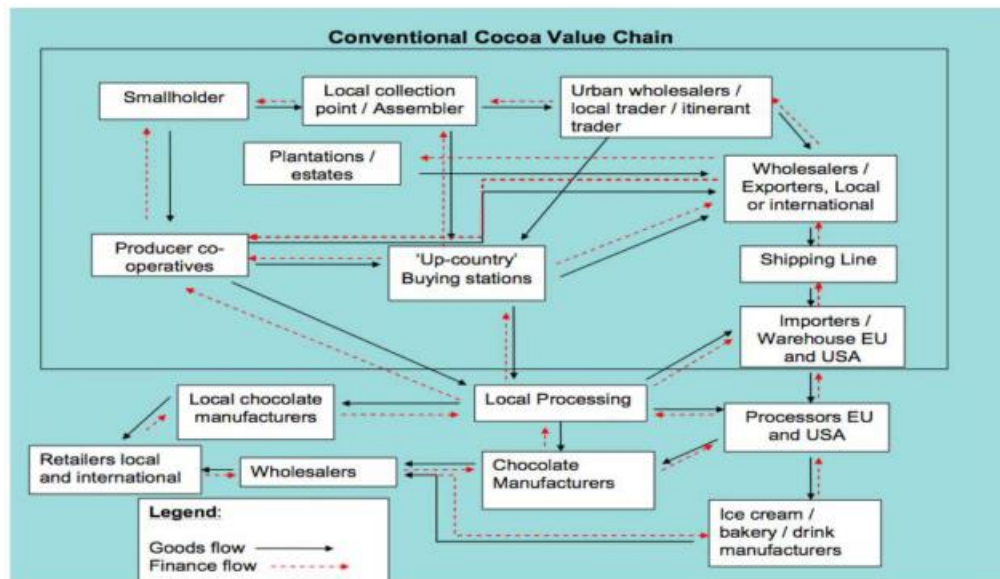


A search for sustainability in cocoa supply chain business models.



i Conventional Cocoa Value Chain (Lalwani et al. 2016)

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26-06-2018

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1. Introduction

1.1 Sustainability challenges in supply chains

In the past 30 years sustainability has emerged as a factor of growing importance among society and business. Due to globalization and worldwide growth of wealth, pressure on the environment is growing. Without strong measures the change of the environment can cause long-term risks like flooding, drought, political instability, social unrest and depletion of natural resources (Giddens, 2015). These consequences can disrupt current ways of business due to their international impact on society. It creates a debate to maintain a balanced way of doing business with special attention to the environment. In 1987 the World Committee of Environment and Development published the Brundtland report which caused worldwide publicity for the sustainability subject. The committee urged for a more sustainable way of living to preserve the world for next generations. (WCED, 1987).

The Brundtland report was the foundation for multiple new corporate strategy theories. For example: the triple bottom line and the rise of Corporate Social Responsibility (CSR) policies. In 1997 Elkington introduced the triple bottom line concept. This concept states that sustainable strategy should not only consider revenue or profit. It should always consider three aspects of sustainability: environmental, economic and social growth (Elkington, 1997). CSR is a different concept which focusses more on stakeholder management. And could be defined as: "the social responsibility of business encompasses the economic, legal, ethical and discretionary expectations that society has of organizations at a given point of time" (A. Carroll, 1999). Another important part of social responsibility is the development of stakeholders. Parties such as NGOs and governments are willing to pressurize companies to stimulate responsible ways of business. Also consumers have become more demanding about the integrity of products. More and more products have to be created and processed in a responsible way to gain trust of the final consumer. All these stakeholders cause demand for a more transparent policy for companies in their businesses and supply chains (Meixell & Luoma, 2015).

The supply chain is an important factor with respect to the sustainability of a company. Mentzer et al. (2001) explain the supply chain as: "a supply chain is the network of organizations that are involved, through upstream and downstream linkages, in the different processes and activities that produce value in the form of products and services delivered to the ultimate consumer". As stated by Mentzer et al., the supply chain consists of multiple parties, including the consumer. Often the parties in a supply chain are independent parties who rely on each other for a strong product or service. But they stay competitive with other parties to protect their position in the chain. Good management of the supply chain is necessary for maintaining a positive product flow and the guarantee of a good relation with the consumer (Mentzer et al., 2001). Creating a supply chain which is sustainable is complicated and requests a lot of focus and dedication from all parties involved (Linton, Klassen, & Jayaraman, 2007).

In recent days the complete supply chains becomes more important than single companies because they are all connected in the chain. This requires more transparency for members of the chain as well as other stakeholders (Meixell & Luoma, 2015). When analyzing consumer demands on product quality, there is a visible trend in influence of the end consumer. Consumers are easier to influence due to new communication channels and develop a stronger need for responsible consumer behavior. Through these channels they can easier pressurize companies to be more transparent. (Wolf, 2014). Other stakeholders use the same measures if they want to gain their advantages in the supply chain. New governmental policies pose challenges for the most efficient production method and force businesses to adapt to a more sustainable production (Meixell & Luoma, 2015). Besides sustainability, the economic perspective stays important. Most companies need to make profits and see sustainability as a side objective (Figge & Hahn, 2012).

When considering sustainability, the food market is a market which cannot be overlooked. It is responsible for over 25% of greenhouse gas emissions and uses nearly 50% of the available non-frozen land in the world. A large part of this land is acquired through deforestation which has a large impact among the local biodiversity and social cohesion (Recanati, Marveggio, & Dotelli, 2017). With such impact, the food industry is an interesting market to search for improvements in sustainability. However, the whole food sector is quite a giant to capture. In this research the main focus will be on the cocoa sector. The cocoa sector has an interesting supply chain due to the structure of main agricultural production in Africa, Asia and Americas while the manufacturing of cocoa into chocolate and other products mainly happens in Europe and Northern America (Recanati et al., 2017). Furthermore, the demand for cocoa is growing persistently. In the past 50 years the demand already rose with 300%, but with Asian wealth growing the way it does, the forecasts are that the demand for cocoa will only rise even more. Therefore sustainability improvements will be even more impactful (Recanati et al., 2017).

To analyze the possibilities for sustainability improvement in the cocoa market, the triple bottom line concept of Elkington (1997) will be used as a central concept. In other words the sustainability concept is divided into 3 smaller aspects of: economic, environmental and social factors. This research explores possible challenges and improvements within these concepts and try to relate them to each other, and whether it is possible to combine them all in the same business models.

1.2 The goal and research questions

The goal of the research is to explore possible business models for sustainable improvements in the cocoa supply chain. For the analysis the triple bottom line factors of Elkington (1997) will have a central role. His concepts pose clear borders to areas of improvement and are comparable. The research explores whether the three factors can be combined to improve the cocoa supply chain or that they are hard to combine and will counter each other when improving one singular factor.

Research questions

The main research question is as following:

- How do business models combine the triple bottom line factors to improve sustainability for a focal company in the cocoa supply chain?

This question will be answered by answering the following sub-questions:

- How do business models combine economic factors with environmental factors to improve the sustainability of the cocoa supply chain?
- How do business models combine economic factors with social factors to improve the sustainability of the cocoa supply chain?
- How do business models combine environmental factors with social factors to improve the sustainability of the cocoa supply chain?

1.3 Research methods

This study is a literature study. Through multiple scientific articles, business reviews, books and relevant webpages information will be gathered to explore the sustainability possibilities in business models.

The most consulted databases are ABI/Inform and Scopus. The snowball technique is an often used tool to search for articles on specific topics.

The main keyword used in databases are: sustainability, supply chain, cocoa, environment, business models, social and supply chain management.

1.4 Structure of the report

Chapter 2 is the theoretical framework of the research. Different central concepts are explained to prepare the reader for the research.

The first segment of chapter 3.1 starts with an overview on the article of Hahn et al. (2010) and Figge & Hahn (2012) to explore the win-win paradigm and trade-off scenarios. After discussing the difference between win-win and trade-off scenarios, a more in-depth analysis of the latter is presented, as well as options/possibilities to approach them in a strategic relevance. The second section focuses on product-market positioning. How environmental measures can be used as a business model to increase value of the product. This part will mainly be supported by: Aragón-Correa & A. Rubio-López, (2007), Jolink & Niesten, (2015) and Rousseau (2015). The third section contains an overview of potential ways to improve the supply chain with combinations of environmental value and economic value. Rao & Holt (2005), Boons (2002) and Shah & Ganji (2017) contribute the most information to this part of the research. The last part contains a case study towards business models in the cocoa market and will be mainly supported by the research of (Gallo et al. 2018).

Other articles supporting this section are Clarkson et al. (2011), and Song et al. (2017).

Chapter 3.2 focuses on the comparability of the economic and social factors. The first section analyzes how sustainable human resource management can contribute to the economic value of a company, using the line of sight model of Buller & McEvoy (2016). In the second section CSR policies are the main topic. Through the CSR model of Maloni & Brown (2006) CSR applicability and effect on the food market will be explored. Stakeholder management will be the leading subject in section 3.2.4. By explaining the stakeholder management model of Meixell & Luoma (2015) applicability of stakeholder management into sustainable business models are suggested. Afterwards there is a section on social policies of four major chocolate manufacturers to get a clear view on the cocoa market. Lalwani et al. (2016) provide the most information in this section. In the last section of 3.2 the three models mentioned in the chapter will be assessed against the policies of the chocolate manufacturers to see whether the models are applied in their policies.

Chapter 3.3 focusses on the social and environmental triple bottom line factors. It starts with a general exploration on the relation of the two factors. In section 3.3.2 the concept of supply chain governance is explored. The main information contributor to this segment is the article of Ingram et al. (2018). In the following section (3.3.3) specific cocoa case scenarios are discussed. Using different articles and sources of NGOs (IDH & Cocosols), measures in the cocoa market are compared and assessed on their combination of social and environmental TBL factors.

The last chapter contains the conclusion of the research. Discussions are applied in every sub-chapter, so will not have a special chapter.

2. Theoretical framework

This research explores sustainability through the cocoa supply chain. There are some central concepts which are important throughout the complete research. This segment explains these concepts.

Sustainability is a common theme in society nowadays and is often used in many different businesses and markets. One of the first and most dominant definition stems from the Brundtland report of the world commission of environment and development and states: “using resources to meet the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987). Linton et al. (2007) states that this definition is not very specific so there are multiple adaptations and interpretations possible. This raises questions like:

- What resources will future generations require?
- To what extent will new sources of depletable resources be identified in the future?
- What sort of policies are required to achieve sustainability?

The answer to these questions require a long-term vision, and are therefore often difficult to answer. However, the amount of research on sustainability is growing fast and will hopefully result in a better long-term vision (Linton et al. 2007). Multiple markets have to cope with sustainability and its growing importance. Both public and private sectors have adopted the concept and are working on its progress (Bodansky et al. ,2004). The concept itself can be interpreted as a large definition, however John Elkington developed a concept to make it more specific and adoptable in research. In 1997 he introduced the triple bottom line (TBL) concept. This concept states that sustainable strategy shouldn't only consider revenue or profit. It should always consider three aspects of sustainability: environmental, economic and social growth (Elkington, 1997). These concepts are also known as the three P's, People, Planet and Profit. The factors of the TBL will have a leading position in this research.

The **supply chain (SC)** is an essential part for every company. It consists of all parties who are involved with the process (or chain) a product has to go through. So from the producer of raw materials to the consumer who buys the final product. Mentzer et al. (2001) define the supply chain as: The alignment of firms that brings products or services to market. With a critical note that the consumer is an important part of the chain.

Every supply chain is unique, in a way that they contain different companies and stakeholders. A company can be in different supply chains with a different role in every chain. It is even possible to be competitor and partner in chains shared with another organization (Mentzer et al., 2001). Mentzer et al. (2001) state that there are three types of supply chains: the direct supply chain, the extended supply chain and an ultimate supply chain. The direct supply chain is the least complex with three chain parts: supplier, an organization and the customer (Figure 1a). The extended supply chain adds suppliers of the supplier and customers of the customer (Figure 1b). Where the ultimate supply chain includes third parties involved in the stream like financial parties or marketing focused companies. The figure shows how complex an ultimate supply chain can become when all the parties are involved in the product flow (Figure 1C).

Many supply chains know a dominant organization which is called the focal organization of focal company (FC). Characteristics of a focal organization are: they rule or govern the supply chain, they provide contact with the customer and they design the end product or service. (Seuring & Müller, 2008b).

FIGURE 1

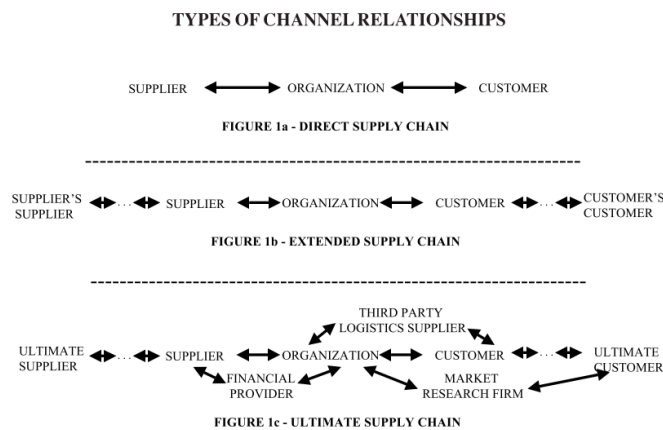


Figure 2 Types of channels Relationships Mentzer et al. (2001 p. 5)

Supply chain management (SCM) is an important business component for most companies and institutions and especially for focal companies through their dominant position in the chain. Due to the widespread influence among different business elements, SCM can be quite impactful on a business. A supply chain and supply chain management are two different things. Mentzer et al. (2001) state that the supply chain is a phenomenon of business that exists, and that supply chain management is the management of those supply chains. So the organizations have to actively manage those supply chains in order to exercise Supply chain management. Supply chain management knows different definitions. One of them is: "A business philosophy that strives to integrate the dependent activities, actors and resources between the different levels of the points of origin and consumption in channels." (Svensson, 2007). Another is: "SCM is a systemic, strategic coordination of the traditional business functions and the tactics across these business functions within a particular company and across businesses within the supply chain, for the purposes of improving the long-term performance of the individual companies and the supply chain as a whole." (Mentzer et al., 2001).

SCM can be extended to sustainable supply chain management (SSCM) when the management strategies focus on sustainability and consider the triple bottom line. Seuring & Müller (2008a) defined sustainable supply chain management as: "the management of material, information and capital flows as well as cooperation among companies along the supply chain while taking goals from all three dimensions of sustainable development, i.e., economic, environmental and social, into account which are derived from customer and stakeholder requirements".

Business models are a fairly recent concept. Since 1995 the publications on the subject rose exponentially and is described by many different terms. These different terms complicate the creation of one clear definition (Zott et al. 2011). Instead, Zott et al. (2011) believe that because it is such a young concept it should not yet be defined. However they created a way to categorize business models. According to Zott et al. (2011), business models can be split up in three major streams: Business models for E-business, business models for strategic issues such as: value creation, competitive advantage and firm performance and lastly business models for innovation and technology management. The models for E-business focus on specific business by internet and can be seen as a combination of: value propositions, revenue models and networks of relationships. In the perspective of the cocoa supply chain the strategic and innovative business models are of higher interest. One of the definitions given in Zott et al.'s article (2011) is: "the method by which a firm builds and uses its resources to offer its customer better value and to make money in doing so" (P.

12) . Which clearly states that a business model is a method of business practice to achieve a certain goal (not only economic goals).

The third stream is innovation and technology management. Like with the strategy and e-business stream a business model can take many forms like a tool, a framework or a certain cooperation/network strategies with third parties. Zott et al. (2011) state that: " We found that four important themes are forming, primarily around the notions of the business model as a *new unit of analysis*, offering a *systemic perspective* on how to "do business," encompassing *boundary-spanning activities* (performed by a focal firm or others), and focusing on *value creation* as well as on value capture." (P.20) So when looking at business models, it can be multiple concepts which help businesses in their core businesses and side activities to raise value.

Corporate social responsibility or CSR is complex to define due to the nature and context of the problems to involvement in multiple aspects like ecology, society and economy (Sheehy, 2014). 60 years after its introduction there is still no dominant, widely adopted definition. The first definition of CSR stems from 1953: "It refers to the obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society" (Carroll et al. 1999). Later on Carroll constructed a new definition for CSR: "the social responsibility of business encompasses the economic, legal, ethical and discretionary expectations that society has of organizations at a given point of time". Which focusses more on different aspects of CSR. Some institutions also formulated definitions, like the EU. Their definition of CSR in 2001 was: "a concept whereby companies integrate social and environmental concerns in their business operations and in their interactions with their stakeholders on a voluntary basis ... [This] not only means fulfilling your legal expectations but also going beyond compliance and investing into human capital, the environment and the relations with stakeholders" (Commission of the European Communities, 2001). Analyzing the definitions mentioned above the social responsibility to the stakeholder and environment are very important aspects of CSR. This could be one of the reasons that CSR grows in importance alongside sustainability.

The concept of **stakeholders** is first introduced by Freeman (1984), with the following definition: 'those groups without whose support the organization would cease to exist'. However due to the introduction of the concept "shareholder value" by Alfred Rappaport the stakeholder concept was not adopted widespread (Zink, 2005). Later on in 2002 the concept was redefined by Post et al. (2002) as: "The stakeholders in a corporation are the individuals and constituencies that contribute, either voluntarily or involuntarily, to its wealth-creating capacity and activities, and therefore its potential beneficiaries and/or risk bearers" (Zink, 2005). With this new definition the concept's adoption rate grew, and is now used more often. It is important to note that stakeholders can be very different parties or groups in different stages of the supply chain or production process.

3. Findings & Discussion

3.1.1 Exploration towards economic and environmental factors in business models.

Looking purely at a company with a goal of making profit, the economic aspect of the triple bottom line theory is the most dominant. When a company makes profit, shareholders are satisfied and the company can grow and invest. With the increasing importance of sustainability, other factors become important/relevant as well. The following segments will focus on the possibilities to combine profitable strategies with sustainable elements for the environment.

3.1.2 The win-win paradigm and trade-off scenarios

For many companies profit is their main goal, and while the importance of sustainability is growing, it is mostly a secondary goal for many companies (Figge & Hahn, 2012). This could suggest that if sustainability causes more profit it would be adopted faster and more frequently. Figge & Hahn (2012) explain that there is a relation to good sustainability measures and a competitive advantage. In their article they describe that companies with activities such as environmental impact assessment, pollution prevention policies and a cleaner production measures score higher financial performances and are positively associated with gaining a competitive advantage. Activities like these can raise return on capital investments through factors as higher efficiency or lower energy costs.

Decisions concerning sustainable business models and sustainable business strategies are often paired with large investments because companies have to make adaptations in their current ways of business. When improving the assets of a company, companies can use a sustainable investment strategies or business models. Figge and Hahn (2012) developed a special business case for making such investments. However, first the investment situation should be considered. According to Aragón-Correa & A. Rubio-López (2007) and Hahn et al. (2010) there is a new trend in sustainable investments, called the win-win paradigm. This paradigm focusses on situations where multiple triple bottom line factors can be achieved simultaneously. An example: while improving sustainability by decreasing the material used, energy cost or waste expenses it still makes profit or decreases current costs in these departments (Scenario A, A* or A** in figure 2). Situations like C & B in figure 2 where one of the factors has a loss ratio is called a “trade-off scenario” and should not be considered when making a new investment following the win-win paradigm.

Figge & Hahn (2012) introduce the concept of “the green business case” which is a strategic tool for making investment decisions. Their tool: “strives to identify and develop corporate environmental strategies that help to enhance the risk-adjusted return on capital of a company, i.e. create share- holder value.” So the model is meant to help companies make better choices for sustainable investments. However, Figge & Hahn also state that the model is bounded to limitations, so it is not suitable for every investment scenario. They state the following limitations of their model:

- Is biased towards financial performance in the prioritization of different win–win cases. Where there are different alternatives that improve financial and environmental performance the one with the highest financial gain will be chosen irrespective of the overall, i.e. environmental and financial, gain.
- Ignores trade-off cases. Alternatives that come with a financial loss will always be second to alternatives that come with a financial gain even if these result in vast environmental losses.

- Uncritically prioritizes win-win cases. Win-win cases will always be preferred to trade-off cases, even if these have a higher net gain than the win-win case.

A tendency to outweigh the economic factor over the environmental factor becomes visible when comparing A, A* and A** in figure 2. A* is the lowest scoring in both performances, so will never be chosen over A and A**. When choosing A** or A the economic performance outweighs the environmental, so A will be the best option using the green business case. Even when A** has a significantly higher environmental performance. When comparing B and C there is a trade-off scenario. A loss in 1 factor for a gain in another and vice-versa. The green business case can't judge negative impacts, so it ignores these kind of decisions. Because of this limitation it will always prioritize A* over C even with less profit.

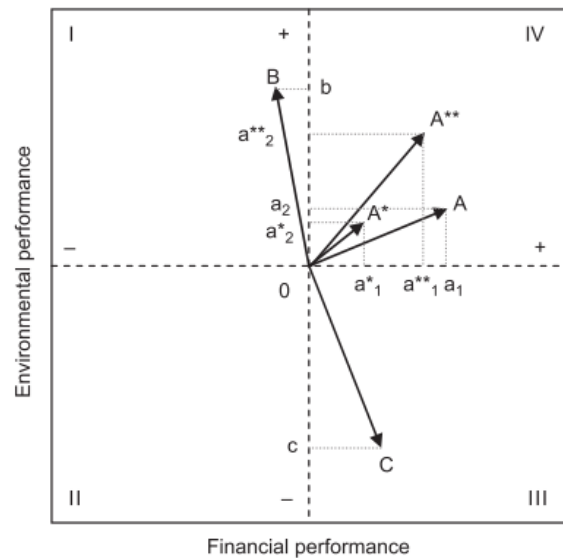


Figure 3 Environmental and financial performance effects of corporate strategies. (Figge & Hahn 2012)

The green business case is a model which can be used for the decision making of large investments and will always prioritize win-win scenarios, thus opt for a business sustainable option. However, when comparing the economic factor with the environmental factor, the economic factor generally has a more dominant position. Using this case creates possibilities to adopt business models which combine factors of the triple bottom line.

However, Hahn et al. (2010) state that win-win scenarios are not so likely as they seem to be. Even with new technologies it is hard to realize an alternative which score strongly in multiple criteria from the triple bottom line factors. Hahn et al. (2010) state: "However, given the multi-faceted and complex nature of sustainable development, we argue that trade-offs and conflicts in corporate sustainability are the rule rather than the exception." This could lead to neglect of options in improvement even if there are win-win scenarios available due to limited perspective on corporate contributions to sustainable development.

Neglecting trade-off scenarios isn't always the best solution for sustainable gain. For instance, a scenario with large gain in environmental progression but with a very small loss in economic value can have a higher net sustainable gain on the long term. But will be neglected in the win-win paradigm. To make trade-offs viable for consideration there are different frameworks or approaches when assessing a specific scenario. Hahn et al (2010) categorize trade-off-scenarios in different levels of the market specified in scale. Their levels are: Individual level, Organizational level, industry level societal level. All levels deal with a different approach and unique decision-making when assessing trade-off scenario's as a possible option.

The individual level focusses on the (powerful) individuals in an organization like managers. The decisions on the individual level is very important on the course of a company, however most of the time not leading to the final decision making itself. When individuals have preferences or tendencies towards a certain goal (for example: sustainability, growth, Fair trade or stakeholder satisfaction) they will try to influence the company towards that direction. However, most companies don't let their strategies or important decision be decided by one person, which makes the individual level less important than other levels (Hahn et al., 2010).

The second level detected by Hahn et al. (2010) is on the organizational level. Referring to: "Trade-offs in corporate sustainability at the organizational level refer to conflicts between different sustainability aspects with regard to the role and impact of companies as single organizations". Focusing on the single company often leads to less complicated scenarios where there is a more

narrow vision on the company. Leading to a more resourced base view of the firm, and focusing on the win-win paradigm. Most decisions on the organizational level tend to neglect the trade-off scenarios and focus on win-win scenarios. This a notable trend that could be interesting to analyze further with the goal of making trade-off decisions more accessible. Because organizational decisions can further influence the industry.

The third level Hahn et al. (2010) detect is the industrial level. Which is different from the organizational level due to the larger nature of problems and solutions. The Sustainability issues shift toward the whole industry and larger impacts to the stakeholders, which causes organizations like NGO's and regulators to involve in decision making. These new parties tend to pressurize companies in a more focus on responsibility aspect and benchmarking with other competitors in the industry. Which can increase the value of a trade-off scenario when making a new move on the market (considering the higher sustainable net gain opportunity of trade-off scenarios). Working together with other parties in the organizational level is essential as sustainable development requires cooperation among the actors in the whole sector.

The last level defined by Hahn et al. (2010) is the societal level. It is described as: "In the context of corporate sustainability, the societal level is concerned with a sustainable economy that is nested within and contributes to a sustainable society and healthy eco-systems.". So in contrast to the organizational level the societal level focusses more on interaction with society and the world. Trade-off scenarios have a special position in the societal level due to the higher involvement on social responsibility towards society. As well as the more long term vision of preserving or maximizing for current societal gains. So while the corporate and industrial levels focus more on the economic and environmental aspects of sustainability, the societal level demands more focus on social development.

To apply the different levels into a framework, Hahn et al. (2010) had to add another factor to assess the impact of the trade-off scenario. They call this factor dimensions and use them to describe the impact on different environmental aspects. The dimensions they define are: outcome dimension, temporal and process dimensions. The outcome dimension is the most straight forward dimension and focusses on the outcome of a scenario. So it focusses on the measurable sustainable development a scenario offers. The temporal dimension focusses on the long-term or short-term viability of a scenario. Because an important part of sustainability is preserving the planet for coming generations this dimension must be taken into account when making a decision. The third and last dimension is the process dimension which considers the changes in the current process of production and logistics. This dimension can be quite impactful because many organizations have complex and expensive processes which cost a lot of attention to change.

With all dimensions and levels described, it is possible to add them together into the analytical framework for trade-off scenarios. Which Hahn et al. (2010) put together in figure 3. Every level clearly has a different scope in each dimension.

	Outcome dimension	Temporal dimension	Process dimension
Societal level	Trade-offs between different economic, environmental and social outcomes at the societal level	Trade-offs between intra- and intergenerational aspects of sustainable development	Trade-offs between a more resilient and a more efficient economic system
Trade-offs between societal and industry levels			
Industry level	Trade-offs between different economic, environmental and social outcomes at the industry level	Trade-offs between present and future industry structures and activity with regard to sustainable development	Trade-offs within structural and technological change processes for sustainable development
Trade-offs between industry and organisational levels			
Organisational level	Trade-offs between different economic, environmental and social organisational outcomes	Trade-offs between short-term and long-term sustainability orientation and effects of corporate activity	Trade-offs between different strategies and governance modes for corporate sustainability
Trade-offs between organisational and individual levels			
Individual level	Trade-offs between individual interests and preferences of different actors regarding economic, environmental and social outcomes	Trade-offs between short-term and long-term preferences and interests of different actors	Trade-offs between in the perceptions of different actors regarding corporate sustainability

Figure 4 Analytical framework for trade-offs in corporate sustainability (Hahn et al. 2010)

Hahn et al. (2010) and Figge & Hahn (2012) focus on both the strong sustainable value of win-win paradigm and the risk of neglecting trade-offs in the decision making process. Their tools can show perspectives on strategic moves whether they have strong sustainable potential. The most important factor is the focus on the win-win paradigm. The win-win scenario is a strong parameter to improve sustainability, but is not always the best long-term option. Due to large possible improvements in non-economic TBL factors which can be rewarding on the long term. Considering trade-off scenarios can create sustainable value and competitive advantages, but it requires more effort by the focal company to investigate possibilities.

3.1.3 Product-market positioning

Competitive advantages are essential for companies to differentiate them from competitors. There is no such thing as a best competitive advantage and there are different ways to achieve it. Even opposite strategies can both result in competitive advantages in different market segments. For example: some companies strive for low price policies, and will usually try to minimize all costs even if this means a lower quality. Other products focus on high quality of the end product, and will maintain price above market-average. Neither the former or latter option is the “best” business model. As long as there is a market segment available where the product will be bought the business model is valid.

For the cocoa market there are multiple options to differentiate the product. When developing such a business model Jolink & Niesten (2015) propose a focus on the following questions:

- How and for whom will the firm create value?
- What is the firm's internal source of advantage and how will this provide the basis for its internal positioning?
- How will the firm make money, and how does this relate to the firm's scope, size and time ambitions?

When answering the first question a firm has to define value. Value creation addresses what customers value, but also what they disvalue. Especially with environmental concepts customers disvalue factors like much use of pesticides, depletion of farm soil or a lot of waste production stemming out of the production process. Firms must find their own balance in value and disvalue to find their spot in the market segments. However, tackling factors which consumer dislike can enhance the price and value of the product thus improve a firm's profits.

When focusing on the second question Jolink & Niesten (2015) state that a firm may address the environmental concerns of a customer with their own concerns and societal ideologies. A firm should actively pursue environmental gain when they want to achieve value proposition through environmental improvement. When customers believe a firm really strives for improvement they are more likely to buy the product than when a firm just tell the customer what it wants to hear.

Jolink & Niesten (2015) believe the answer to the third question is: "The ability of the ecopreneurial business model to generate money will run parallel with the readiness of consumers to appreciate the replacement of disvalue by value." (Jolink & Niesten 2015 P.6) . So whether the firm can successfully raise the value of their product by eliminating the disvalue customers experience creates the opportunity to make money. An important factor though, is that the firm has to communicate this well. Branding and communication toward customers is important when carrying certain quality and environmental value.

A well-known strategy for communicating sustainable values which is often used in the food and cocoa business is the use of environmental product labels (Aragón-Correa & A. Rubio-López, 2007; Rousseau, 2015) like UTZ certified cocoa (Lalwani et al. 2016) The use of a certification or label can create added value or competitive advantage due to its reputation among consumers. A label should give the guarantee that a certain product meets certain (environmental/social) demands. For example the UTZ label guarantees fair wages for farmers and their employees, and sustainable farming and production, or Rainforest Alliance which guarantees sustainable cocoa production (Nelson & Phillips, 2018). By meeting the label's guarantees consumers can feel better or more responsible when buying the product. Organic food for example is often presumed healthier than non-organic food. Gaining an organic product label could influence consumer behavior and thus create a competitive advantage (Rousseau, 2015). Other examples for strong consumer preferences are: reduced environmental impact, better taste and fair trade.

Integrity is extremely important for a company and labels to be potent. Aragón-Correa & A. Rubio-López (2007) emphasize that labels can lose their integrity when they have mixed priorities. The institutions whom verify the labels should never have mixed priorities. Practices like consulting jobs in the same branch they certify labels in, or be a competitor in the market itself. Their integrity could also get compromised by a lack of transparency. Otherwise the label cannot be verified by third parties, which makes it nearly invalid. A way of solidifying the integrity of a label is acknowledgement by independent organizations (like governments or NGO's), or raising transparency so it would be less difficult to verify the conditions. For the environment the labels are a good solution to raise awareness and it gives economic incentives for companies to adapt their production process to fit the label demands.

3.1.4 Supply chain improvements

When companies try to increase profit there are different ways to achieve that goal. In perspective of the supply chain there are a lot of opportunities in logistic management or cost reduction. Cost reduction can be achieved in several ways, and with rapid technological advancements efficiency is one way which can meet the ecological aspect of the TBL. When a company is able to reduce the polluting factors in a production process this could increase their sustainable value and decrease the corresponding costs (like in the win-win paradigm).

Rao & Holt (2005) split the supply chain in four different parts to categorize environmental initiatives which can add competitiveness for a focal company. These parts are: inbound logistics, the internal supply chain (production), outbound logistics and reverse logistics. These parts all take different approaches to enhance competitive value because of their position in the supply chain. The product can hold different forms during these phases (cocoa bean, chocolate bar or another cocoa product). In the first phase the product will mostly consist of raw materials (cocoa beans in the cocoa market.) During the internal supply chain phase, the most dominant process will be the transformation from raw material to end product (cocoa bean to chocolate for example). And with outbound logistics the more central role will be with transportation and meeting (safety) regulations. For the cocoa market specifically, the reverse logistics are of minor importance.

Especially in a market like the cocoa market the production of raw materials is an important part of the product and has a large impact on the whole supply chain. So when exploring the first phase (inbound logistics) of Rao & Holt's model there are multiple important factors. The first is the relation with suppliers. Bowen et al. (2006) state that improved relations with suppliers improves the opportunity to raise sustainability. Other social benefits of good supplier relations will be discussed later on. Companies can maintain specific "green supplier strategies". These strategies mean that focal companies only buy from supplier with certain sustainable standards. This way they can guarantee certain quality of product (and maybe even use this as a product label). However, the inbound logistics mostly focus on social relations with suppliers, so the topic will be discussed in the part 3.2 and 3.3.

Rao & Holt's second phase focusses on the production phase. There are multiple ways to improve the production phase for a greener process while economics do not have to suffer in the process. One of these ways is striving for lean production. Lean production is a management strategy origination from Japan, where it was primarily introduced by Toyota in the car industry. It is a production strategy that focusses on using balanced resources, strategies of improving production processes, eliminating waste and using professional technical methods to improve product quality (Shah & Ganji, 2017). Implementing lean production into the company tends to be challenging. Other cases teach that it is necessary to have a thorough corporate vision that aims to help all components of a company. Only when a company or manager is in control and has a clear overview of all processes, lean production can be on its best effect. Due to the fact that lean production requires a lot of data for decision makers to address wider organizational goals. Goals like reducing overproduction, better assess inventory levels, reduce waste levels and improve production time. Both Rao & Holt (2005) and Shah & Ganji (2017) state that waste reduction is a very important factor in improving the efficiency of the supply chain. Waste is: "any unnecessary activity that consumes resources, space or time, and thus adds no value to the service or product." (Shah & Ganji, 2017 P. 6). Getting rid of waste not only costs money and energy, but often brings environmental pressure. Decreasing waste seems a win-win situation most of the times, while decreasing waste processing efforts the environmental pressure decreases thus making it a strong element where economic and environmental goals meet. One way of reducing waste is the reduction of used material (Boons, 2002). The use of production material is a responsibility and tool for a producing company, making it a strong business model if you can work more efficient than competitors. When requiring less materials (say cocoa beans) a company gets less dependent on suppliers, giving them a strong

position. However, this can only work with a (focal) company which has a strong market position, otherwise it is more challenging to pressurize suppliers at all.

Material reduction is an uncomplex concept, however not easily achieved. It is a legitimate business model when innovation makes it possible to work more efficient. Or when cutting back overproduction reducing waste and storage expenses. When looking close to the definition of waste, it can be concluded that the use of water and energy can be seen as waste because it does not add value to the product but is necessary for production. However, new technologies open up more sustainable options like: preservation of heat, cleaner energy and more efficient water usage. Adopting these technologies can assist a more efficient business model.

Another measure Boons (2002) proposes is material substitution. Substitution of production materials for cheaper products can decrease costs in and depending on the substitute also improve environmental footprint. An important factor to assess is of course the quality of the end product. Especially in the food market where the taste of a product is one its most important elements the composition of ingredients cannot easily be changed. For a market like cocoa this is also related to the product – market position. It is possible that consumers are willing to pay more for chocolate existing of nearly only cocoa. When a company would change their material composition, the end product could change market tier (high end, middle or low quality). Another factor which can influence material substitution is regulation. Sometimes institutions can pressurize producers in using other by raising taxes on certain ingredients (like alcohol or sugar) or even forbid certain ingredients. When this happens it can be very challenging for companies to maintain their product quality and trademark, but can also offer option to innovate to other options.

Another measure proposed by both Boons (2002) and Rao & Holt (2005) is recycling of products. Recycling can cover a lot of different aspects in the supply chain, and the focal company can play an influential role in supplier recycling as well as consumer recycling. By pressurizing suppliers to meet certain recyclability demands they can improve the re-use and recyclability capacities of these suppliers. However, the preparations for a recycle project are often quite expensive. It requires special investments for technologies mostly new and very complex on waste separation and processing for re-use. The role for focal companies towards recyclability for consumers requires another approach. Where the Focal company can demand or pressurize suppliers to adapt, it has to stretch out a helping hand toward consumers. Due to the different size of scale, consumers only handle very small amounts of products. So consumers are not likely willing to put too much effort in every different product they buy when it comes to recyclability. This creates challenges like: is the product designed for disassembly, how can a company collect all their products and the confrontation with consumer when they are positioned into a certain recyclability demand. Thus far the environmental gain combined with the recycling business model is related positively. On the long term less products will be used and it also works in favor for decreasing waste. However, recycling is more difficult for economic reasons. As mentioned before it requires quite an investment for physical assets to be able to recycle the products itself. Further it requires an extensive logistic effort for product collection. However cooperation in the industry can change the situation. When multiple focal companies are willing to invest in a recycle system applicable to the whole industry recycling can become economically feasible (Boons, 2002).

In the phases of Rao & Holt (2005), outbound function succeeds the production phase. The outbound phase focusses more on marketing and the sale of a product. Some business elements can however overlap in multiple phases. For example packaging. In the production phase, the package is made and tested for functional use. As well as assessed for recycling or reuse. However, in the outbound phase the options for most efficient transport and sale will be assessed. Which means that other specialists analyze the same product part. This creates opportunities for multidisciplinary creations and innovations. For example biodegradable or reusable packaging. As in the production phase, waste management is one of the most important factors when decreasing the environmental pollution. The same with logistics. Efficiency of transport and distribution can decrease pollution and result in lesser costs. A unique point of the outbound phase is the communication with consumers. It

is the only phase where there is direct contact with the consumer. This creates opportunities to influence the consumer to actively recycle or reuse the sold product. However, in the case of cocoa this is challenging because of the consumption style (one time usage) of food products. Nonetheless, companies can still try to motivate customers to actively recycle or show awareness to environmental challenges and aid these in creative ways.

Triggering the creativity of consumers can possibly raise consumer loyalty, which raises the competitive advantage towards other companies. Other mentioned measures can all serve this advantage in other ways. Improved efficiency is an advantage on its own due to the lesser amount of materials necessary to produce. Or a higher yield with the same amount of materials delivers almost the same results. And lesser products mean lesser (marginal) costs. Using the lean production method also focusses on quality improvement of the end-product which causes advantage due to better quality. Furthermore, the cost savings earned with good waste management also help the improvement competitive advantage.

3.1.5 Cocoa specific opportunities

In the previous part the more generally applicable theories of sustainable business models were addressed. In this part there will be a more specific exploration towards business models in the cocoa market. The cocoa market has been growing in the last 15 years, mostly due to the raise of wealth in Asia. This increases challenges of sustainable and responsible growth (Recanati et al., 2017). One of the most important factors in the chocolate market is boundedness to certain climates for the growth of cocoa. Cocoa production is only available in certain climates and cocoa only grows in tropical areas within 20 degrees of the equator, due to the humidity and temperature. All the areas in that region are emerging economies (like: Brazil, Indonesia, Nigeria and Ivory Coast). Emerging economies offer opportunities as well as challenges. Opportunities for the cocoa market to contribute to nationwide wealth and growth, and develop a dominant way of business to aspire other markets when possible. However it causes challenges as well due to institutional voids, less available high-educated workers and less large multinational companies experienced with local culture (Gallo et al., 2018). For example, in 2010 UNICEF estimated that suppliers in Ivory Coast relied on 35.000 youth laborers. This shows that cultures of “western” companies and local culture does not always align.

Gallo et al. (2018) did a case study exploring opportunities for sustainable business models in the cocoa market. They applied their research on a specific type of chocolate company: the bean-to-bar companies. Bean-to-bar companies are relatively small companies whom try to buy their cocoa directly from the farmers, and keep the rest of the supply chain as close to themselves as possible. This technique is used to create higher product value through higher quality or ecological guarantees. Bean-to-bar companies also have higher opportunity to impact the poverty of cocoa growing region through sustainable business models. In their research four different companies were analyzed on their strategy, business models and locations. Although bean-to-bar companies have totally different positions in the supply chain than focal companies, their business models are still interesting due to possible adoption for focal companies.

The first company (GCC) was located on the island of Grenada, where it focused on improving the economic benefits of local growers and the island itself. The second company (Kallari chocolate) focusses on strong collaboration with growers to raise bargaining power in the supply chain. Another focus was strong collaboration and alliances with NGO's. Both Kallari and GCC extracted, processed and manufactured the cocoa into chocolate on the same location. The third company (Divine Chocolate) is a company which has a split ownership between an NGO, Ghana growers cooperation and a finance cooperative. The fourth company is TCHO, a luxury chocolate producer. TCHO focused on collaboration with growers to raise product quality. In this way growers can sell their beans for a higher price. Last TCHO also guided growers in relations with NGOs research institutes with the goal

to improve equality in the supply chain. With both Divine chocolate and TCHO manufacture and cocoa elaboration where on different locations.

The research on the four companies shows that many companies use extensive cooperation in their business models. As mentioned by Boons (2002) cooperation is very important when improving sustainability challenges. Not only horizontally among producers, but vertically through the whole supply chain as well. Gallo et al. (2018) found two major themes in their research results: *Firm location* and *claimant identity*. Due to the selective area where cocoa can grow effectively, it is not always easy to place the production facility nearby the growing areas. With growing distance between cocoa growing and manufacturing there is a probability that firms will lose sight on local problems, socially and environmental alike. Not only will this cause mixed priorities in the supply chain partners but also add a lot of transportation costs. Say a bean is grown in Brazil, manufactured in western Europe and sold in the United states, that adds a lot of costs and environmental pressure than direct manufacturing in Brazil. Secondly the stakeholders near the manufacturing plant will likely influence environmental and social processes caused by the factory. Where on developing countries focal companies can set an example and a sustainable environmental base for the region. The second theme: 'claimant identity' focusses on cooperation with supply chain members. Where Divine chocolate and Kallari even had part ownership by cocoa growers, GCC and TCHO work really close with them. Involving supply chain partners into the whole picture seems so improve stability and sustainability due to influence from local growers. TCHO managed to improve quality and efficiency of their growers, which can lead to certain environmental profits as was mentioned before by Rao & Holt (2005).

The business model of TCHO is a model which is also adopted by large focal companies like Nestlé, Mars and Hershey. All these multinational companies have special programs developed to help their suppliers with production improvement (Nelson & Phillips, 2018). This programs may not be rewarding on short term, but focus on a long term sustainable solution. Problems caused by poor treatment and management in the past years like soil degradation and lower quality beans due to intensified production can be fixed over time. Especially when focal companies assist their suppliers with funds, experience and knowledge, environmental improvement can be solved easier and yields and quality will grow again (Nelson & Phillips, 2018).

3.1.6 Discussion

Exploring the field of sustainable business models offers a lot of different approaches for sustainable improvements. Environmental development is growing in importance, and many stakeholders are aware of the shift resulting in business models which combine environmental gain with economic profit. Mainly focusing on win-win opportunities focal companies try to improve multiple TBL factors in one opportunity. Through development in the supply chain environmental pressure can be decreased while lowering the costs or increasing the production or yield. Hahn et al. (2010) state that trade-offs should be considered as well when striving for sustainable improvement. However, questions can be raised by the validity of this statement. When sacrificing a bit of economic value for environmental improvement, most people will presumably approve this. Although, when a company should sacrifice a bit of environment for the same ratio of economic gain, many stakeholders will probably protest against this, even both environment and economic are factors of the TBL.

Another important aspect is the positioning of the product. Markets are composed of different segments where companies should position themselves or their products. Decisions concerning the production price or environmental footprint of their products, like fair trade or organic production influence the market position of the product. This position should be managed well by companies to maintain a balance in customer demand and the company supply. Companies can strive for sustainability, but if the consumer demand is to low, the sustainable goals are challenging to achieve.

When exploring cocoa specific cases, environmental gain was achieved through different measures. More efficient production stimulated economic and environmental growth in the case of TCHO. Other companies focused on minimal logistic operations through processing and production in the same location. Both measures increase economic value through decreasing environmental pressure.

3.2.1 Exploration towards economic and social factors in business models

The social factor in the TBL is a factor which can cover many parts in the company. All parties in a supply chain acquire attention and then there are third parties as well, like NGOs and institutions. Nelson & Phillips (2018) state that disvalue of a product is very important for the market position and its economic potency. Social factors such as a good reputation, good employee circumstances or good communication can create value (or decrease disvalue). When a company tries to develop a social policy for within the company it is called human resource management (HRM), when focusing more on external contacts the factor moves towards CSR. This chapter firstly focuses on sustainable HRM and how it can be used to improve the economics of a company. Later on the CSR concept and stakeholder management are explored for sustainable opportunities.

3.2.2 Sustainable HRM

Human resource management can be defined as: “A concept that transcends all primary activities of an organization and is concerned with recruiting, managing, training, developing and rewarding people within the organization” Johnson et al. (2015 P. 61). So it has influence on the culture of a company and is the bridge between managerial communication and the work floor. This creates opportunities for HRM to create a sustainability vision among employees. One of the business models suitable for such a job is the line of sight (LOS) model of Buller & McEvoy (2016). Their model is meant for: “The alignment of organizational capabilities and culture, group competences and norms, and individual knowledge, skills, abilities and other characteristics” (P. 473). The LOS model consists of a framework which focusses on external and internal components of an organization (figure 4).

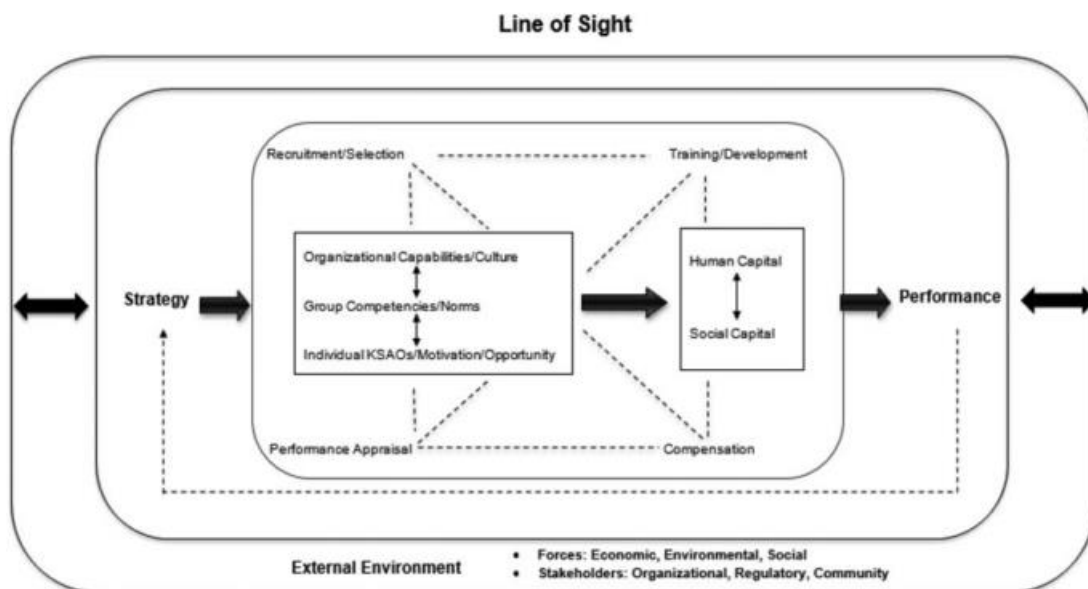


Figure 5 Line of Sight model Buller & McEvoy (2016 P. 474)

External stakeholders interact with a company to influence their vision, strategy and goals. While the internal part of the model consists of three different levels of analysis (organizational, group and individual) for strategic purposes. All three levels in the model are essential for creating and implementing a sustainable strategy through HRM. When a company interacts with stakeholders to create a sustainable vision and opinion, it leads to a (sustainable) strategy considering the TBL

aspect. When a strategy is formed it has to be implemented in the organization through HRM practices. Afterwards the performance of the new strategy will be measured by the company through the TBL factors and will finally get in contact with the external environment. When assessing the LOS model there are three important factors to recognize. Because companies want to maintain their competitive advantage they also have to maintain interaction with the external environment and keep adapting their strategy. A second factor is that strategy influences organizational, group, and individual activities, however these activities influence the strategy as well. Lastly it is important that the model assumes long-term strategies which focus on a sustainability through improvement in the TBL factors.

When zooming in on the internal part of the model there is a central position for the three levels of activities. Starting with the organizational capabilities and culture. Jolink & Niesten (2015) mention that external parties perceive it as important that a company lives by its own strategy. An essential part here lies within culture and HRM. The culture in a company is important for the interaction between employees and the strategy of the company (Johnson et al., 2015). Culture has a positive connection with firm performance, when values, assumptions and sustainable goals are shared among all personnel performance should be enhanced because of higher productivity and wellness of employees (Buller & McEvoy, 2016). Buller and McEvoy (2016) propose that: "Long-term sustainability performance at the organizational level is enhanced when HRM practices generate, reinforce, and maintain organizational capabilities and culture aligned with the sustainability strategy." (P.479).

The group competencies /norms of a group add certain skills and abilities to a company. When applied in a sustainable culture or to a sustainable strategy it is of importance that every group and group member has something to do with these sustainable goals or practices (Laszlo & Zhexembayeva, 2011). A special focus when assessing groups is teamwork in the groups themselves. Groups focus on things like: problem solving, collaboration, systems thinking and multidisciplinary activities. When put together more efficiently and complementary, groups can be a strong work force which enhanced performance. Thus enhance the sustainable capacities of a company (Buller & McEvoy, 2016). Two other theories are also interesting. The first is researched by Sonenshein et al. (2013) and states that employees whom do not align with the goals of a company will seldom be able to deliver good results due to conflicts in value. However, when aligned in values and goals employees score better results. The second theory proposed by Mirriman & Sen (2012) is that money cannot close the gap between social norms and deviating work practices. In the group level Buller & McEvoy (2016) propose: "Long-term sustainability performance at the group level is enhanced when HRM practices generate, reinforce, and maintain job-specific, group competencies and norms aligned with the sustainability strategy." (p. 481).

The third level of analysis is the individual level. The individual level is important because ultimately everything in a company is done through individual and collective actions of the employees (Buller & McEvoy, 2016). In the individual level there is more focus to training and education. In the first place (as one of HRM main responsibilities) the right people should be hired and put on the most suitable position. When working with sustainable strategies it's even more important that the values and norms align with their task and company. Furthermore employees should be trained the skills to empower themselves in the sustainable spectrum. When an individual employee believes that her/his work really contributes to the goal of a company, they tend to increase engaging in work opportunities and special activities (Colvin & Boswell, 2007). According to Buller & McEvoy (2016) companies with a strong sustainable reputation are better in attracting suitable and talented employees. Which can create a strong competitive advantage. Buller & McEvoy (2016) propose that: "Long-term sustainability performance at the individual level is enhanced when HRM practices generate, reinforce, and maintain individual KSAOs, motivation and opportunity aligned with the sustainability strategy." (p. 483). With KSAO's they mean skills or abilities.

Surrounding the three levels of analysis there are four HRM practices: recruitment/selection, training/development, employee appraisal and compensation. These practices are the primary

mechanisms to empower employees through HRM in all levels of the organization (Buller & McEvoy, 2016). Buller & McEvoy propose (2016) that: “Long-term sustainability performance at the organizational level is enhanced when HRM practices are aligned with one another and they generate, reinforce, and maintain organizational competencies and culture, job- specific group competencies and norms, and individual KSAOs, motivation and opportunity aligned with the sustainability strategy.”(p. 484)

HRM can contribute for sustainability in a company, following a model like Line of Sight can create a sustainable business model. Due to clear levels in the organization, problems can be solved easier and HRM specialists can assess their tasks more efficient. An important element for a company is a clear strategy, which is created in perspective with external parties. A strategy should have a clear match with the culture of a company so that the whole company is aligned. Employees who are aligned with a company tend to gain better results and fit better. Also companies with sustainable reputations tend to attract more talented and motivated personnel. Which has a big chance of resulting in higher economic value.

3.2.3 CSR policies in the supply chain

CSR is a still growing concept among businesses in sectors of all kind and adopted in many business models and strategies. The concept is a broad concept which can cover many aspects of a company. Maloni & Brown (2006) developed a special model (figure 5) to create different dimension for CSR in the food supply chain. The food supply chain in general is a chain with high labor intensity and many regulations concerning health and safety. The model is created for the complete food market which also includes factors like animal welfare. Subjects which are irrelevant for the cocoa market (like animal welfare) will not be explored further.

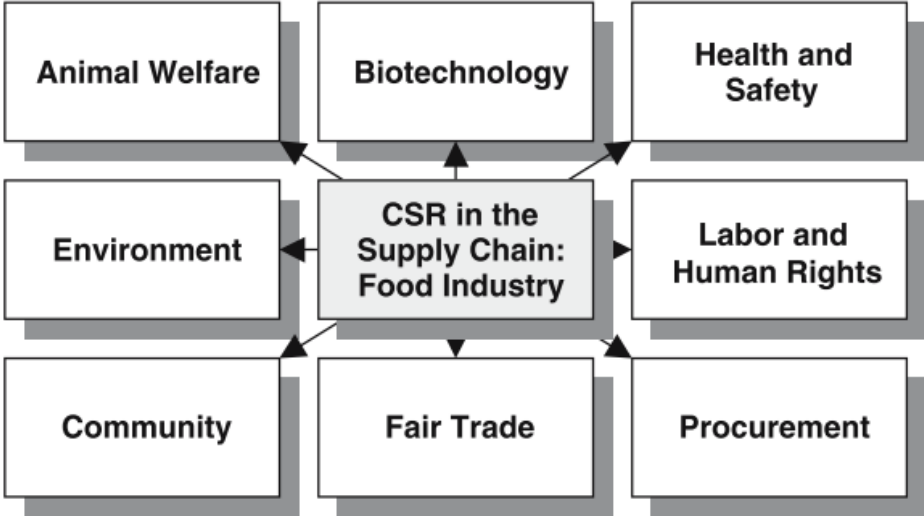


Figure 6 CSR in the supply chain of the food industry (Maloni & Brown 2006 p.38)

The first aspect in the model relevant for the cocoa market is **biotechnology**. Biotechnology can be seen as: "The use of biological processes to make useful products" (Gosling, 1996). Scientific activities like: cloning, growth simulation, genetic testing and enhancing resistance of the organism. Many firms in the food sector use these techniques with much success. Results like: reduced crop loss, less need for pesticides and herbicides, higher crop yield and lower costs can be achieved through biotechnology (Gosling, 1996). Even though biotechnology results in so many positive factors for companies, many consumers still doubt the biotechnological practices due to ethical challenges. The public perception on the topic is far more negative than most experts in the scientific field. However, biotechnology with plants is wider accepted than with animals. Due to ethical aspects like cloning and genetic manipulation, or fear on side effects of used antibiotics or growth hormones. This opinion tends to be difficult to change, and food retailers become more sensitive towards consumer opinion in this matter resulting in high demands of transparency and safety (Maloni & Brown, 2006). Here lies the power and importance of the CSR aspect. Communicating the biotechnological advancements and processes can help in positive attention on the technology. As well as clear statements of the profits on biotechnology are possibly interesting to consumers and will maybe change their opinion towards it. Especially when concerning plants, which results in less ethical discussions. When consumers have no negative association with biotechnology the firm can optimize their production processes with all advancements it offers and raise economic value of the company.

Secondly Maloni & Brown (2006) specify **community** as an important subject in their model. The opportunities in the community present a broad set of activities build around local help and support. Activities such as: help with housing, childcare, health care, job training, educational support and local stimulation of art and culture are possible ways for a firm to enhance their status with employees and the local community. Some activities "just" need financial activities, but others are acquired through cooperation and the use of corporate effort. One difficulty on philanthropy is that financial donations tend to result in shareholder pressure which can demotivate companies to continue their philanthropic activities. However, Porter & Kramer (2002) state that the gifts raise employee loyalty and a competitive advantage towards companies whom do less or no philanthropy at all. While the community is not a specific member of the supply chain, it is still an important factor to consider. Most participants of the supply chain belong to the local community themselves. Which can create higher loyalty and goodwill from all actors throughout the chain. So managing the social relations with the community can deliver competitive advantages and enhanced loyalty, possibly increasing economic value.

The **environment** is the third part of Maloni & Brown's (2006) model. With the food market (animals more than plants) as a highly polluting market, it is important for companies to create policies around the measures and consequences relating to the environment. Elements like: soil & water pollution, deforestation, chemical pollution and intensive farming techniques can be very destructive on the environment and thus for the company as well. Not only customers expect environmental responsible products, but also members of the supply chain itself can have high demands. When communicating with supply chain members it is important for a company to be transparent in their environmental activities. What measures a company takes are important details for any member of the supply chain. So when focusing on a sustainable environmental strategy, development of a CSR policy and communication format can deliver profits of trust and maybe enhance status of a company, depending on the strategy of the company itself of course. When assessing cocoa case related scenarios one of the environmental problems addressed by Maloni & Brown (2006) is for example deforestation. Deforestation delivers all kind of environmental and community pressure. Focusing on helping the local community and proposing cocoa farmers to work differently are CSR opportunities to enhance economic value through social measures.

Another aspect of the Maloni & Brown (2006) model, and very relevant to the cocoa market is **fair trade**. Fair trade focusses on giving every partner in the supply chain a fair price for their product. Often focal companies use their power to force procurement prices down so much that farmers/suppliers barely make profits. Agreements between sellers and buyers should prevent this and cause fair trade prices between the two partners. Fair trade however results in a higher price end product, forcing companies to consider their market position. Fair trade can result in a better image for firms whom adopt the concept, but does bring additional costs which influence the profitability. Communication with NGO's is a very important part of the fair trade concepts, these organizations can help with communication and the creation of a good responsible policy.

Health and safety is a factor which is very important in the food market. If a product is not safe for consumption, all other aspects of the supply chain do not matter anymore. With supply chains growing in complexity the overview on a product declines rapidly. Due to this challenge traceability of the products has to increase. When a wrong product is directly traceable to a certain supplier, companies can take direct action and prevent it from happening again in the future furthermore recall costs can be decreased with a good traceability system. Adapting products due to regulations can be easier as well when having a more structured system concerning the production process. Not only companies profit from the traceability of a product, but consumers can profit as well. Consumers can relate the origin of the product and get more information about the production process resulting in higher product transparency. With health and safety as one of the main concerns for a company cocoa is in a difficult spectrum because most cocoa products are an unhealthy luxury product. This creates a challenge for clear policies concerning consumer health and product innovation to decrease the unhealthy status and reputation of cocoa products.

Another relevant factor to the cocoa supply chain is **labor and humans rights** factor. Especially with focal companies with extended supply chains it becomes more difficult to be informed on all suppliers and supply chain partners. Let alone control their processes and force chain members to behold certain quality and rules. Special institutions and NGO's do fight against bad labor circumstances and equal rights for laborers in less developed countries. An example in the clothing market are so called 'sweatshops', factories which produce clothes for big brands such as Nike or Wal-Mart but maintaining bad circumstances for employees. Including child labor and lack of work breaks. When discovered by a institution or NGO this can cause a big dent in a firms image (Maloni & Brown, 2006). Especially in developing countries without clear worker protection this is not an unknown phenomenon. According to Gallo et al. (2018) this results in problems like child labor in the cocoa market in Ivory coast (one of the biggest cocoa exporting countries.) So when confronted with an extended supply chain with parts (in developing countries), focal companies bare the risk of working together with suppliers whom do not always share the save vision on labor and human rights. However, because the products will be sold as a brand of the focal company they bear the responsibility. If they do not want such a confrontation a good and clear CSR policy is required. Strict supplier regulations and selection criteria are essential as well. Another important factor within the human rights and health and safety aspect is protection against the use of unhealthy measures like pesticides and herbicides. While the product itself has to be of safe quality, the laborers often work with strong chemical pesticides. Situations like these require responsibility of the focal company as well, due to their powerful position in the market. This part of CSR can see pure as cost raising activities in a pure economic way, however brands can sustain quite some brand damage when there are issues concerning labor and human rights. So it can be seen as a value rising activity.

The last segment in Maloni & Brown's (2006) model is **Procurement**. Procurement is a process which transfers a lot of financial interactions, especially when a focal company uses multiple suppliers. Due to the nature of the transactions it can be full of ethical issues such as: bribery, gifts, obscure contracts, favoritism, power abuse and corruption. This specific subject depends a lot on individuals in an organization and can be tackled by clear policies and regulations concerning certain deals or procedures. Clean procurements is important for a company due to its integrity status and

dependability of employees and suppliers. The policies created by the company should be enforced to assure fairness and integrity within the supply chain (Maloni & Brown, 2006).

The model of Maloni & Brown (2006) offers an extended framework to use when assessing or developing a CSR policy. Combined with the line of sight model of Buller & McEvoy (2016) Focal companies have the opportunity to align internal and external social policies. Using these combined policies can result in strong competitive advantages and a positive reputation of the firm. However, there is one more social aspect which I believe could enhance the social constructs for a focal company. This factor is stakeholder management. The previous models mainly focus on the focal company as a policy maker, however stakeholders often pressure or approach the company itself to gain influence in the market (Bremmers et al. 2007; Meixell & Luoma, 2015). These situations need a specific approach to achieve the maximum results.

3.2.4 Managing stakeholder pressure

A focal company holds a central position in the supply chain, with this dominant position comes interest of different stakeholders. These stakeholders all have interests in a big reach of different perspectives. Clarkson (1995) divides stakeholders in 2 segments, primary and secondary stakeholders. Where the primary stakeholders are: customers, suppliers, employees and shareholders. Other stakeholders like governments, NGOs, communities and competitors are viewed as secondary stakeholders, due to their less direct involvement with the company. Also the difference of internal and external stakeholders can be defined. Actors within the supply chain can be seen as internal stakeholders, not directly involved in the supply chain can be concluded as external. Meixell & Luoma (2015) developed a special model for processing stakeholder pressure in the supply chain.

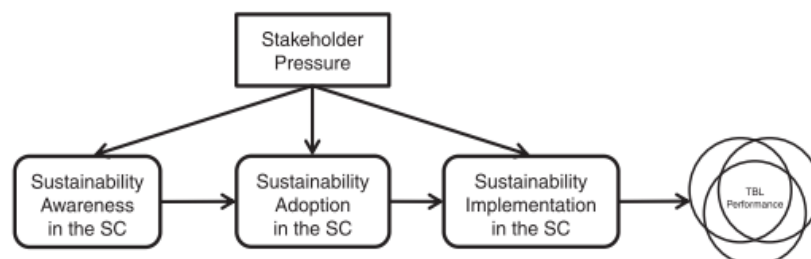


Figure 7: Stakeholder sustainability pressure model (Meixell & Luoma 2015, P.9)

A company depends on its stakeholders for a lot of business elements, so good cooperation and communication is important. Processing stakeholder pressure should be taken serious because they can offer business opportunities in the form of: innovation, relations, financial benefits and more.

Looking at the stakeholder sustainability pressure model it clearly shows that stakeholders pressure on the whole process of sustainability performance. Even though the model seems to show there is a fixed sequence from awareness-adoption-implementation, this is not always the case. Some stakeholders don't have the direct goal or means of implementation of a certain sustainable measure. Raising awareness or adoption can be a goal on its own. However, for a company to adopt a certain process there must be problem-awareness. Awareness can be raised in different ways. There are aggressive ways, like consulting the media when a discovery is made which is ethically doubtful. Or more subtle ways via lobbying or relations. The second segment in the model focusses on the adoption of goals. Most of the times a stakeholder raises awareness first, however it is possible that a stakeholder forces a company to adopt the goal immediately. Situations with new laws are a good example which can force a company directly to adopt certain goals. The last segment is implementation. Which is the final goal for most stakeholders. Due that their pressure resulted in an improvement in TBL performance

The type of stakeholder is interesting for a company, and should always be considered when assessing new opportunities through stakeholder pressure. Meixell & Luoma (2015) state that two of the largest stakeholders in a supply chain are customers and suppliers. Customers have a lot of power due to their final position in the supply chain. If the consumers reject something a company has not many options left but to reject their own decision. Suppliers are powerful as well, however they are far less independent especially considering a focal company which with its size has a large product demand. When interacting with such stakeholders it is very important to consider their power in the chain. Addressing the external stakeholders, the government rises above the rest in the power spectrum. Governments have an extremely powerful tool with law and regulations. And with fast changing technology sometimes governments can get unpredictable. Groups like NGO's can be impactful, but mostly focus on reaching one specific goal. Focal companies can show improvement a bit easier in one goal, to prevent escalation of pressure.

A factor which shouldn't be forgotten is that pressure can result in very fruitful cooperation. Like the case study of Gallo et al. (2018) shows that cooperation with stakeholders can be rewarding. In the case of GCC there was a close cooperation with many stakeholders on the island, resulting in a very strong business model widely supported by suppliers and customers. Or with TCHO the company assisted all suppliers with technical aid. These examples show that there are different rewarding opportunities in close contact with stakeholders.

Contact with stakeholder is not always easy to manage for companies. Some NGOs for example are very aggressive in their actions to reach certain goals. Kaptein & Tulder (2003) state that there are many different ways to cope with stakeholder pressure and communication. An important element for focal companies is to develop a code of conduct. A code of conduct can be described as: "Corporate codes constitute a concrete effort to fill the regulatory and legislative gap that exists in particular when firms become a Multinational Enterprise (MNE) and have to operate across regulatory, moral and cultural borders." (Van Tulder et al. 2009 p. 399). Having such codes stimulates transparency and stakeholder expectation management. When dealing with aggressive stakeholders, companies should also adopt communication strategies to limit the reputational damage and improve the communication process.

3.2.5 Cocoa Case explored

This chapter investigates some theories and ideas around the social concepts in the supply chain in general. This part of the chapter will try to explore specific cocoa cases to see whether there is any overlap in the theory and the specific supply chain. The case study of Lalwani et al. (2016) will be used to explore and compare the social sustainability initiatives of the four major competitors in the chocolate market.

The four largest chocolate manufacturers are Nestlé, Mars, Mondelez and Ferrero. Together they are accountable for about half of the chocolate production worldwide (Lalwani et al., 2016). Making them important focal companies in a wide stretched and complex supply chain. To convince others of their sustainable endeavors and strategies all companies publish CSR and sustainability reports. This is one of the main tools to improve transparency and communication to stakeholders. Using this tool in a correct way and with the current global media opportunities, can lead to significant brand or firm image improvement. However, when used in an untruthful way that same media can be used by powerful stakeholders or competitors to harm the brand value and can lead to disruptions in sales and supply chain activities (Gold et al. 2015).

As mentioned before in section 3.2.3, the cocoa market is confronted with social problems like child labor in Ivory Coast. Companies seem to have difficulties to tackle this problem in practice. So when developing a CSR policy, companies tend to be cautious to commit to goals which seem unrealistic. Agricultural companies like Dole and Del Monte (both fruit companies) even rejected international agreements due to instability in their main producing environments. However, companies also see that CSR-policies are important even though they are very complex to achieve.

Mainly because striving for the goals mostly improves local communities and can lead to competitive advantages. Different researches also show that positive corporate social performance leads to a better corporate financial performance (Lalwani et al., 2016). Long (2008) emphasizes once more that cooperation in the supply chain is essential for all parties to gain social improvement and a raise in value and quality.

The first company in the comparison is Ferrero, an Italian/Luxembourg company and third in the list of largest chocolate companies (based on net sales in 2014). The company has partnerships with different NGOs like Rainforest Alliance and UTZ certified to assure sustainable grown beans. It works together with their growers by providing training and support. For high quality beans the company pays a premium with the objective to stimulate the local economy and quality assurance. An important target for Ferrero is that 100% of their production exists of certified cocoa. Furthermore it is member of the World Cocoa Federation and the International Cocoa initiative. Two organizations whom work together for advancements in the cocoa market. With the help of NGO's Ferrero aims to provide education and vocational training. Besides these aims they try to improve local communities through healthcare. When focusing on suppliers they apply of code of conduct. Working conditions and quality assurance must be on certain levels and Ferrero is allowed to conduct inspections on any time. Breaking on of these conducts results in termination of the business relationship. This way they hope to involve suppliers into their sustainable goals (Ferrero, 2013; Lalwani et al., 2016).

Mars is the largest chocolate producer in the world (based on net sales in 2014). The company aims to make cocoa farming a reliable source of income so local communities can grow and depend on their economy. In the past cacao price changes caused instability for farmers causing poverty among the population. Like Ferrero Mars aims for 100% use of certified chocolate in the future. Mars is involved in partnerships with Rainforest Alliance, UTZ certified and Fairtrade. However, this does not mean all Mars brands meet these qualifications. With an own Sustainable Cocoa Initiative Mars strives for higher incomes for local farms to decrease child labor and increase education. One of the factors from the Maloni & Brown (2006) model we did not see with Ferrero is biotechnology. Mars actively tries to pursue improvement of cocoa seeds to guarantee better yields and quality for farmers. Aiding local communities with guidance and training is an important activity as well. Local Cocoa Development centers are developed to help and solve with local issues considering the farmers and their production (Mars, 2013; Lalwani et al., 2016).

Mondelez is the runner up after Mars (based on net sales in 2014). Focusing on a long-term sustainable supply of cocoa and working towards the welfare of cocoa farmers and their communities. Other than Mars and Ferrero, Mondelez did not set a 100% certified product goal, however it insist on buying from certified growers. Membership of the World Cocoa Foundation is gained through supporting all their programs, and a special partnership with Bill & Melinda Gates foundation aims for better livelihoods in local farming communities in West Afrika. Partnerships with local growers to improve yield and bean quality are also a way of reaching their sustainable supplier goal. Mondelez started the 'Cocoa Life' project, which was the biggest project so far in 2016. With an investment of 400 million dollars to help 200.000 farmers with the focus on improving yields and income (International, 2013; Lalwani et al., 2016).

The last company in the list is Nestlé. Nestlé focuses on the concept of 'creating shared-value'. Within this concept they focus on nutrition, water and rural development. Of the four companies they are arguably the most clear about environmental improvement. These three factors are applicable into three focus factors chosen by Nestlé: Profitable farms, social conditions, and sustainable chocolate. The first priority of Nestlé is making growing cocoa a profitable occupation. They very actively pursue strong crops by growing their own cocoa plant in controlled environment

and then dispersing them among farmers. By using biotechnology they try to create stable and strong income source for farmers. Nestlé strives for a distribution of at least one million plants annually. Collaboration with NGOs is part of their CSR policy as well, reaching for training, education and ethical alignment. When a farmer has acquired training and follows the protocol they get a premium price for their cocoa. Besides these activities, Nestle also works with UTZ and Rainforest alliance for certified products (Lalwani et al., 2016; Nestlé, 2013).

3.2.6 Discussion

Social aspects of sustainability can add value to an organization. Following the LOS framework of Buller & McEvoy (2016) states that HRM management can raise TBL factors. When HRM policies focus on sustainability, companies can improve their culture and acquire qualified employees which strive for sustainability themselves. Besides culture and good employees, a company can adapt more efficient to external pressure from stakeholders. Another result of good HRM is higher efficiency in labor, for example through groupwork.

When considering all aspects of the CSR framework of Maloni & Brown (2006) companies can develop sustainable CSR policies. Through CSR the company can better cooperate with stakeholders and clarify their goals concerning social responsibility. Especially within the social spectrum of sustainability there is a lot of contact with different stakeholders. To manage the pressure from stakeholders companies can apply the model of Meixell & Luoma (2015).

With the exploration of the social sustainability initiatives of the four focal companies in section 3.2.5 different theories and frameworks mentioned in this chapter were visible in their practices. While the case study was mainly focusing on the supply chain relation between suppliers, stakeholders and the focal company, the HRM aspect was not really mentioned. However, the outside parts of the Line of Sight model (Buller & McEvoy, 2016) is notable in these case studies. Due to pressure of external factors, companies start to develop CSR strategies, resulting in higher performances in TBL aspects. The same for the stakeholder pressure model of Meixell & Luoma (2015). In the case of Nestlé there was an interesting situation. A BBC documentary raised awareness about child labor in the supply chain of Nestlé. Their reaction was direct adoption of the goal to expel child labor from their supply chain. And directly implementing a strategy to pursue this goal by working together with NGOs to inspect suppliers and start prevention programs and education programs among local communities (Lalwani et al., 2016).

The framework of Maloni & Brown (2006) is highly visible in the cases as well. Applying the model to the case studies almost every category is recognized. Animal welfare is of no relevance as expected. Of all the other CSR-factors procurement is the least discussed subject. Mars and especially Nestlé had well developed policies concerning biotechnology. All four companies tried to improve health & safety, labor and human rights and local communities. In the environmental factor most companies strive for long term sustainable grow. That leaves fair trade as last factor of the model. Some companies did work together with Fair Trade organizations already and all companies strive for good prices for farmers.

As the case study shows, social aspects of the triple bottom line receive a lot of attention. Four focal companies all strive for improvement to gain competitive advantage or at least sustain the brand reputation. Social concepts are broadly implementable in different parts of the supply chain to add economic value and can lead to sustainable (long-term) growth.

3.3.1 Exploration towards environmental and social factors in business models

The last combination of TBL factors which are not yet described are the social and environmental factors. Due to the profit driven nature of many firms, the economic part of the TBL factors is most dominant. However the past two chapters have showed that economic improvements do not eliminate social and environmental improvements. In this chapter there will be a search towards combinations of sustainable social and environmental measures which enhance or co-exist together. The social and environmental factors cover a wide ranged set of scenarios and possibilities. Multiple situations are good examples for the coherence of these factors. Situations like: The increase of land-use provides higher yields, but can destroy local habitats. Soil erosion can cause long-term problems for local communities and the use of herbicides and pesticides can cause health problems when they are not handled responsibly (Pullman, Maloni, & Carter, 2009). With challenges like these a win-win solution is often the best option, however like Hahn et al. (2010) suggest: an open mind for trade-off scenarios can bring improvements as well.

As mentioned in section 3.1.5 the cocoa market is a climate dependent business. Climate change is a factor which influences the regions (mainly west Afrika, Indonesia and Brazil) of cocoa production directly. These regions are mostly developing countries and local communities do not have the same wealth as western countries. For example: the cocoa sector in Ghana employs over 800.000 small farm holders whom rely on the cocoa industry for 70-100% of their income (Asante et al. 2017). These farmers are extremely climate dependent because they cannot invest in expensive technologies or biotechnology to adapt to the local changes. This affects the social communities as well. When there is a bad harvest the whole community suffers, and sometimes even forces farmers to switch crop or abandon their communities in the hope for a better life elsewhere (Wijaya et al. 2018). Another example of vulnerability is the harvest in 2011 in Indonesia. The economic crisis caused a drop in cocoa demand which caused a production surplus in Afrika. Due to the surplus cocoa prices took a dive and made it difficult for farmers in Indonesia to maintain their farms and industry. Resulting in poverty, crop switches and farm abandonment (Wijaya et al. 2018). These examples show how sensitive the local farmers are. The following sections presents several opportunities for focal companies to create a long-term solution that will both benefit the environment and people of the supply chain.

3.3.2 Supply chain governance

Governance of the supply chain is an important activity for a focal company. It refers to the: “the relationships and institutional mechanisms through which the coordination of activities in a chain take place and the relative powers between stakeholders in a chain” (Ingram et al. 2018 P. 3). Through its central position, a focal company has the power to enable and shape expectations, interactions and behavior through the norms and processes that the company applies on the supply chain. Besides the influence of the focal company, institutions also carry this influential power through laws and rules. If a company wants to maintain its competitive position it could be a good idea to develop a good relation with the local institutions. Local institutions use governance as well, however not to fare business, but to develop policies. Governance by an institution mostly focusses on public goals, when an institution cooperates with an actor from the private sector (for example, a focal company) it is called co-governance and most times focusses on public goals as well. This co-governance opens up different opportunities for companies to reach for sustainable goals through strong cooperation with society and stakeholders. By cooperating with the (local) government a company can influence certain new rules and decisions which can profit the market or company itself. It also offers opportunities to improve relations with society and it gives a more extensive view of the local challenges. However, the cooperation part is considered most important because a

company can reach goals through social cooperation (Ingram et al., 2018). An interesting situation is caused by different governmental priorities. While most focal companies are bound to the regulations and rules of the “western world”, large parts of the supply chain do take place in developing countries with less developed regulations. Some governments try to motivate focal companies to develop sustainable measures through their supply chain with different tools. Besides cooperation, financial benefits or fines can be applied. Sometimes the government itself creates a certification program to stimulate sustainable programming.

As stated in section 3.1.3 certifying a product can position the product in a certain market segment and in this can create economic value for the product. However, to gain this certification a cooperation with an NGO or institution is required. So through social cooperation, the process improves environment. Like the UTZ certification is obtained through NGO cooperation to improve environmental standards and economic value. Although not every NGO gives a certification for the product itself. Without it the final communication to the customer can be more challenging. However not every social cooperation directly involves the market positioning of a product.

When looking to the stakeholders model of Meixell & Luoma (2015 P. 22) it shows that companies can adopt awareness and goals from stakeholders. By using its extensive knowledge and experience through the supply chain a focal company can reverse this pressure into an opportunity. By adapting to problems in the chain and take initiative itself, it can create goodwill among stakeholders. Which can raise the reputation of the focal company and cause stakeholders to help faster. When goals are aligned and less effort is required to gain this alignment, that energy can be used to improve the environmental and social goals of the cooperation (Ingram et al., 2018).

With respect to governance one element is most important of all: cooperation. When striving for social and sustainable goals there is no need to reach for those goals alone. Large parties such as governments and NGOs can and will aid a focal company when reaching for societal improvement. Local communities are most likely to help as well when the problem considers their business. It is important for a company to manage expectations and estimate in what way every party would like to assist to reach the goal in the most efficient way possible.

3.3.3 Cocoa specific scenarios.

The cocoa market experiences different scenarios where social and environmental problems and opportunities meet. These problems may not seem like business models, which is true in definition. However, dealing with these scenarios in a professional way can create sustainability among supply chain members and add value to the supply chain as well. In another way it can decrease disvalue by eliminating problem which could cause image damage. Danso-abbeam & Baiyegunhi (2018) state that cocoa farmers in Ghana face many challenges preventing them to develop a sustainable and assuring business. Problems like: inadequate access to finance and extension services, poor infrastructural conditions, high incidence of pest and diseases, low quality cocoa trees, low fertility of the soil and deforestation (Ruf, Schroth, & Doffangui, 2015). An assessment on these problems will provide information which could be applicable into business models for the combination of environmental and social factors.

The first problem mentioned by Danso-abbeam & Baiyegunhi (2018) is low access to finance and extension services. Smallholder farmers (who form the majority of cocoa growers) are still struggling to develop structural income and access to financial capital. Although most farmers require training programs, farm assets and agro-inputs like fertilizer and improved seeds they struggle to get the means to make these investments. Due to high risk (irregular yields, local instability and fluctuating market-prices), financial institutions do not act on this shortage (IDH, 2018b). This is an opportunity for a focal company to use its influence among stakeholders and suppliers or even its own financial capital. Trials can be started that the focal company could guarantee the loan of a loyal supplier, so that suppliers could develop their farms and increase profits and yields. If this proves to be a profitable activity for financial institutions this could help

establishing financial opportunities in the market. Focal companies could also grant the money themselves, this would establish a loyal relationship between the company and supplier which could profit both parties on the long run including sustainable production. A third option is collaboration with other stakeholders through blended finance. Blended finance can be defined as: “the strategic use of development finance and philanthropic funds to mobilize private capital flows to emerging and frontier markets” Duursma et al. (2017). The company itself could use a funded NGO to stimulate other private equity to join the project. Or could support the project itself to set a good example for the rest. Responsible financing is important for running a business, and requires training. When farmers get this training they can learn to manage their finance properly. In practice these trainings do seem to be fruitful. IDH developed a training program together with cocoa manufacturers resulting in a 100 per cent loan repayment rate among cocoa farmers (IDH, 2018a). Considering the financial dependency of farmers on their yields, joint funds could help as well. A foundation managed by a focal company or stakeholder in the supply chain could offer aid to farmers with a bad yield or bad luck. Collaboration in the local community can be very effective, however could use a guiding party which has the knowledge and experience how to be most effective.

Infrastructural problems are a more difficult problem due to the collective nature of the product. Governments play an important role for development of infrastructure. As a “stakeholder” in the local economy focal companies should try to pressure parties to invest in infrastructure and maybe support the project itself financially. Furthermore companies could stimulate farmer cooperations. By making joint investments in logistics, farmers share the risk and the costs. This worked out in the past according to IDH (2018a)

Pests and diseases among the cocoa plants are a big problem among small farmers. When a pest or disease strikes a farm, it can reduce farm outputs in a range of 60-90%. For most farmers their cocoa yield is their only income source, and thus can be disastrous for the wealth of a farming family. So the availability of effective repellants is important for cocoa farmers. However, pesticides and herbicides are not cheap and lots of farmers cannot afford these measures. Besides the problem in costs the health element also plays a part. Most pesticides are unhealthy for humans and require certain training to use safely. A possible solution is of course direct help by the focal company, however this would only solve short-term problems and is expensive. A more sustainable solution is a specialized group of local employees. The concept already exists and proves effective in Ghana (Danso-abbeam & Baiyegunhi, 2018). A group of local employees gets trained in the responsible use of the repellants and assists farmers in the area. This way farmers can split costs and it creates more work for the local community. Pesticides and Herbicides however, tend not to be very good for the environment. Due to training the repellants are used on the most efficient way, however they still harm other elements of the environment (like ground water and animals in the ecosystems (Oyekale, 2018)). This requires a very (bio)technological advancement to create repellants which are harmless to the environment, especially a kind affordable for mass production and poor farmers. The development of such resources could be achieved by cooperation between all stakeholders in the supply chain.

Another problem for cocoa farmers is that most farmers own old cocoa trees, which have a lower yield than younger trees. Furthermore they focus more on diversification instead of efficiency causing farms to have a structural problem. There are multiple ways to upgrade the yields of mature cocoa fields, rehabilitation of old trees or replanting their old cocoa fields (Wessel & Quist-Wessel, 2015). When rescheduling a farm, the farmer will require help or training to prevent problem repetition. This problem could be tackled in the same way as the proper use of pesticides. Train local community members to assist farmers in the reclassification of their farms. This way yields will increase (which will create more revenue as long as the cocoa demands rise), and more jobs will be created so the whole community can prosper. Another factor in such a plan is that is focused on the long term, now it is a possibility that a whole farm has same aged trees. When existing of different aged trees, long-term yields will be more constant providing more stable income and higher quality product for the farmers (Wessel & Quist-Wessel, 2015).

The solution of the old tree problem helps another major issue in the cocoa market. In the past farmers would relocate their farm when yields were starting to drop. Causing immigration among farmer communities. To create new space for the cocoa farms farmers started to deforest areas, using the fertile soil for their cocoa trees. Since this was a working farming technique many farmers adopted it, causing mass deforestation in cocoa growing countries. Deforestation is terrible for the environment, causing ecosystems to disappear and biodiversity to decrease (Ruf et al., 2015). Furthermore constant restarting plantations without recycling or cleaning up the old ones is very inefficient way of land usage. Also mass migration paired with the shift of farmlands prevents communities to start with a long-term strategy of developing their farms on sustainable growth. The problem can be prevented but needs specific attention and strong cooperation with all stakeholders. Policies can be created through cooperation with governments to guide farmers in efficient land use and explanation about the bad consequences of deforestation. As mentioned before in the previous problems, the suppliers are dependent on knowledge and funds from supply chain stakeholders. When helped they can achieve sustainable farming and prevent further mass deforestation in the future (Ruf et al., 2015). Another important element that should not be forgotten is the difference in scope between the different supply chain members. Where focal companies and governments have the “Luxury” for policies concerning sustainability and preserving ecosystems, most farmers depend on their crops for their livelihood. This can cause a priority gap which can be challenging to bridge.

Another solution to deforestation and the risk on low yields is joint research. Projects like Cocosols which focuses on knowledge on the cocoa tree. Research and innovation are extremely important to assure improvement through the market and supply chains. Connecting educational/research institutions in projects can add an objective view to the market and chain which can discover alternative problems or solutions. Working together to gain access to innovations is an effective way of improving sustainable challenges and can improve the total market (“CocoaSoils,” n.d.).

3.3.4 Discussion

Social and environmental factors are two TBL factors which can be combined well and both focus on a long-term gain. Where financial projects can sometimes go for short-term gain, social and environmental processes need time to develop in communities. Due to the economic nature of a focal company, pure philanthropy towards social and environmental projects are not very common. So when investing in communities and environment there should be some reward for companies, or at least no costs. Projects like the financing project started by IDH (2018a) show that trust in local farmers can be profitable or cost-neutral due to the 100% loan returns. Which is a good example of sustainable aid. Two other important factors which were found in almost every challenge or problem were cooperation and education/training.

Cooperation is essential when combining social with environmental projects. Companies do not have to work alone to improve social and environmental factors. Reaching out to stakeholders such as governments and NGOs can be helpful with improvements. Stakeholders often have better qualified personnel for the subject they focus in than companies which focus on the economic part of a market and see sustainability as an important side goal. In these cases cooperation can bring experts of different competencies together which can combine and tackle problems in a creative and efficient manner.

The second phenomenon which was found in the cases was training. Dependence is a weakness in the supply part of the cocoa supply chain. By training local communities focal companies stimulate self-sufficiency and dependability as well as social stability through jobs and steady income. The wealth, influence, knowledge and experience of a focal company can be set to good use in lower developed communities such as cocoa farmers and will eventually profit all parties.

Problems concerning the relation of social and environmental problems are present. For example different living dimensions. Multinational companies are fighting global warming and environment issues, while local farmers are trying to provide for their families and themselves. This can result in different views and should be handled carefully through good communication.

Due to the priority of economics in business, literature and research specific on the combination of environmental and social gains are harder to find. By researching specific cases, I wanted to show that as projects which do focus on sustainability instead of profitability do not have to lead to lower profitability. And even can be considered profitable on the long term.

Most scenarios and solutions mentioned in section 3.3 are win-win scenarios. Trade-off scenarios are unusual in the combination of the social and environmental factor. Because both factors require improvement. Actively decreasing social factors like safety and health, or fair pricing will probably receive a lot of negative attention for a company. Even if they do it for environmental improvements. It seems that trade-off scenarios are more likely to happen in the spectrums concerning economic trade-offs.

4 Conclusion

This research searched for sustainable factors in the cocoa supply chain from the view of a focal company, recognizing the combination of Elkington's different triple bottom line factors in business models. Which created the main research question: How do business models combine the triple bottom line factors to improve sustainability for a focal company in the cocoa supply chain?

Focal companies can create value through business models which enhance social or environmental value. Environmental and social improvements can create advantages like cost reduction, higher efficiency, improved stakeholder relations and improved company image. Through these advantages, the economic value of a company can rise and will result in competitive advantages and a stronger position in the supply chain. With opportunities focused on long-term sustainability.

Environmental business policies can raise the value of a product in different ways. Market positioning is an important aspect relating to the available environmental measures a company can apply to its products. When targeting a high market segment, measures like organic cocoa growth or the use of better quality fertilizer, pesticides and herbicides are available through the higher product price. In lower market segments focus on more fundamental environmental improvements such as lesser transportation and waste reduction can be a better alternative. Another environmental goal which can enhance production and economic value is increased efficiency. Through models such as lean production or the use of biotechnology the production process through the supply chain can increase resulting in lower costs and higher yields.

Business models can apply social goals as well to increase the economic value. Through sustainable HRM a focal company can assign qualified people in the company and the supply chain. Motivation and skills are important properties of good qualified employees which will improve the value on their position. Good use of different skills in groups can enhance productivity as well. Developing a CSR policy is a way for companies to enhance different social factors through the supply chain. Improvement of safety and health, human rights, equality and local communities can stimulate higher loyalty and better work results which eventually increase the economic value of a product through better firm reputation and possibly higher quality products. Another important social activity is stakeholder management. Managing stakeholders such as NGOs and governments can prevent negative interactions and improve cooperation between the different stakeholders through the supply chain. These stakeholders often have different expertise's which can be put to good use in a efficient cooperation.

Environmental and social aspects can be combined in business models to increase company value as well. Through cooperation of all stakeholders many goals in both TBL factors can be achieved. Cooperation with NGOs to increase education and training among local communities can create social certainty and improve environmental knowledge of the local community. Or companies can assist their farmers with techniques to improve yield and soil quality, resulting in a more dependable income. Due to the knowledge gap, help from stakeholders is essential for improvement throughout the supply chain. Another interesting factor to highlight is the fact of different priorities. Focal companies mostly focus on demand of western consumers whom have other life standards than farmers in developing countries which can result in conflicting priorities. Where local farmers strive for social stability and more "survival". The western consumers focus more on global environment and "western" social standards.

Throughout the research multiple scenarios were confronted with a trade-off or win-win consideration. Win-win scenarios are to preferred options due to the increase on multiple factors in the TBL. However, trade-off scenarios should not be discarded right away. For example: a small economic loss can result in high environmental gain. Which can cause for more sustainable growth than a win-win scenario with small gains in both factors. In a trade-off scenario multiple levels and dimensions should be weighed off to assess the possibilities. Dimensions concerning, outcome time and process can effect the long and short term results of the decision. The level of the trade-off is of

importance as well. Small or large decision need different approaches to be successful (figure 3 Hahn et al., 2010 P. 11) . Another interesting aspect of trade-off scenarios is that theoretical a trade-off can be in all three TBL factors, however this tends to be different in reality. In the current market and focus on sustainability trade-offs tend to be only economic. When companies would sacrifice the environment or social wellbeing in their supply chain to achieve economic gain, many stakeholders and consumers will react negatively on this decision creating disvalue and reputation damage for the focal company. While with an economic decrease for social or environmental gain is stimulated by most stakeholders.

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