first advantage is capabilities, by combining capabilities with your coopetition partner firms gain access to a larger set of skills and competencies. By using these skills and competencies the firms are able to, for example, improve the quality of their product. Improving the quality can be done through better use of resources, more knowledge and better inputs into the process. By improving the quality of the product, while not increasing the price, the product will become more wanted. The two firms have created a competitive advantage by improving the quality of their product.

Risk reduction will make your company more reliable. By reducing the uncertainty within your firm's supply chain you will be able to be more reliable towards your customers. Customers want to have a reliable supplier, they want to receive their products on time and in the right amount. By satisfying the customer you will have a competitive advantage over the supplier who are not able to always satisfy their customer's needs.

Cost savings is an easy way of increasing your competitive advantage. By lowering your production costs you will also be able to reduce your consumer price, making your product more desirable and thus increasing your competitive advantage.

The last advantage resource synergy creates a competitive advantage in way that is similar to that of the capabilities. Resource synergy creates a better use of resources or makes the resources more valuable. This increase of better use or increased value will give the product a higher value which in turn increases the competitiveness of the company.

Combining these advantages will reap even greater benefits, it has the potential to not only reduce costs but also increase the quality of the product. In this way it works on both sides of the line. On one hand the possibility arises of lowering the price while at the same time being able to make better promises to customers and improving the product quality. So as one can imagine this will give the company a greater advantage than each of the separate advantages, but as you can see later on it might not always be wise to share everything with your coopetition partner. We will discuss this in chapter 6.1.2.

5.2 What is the degree of influence

All the theories described above does not mean that it will automatically work in practice. But a study by Gnyawali & Park (2011) proves that it could work. Their research focused on the coopetitive relationship between Sony and Samsung and how this partnership changed the LCD market and gave the companies a competitive advantage and how this advantage benefited them.

According to Gnyawali & Park (2011), value creation occurs through cost sharing, economies of scale, standard setting, and use of relational-specific routines. Luo (2007) implies that firms will get more opportunities to create greater common value and

benefit from it when the industry or the business segment is growing. Leading firms can even create new markets. Being able to balance competition and cooperation is critical to maintain stability in relationships (Das and Teng, 2000). Going back to the case presented by Gnyawali & Park (2011), the partnership between Sony and Samsun on the S-LCD resulted in industry dynamics which also partly contributed to the rapid drop of prices of flat-screen TVs. The price drop was possible due to two forces: economies of scale and competitors response, besides the influence of concentrated retail stores. As the partners put heavy investments in the S-LCD, it was possible to reach economies of scale and produce panels with lower costs. Using the panels, Sony could launch its Bravia model in a reasonable price range. In terms of competitor response, when Samsung and Sony produced LCD TV in the 40 in. class, Matsushita reacted promptly and dropped the price of PDP TVs, resulting in a steeper price decline in the industry. This price decline (increasing affordability) and technological development created new markets for flat screen TVs. Overall, their examination suggests that the co-opetition between Samsung and Sony had strong positive impacts in the industry, through better products with affordable prices, technological advancement, and market creation.

So the effect of competitors teaming up to create a new product has several influences on the market, besides lowering production costs they also created a new market. Together they teamed up and increased their market shares at the costs of the other market competitors, at the same time the total market share of the top 5 declined, Sony and Samsung are also part of this top 5, see figures 4 and 5.

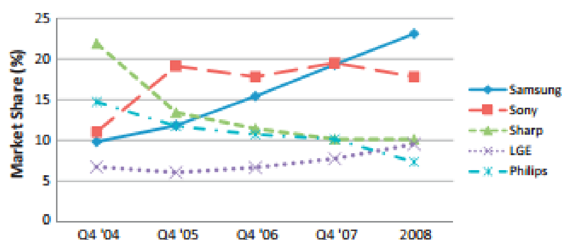

Figure 4: LCD market shares top 5 producers

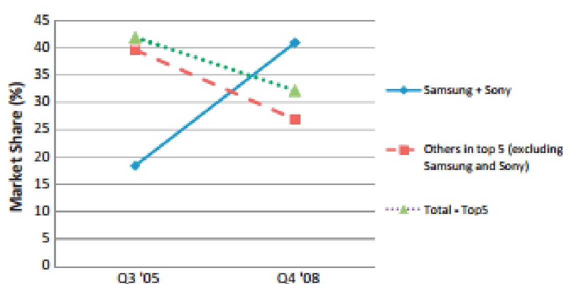

Figure 5: LCD market share, Samsung and Sony partnership compared to the top 5

This shows similarities with the research of Pulles (2014) who claims that two competing firms may decide to join forces against a third competitor, or in this case the market as a whole. Firms with a strategic orientation that emphasizes cooperation among supply-chain partners are more likely to achieve greater economic benefits compared to firms that subscribe to the traditional, zero-sum-based notion of competition. (Chen et al; 2004)

6. THE CIF

6.1 What does it include

The aim of this paper was to design a framework for managers, the aim of this framework is to aid managers in deciding whether or not to implement coopetition. The name I will use for this framework is the Coopetition Implementation Framework (CIF), see figure 6. The most important reason for managers to implement coopetition is if it offers the firm a competitive advantage. This does not necessarily have to offer a competitive advantage to all firms; it could also target a specific competitor. By cooperating with a competitor the two companies can aim at breaking a monopoly or large market share of a third competitor. Besides this there are more reasons for managers to implement coopetition. In this framework I will provide an overview on what managers need to do to ensure they rape the benefits of coopetition. The framework will be composed of two parts, the first part will focus on the generic coopetition success factors and how to manager can encourage these factors and ensure that the pre requisites are met. By doing so the managers can improve their firms performance and increase its competitive advantage. The second part of the framework will focus on specific cases. As discussed earlier sometimes exceptions need to be made to ensure the risks of coopetition are limited and in some cases going one step further coopetition offers an even more competitive advantage to your company. In the next sections we will discuss the two parts, first we will start with the generic elements which are always good. After that different situation will be introduce to look at specific elements of coopetition.

The previously identified advantages of coopetition show managers the impact coopetition can have on their firm. And in chapter five the influence of coopetition on the competitive advantage has been identified. The most interesting thing to know for managers is how to attain these advantages coopetition offers. In this section the generic elements will be discussed, these are the elements that are always good to implement at your firm. When implementing these coopetition elements there are little risks and they offer an advantage to your firm. The things to implement will be determined through the advantage it offers. To start off the paper will discuss how to share capabilities with your coopetition partner.

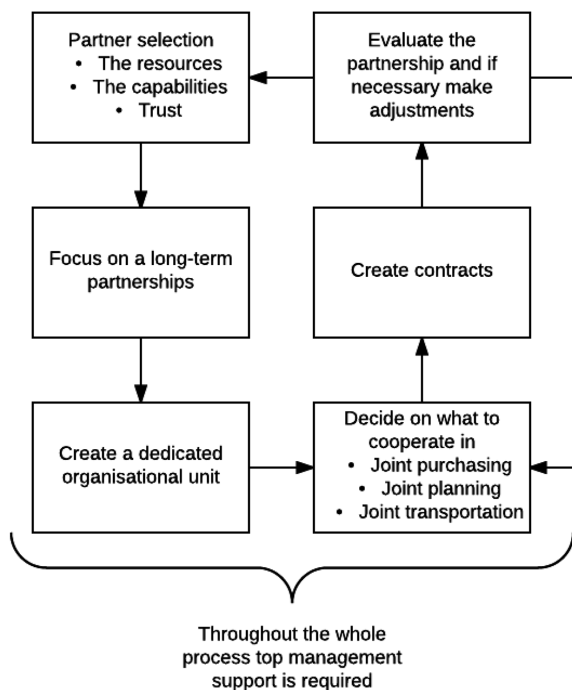

Figure 6: The CIF

The process of the model is as follows:

Step 1: The company needs to select the right partner, the right partner is selected through partner selection and will be determined by the resources, the capabilities of the partner and the trust vested in this potential partner

Step 2: The companies entering into the coopetition partnership have to invest in a long-term partnership and they also need to realise that a coopetition partnership is a long-term partnership

Step 3: The companies need to create a dedicated alliance unit, by creating this unit communicating will be easier and decision making will be quicker because the unit has the ability to go higher up the hierarchy.

Step 4: The company needs to decide on the fields of cooperating. There is a wide array of fields in which companies can cooperate and in this step it is determined in which they will.

Step 5: After deciding what the coopetive relationship will include companies need to create contracts to protect their right from abuse by the partner.

Step 6: If the contacts have been made and the partnership is in effect evaluation starts. This aim of this evaluation is to determine whether the partnership is effective. Depending on the results the companies have three options: (1) continue with the partnership is it currently is. (2) Look for more, or less, fields to cooperate in. Or (3) look for a different coopetition partner.

Throughout the partnership it is always important to keep evaluating and adjusting where necessary.

6.1.1 What should managers do

The most important aspect of coopetition is that it is not a short term arrangement. Schrader (1990) concluded that cooperation only takes place based on long-term perspective and with an appropriate level of trust between players. Trust is not something that is created overnight; trust can only be built over time. Therefore the first thing managers need to do to implement a coopetition strategy is to select their coopetition partner. The partnering model by Douglas et al (1996) should aid managers in decisions regarding partnerships, see figure 7. Selecting the right partner has the potential to make to coopetition more successful. By selecting the right partner a company has to potential to gain access to resources it currently does not possess. By acquiring these resources the company can create resource synergies with their coopetition partner, besides creating these synergies the company also has the possibility of capability transfer. But this is something a company should not always do, in the next section we will discuss this into more detail, but shortly by doing so firms run the risk of losing their competitive advantage completely due to opportunistic behavior by the partner. Trust development plays a critical role in successful coopetition relationships, because actors in this relationship are willing to share resources and risks with others (Ruijun & Zhiman, 2011).

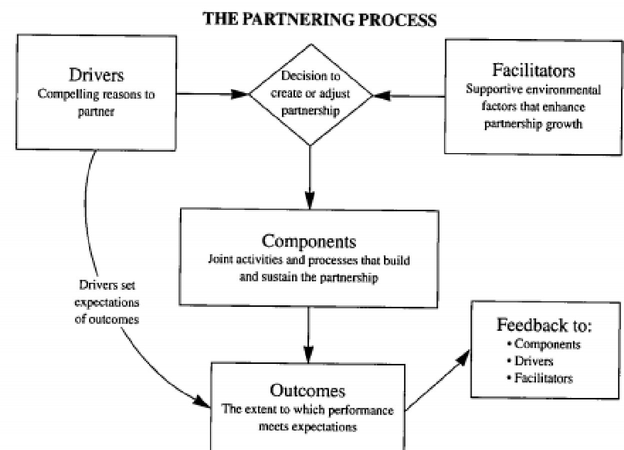

Figure 7: Partner selection process

One other advantage coopetition offers is the joint purchasing, by doing so the companies are able to reach economies of scale. This is something managers should always strive for; it can result in cost reductions especially when companies are able to combine it with another element like joint transportation. Joint purchasing offer little risk and should only be prevented in some cases. This is for example when increasing demand in the product will increase the price.

What do managers need to do in order to make their coopetition strategy successful? According to Aviv (2007) in all successful collaborations, collaborative planning has been proved to be an important element of performance of supply chains. An important determinant for future collaborations is success; according to Ramanathan & Gunasekaran (2014) success of supply chain collaborations will have a significant positive impact on the long-term future collaborations. From the results of their analysis it is also clear that the success of collaboration is decided by collaborative planning, collaborative decision making and collaborative execution of supply chain processes.

Research by Kale et al. (2002) suggest that one way for firms to capture, integrate and disseminate alliance management is through the creation of a separate, dedicated organisational unit

charged with the responsibility to capture prior experience. From now on I will use their reference to this: ‘dedicated alliance function’. A dedicated alliance function helps to solve the problems that occur in supporting the alliance in two ways. First, it has the organizational legitimacy to reach across divisions and functions and to request the resources necessary to support the alliance’s initiatives. When particular functions are not responsive, it can quickly elevate the issue through the organization’s hierarchy and request the appropriate executives to make a decision on whether a particular function or division should support an alliance initiative. Second, over time, individuals within the alliance function develop networks of contacts throughout the organization. They come to know where various useful resources reside within the organization. These networks also develop some trust between alliance managers and employees in the organization, thereby facilitating reciprocal exchanges in support of alliance initiatives. For coopetition this is also something managers should do in all cases, it is a great aid in managing the partnership and will also aid in future partnerships. The function will increase the company’s tacit knowledge with regard to alliance partnership. Persons assigned to this work gain experience with every aspect of a partnership, from formation to termination Kale et al. (2002).

Chin et al (2008), states that senior executives’ attitudes to coopetition relationships greatly influence the achievement of a coopetition strategy. And there are similarities with the views by Chen et al (2007) who insist that high quality management systems enables and guides an organisation’s coordinated activities toward excellence.

What should managers do	Why should they do it
Partner selection	Selecting the right partner has the potential to make the coopetition more successful.
Focus on long-term partnerships	Coopetition is a long-term partnership; this is because for coopetition to be successful trust is needed.
Create a dedicated alliance unit	Creating this dedicated unit will increase the company’s knowledge of alliances and improve the partnership.
Create contracts	To protect the company’s rights.
Joint planning	By collaborative planning mismatches in planning can be prevented, and costs can be saved on transportation.
Joint purchasing	By jointly purchasing companies are able to reach economies of scale gaining access to better deal and reducing costs.
Top management support	The support of top management will positively influence the coopetition strategy. Is required throughout the whole process.

Figure 8: Coopetition do's

6.1.2 What should managers not do

Besides all the things managers should do to make their coopetition strategy successful there are also actions managers should not do; the so called don’ts. In this section these don’ts will be discussed. When entering a coopetition strategy there are things you need to avoid as a firm, one of these is short-sightedness. As mention in the previous chapter coopetition is a long-term arrangement, by aiming at short-term benefits you will lose in the long run. While maybe in the short-term you reap some benefits these are neglectable compared to the potential benefits in the long run. According to Blanchard (2009) a firm needs to avoid becoming overwhelmed by the prospect of balancing risk factors against the cost and benefits of implementing risk-mitigation strategies. But besides this there are not many things managers should always try to avoid. Things managers should not do, or try to avoid, is more applicable to specific cases or situations. Now I will describe what managers should try to avoid in certain cases.

Although in some cases it is beneficial for companies to share information with their coopetition partner this might not always be the case. When your company is a highly innovative company you do not want to share too much information on your product with your partner. This because it will encourage opportunistic behaviour, and might lead to misuse by your partner, if this happens your company will lose its competitive advantage. To prevent this, managers should limit information sharing on product information. Since this paper focusses on the use of coopetition is supply chain management I therefore advise managers to only share information that is useful for use in the companies supply chain. This would be the information described in chapter 6.1.1.

Another thing managers should prevent is a power difference, although in most cases this is a given methods can be applied to limit this difference. One of these methods is contracting as mentioned in the article of Ruijun & Zhiman (2011). In their case study one of the managers of the two coopetition partners made the following statement: ‘Vennerström advised that he had learned the lesson and signed the contract to protect their rights, but in order to stay flexible, he insists on not putting everything in the agreement’.

Before going into depth on the do’s and don’ts in by using scenario’s to check the influence of the managing actions I want to mention that all of the don’ts are linked to the disadvantages that come with a coopetition strategy, however as a manager you can never exclude the disadvantages coopetition offers but you should always aim at minimizing the risk by using the afore mention measures.

What should managers not do	Why should they not do it?
Share too much information	By sharing too much information the firm runs the risk of losing its competitive advantage.
Enable power imbalance	By not making contracts, your firm will run the risk of falling victim to power imbalance

Figure 9: Coopetition don'ts

The specific elements will be explained using three scenarios, these are fictive scenarios only, used to explain the effects of the managerial actions. The aim of these scenarios is to show what could happen if coopetition is implemented. The scenarios will show both the negative and positive sides. The first two scenarios will focus on the positive impact coopetition has on

firm performance. The third will focus on potential negative influence coopetition can have on your company.

6.1.3 *Scenario's*

(1) Company A is a production company in the mobile phone industry. The company is one of top five companies in the world but it is the fifth ranked company. Company A wants to grow and increase its revenue, but the batteries of the phones company A produces are not good enough to keep the phones charged for at least one day. Other companies in the top five produce phones with a better battery and therefore the companies have a competitive advantage compared to Company A. Company A wants to increase the quality of their phones by improving the batteries, but producing the batteries in-house is too expensive for company A, therefore they seek contact with a company outside the top five, company B. Company B produces phones with a battery that lasts for two days but the phones themselves have an inferior processor. By partnering with company A they are able to secure a better processer which improves the overall quality of the phones it produces. At the same time company A gains access to better batteries, improving the overall quality of their phones. The consequences of this coopetition strategy is that company A's position in the top five has improved from the fifth position to the third. But not only company A profited for the partnership, company B was not inside the top five before the partnership but due to its better quality phone it was able to gain a better competitive advantage and penetrate the top five, taking the fifth place. This example shows what the influence of resource synergy can be on the competitive advantage of a firm.

(2) Company A, is a production company located in Enschede. Company B, a competitor of company A, is located in Enschede. Both companies are looking to cut transportation and purchasing costs, but so far their efforts to cut the costs have failed. In an effort to cut the costs the companies decide to enter into a partnership to jointly purchase the resources needed. The reason for the companies to do is that due to their close proximity to each other they are able to mutually share the transportation costs and method. By doing so the companies are able to save on transportation costs, instead of both receiving separate half truck loads the companies now share a single truck. Also by jointly purchasing the companies can buy in larger quantities and receive larger discounts from the supplier. By lowering the costs both companies are able to lower their consumer price, gaining a better competitive advantage compared to other competitors. This scenario shows similarities with the Sony and Samsung example of Gnyawali & Park (2011).

(3) This scenario will describe a case in which a coopetition strategy is mishandled. Company A is a small company in the microprocessor market who recently developed a new processor which out performs all the others in the market. Company B is a large computer manufacturer and for their new model their want to use the processor of company A, since this processor will give them a competitive advantage. Company A is not able to deliver enough processors on its own and decides to enter into a coopetition partnership with company C, by doing so the company is able to deliver enough processors. Company C is a much larger production company and could easily handles the required output on its own. At the start of the partnership no agreements are contracted and all information is shared to ensure that company C is able to produce processors of the same quality. After a few weeks company B decides it wants to cut purchasing costs on the processors, because they know company C is able to handle the production on their own and can produce cheaper they approach company C and ask them if they want to be their single supplier. Company C sees the benefits, like increased revenue and decides to agree. By doing so company A loses its buyer and its technology to their former partner. Since nothing was contracted and all the information was shared company A has lost its competitive advantage and because they also lost their customer and potential customers the company goes bankrupt after a few months. This scenario shows that if coopetition is handles wrongly it could lead to firm failure and even bankruptcy.

7. DISCUSSION AND FURTHER RESEARCH

7.1 Discussion

Coopetition is a great way for managers to increase their companies competitiveness. By using coopetition in supply chain management companies are able to save costs and at the same times also improve the attractiveness of their product. Coopetition does not only offer advantages but also poses risks, but these risks can be managed. However if coopetition is not properly managed it could also lead to firm failure. Due to the fact that both companies operate in the same market, share similar resources a company could fall victim to abuse by its partner, or opportunistic behaviour. However, the actual purpose of the concept of coopetition is aiming to benefit both firms in this specific relationship and not just one firm (Luo, 2007).

The aim of this paper was to give managers a better insight into what coopetition has to offer them and what it can do for the firm. By mapping out the advantages, the influence of these advantages and how to attain these advantages managers will be able to make a better informed decision, will have more knowledge of the consequences and also know what they should try to avoid or eliminate. The CIF provides a new addition to the existing literature by providing managers with a better means of implementation, it differ from non supply coopetition because in the framework specific supply management elements have been taken into account.

However the question remains whether the advantages of coopetition outweigh the risks involved with coopetition. The company takes a risk when cooperating with a competitor, the fact that coopetition is a long term partnership could also be a source of risk. By cooperating for a longer time firm will start cooperating on more fields, although this increases the benefits the risks also increase. The companies could fall victim to sharing of too much information and run the risk of abuse by the partner. The discussion therefor is how far you should go in cooperating with the partner, in this paper I have described that in certain cases a company should not do this, however in general it would be more beneficial for companies to cooperate on a larger scale. This would be a good start for more research.

7.2 Further research

A good start for future research would be to search for the limits of coopetition. The questions that should be answered is what the limits of coopetition would be, when does coopetition become a danger to the involved firms and what measures could be taken to extend this limit while still increasing the benefits.

Furthermore for future research I would like to see more case studies on the start of coopetition partnership, while doing this using the Coopetition Implementation Framework. This is because the paper is completely based on literature or previous

case studies like the Sony and Samsung case. It would be interesting to see if in practise the framework will lead to more successful coopetition partnerships and reduce the risk involved with these partnerships. I think that in the future this framework can be expanded to include more aspects of coopetition, this paper only focused on the supply side of the company. There are far more aspects to a coopetition strategy, the previously researched ones are especially in innovation and new product development. It would be interesting to see whether there is a way of combining the two, supply and innovation, and even further reducing the risks. Because this paper stated that unique information should not be shared or only very limited.

8. REFERENCES

Alvarez, S. A., & Barney, J. B. (2001). How entrepreneurial firms can benefit from alliances with large partners. *The Academy of Management Executive*, *15*(1), 139-148.

Barney, J. B. (2000). Firm resources and sustained competitive advantage.*Advances in Strategic Management*, *17*(1), 203-227.

Bengtsson, M., & Kock, S. (2000). 'Coopetition' in business networks - to cooperate and compete simultaneously. *Industrial Marketing Management, 29(*5), 411–426.

Bengtsson, M., & Kock, S. (2014). Coopetition - quo vadis? Past accomplishments and future challenges. *Industrial Marketing Management, 43*(2), 180-188.

Bonel, E., Pellizzari, P., & Rocco, E. (2008). Coopetition and complementarities: modeling coopetition strategy and its risks at an individual partner level. *Management Research: Journal of the Iberoamerican Academy of Management*, *6*(3), 189-205.

Brandenburger, A. M., & Nalebuff, B. J. (1996). *Co-opetition*. New York: Doubleday Currency.

Chen, I. J., Paulraj, A., & Lado, A. A. (2004). Strategic purchasing, supply management, and firm performance. *Journal of operations management*, *22*(5), 505-523.

Chen, M. J., Kuo-Hsien, S. U., & Tsai, W. (2007). Competitive tension: The awareness-motivation-capability perspective. *Academy of Management Journal*, *50*(1), 101-118.

Chin, K. S., Chan, B. L., & Lam, P. K. (2008). Identifying and prioritizing critical success factors for coopetition strategy. *Industrial Management & Data Systems*, *108*(4), 437-454.

Das, T. K., & Teng, B. S. (2000). A resource-based theory of strategic alliances. *Journal of management*, *26*(1), 31-61.

Van der Duyn Schouten, F. A., Van Eijs, M. J., & Heuts, R. M. (1994). The value of supplier information to improve management of a retailer's inventory.*Decision Sciences*, *25*, 1-1.

Dyer, J. H., & Singh, H. (1998). The Relational View: Cooperative Strategy and Sources of Interorganizational Competitive Advantage. *The Academy of Management Review, 23*(4), 660-679.

Ellram, L.M., Tate, W.L., & Feitzinger, E.G. (2013). Factor-Market Rivalry and Competition for Supply Chain Resources. *Journal of Supply Chain Management*, *49*(1), 29-46.

Emden, Z., Calantone, R. J., & Droge, C. (2006). Collaborating for new product development: selecting the partner with maximum potential to create value. *Journal of product innovation management*, *23*(4), 330-341.

Gnyawali, D. R., & Park, B. J. (2009). Co-opetition and technological innovation in small and medium-sized enterprises: A multilevel conceptual model. *Journal of Small Business Management, 47*(3), 308-330.

Gnyawali, D. R., & Park, B. (2011). Co-opetition between giants: Collaboration with competitors for technological innovation. *Research Policy, 40*(5), 650-663.

Hamel, G., Doz, Y. L., & Prahalad, C. K. (1989). Collaborate with your competitors and win. *Harvard business review*, *67*(1), 133-139.

Hill, C. W. (1990). Cooperation, opportunism, and the invisible hand: Implications for transaction cost theory. *Academy of Management Review*, *15*(3), 500-513.

Kale, P., Dyer, J. H., & Singh, H. (2002). Alliance capability, stock market response, and long-term alliance success: the role of the alliance function.*Strategic Management Journal*, *23*(8), 747-767.

Khanna, T., Gulati, R., & Nohria, N. (1998). The dynamics of learning alliances: Competition, cooperation, and relative scope. *Strategic management journal*, *19*(3), 193-210

Krause, D. R., & Ellram, L. M. (1997). Critical elements of supplier development. The buying-firm perspective. *European Journal of Purchasing & Supply Management*, *3*(1), 21-31.

Lambert, D. M., Emmelhainz, M. A., & Gardner, J. T. (1996). So you think you want a partner?. *Marketing Management*, *5*(2), 24.

Lavie, D. (2006). The competitive advantage of interconnected firms: An extension of the resource-based view. *Academy of management review*, *31*(3), 638-658.

Lee, H. L. (2002). Aligning supply chain strategies with product uncertainties.*California management review*, *44*(3), 105-119.

Loebbecke, C., & van Fenema, P.C., (1998). Towards a theory of Inter-Organizational Knowledge Sharing during Co-opetition, *Proceedings of European Conference on Information Systems,* Aix-en-Provence, France, 1632-1639.

Loebbecke, C., & van Fenema, P.C., Powell, P., (1999). Coopetition and knowledge transfer, *Database for Advances in Information Systems. 30*(2). 14-25.

Luo, X., Slotegraaf, R. J., & Pan, X. (2006). Cross-functional "coopetition": The simultaneous role of cooperation and competition within firms. *Journal of Marketing*, *70*(2), 67-80.

Luo, Y. (2007). A coopetition perspective of global competition. *Journal of World Business*, *42*(2), 129-144.

Mahoney, J. T., & Pandian, J. R. (1992). The resource-based view within the conversation of strategic management. *Strategic management journal*, *13*(5), 363-380.

Morris, M. H., A. Kocak, and A. Özer (2007). "Coopetition as a Small Business Strategy: Implications for Performance," *Journal of Small Business Strategy 18*(1), 35–55.

Navaratnam, T. 2015. Strategic implications of coopetition for buying firms in a shared supply market. *6th IBA Bachelor Thesis Conference.*

Osarenkhoe, A. (2010). A study of inter-firm dynamics between competition and cooperation–A coopetition strategy. *Journal of*

Database Marketing & Customer Strategy Management, *17*(3), 201-221.

Oxley, J. E. (1997). Appropriability hazards and governance in strategic alliances: A transaction cost approach. *Journal of law, Economics, and Organization*, *13*(2), 387-409.

Oxley, J.E., Sampson, R.C., & Silverman, B.S. (2009). Arms race or détente? How interfirm alliance announcements change the stock market valuation of rivals. *Management Science*, *55*(8), 1321-1337.

Park, S. H., & Russo, M. V. (1996). When competition eclipses cooperation: An event history analysis of joint venture failure. *Management science*, *42*(6), 875-890.

Peteraf, M. A. (1993). The cornerstones of competitive advantage: A resource-based view. *Strategic management journal*, *14*(3), 179-191.

Pilsik, C., 2005. The nature of coopetition: Literature review and propositions. *AMA Winter Educators' Conference Proceedings. 16,* 105.

Powell, W. W. (1998). Learning from collaboration: Knowledge and networks in the biotechnology and pharmaceutical industries. *California management review*, *40*(3), 228-240.

Pulles, N.J. (2014). The competition for supplier resources. *University of Twente.*

Quintana-Garcia, C. & Benavides-Velasco, C. A. (2004). Cooperation, competition and innovative capability: A panel data of European dedicated biotechnology firms. *Technovation, 24*, 927-938.

Ramanathan, U., & Gunasekaran, A. (2014). Supply chain collaboration: Impact of success in long-term partnerships. *International Journal of Production Economics*, *147*, 252-259.

Ritala, P. 2012. Coopetition Strategy—When Is It Successful? Empirical Evidence on Innovation and Market Performance. *British Journal of Management 23*(2), 307–324.

Ritala, P., Golnam, A., Wegmann, A. (2014). Coopetition-based business models: The case of Amazon.com. *Industrial Marketing Management, 43*(2), 236-249.

Ruijun, C., & Zhiman, L. (2011). Coopetition strategy management in SMEs: A case study of Nyhammers and Bäckströms Company.

Salter, M., & Weinhold, W. (1980). Diversification by acquisition. *New York: Free Press*.

Sampson, R. C. (2004). The cost of misaligned governance in R&D alliances.*Journal of Law, Economics, and Organization*, *20*(2), 484-526.

Schrader, S., (1990) *Zwischenbetrieblicher Informationstransfer: Eine Empirische Analyse Kooperativen Verhaltens.* Berlin, Duncker & Humblot.

Simmons, L.C. 1996. "Levelling the Playing Field with Co-opetition." *Mortgage Banking 56*(11): 75–76.
Soekijad, M., & Andriessen, E. (2003). Conditions for knowledge sharing in competitive alliances. *European Management Journal*, *21*(5), 578-587.

Sulej, J. C., Stewart, V., & Keogh, W. (2001). Taking risk in joint ventures: whose throw of the dice? *Strategic Change*, *10*(5), 285-295.

Vorst, J. G. A. J., Beulens, A. J., Wit, W. D., & Beek, P. V. (1998). Supply chain management in food chains: Improving performance by reducing uncertainty. *International Transactions in Operational Research*, *5*(6), 487-499.

Walley, K., (2007). Coopetition: an introduction to the subject and an agenda for research. *International Studies of Management & Organization 37*(2), 11– 31.

Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic management journal*, *5*(2), 171-180.

Carlson, N. (2015, April 16). Marissa Mayer redoes Yahoo's search deal with Microsoft, makes huge changes. Retrieved April 16, 2016, from http://uk.businessinsider.com/yahoo-renews-microsoft-search-partnership-2015-4?r=US&IR=T

Lowitt, E. (2012). Why Your Company Should Partner with Rivals. Retrieved March 29, 2016, from https://hbr.org/2012/03/why-your-company-should-partne

Marco della Cava, Mike Snider, & Swartz, J. (2016). Why Microsoft may help finance Yahoo sale. Retrieved April 15, 2016 from http://www.usatoday.com/story/tech/news/2016/03/28/why-microsoft-may-help-finance-yahoo-sale/82337720/

Microsoft and Yahoo Agree to Amend Search Partnership. (2015, April 16). Retrieved April 16, 2016, from http://www.businesswire.com/news/home/20150416005673/en/Microsoft-Yahoo-Agree-Amend-Search-Partnership

Vantrappen, H., & Deneffe, D. (2016, April 06). Joint Ventures Reduce the Risk of Major Capital Investments. Retrieved April 16, 2016, from https://hbr.org/2016/04/joint-ventures-reduce-the-risk-of-major-capital-investments

Toet, D. (2016, March 25). Gegadigden Yahoo rekenen op steun van Microsoft. Retrieved April 16, 2016, from http://fd.nl/ondernemen/1145087/gegadigden-yahoo-rekenen-op-steun-van-microsoft