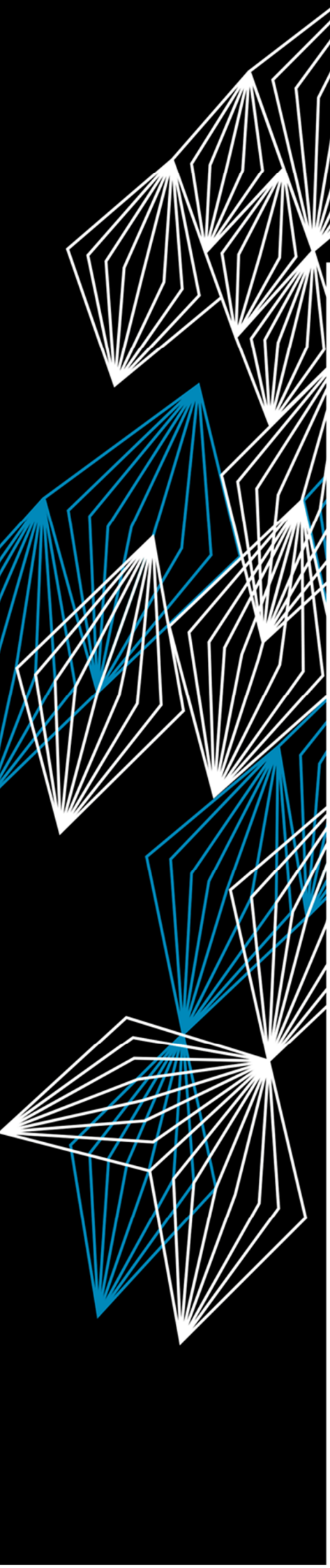


BACHELOR THESIS

THE EU'S COMMITMENTS TO SUSTAINABLE DEVELOPMENT: THE CONTRIBUTION OF CERTIFICATIONS FOR COCOA

Carolin Witte

FACULTY OF BEHAVIOURAL, MANAGEMENT AND SOCIAL SCIENCES

BACHELOR OF SCIENCE EUROPEAN PUBLIC ADMINISTRATION

EXAMINATION COMMITTEE
Dr. M. L. Franco García
M. Ramos Mejía, MSc

24 February 2017

UNIVERSITY OF TWENTE.

Table of Contents

ABSTRACT II
LIST OF TABLES III
LIST OF FIGURES III
LIST OF ABBREVIATIONS III
1. INTRODUCTION 1
1.1 Background 1
1.2 The Global Cocoa Market 2
1.3 Research Questions 5
2. LITERATURE REVIEW 6
2.1. Certification Systems for Sustainable Cocoa 6
2.1.1. Fairtrade 6
2.1.2. UTZ Certified 7
2.1.3. Rainforest Alliance 8
2.2. The EU's Goals for Sustainable Development in the Global South 9
2.3. Analytical Framework 12
3. RESEARCH METHODOLOGY 13
3.1. Research Design 13
3.2. Data Collection 15
4. FINDINGS 16
4.1. The Effects of Certification Schemes 16
4.1.1. Economic Dimension 17
4.1.2. Social Dimension 19
4.1.3. Environmental Dimension 21
4.1.4. Effects of Certification in the Context of the EU's Goals for Sustainable Development 22
4.2. The Current Role of Certification Schemes as Tools for Achieving the EU's Goals for Sustainable Development in the Global South 24
4.3. The Main Barriers for Small Producers of Cocoa for Starting and Continuing with Certification Schemes 25
4.4. Strategies to Overcome Barriers 26
5. DISCUSSION 27
6. CONCLUSION AND RECOMMENDATIONS 28
REFERENCES 30
ANNEX 36
Annex A: Tables of FAOSTAT Data 36
Annex B: Table of International Trade Centre Data 51

Abstract

Cocoa is produced in the global south but predominantly consumed in Europe. Developed by non-governmental actors, certification schemes have emerged as measures to combat poverty, preserve biodiversity and improve small producers' livelihoods in the global south.

In the light of the UN's new SDGs, the EU is redesigning its approach to sustainable development. This research therefore aims at assessing the role of certifications for cocoa in current EU policies and the future potential for such schemes in policies as tools for sustainable development. This is done by analyzing the effects of certification schemes for cocoa, the conditions for small producers for participating in such a scheme and by identifying possible strategies to overcome potential barriers for participation.

It is concluded that the EU can only rely on certification schemes as a tool for sustainable development to a limited extent in the case of cocoa, due to their inconsistent effectiveness in the areas of poverty alleviation, gender equality and education. However, effects on other SDGs are predominantly positive. Accessibility to certification schemes remains a challenge which needs further attention when certifications are implemented to foster sustainable development in the global south.

List of Tables

Table 1: Cocoa Bean Production in 2013/2014 in Thousand Tons per Country (Food and Agriculture Organization of the United Nations, 2016) 3

Table 2: Trend of Major Global Chocolate Manufacturers' Commitments to Purchase Sustainably Sourced Cocoa (Fountain & Hütz-Adams, 2015; Mondelez International, 2016; Nestlé, 2014, 2015, 2016)..... 4

Table 3: Research Questions and Methods 14

Table 4: Overview of Contribution of Certifications of Cocoa for the EU's Goals for Sustainable Development 22

List of Figures

Figure 1: Schematic Analytical Framework..... 13

List of Abbreviations

ACP	African, Caribbean and Pacific Group of States
EU	European Union
FLO	Fairtrade Labelling Organizations International
ICCO	International Cocoa Organization
MDGs	Millennium Development Goals
SDGs	Sustainable Development Goals
TEU	Treaty on European Union
TFEU	Treaty on the Functioning of the European Union
UN	United Nations

1. Introduction

The three-fold focus of this research project will firstly describe the EU's goals for sustainable development and the effects of certifications schemes for cocoa, secondly identify the main barriers for small producers of cocoa to start or continue with such a scheme and finally assess how the EU and the small producers themselves can reduce these barriers.

1.1 Background

The cocoa tree, or *Theobroma*, native to the Amazonian rainforest, is nowadays mainly cultivated in Western African countries such as Ghana and Côte d'Ivoire, but smaller quantities are also produced in Latin America as well as in South East Asia. Small-scale farmers are responsible for 80 to 90% of the world's cocoa bean production (World Cocoa Foundation, 2014). While there is no official definition of small-scale producers, usually family-run farms with a production area of up to 10 hectares are considered small-scale producers in the case of cocoa (Technical Center for Agricultural and Rural Cooperation, 2014), with the definition depending on the different contextual factors per country or region and the situation relative to other farmers of the same crop (Calcaterra & Aidenvironment, 2013; Dixon, Taniguchi, Wattenbach, & Tanyeri-Arbur, 2004).

Theobroma requires a hot and humid climate as it is found within 20 degrees of latitude north and south of the equator (World Cocoa Foundation, 2014). Therefore, it is not possible to cultivate cocoa where it is consumed most: in Europe. With EU countries being among the biggest importers of cocoa as well as the biggest exporters of manufactured cocoa products worldwide, the responsibility of the EU for the effects of cocoa consumption cannot be denied.

One tool that has been developed for enhancing sustainability in the cocoa supply chain is product certification. There is a number of certification schemes available, each with different goals and approaches. However, at present, only a fraction of small producers of cocoa is certified, with global market shares of cocoa certified by FLO, UTZ or Rainforest Alliance estimated between 15 and 30% (Fountain & Hütz-Adams, 2015). Not all small producers are able to access these certifications and sell their products under such a scheme. As market demands for cocoa are shifting towards a more sustainable supply chain with certified cocoa, the barriers for small producers to start or continue collaboration with a certification scheme prove to be a challenge. Therefore, the question arises how effective certification schemes can truly be in terms of improving sustainability in the case of cocoa production.

The EU has committed itself to fostering sustainable development by laying down a strategy, which is not limited to topics of sustainability within the EU but also includes the global scale. Despite not having

developed a common EU policy on Fair Trade specifically, efforts have been made in order to include Fair Trade in the scope of sustainability policies in the past years (Molle, 2011). This recognition of Fair Trade by the EU proves that the role of sustainable trading practices is growing more important and that certification schemes are considered to be contributing to the promotion of these practices.

There are five to six million cocoa farmers worldwide on mostly small, family-rum farms, as opposed to many other crops which are produced on larger farms (World Cocoa Foundation, 2014). One would think that if those small producers can benefit from the effects of certification schemes, a majority would be engaged in such certifications. However, only a small portion of the world's cocoa is certified. Some small producers also abandon the certification they already used. This research will therefore investigate which factors hinder the spread of certifications with the aim of assessing the pitfalls of certification schemes and its impact in the light of the EU's goals for sustainable development.

1.2 The Global Cocoa Market

The total global production of cocoa beans for the year 2013/2014[1] was 4.450.263 tons (Food and Agriculture Organization of the United Nations, 2016). When looking at the production of cocoa divided by country, it is easy to see that the produced volume differs vastly among countries. The ten countries which contribute most to the world's harvest of cocoa beans based on their cocoa bean production in 2013/2014, which is the most recent complete dataset, are summarized in table 1. The difference in volume is significant, with Côte d'Ivoire, Ghana and Indonesia combined supplying about 68% of the world's cocoa, while the market shares of the remaining seven countries vary between roughly 1% and 6%.

[1] The ICCO counts a year in cocoa production from October to September

Table 1: Cocoa Bean Production in 2013/2014 in Thousand Tons per Country (Food and Agriculture Organization of the United Nations, 2016)

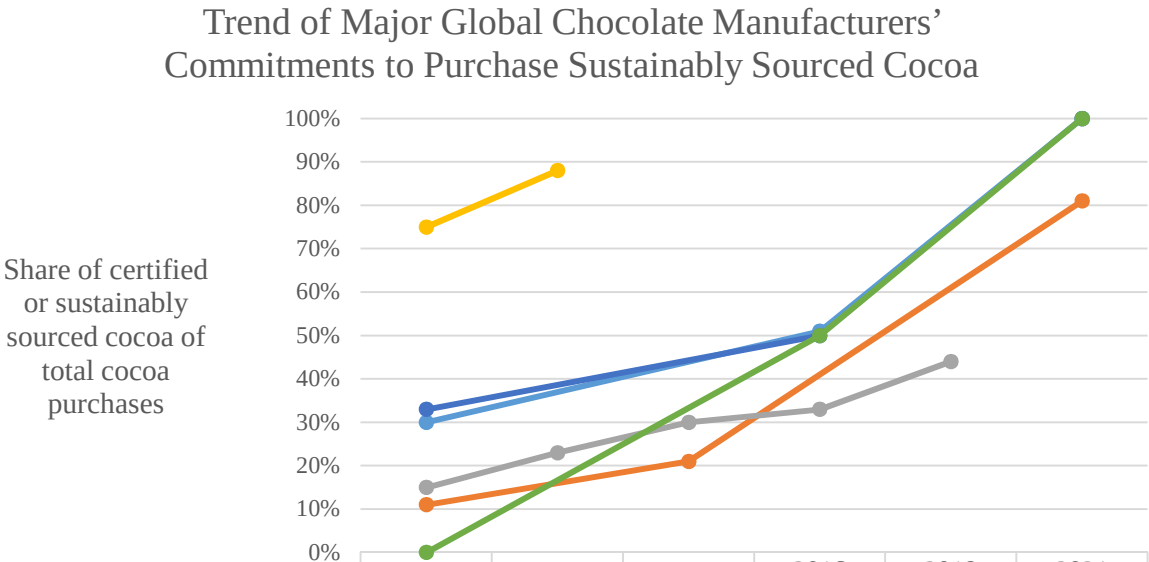
Producing country	Cocoa bean production in 2013/2014	
	Volume in thousand tons	% of total world production
Côte d'Ivoire	1434	32.22%
Ghana	859	19.30%
Indonesia	728	16.37%
Nigeria	274	6.15%
Brazil	270	6.06%
Cameroon	248	5.57%
Ecuador	156	3.51%
Peru	82	1.83%
Dominican Republic	70	1.56%
Colombia	48	1.07%
Rest of the world	282	6,34%
World	4450	100,00%

In 2013, imports of EU countries added up to more than 50% of global imports of cocoa beans, with the Netherlands alone contributing for roughly one fifth of global imports (Food and Agriculture Organization of the United Nations, 2016). When looking at imports of cocoa butter and cocoa paste, the same holds true, with slight shifts in the distribution of shares among the EU countries. Considering cocoa powder and cake, the EU accounts for only one third of the world's imports. Not surprisingly, EU countries' exports also account for about 50% of the world's manufactured cocoa products such as chocolate and other foodstuffs containing cocoa, as measured in their value in US Dollars (International Trade Centre, 2017).

The current market share of certified cocoa is still relatively small, although it is increasing, with estimates of cocoa certified by FLO, UTZ or Rainforest Alliance varying between 15 and 30% of the total cocoa production. Due to the fact that some cocoa on the market is not only certified by one, but by two or more certification bodies, only rough estimates about the percentage of certified cocoa sold on the market can be given. Furthermore, not all cocoa produced under the standards of a certification scheme is actually sold as certified cocoa (Fountain & Hütz-Adams, 2015).

The global demand for sustainably sourced cocoa will rise in the coming years due to the increase in the use of sustainably sourced cocoa to which some of the biggest chocolate companies in the world have committed themselves. The five producers Mars, Mondelēz, Nestlé, Ferrero, and Lindt & Sprüngli belong to the ten main candy manufacturers in the world in terms of net sales volume (Candy Industry, 2016) and can all be found on the European market. The goals for purchasing certified cocoa declared by these global chocolate producers are summarized in table 1:

Table 2: Trend of Major Global Chocolate Manufacturers' Commitments to Purchase Sustainably Sourced Cocoa (Fountain & Hütz-Adams, 2015; Mondelez International, 2016; Nestlé, 2014, 2015, 2016)



	2013	2014	2015	2016 goal	2018 goal	2021 goal
Mars	30%			51%		100%
Mondelēz	11%		21%			81%
Nestlé (Cocoa Plan only)	15%	23%	30%	33%	44%	
Nestlé (UTZ or Fairtrade)	75%	88%				
Ferrero	33%			50%		100%
Lindt & Sprüngli	0%			50%		100%

While Mars and Ferrero commit to purchasing cocoa that is certified by independent third parties, the remaining three manufacturers have developed their own programs or apply a blended approach for improving sustainability along the cocoa supply chain. These programs are aimed at different parts of farmers' working and living conditions, ranging from capacity building in good agricultural practices, tackling child labor, investments in infrastructure and raw materials to long-term trade relationships.

One example is the *Farming Program* which was developed by Lindt & Sprüngli and will be applied to their entire production of cocoa by 2020, without using any third-party certifications (Lindt & Sprüngli, 2016). Instead, Lindt & Sprüngli has developed four steps to become the preferred buyer for cocoa farmers, and improving the both the quality of cocoa and the quality of life of cocoa farmers at the same time: (1) ensure traceability and farmer organization, (2) provide training and capacity building, (3) support farmer investments and community development and (4) ensure verification and continuous progress. Lindt & Sprüngli also pays a price premium which is reinvested in local projects aimed at improving the farmers' living and working conditions (Lindt & Sprüngli, n.d.).

Nestlé aims at sourcing 175.000 tons of cocoa through their *Nestlé Cocoa Plan* by 2018, which roughly equals 44% of Nestlé's total purchase of cocoa (Nestlé, 2016). A large part, namely 88%, is certified by

FLO or UTZ already (Nestlé, 2015), but the program does not explicitly commit to 100% independent certification. The plan is based on three pillars, namely capacity building for farmers, improvement of social conditions, and ensuring long-term supply of cocoa. The improvements of social conditions are mainly focused preventing child labor by building schools, gender equality and provision of water and sanitation infrastructure. Nestlé also distributes high-quality cocoa plantlets to farmers free of charge in order to improve the quality and yield.

Mondelēz buys Fairtrade as well as Rainforest Alliance certified cocoa and set up a program called *Cocoa Life* with investments aiming to improve the livelihoods of 200,000 cocoa farmers over the course of 10 years. By the end of 2015, 21% of the company's cocoa was sustainably sourced according to the program's requirements (Mondelez International, 2016). *Cocoa Life* focuses on the benefits of cocoa farming for the entire community,

The global chocolate manufacturers are thus transforming the market by demanding more cocoa certified by external bodies as well as within their own sustainability programs.

1.3 Research Questions

For small cocoa producers in the global south it might be difficult to establish business relationships across continents in order to sell their cocoa to global chocolate manufacturers due to their limited experience, knowledge and networking opportunities. Therefore, it is worth taking a closer look at their possibilities to overcome those obstacles by obtaining fair trade or organic certification, especially within the light of the EU's interest to foster sustainable development.

More specifically, a closer look should be taken at the different certification systems, their underlying conditions and their feasibility in the context of the small producers.

The aforementioned observations led to the following research question to form the base of this research project:

RQ: To what extent can the EU rely on certifications to make sure its goals for sustainable development are met in the case of small producers of cocoa in the global south?

In order to answer this descriptive research question in a systematic way, four sub-questions that reflect the main components of the general research question were formulated. In this way, a structure for answering the research question is formed. The four sub-questions are:

S1: What are the effects of certification schemes for cocoa in terms of sustainability in the global south?

S2: What is the EU's policy on sustainable development and in how far do certification schemes already serve as tools to achieve the EU's goals for sustainable development in the global south?

S3: What are the main barriers for small producers of cocoa for starting and continuing with certification schemes?

S4: What can be done by the EU as well as by the small producers to overcome barriers for starting and continuing with certification schemes?

2. Literature Review

In this section, the main concepts used in the research as well as the existing body of literature and information derived from official documents will be discussed.

2.1. Certification Systems for Sustainable Cocoa

A certification is based on a set of standards and rules including monitoring instruments and is recognized by an organization or network (Getz & Shreck, 2006). The certification process leads to the placement of a label on the product, which then communicates the nature of the certification system to the consumer. Another term which is used when referring to certifications is voluntary sustainability standard. This emphasizes the voluntary nature of such a system: it is not mandated by a government or similar institution and participation happens at free will (Komives & Jackson, 2014). There are more than 60 voluntary sustainability standards available which can be awarded to cocoa products (International Trade Centre, 2015). This number includes standards focused on quality or some which focus on a limited number of producing countries and destination markets. The main available certifications for cocoa products related to sustainability which are available worldwide are Fairtrade, UTZ Certified, and Rainforest Alliance, which focus on different aspects of sustainability in cocoa farming. As these types of certifications are the ones most represented on the market, both in terms of geographical availability and of the share of cocoa certified by them, they have also been subject to a number of scientific research projects investigating their effects.

2.1.1. Fairtrade

Fairtrade by Fairtrade International (n.d.-b) has the scope of poverty alleviation by providing market access for disadvantaged producers, the promotion of fairer trading conditions and the empowerment of

producers. It therefore mainly targets small-scale producer organizations (of varying size and with or without hired labor). An important and unique element of the strategy is the payment of a guaranteed minimum price and a premium to the small producers. For cocoa, this currently is 2138€ per metric ton for conventional cocoa beans and 2458€ for organic cocoa beans. The premium in both cases is 214€ per metric ton of cocoa beans (Fairtrade International, 2017). In order to get certified, producer organizations have to undergo an audit procedure which is done independently by FLOCert GmbH. The costs for this procedure depend on the size and type of the organization to be certified and vary between 2004€ and 4095€ for the simplest scenario (FLOCert, 2016). The more complex an organization is, the more expensive the initial audit will be. This initial certification is then followed up by audits, every three to six years which cost between 1199€ and 2839€ per year, again depending on size and type of the organization. The fee will always be paid annually, even if no audit has taken place that year.

Regarding traceability, Fairtrade applies the principle of mass balance. This means that certified cocoa can be mixed with non-certified cocoa as long as the corresponding amounts which are traded along the supply chain are always documented and paid accordingly (Basso, Schouten, Renner, & Pfann, 2012). In order to be allowed to put the Fairtrade logo on the product, the manufacturer has to purchase 100% certified cocoa for that product (Fairtrade International, n.d.-a). However, due to the mass balance principle it is possible that the cocoa the manufacturer receives for making the final product is not only certified cocoa, but a mix.

2.1.2. UTZ Certified

Meanwhile, UTZ (2017) focuses on the productivity and profitability of farmers through good agricultural practices which also respect people and the planet. UTZ also involves the industry in its vision by aiming at investments and rewards for sustainable production, and emphasizes transparency for consumers. Contrary to Fairtrade, UTZ certifies larger cocoa plantations as well and does not limit its activities to smallholders (de Heer, 2016). There is no minimum price guaranteed by UTZ and premium payment is negotiated directly between the producer and the first buyer and reported to UTZ (UTZ Certified, 2016b). On average, the premium received by the producer in 2015 was 102€ (Campfens, 2016). Membership fees and program fees are charged to traders, but not to producers. The first buyer has to pay 10€ per ton of purchased cocoa beans, plus an annual membership fee between 250€ and 4000€, depending on how much cocoa they purchase per year (UTZ Certified, 2015b). This membership fee also applies to other companies along the supply chain. The annual audit procedure for both producers and traders is carried out by more than 60 recognized third-party certification bodies (UTZ Certified, 2016a) and therefore varies in price between 468€ and 4210€ (UTZ Certified, 2011).

In order to make clear where the product the customer is buying came from, UTZ uses three traceability levels for cocoa: identity preserved, segregation and the aforementioned mass balance (UTZ Certified, 2015a). At the identity preserved level, the origin of the product can be traced back until the producer where it came from. Under segregation, the products of different producers can be mixed, but it remains clear which producers have contributed to the mix. The amount of certified cocoa required in the end product for the label to be awarded to the product is 90% to 100%, depending on the raw product and the traceability level (UTZ Certified, 2015a).

2.1.3. Rainforest Alliance

Rainforest Alliance (2017) focuses on biodiversity and wants to ensure sustainable livelihoods by the transformation of land-use practices, business practices and consumer behavior. Just as UTZ, Rainforest Alliance also includes larger-scale farms. There is neither a guaranteed minimum price nor a guaranteed premium: prices are entirely set by the market (Rainforest Alliance, 2014). There is no membership fee but a volume-based fee to be paid by the first buyer of 14€ per ton of cocoa beans (Rainforest Alliance, 2012b).

In order to receive and hold the certification, producers as well as traders are audited every year by a number of third-party certification bodies which all set their own prices (Rainforest Alliance, n.d.-a, n.d.-b).

The traceability is ensured by the three approaches mentioned before: mass balance, segregation and identity preservation (Potts et al., 2014). The label can be used on a product already when 30% of its content is certified cocoa, under the condition that a statement on the product clarifies this (Rainforest Alliance, 2016a).

2.2. The EU's Goals for Sustainable Development in the Global South

As this research project assesses whether the EU's objectives for sustainable development are reached by the means of certification of small cocoa producers, a clear definition of these objectives is needed.

Since the Treaty of Amsterdam in 1997, sustainable development forms part of the fundamental objectives of the EU, and is required to be integrated into all policies (Baker, 2007).

The first clear and official statement made by the EU concerning the role of the EU in sustainable development was the **European Sustainable Development Strategy (EU SDS)** of 2001. However, this strategy mainly focused on the internal sustainable development of the EU, and only covered external activities and cooperation on the sidelines. It has been broadened by a renewed version in 2006. In this strategy, the Council of the EU (2006, p. 2) has based its definition of sustainable development on the one developed by the Brundtland Commission, stating that "Sustainable development means that the needs of the present generation should be met without compromising the ability of future generations to meet their own needs". This general definition is then broadened to include "safeguarding the earth's capacity to support life in all its diversity […] based on the principles of democracy, gender equality, solidarity, the rule of law and respect for fundamental rights, including freedom and equal opportunities for all. It aims at the continuous improvement of the quality of life and well-being on Earth for present and future generations. To that end it promotes a dynamic economy with full employment and a high level of education, health protection, social and territorial cohesion and environmental protection in a peaceful and secure world, respecting cultural diversity." It can thus be said that the EU's objectives for sustainable development encompass the economic, social and environmental dimension.

The 2006 EU SDS identified seven key challenges along with operational objectives and targets, namely (1) climate change and clean energy, (2) sustainable transport, (3) sustainable consumption & production, (4) conservation and management of natural resources, (5) Public Health, (6) social inclusion, demography and migration, and (7) global poverty and sustainable development challenges (Council of the European Union, 2006). Again, the external dimension was only dealt with marginally. It was the most pronounced in key challenge number 7, which included raising the volume of official development assistance by Member States to up to 0,7% of gross national income.

As development cooperation is a shared competence between the EU and its Member States (Art. 4 TFEU, 2016) the **2005 European Consensus on Development (ECD)** marked a milestone in the EU's commitment to sustainable development by forming the first common framework for development cooperation for all EU Member States as well as for EU institutions. It set common objectives, values and principles in order to streamline the Member States' and the EU's activities, and put the eradication of poverty and the pursuit of the UN's eight Millennium Development Goals on top of all other objectives of EU development cooperation, next to "the promotion of democracy, good governance and respect for human rights" (Council of the European Union, European Parliament, & Commission of the European Union, 2006, para. 42). Other important elements of this vision were the increased effectiveness of aid, and policy coherence for development (PCD). This means that the EU commits itself to take into account the development cooperation objectives in those policies that are adopted outside the area of development, but potentially affect developing countries to ensure the achievement of the MDGs.

The Millennium Development Goals are to:

1. eradicate extreme poverty and hunger;
2. achieve universal primary education;
3. promote gender equality and empower women;
4. reduce the mortality rate of children;
5. improve maternal health;
6. combat HIV/AIDS, malaria and other diseases;
7. ensure environmental sustainability;
8. develop a global partnership for development

Box 1: The Millennium Development Goals (Council of the European Union et al., 2006)

In the **Treaty of Lisbon** (2007), which came into effect in 2009, Article 3.5 TEU defines the principles on which the EU's external relations shall be built. The EU commits itself to "contribute to peace, security, the sustainable development of the Earth, solidarity and mutual respect among peoples, free and fair trade, eradication of poverty and the protection of human rights". Furthermore, the general provisions for the EU's external action include the fostering of "the sustainable economic, social and environmental development of developing countries, with the primary aim of eradicating poverty" and helping to "develop international measures to preserve and improve the quality of the environment and the sustainable management of global natural resources, in order to ensure sustainable development" (Art. 21, TEU).

In the light of the replacement of the United Nation's Millennium Development Goals, the EU has played a major role in the development of the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs). In 2016, the European Commission published **three proposals related to the EU's role in the implementation of the SDGs**: (1) the Communication *Next steps for a sustainable European future: European action for sustainability* (hereinafter *Next-Steps-Communication*), (2) the Communication *Proposal for a new European Consensus on Development: Our World, our Dignity, our Future*, (hereinafter *New ECD-Proposal*), and, along with the High Representative of the Union for Foreign Affairs and Security Policy, (3) the Joint Communication *A*

renewed partnership with the countries of Africa, the Caribbean and the Pacific (hereinafter *New ACP-Proposal*).

In its Next-Steps-Communication, the Commission (2016b) identified two steps by which the EU shall respond to the 2030 Agenda: Step one is to embed the SDGs in EU policies and the priorities of the Commission. Step two then aims at the long-term implementation of the SDGs by including them in the vision for after 2020. Other key actions include reporting of the progress, collaboration with external partners and supporting the efforts of developing countries, and the launch of a multi-stakeholder platform with the goal of exchanging best practices in the implementation of the SDGs by the EU, by Member States and across sectors.

The New ECD-Proposal aims at updating the former ECD to the new SDGs under the motto "do more, do it better and do it differently" (Commission of the European Union, 2016a). This includes an increased effectiveness and impact of EU development policy by better coordination between the EU and Member States, but also an increased importance of domestic action and each country's responsibility for their own sustainable development, assisted by global partners and their Official Development Assistance as well as policy which fosters investment.

Sustainable Development Goals

1. End poverty in all its forms everywhere
2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture
3. Ensure healthy lives and promote well-being for all at all ages
4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
5. Achieve gender equality and empower all women and girls
6. Ensure availability and sustainable management of water and sanitation for all
7. Ensure access to affordable, reliable, sustainable and modern energy for all
8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
10. Reduce inequality within and among countries
11. Make cities and human settlements inclusive, safe, resilient and sustainable
12. Ensure sustainable consumption and production patterns
13. Take urgent action to combat climate change and its impacts
14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development
15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

Box 2: The Sustainable Development Goals (General Assembly of the United Nations, 2015, p. 14)

The New ACP-Proposal (Commission of the European Union & High Represenative of the Union for Foreign Affairs and Security Policy, 2016) also builds on the SDGs and puts emphasis on tailored partnerships, which means that policy and cooperation should take into account the different situation and challenges in each of the three regions. Therefore, it also aims at a stronger relationship with

neighboring regions which are not part of the current ACP, but do influence certain regional challenges. Since several ACP countries are also cocoa producers, this proposal also has the potential to affect the global cocoa market and the conditions for producing cocoa in these countries.

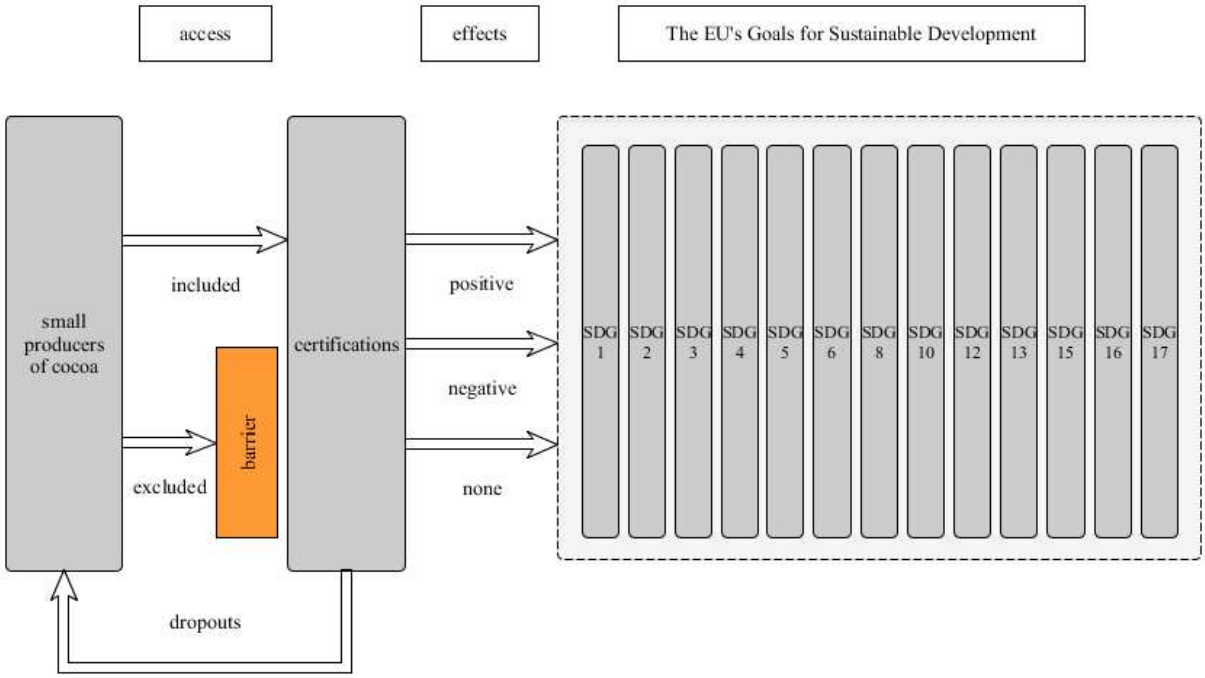
The responsible European institutions and the Member States will discuss these three new proposals in the coming months, and they are therefore not yet legally binding and still subject to change. However, they give an impression of the general direction of the EU's activities for the next few years. Considering that the EU stuck to the MDGs in the past, it is not likely that the importance of the new SDGs as a baseline will be rejected by any European institution for future policies, especially in the light of current strategies such as the Global Strategy for the Union's Foreign and Security Policy, which already make reference to the SDGs. It can therefore be concluded that the SDGs serve as a general basis for the EU's objectives in development-related policy-making.

2.3. Analytical Framework

In order to assess in which way certification schemes play a role for the achievement of the EU's goals for sustainable development, a clear framework is needed. As illustrated in Figure 1, the first step in the analytical process to be looked at is the access to a certification scheme for small producers. There are three types of small producers: (1) those who do gain access, (2) those who gain access but discontinue the certification and (3) those who do not have access to a certification scheme. Only the first two types cross the barrier. The next step in the analysis then is the effects that certification has on the first type of small producers: positive effects, negative effects, and no effect. These effects will be assigned to each of the EU's goals for sustainable development in order to assess the contribution of certification to them. The goals have been identified before as being equal to the SDGs. In the context of voluntary sustainability standards for cocoa, thirteen goals can be filtered as being the most relevant for this situation as they match the objectives of the three certification schemes in the analysis: SDGs number 1, 2, 3, 4, 5, 6, 8, 10, 12, 13, 15, 16, and 17 (Fairtrade International, 2015; Rainforest Alliance, 2016b; UTZ Certified, 2016c).

The remaining two types of small producers, namely those who do not gain access to a scheme or discontinue their participation, will be analyzed separately.

Figure 1: Schematic Analytical Framework



3. Research Methodology

In this section, the main characteristics of the research design, research methods and data collection and the reasons for choosing them are described.

3.1. Research Design

As described in the introduction section, the main research question driving this research is: *To what extent can the EU rely on certifications to make sure its goals for sustainable development are met in the case of small producers of cocoa in the global south?* To the end of answering this question, a non-experimental design was chosen.

The specific method chosen to investigate this is a systematic literature review as described by Wolfswinkel et al. (2013). This unobtrusive method of analyzing secondary data provides a step-by-step guide to the unprejudiced analysis of the existing body of literature. The five steps are (1) define, (2) search, (3) select, (4) analyze, and (5) present. More specifically, the fourth step of the systematic literature review method was complemented by a form of directed content analysis (Hsieh & Shannon, 2005) in which the data from the documents found is coded into positive, negative, and neutral effects

of certification schemes and then compared to the EU's goals for sustainable development. The qualitative data found in the systematic literature review thus forms the basis for further analysis.

The advantages of a non-experimental design and specifically methods such as content analysis and a systematic literature review include the cost and time efficiency and its unobtrusiveness. Another advantage is the flexibility of filtering criteria and codings: When coming across a new insight, it can immediately be included in the analysis, as opposed to for instance survey research (Babbie, 2009; Wolfswinkel et al., 2013). A major disadvantage, on the other hand, is the fact that the aforementioned methods rely on the publication of literature or communication by others: Aspects which have not been analyzed or recorded yet cannot be taken into account.

In the table below the goals of each subquestion and the means how to answer them are listed:

Table 3: Research Questions and Methods

Research question	Research Method	Target Group	Outcomes
RQ: To what extent can the EU rely on certifications to make sure its goals for sustainable development are met in the case of small producers of cocoa in the global south?	Systematic literature review (academic publications; position papers and similar publications from NGOs and other actors in Fair Trade; EU policy documents such as strategies, treaties, and similar)	EU, especially the Directorate General International Cooperation and Development (DG DEVCO) and the European External Action Service (EEAS) experts in the field of certifications, sustainable development and Fair Trade experts in the field of cocoa production	Assessment of the suitability of certification schemes as a tool for fostering sustainable development in the case of small producers of cocoa in the global south
S1: What are the effects of certification schemes for cocoa in terms of sustainability in the global south?	Systematic literature review	experts in the field of certifications, sustainable development and Fair Trade experts in the field of cocoa production	Assessment of the effects of certification schemes
S2: What is the EU's policy on sustainable development and in how far do	Systematic literature review Directed content analysis	EU, especially the Directorate General International Cooperation and Development (DG	Identification of the EU's strategy and the involvement of certification schemes

certification schemes already serve as tools to achieve the EU's goals for sustainable development?		DEVCO) and the European External Action Service (EEAS)	
S3: What are the main barriers for small producers of cocoa for starting and continuing with certification schemes?	Systematic literature review	experts in the field of certifications, sustainable development and Fair Trade experts in the field of cocoa production	Identification of barriers to hold certification for small producers
S4: What can be done by the EU as well as by the small producers to overcome barriers for starting and continuing with certification schemes?	Systematic literature review	EU actors in the field of certifications, sustainable development and Fair Trade (NGOs, certification bodies, and similar) small producers of cocoa	Recommendations for future EU policies Recommendations for small producers

3.2. Data Collection

As mentioned above, data was collected by applying a systematic literature review. As a source of data, mainly secondary, qualitative data coming from scientific articles as well as policy reports and official documents were used.

As a first step in the systematic literature review, the criteria for the in- or exclusion of a publication were defined. The general scope of the review was set to be certification schemes for cocoa and EU policy. Due to the relation of the research question to EU policies, not only scientific publications were decided to be included, but also policy documents as well as publications made by NGOs. Next, the outlets of the publications were determined to be search engines featuring academic, peer-reviewed journals to ensure methodological quality, such as Web of Science and Google Scholar, as well as the publications channels of the EU such as the Official Journal and the websites of the Commission's Directorate-General of International Cooperation and Development and the Directorate-General for Trade. Then, the exact search terms were defined. These included *cocoa*, *certification*, *small producers*, *fair trade*, *sustainability*, *EU development policy*, *SDGs*, *development cooperation*, *access to certifications*, *barriers for certification*, and their synonyms.

In the second step, the actual search was carried out by using the previously defined criteria.

During the third step, the selection of literature was made by reading titles, abstracts and parts of the literature found, screening for the search terms within their context. Furthermore, citations were screened for additional relevant publications which may not have been found with the search terms yet. After this step, the search was repeated with a focus on coffee for those topics of effects and barriers for which there was no literature found in the context of cocoa, in order to provide a complete picture of (possible) effects and barriers. The final number of publications after this step was 34.

In the Analysis phase, the selected publications were read while making excerpts of their main conclusion and other valuable insights for the scope of the review.

The last step then was the presentation of the results in writing, putting them into the context of the research questions.

4. Findings

In this chapter, the empirical findings relevant for each subquestion of the research question will be presented to achieve the objectives mentioned in Table 3 in chapter 3.1.

4.1. The Effects of Certification Schemes

Certification of cocoa has been subject to academic research in the past, but the whole body of available literature remains rather slim nevertheless. In order to study the effects of certifications, it is thus necessary to look at other types of commodities and settings as well. Coffee is a commodity very similar to cocoa in terms of its production and can therefore serve as an addition for gaining insights in the effects of certification of such cash crops.

In the literature, the consequences of different types of certification for producers have been studied for a number of commodities. The positive effects of obtaining certification of small producers have been shown in many cases. However, also negative impacts have been found.

The effects observed in the literature can be divided into three dimensions: (1) economic effects, (2) social effects, and (3) environmental effects.

4.1.1. Economic Dimension

The effects of certifications for cocoa on the economic dimension include the level of income and poverty reduction, market access, productivity and quality, access to credit, and labor and production costs. The effects observed in the literature for each of these aspects will be presented in this section.

4.1.1.1. Level of Income and Poverty Reduction

Since the idea of Fair Trade was based on the vision of eradicating poverty, the effects of certification on the small producers' level of income have been researched extensively. Concerning the situation of cocoa producers, several studies have described the impact of minimum prices, price premiums and the sales price for certified products set by the market compared to conventionally produced cocoa.

Despite Rainforest Alliance not guaranteeing any premiums or minimum prices, cocoa farmers in Côte d'Ivoire increased their net income per hectare by almost 30% (Rainforest Alliance, 2012a). In the same context, an increase in income for the individual farmers had also been observed earlier by Krain, Millard, Konan, and Servat (2011). In this specific study, a tax reduction for the cocoa traders handling certified cocoa also played a role as this reduction was passed on to the farmers. In a case of Ghanaian cocoa farmers, the group which obtained UTZ certification earned 21% more than the control group as opposed to a difference of only 6% between the groups before certification (Bennett, Giovannucci, Rue, Ayerakwa, & Agyei-Holmes, 2013). Bacon (2005) found that coffee producers still made better profits on average than non-certified producers when they sold the majority of their harvest as conventional coffee and did not receive a premium for that part of their harvest, since prices for Fair Trade certified coffee were twice as high as conventional coffee. Likelihood for poverty has also been found to be reduced in the case of cocoa farmers in Colombia (Committee on Sustainability Assessment, 2013). In the context of Fairtrade certification in Ghana, however, Ronchi (2002a) found that there was no relevant raise in individual incomes and that farmers still had to rely on other forms of income in order to cover their costs of living. The premium received by the cooperative was also invested into projects fostering the creation of alternative sources of income for women, aimed at decreasing financial vulnerability and improving women empowerment. A similar observation was made in two case studies involving Fairtrade cocoa and coffee (Oxford Policy Management & International Institute for Environment & Development, 2000): The premium paid to the cooperative would have been too small to make a difference for the individual farmer and has therefore only been used for investments at the community level.

4.1.1.2. Market Access

The creation of a cooperative and obtaining a certification can significantly change the channels through which small producers sell their commodity. One example are producers of Fair Trade coffee in Costa Rica (Ronchi, 2002b), where the cooperation of a producer organization and FLO led to a significant improvement in market access and information about markets. The contact to potential buyers was built thanks to the Fair Trade certification. This effect has also been observed for cocoa producers in Côte d'Ivoire (Deutsche Gesellschaft für Technische Zusammenarbeit, 2009).

However, Getz & Shreck (2006) also observed negative effects on the market access of non-certified producers in the community. Among Dominican banana farmers, Fairtrade certified farmers were 20% more likely to have access to export markets. Also within the group of certified farmers, there were differences which were caused by the preference given to higher quality bananas. The certified producers able to deliver better quality could sell more of their harvest in the Fairtrade market, and could reinvest their additional earnings to further improve quality. Those producers delivering poorer quality earned less and were therefore not able to improve their quality by the improvement of their techniques.

4.1.1.3. Productivity and Quality

A factor most likely related to the level of income is the productivity of a farm and is therefore worth to be looked at more closely. In Côte d'Ivoire, the newly introduced agricultural practices led to an increase in both the volume of the harvest as the quality of the cocoa harvest after obtaining certification (Krain et al., 2011). Concerning quality, it has been observed that in the case of cotton producers in Mali, Fair Trade certification caused a major improvement in quality which increased the producer's chances of exporting their products to foreign markets (Balineau, 2013). Moreover, also the quality delivered by non-certified producers rose due to spillover effects. In contrast, Bennett et al. (2013) observed that only certified farmers were better at meeting quality demands set by the market in contrast to non-certified cocoa farmers.

In a project in cooperation with the German Technical Assistance, Rainforest Alliance and cocoa farmers in Côte d'Ivoire, it could not be determined whether the yields had increased and whether the training on prevention of plant diseases had an effect (Deutsche Gesellschaft für Technische Zusammenarbeit, 2009).

4.1.1.4. Access to Credit

Ronchi (2002a) found that farmers were more aware of the availability of credit after their cooperation had gained Fairtrade certification. Bennett et al. (2013) made the interesting observation that certified farmers requested higher credits than before being certified – but that neither the share of certified farmers requesting credit nor the share of granted credits was higher than among non-certified cocoa farmers.

As Nelson & Galvez (2000) have shown, brazil nut producers in Peru had access to a much less risky and most of all cheaper credit system since they obtained certification. This allowed them to invest more into their activities and to design them in a more efficient way. In Nicaragua, Fair Trade certified coffee producers had better chances of receiving a credit in general compared to non-certified small producers (Christopher M. Bacon, Méndez, Flores Gómez, Stuart, & Díaz Flores, 2008).

4.1.1.5. Labor and Production Costs

Even before adopting a certification scheme, small producers face additional investments for infrastructure and audit costs in order to comply with certifications' requirements. Kilian, Pratt, Jones, & Villalobos (2004) found that this led to higher production costs in the case of UTZ and Rainforest Alliance certified coffee. Certification also demands for a high-quality administration and management, which is often more complex than the systems small producers and cooperatives used before being certified (Walrecht, Basso, & Hime, 2012). This can increase the costs of production, and even require additional workforce (Valkila, Haaparanta, & Niemi, 2010).

4.1.2. Social Dimension

In this section, the effects of certifications on the social dimension will be presented. These include farmers' working conditions, the quality of farmers' livelihoods, training, and gender quality and women empowerment.

4.1.2.1. Working Conditions

It has been found that the conditions under which the small producers perform their work have been improved by certification (Bennett et al., 2013; Committee on Sustainability Assessment, 2013; Krain

et al., 2011). This entails health and safety at the workplace by protection from harmful substances and access to medical aid, but also an improved job security and housing conditions.

Another factor within this topic is the reduction of child labor (Bennett et al., 2013; Beyer, 2012; Tulane University, 2011). This does not mean that certification has been found to completely eliminate child labor but rather that the different certification schemes have set their requirements in such way that a detection of child labor leads to an exclusion from the certification scheme, encouraging small producers to redesign their workforce.

4.1.2.2. Quality of Farmer Livelihoods

Small producers' living conditions concerning the value and quality of their homes seem to improve with certification (Krain et al., 2011; Ronchi, 2002b). Also both the quantity as the quality of their nutrition has been found to improve after becoming certified (Committee on Sustainability Assessment, 2013), next to a reported increase in access to clean water (Doherty & Tranchell, 2005).

Another factor is access to education for the small producers' children. Studies have found mixed results: In several cases of both cocoa and coffee farmers, there was a positive impact on both on the number of certified farmers' children attending school as on the duration of their education (Arnould, Plastina, & Ball, 2009; Christopher M. Bacon et al., 2008; Ronchi, 2002b), which had for example been achieved by scholarships provided by the cooperations. In contrast, Bennett et al. (2013) found that, despite UTZ certification having reduced child labor, school attendance did not improve, similarly to Méndez et al. (2010) who did not find a significant difference in school attendance between children of certified and non-certified coffee farmers.

Arnould et al. (2009) as well as Ronchi (2002a) furthermore observed a better access to healthcare for certified farmers and their families.

4.1.2.3. Training

By providing training activities for the small producers, the certification schemes ensure that the farmers are educated about the skills relevant to fulfilling the requirements of the certification scheme. This does not only include the skills necessary for the production itself, such as good agricultural practices (Committee on Sustainability Assessment, 2013; Nelson & Galvez, 2000), but also administrative skills which then enable small producers to fulfill the documentation demands by the certification bodies and

to monitor their economic activity (Krain et al., 2011). This enhancement of skills is closely related to the productivity and quality effects of certification.

4.1.2.4. Gender Equality and Women Empowerment

In the case of cocoa producers, no significant impact of certification has been found concerning gender roles (Krain et al., 2011). The position of women, their role within the production process and their control over it remain weak, despite having full voting rights in cooperative councils (Ronchi, 2002b). In the case of coffee producers, however, Bacon et al (2008) claimed that women who were connected to a Fair Trade certified cooperative had better access to and control over financial resources. Moreover, women on Fair Trade certified farms worked more than twice as many days per year than on non-certified farms. At the same time, however, in both certified and non-certified farms, mostly men were the recipient of the cooperative's payments, and only half of them shared profits with their wives.

4.1.3. Environmental Dimension

This section deals with the effects of certification on the environment, including biodiversity, use of natural resources, and use of agrochemicals.

After the adoption of certification, small producers tend to put more effort into implementing measures aimed at the conservation of nature and biodiversity (Committee on Sustainability Assessment, 2013; Krain et al., 2011).

Also the management of natural resources used in cocoa production has been found to improve due to the training received by certification bodies, thereby enhancing the farmers' knowledge and skills (Krain et al., 2011). When looking at coffee producers, Bacon et al. (2008) found that the number of farmers who implemented measures for the conservation of soil and water was 33% higher amongst certified farmers as opposed to non-certified farmers.

In many cases, the use of agrochemicals for fertilization or pest management has decreased, caused by the certifications' requirements. This, in turn, also reduces the health risks related to handling agrochemicals (Consumers International, 2005).

4.1.4. Effects of Certification in the Context of the EU's Goals for Sustainable Development

When putting the effects of certifications for cocoa observed in the literature into the context of the EU's goals for Sustainable Development, as represented by the SDGs, a lot of overlap can be found. However, as table 4 illustrates, the results cover the entire spectrum from positive, negative to no effects. This results in a varying balance for some SDGs so that in many cases it cannot be said whether certifications are a suitable tool for the achievement of that particular SDG or not. This is the case for SDGs 1 (end poverty), 4 (education), 5 (gender equality), and 10 (reduced inequalities). For the remaining SDGs, the observed effects were positive.

Table 4: Overview of Contribution of Certifications of Cocoa for the EU's Goals for Sustainable Development

SDGs	Positive effects	Negative effects	No effect
1 **End Poverty**	- net income rises (due to better productivity and quality, premium) - premium invested into projects benefitting the entire cooperative and potentially entire community - better access to credit decreases vulnerability to price volatility	- risk of marginalized farmers dropping out again after having made investments	- sometimes no relevant rise in income, esp. when demand for certified cocoa is low - sometimes no significant rise in quality and good agricultural practices
2 **Hunger**	- net income rises - higher quantity and quality of nutrition		
3 **Health & well-being**	- living conditions improved - access to medical treatment improved		
4 **Education**	- sometimes higher rates of school attendance		- sometimes no change in school attendance

	- training in good agricultural practices and administration		
5 **Gender equality**	- premium invested into alternative sources of income for women - sometimes better access to financial resources for women		- sometimes no change in gender roles - limited participation in decision-making for women
6 **Clean water & sanitation**	- sometimes improved access to clean water		
8 **Decent work & economic growth**	- improved working conditions (health & safety) - improved job security & local employment opportunities - reduction of child labor		
10 **Reduced inequalities**	- improved access to markets, market information and credit	- decreased market access for non-certified farmers	
12 **Responsible consumption & production**	- increased awareness of good agricultural practices and environmental issues among producers		
13 **Climate Action**	- better management of natural resources		
15 **Life on Land**	- decreased use of agrochemicals		

	- implementation of biodiversity conservation measures		
16 **Peace, Justice & Strong Institutions**	- increased bargaining power and democratic control		
17 **Partnership**	- long-term trade relationships built		

4.2. The Current Role of Certification Schemes as Tools for Achieving the EU's Goals for Sustainable Development in the Global South

Despite the lack of a comprehensive EU policy or regulation on fair trade, the EU has recognized the role of fair trade in sustainable development. The specific reference made to both fair trade and the eradication of poverty made in Art. 3.5 TEU shows the EU's awareness of the interrelatedness of these two concepts and the responsibility of the EU in this regard. This has been articulated in different legislations, policies and statements made by the EU and its officials.

One example of the integration of fair trade into official EU agreements is the consistent reference to it in new trade agreements with third countries, for instance the agreement with Colombia and Peru (Council of the European Union, 2012).

In 2009, the European Commission suggested that public procurement procedures should include Fair Trade certification as a requirement for purchasing and that there should be investigation into the possibilities to promote Fair Trade using EU budget (Commission of the European Communities, 2009). By 2014, the former suggestion had been incorporated into two new directives on public procurement, allowing public institutions in the EU to make Fair Trade certification a requirement in their tenders (European Parliament & Council of the European Union, 2014a, 2014b). The 2009 communication nevertheless also emphasized that sustainability schemes should remain non-governmental and should not be publicly regulated, leaving innovation and development in this regard to the market.

In its new trade strategy, the Commission has however dedicated a subchapter to the promotion of "fair and ethical trade schemes" (2015, p. 25), which articulated five actions that will be implemented: (1)

Promotion of fair trade and other sustainability assurance schemes in free trade agreements, (2) include fair and ethical trade in the next review of the Aid for trade strategy, (3) promotion of fair and ethical trade schemes through EU delegations in third countries, (4) enhanced collection of market data in international bodies, and (5) raising awareness on both the supply and demand side.

Within the Development Cooperation Instrument, the EU has allocated a budget of 1.5 million € for the period between 2014 to 2020 to the support of food security and sustainable agriculture, which explicitly includes fair trade schemes (European Parliament & Council of the European Union, 2014c).

In conclusion, it can be said that the EU seems to be reluctant to adopt extensive policy on fostering sustainability certification but does encourage its voluntary, non-governmental development.

4.3. The Main Barriers for Small Producers of Cocoa for Starting and Continuing with Certification Schemes

Small producers located in remote areas might not be easily accessible for a certification scheme for practical reasons, but also the lack of a cooperative in the region where small producers are located is a problem that cannot be overcome by the individual small producers alone (Aidoo & Fromm, 2015; Nelson & Galvez, 2000). Aidoo & Fromm also stated that some small producers might not even be aware of the existence of certifications and the implications of obtaining such. This can be related to the fact whether small producers are members of a cooperative or not: They furthermore found that membership has proven to have a significant positive impact on small producers' willingness to adopt certification in the case of Ghanaian cocoa farmers. In the case of Nicaraguan coffee producers, however, the establishment of such a cooperative already posed an obstacle (Tellman, Gray, & Bacon, 2011), a phenomenon also observed by Friedmann (2011), in which case it was caused by legal constraints and a lack of knowledge about the way cooperatives work.

Furthermore, small producers with small farms are less likely to benefit from certification as they face difficulties to cover the high costs linked to complying with the high standards of certification schemes (Consumers International, 2005; Friedmann, 2011; Tellman et al., 2011; Walrecht et al., 2012) and the need for a more advanced administration (de Battisti, Macgregor, & Graffham, 2009). In order to obtain a certification, first of all small producers and cooperatives have to invest into several aspects of their production process and administration, next to the payment of application and audit fees. This is not always possible for small producers, who can lack both the experience with such processes as well as the access to credit for pre-financing those preparatory activities. Paradoxically, in the survey conducted by Aidoo & Fromm, farmers with access to credit were less likely to adopt certification, probably

because the use of expensive (and thus for this group easily available) inputs such as fertilizers that increase yield is discouraged under certification schemes.

In some countries, the problem of reaching a level of productivity that allows to make exporting cost-efficient hinders small producers from even considering the access to export markets (Tellman et al., 2011).

Another disincentive can be the fact that the land is not owned by the small producers themselves as there is no guarantee for a long-term return of investment for the small producers himself (Waarts, Judge, Brons, & Ruyter de Wildt, 2013). Moreover, Nelson & Galvez (2000) found that farmers were reluctant to invest into their cocoa farming and thereby being forced to upscaling it to their single source of income, instead of using several sources of income to spread the risks.

Particularly looking at those small producers who have already obtained certification but then dropped out of the scheme, several reasons and potential motivations can be found in the literature. Deppeler, Fromm, & Aidoo (2014) found that those cocoa farmers who were not literate struggled to meet the requirements for record keeping. Also the higher labor costs and the requirements to repay credits on time were mentioned as a factor influencing the decision to leave. Interestingly, these problems seemed to affect mostly women. When inquiring the potential reasons for farmers to leave the certification in the future, certifiers not keeping promises concerning premium payments, project implementation and the provision of material were mentioned, next to unfair practices and cheating by the purchaser.

4.4. Strategies to Overcome Barriers

The barriers for those small producers who do not apply for certification schemes mostly consist of a lack of knowledge about the available schemes in general and their potential benefits (Aidoo & Fromm, 2015). An improved communication strategy to reach local cocoa producers can be a way to diminish this effect as a first step (Friedmann, 2011). A similar approach is already implemented by Rainforest Alliance in the coffee supply chain as they provide information about their certification and organize capacity-building workshops. They also subsidize the costs of certification through a fund fed by revenues and EU subsidies (Consumers International, 2005).

The high costs of certification, be it for first-time applicants or for small producers who have been certified before and have to fund the continuation of the certification, are a major barrier. Especially the poorest among the small producers lack the necessary capital. Therefore, improved access to credit has been brought forward as an important measure to reduce the impact of this barrier (Tellman et al., 2011). Another possible factor is improved capacity building for farmers in order to enable them to deliver better quality to the market and work more efficiently even before applying for a certification, in order

to raise their net income and thereby their capital available for such investments, without the need for access to credit (Friedmann, 2011).

A potential solution for improving market access and quality has been suggested by Tellman et al. (2011): By fostering networking activities between existing cooperatives and mutual learning, these cooperatives gained access to new markets despite not being certified. The financial benefits derived from this new sales channel can then serve to facilitate new investments, such as certification costs as described above.

5. Discussion

In this thesis, a systematic literature review has been used in order to assess in how far certifications schemes for cocoa are a suitable and reliable tool for fostering sustainable development in the global south within the EU's policy framework.

The contributions of certifications are in general positive, despite showing mixed results for some SDGs. The most interesting result is that it is not possible to conclusively assess whether certifications contribute to ending poverty in the case of cocoa. A possible reason for this could be the different types of certifications and their goals, which differ in focus. Surprisingly, however, the observations have shown that those schemes whose foremost goal is not poverty alleviation (UTZ and Rainforest Alliance) had a more positive effect of farmers' income than the scheme that does focus on this topic (Fair Trade). Moreover, the mixed nature of results holds true for a number of other goals, especially gender equality and education. The fact that for most other goals only positive impacts have been found does however not mean that there are no negative impacts or that the benefits outweigh the costs. Instead, many studies have focused on the situation after adoption of certification, without always being able to attribute an observation to the adoption of certification or to clearly determine that an observation represents a change to the pre-certification situation.

The EU's current policy does not systematically feature certification schemes as a tool for fostering sustainable development except for some minor inclusions into already existing measures. More importantly, the EU has voiced that the development of such certification schemes should remain a non-governmental initiative. Considering the number of certification schemes that are available for products on the European market and the weight EU countries' imports have on the global cocoa market, this very limited use and support of certifications by the EU is rather unexpected.

The identified barriers for small producers to participate in a certification scheme show that in order to fully assess the suitability of such a measure for fostering sustainable development, those producers who do not apply, fail to fulfill requirements or drop out of a scheme need to be considered as well. The

potential positive effects of a certification can only be achieved when not only a select group of small producers benefits.

In the existing literature, the possible solutions in order to overcome those barriers have not been dealt with very extensively, but the already existing suggestions and applied strategies point to governmental subsidies, networking between farmers and capacity building activities. It is noteworthy that these solutions thus include both governmental and non-governmental actors.

With the increased recognition of certifications and mainly Fair Trade, the EU has opened the door for a much more strategic and integrated approach to fostering certification schemes and benefitting from their achievements. With the majority of the effects of certification of cocoa being positively related to one or more of the EU's goals for sustainable development, the EU should take on its responsibility to actively foster the access to those certifications in order to reach the goals the EU has set for itself. By investments into better communication about certification schemes among small producers and providing financial subsidies for certification schemes in order to be able to reduce their initial certification costs for small producers, the EU could potentially significantly lower the barriers and contribute to the achievement of the SDGs. As there are also a number of negative effects and issues which do not seem to be currently resolved by certification, the EU should also have an interest in improving the effectiveness of certification schemes in order to ensure that positive achievements are not cancelled out.

A limitation of this research is the fact that a literature review relies on the existing literature and cannot further explore the reasons behind the observations made by others. A more immersed approach can be especially helpful to find more barriers and potential solutions, in order to deliver more detailed recommendations for future action.

6. Conclusion and Recommendations

It can be concluded that the effects of certification for small producers are predominantly positive, despite the existence of negative externalities. While the direct effect of a higher sales price or a premium is sometimes negligible due to high costs for compliance with certifications' requirements, the positive effects for capacity building of the small producers can have a long-term influence on productivity and quality as well as on a community level, even when they decide to abandon the certification. What remains an issue is the accessibility to certifications and the related benefits especially for the poorest and most remote small producers.

The possibilities of small producers to overcome these barriers by themselves remain limited, while the certification schemes have a large influence especially on the costs of certification. The case of

Rainforest Alliance in Brazil provides an example of a certification scheme actively working to reach the poorest small producers by reallocating revenue to workshops and subsidies.

With several policies, the EU is already fostering certification schemes directly and indirectly in order to improve sustainability, but has showed very little action regarding the further improvement of the working of such schemes and the reduction of access barriers.

Turning to the extent to which certification schemes contribute to the EU's goals for sustainable development in the case of small producers of cocoa in the global south, it can be observed in Table 4 that the majority of the effects certifications have can be considered positive while negative implications are seldom. However, certifications do certainly not contribute to all goals in the case of cocoa to the same extent. Therefore, without further action to increase effectiveness, certifications in the context of cocoa can only deliver limited improvements for the EU's goals for sustainable development.

Further research is necessary in order to improve the ability to assess the effects of certification schemes. A stronger focus on the effects on non-certified small producers is pivotal in order to map the potential dangers of certification externalities in a more detailed way. Furthermore, there is very little research on the effects on certification schemes on a macro level, as most studies focus on the cases of individual cooperatives, seldom allowing for seeing the big picture and assessing the influence on the economic development of an entire country or a region.

References

Aidoo, R., & Fromm, I. (2015). Willingness to adopt certifications and sustainable production methods among small-scale cocoa farmers in the Ashanti region of Ghana. *Journal of Sustainable Development*, *8*(1), 33–43. http://doi.org/10.5539/jsd.v8n1p33

Arnould, E. J., Plastina, A., & Ball, D. (2009). Does Fair Trade deliver on its core value proposition? Effects on income, educational attainment, and health in three countries. *Journal of Public Policy & Marketing*, *28*(2), 186–201.

Babbie, E. (2009). *The Practice of Social Research* (12th ed.). Belmont, CA: Wadsworth.

Bacon, C. M. (2005). Confronting the coffee crisis: Can Fair Trade, organic, and specialty coffees reduce small-scale farmer vulnerability in Northern Nicaragua? *World Development*, *33*(3), 497–511. http://doi.org/10.1016/j.worlddev.2004.10.002

Bacon, C. M., Méndez, V. E., Flores Gómez, M. E., Stuart, D., & Díaz Flores, S. R. (2008). Are sustainable coffee certifications enough to secure farmer livelihoods? The Millenium Development Goals and Nicaragua's Fair Trade cooperatives. *Globalizations*, *5*(2), 259–274. http://doi.org/10.1080/14747730802057688

Baker, S. (2007). Sustainable development as symbolic commitment: Declaratory politics and the seductive appeal of ecological modernisation in the European Union. *Environmental Politics*, *16*(2), 297–317. http://doi.org/10.1080/09644010701211874

Balineau, G. (2013). Disentangling the effects of Fair Trade on the quality of Malian cotton. *World Development*, *44*, 241–255. http://doi.org/10.1016/j.worlddev.2012.12.005

Basso, K., Schouten, K., Renner, T., & Pfann, M. (2012). *Cocoa Certification: Study on the costs, advantages and disadvantages of cocoa certification*. Amstelveen, the Netherlands: KPMG Advisory N. V. Retrieved from http://www.icco.org/about-us/international-cocoa-agreements/doc_download/302-study-on-the-costs-advantages-and-disadvantages-of-cocoa-certification-october-2012.html

Bennett, M., Giovannucci, D., Rue, C., Ayerakwa, H., & Agyei-Holmes, A. (2013). *Cocoa farms in Ghana: An evaluation of the impact of UTZ certification on the sustainability of smallholders supported by the Solidaridad Cocoa Programme (2010-2012)*. n.p.: Committee on Sustainability Assessment (COSA).

Beyer, D. (2012). Child labor in agriculture: Some new developments to an ancient problem. *Journal of Agromedicine*, *17*(2), 197–207. http://doi.org/10.1080/1059924X.2012.660442

Calcaterra, E., & Aidenvironment. (2013). *Defining smallholders: Suggestions for a RSB smallholder definitions*. Lausanne, Switzerland: Ecole Polytechnique Fédérale de Lausanne.

Campfens, B. (2016, September 26). Same UTZ cocoa, different price – why isn't the cost of sustainability always the same? *Your Questions Answered*. Retrieved from https://www.utz.org/better-business-hub/sourcing-sustainable-products/utz-cocoa-different-price-isnt-cost-sustainability-always/

Candy Industry. (2016). 2016 Global Top 100 candy companies. Retrieved January 10, 2017, from http://www.candyindustry.com/2016-Global-Top-100-Part-4

Commission of the European Communities. (2009). Communication from the Commission to the Council, the European Parliament and the European Economic and Social Committee: Contributing to sustainable development: The role of fair trade and nongovernmental trade-related sustainability assurance schemes. *COM(2009) 215 Final*.

Commission of the European Union. (2015). *Trade for all: Towards a more responsible trade and investment policy*. Luxembourg, Luxembourg: Publications Office of the European Union. Retrieved from http://ec.europa.eu/trade/policy/in-focus/new-trade-strategy/%5Cnhttp://trade.ec.europa.eu/doclib/docs/2015/october/tradoc_153846.pdf

Commission of the European Union. (2016a). *A proposal for a new European consensus on development*

[Press release]. Retrieved from http://europa.eu/rapid/press-release_MEMO-16-3884_en.htm

Commission of the European Union. (2016b). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. Next steps for a sustainable European future. European action for sustainability. *COM(2016) 739 Final*.

Commission of the European Union, & High Represenative of the Union for Foreign Affairs and Security Policy. (2016). Joint communication to the European Parliament and the Council. A renewed partnership with the countries of Africa, the Caribbean and the Pacific. *JOIN(2016) 52 Final*.

Committee on Sustainability Assessment. (2013). *The COSA Measuring Sustainability report: Coffee and cocoa in 12 countries*. Philadelphia, PA: Committee on Sustainability Assessment. Retrieved from http://thecosa.org/wp-content/uploads/2014/01/The-COSA-Measuring-Sustainability-Report.pdf

Consumers International. (2005). *From bean to cup: How consumer choice impacts upon coffee producers and the environment*. London, United Kingdom: Consumers International.

Council of the European Union. (2006). Renewed EU Sustainable Development Strategy (10117/06). Brussels, Belgium: European Union. Retrieved from http://register.consilium.europa.eu/doc/srv?l=EN&f=ST 10117 2006 INIT

Council of the European Union. (2012). Council Decision of 31 May 2012 on the signing, on behalf of the Union, and provisional application of the Trade Agreement between the European Union and its Member States, of the one part, and Colombia and Peru, of the other part (2012/735/EU). *Official Journal of the European Union*, L354/55.

Council of the European Union, European Parliament, & Commission of the European Union. (2006). The European consensus on development. *Official Journal of the European Union*, C46/1.

de Battisti, A. B., Macgregor, J., & Graffham, A. (Eds.). (2009). *Standard bearers: Horticultural exports and private standards in Africa*. London, United Kingdom: International Institute for Environment and Development.

de Heer, S. (2016, September 12). What's the difference between UTZ, Fairtrade and the Rainforest Alliance? *Your Questions Answered*. Retrieved from https://www.utz.org/better-business-hub/marketing-sustainable-products/whats-difference-utz-fairtrade-rainforest-alliance/

Deppeler, A., Fromm, I., & Aidoo, A. (2014). *The unmaking of the cocoa farmer: Analysis of benefits and challenges of third-party audited certification schemes for cocoa producers and laborers in Ghana*. Paper presented at the International Conference on Food and Agribusiness Marketing Association (IFAMA), Cape Town, South Africa.

Deutsche Gesellschaft für Technische Zusammenarbeit. (2009). *Realise the difference: Impacts of the Public Private Project PPDC. Market-oriented promotion of certified sustainable cocoa production in Côte d'Ivoire*. Eschborn, Germany: Deutsche Gesellschaft für Technische Zusammenarbeit.

Dixon, J., Taniguchi, K., Wattenbach, H., & Tanyeri-Arbur, A. (Eds.). (2004). *Smallholders, globalization and policy analysis*. *AGSF Occasional Paper* (Vol. 5). Rome, Italy: Food and Agriculture Organization of the United Nations.

Doherty, B., & Tranchell, S. (2005). New thinking in international trade? A case study of The Day Chocolate Company. *Sustainable Development*, *13*, 166–176. http://doi.org/10.1002/sd.273

European Parliament, & Council of the European Union. (2014a). Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC. *Official Journal of the European Union*, L94/65.

European Parliament, & Council of the European Union. (2014b). Directive 2014/25/EU of the European Parliament and of the Council of 26 February 2014 on procurement by entities operating in the water, energy, transport and postal services sectors and repealing Directive 2004/17/EC.

Official Journal of the European Union, L94/243.

European Parliament, & Council of the European Union. (2014c). Regulation (EU) No 233/2014 of the European Parliament and of the Council of 11 March 2014 establishing a financing instrument for development cooperation for the period 2014-2020. *Official Journal of the European Union*, L77/44.

European Union. (2007). Treaty of Lisbon amending the Treaty on European Union and the Treaty establishing the European Community. *Official Journal of the European Union*, C 306.

European Union. (2016). Consolidated version of the Treaty on the Functioning of the European Union. *Official Journal of the European Union*, C 202.

Fairtrade International. (n.d.-a). Composite products. Retrieved January 28, 2017, from https://www.fairtrade.net/products/composite-products.html

Fairtrade International. (n.d.-b). Our vision. Retrieved January 23, 2017, from https://www.fairtrade.net/about-fairtrade/our-vision.html

Fairtrade International. (2015). *Sustainable Development Goals and Fairtrade: The case for partnership*. Bonn, Germany: Fairtrade International. Retrieved from http://www.fairtrade.net/fileadmin/user_upload/content/2009/resources/15-10_Sustainable_Development_Report.pdf

Fairtrade International. (2017). Price and premium info. Retrieved January 28, 2017, from https://www.fairtrade.net/standards/price-and-premium-info.html

FLOCert. (2016). *Fee system small producer organization*. Bonn, Germany: FLOCert.

Food and Agriculture Organization of the United Nations. (2016). FAOSTAT database. Cocoa bean production in 2013/2014. Retrieved January 8, 2017, from http://www.fao.org/faostat/en/#data/QC

Fountain, A. C., & Hütz-Adams, F. (2015). *Cocoa Barometer 2015*. *Cocoa Barometer*.

Friedmann, J. (2011). *Legal and institutional barriers to fair trade* (Legal Aspects of Sustainable Natural Resources. Legal Working Paper Series). Retrieved from http://cisdl.org/public/docs/news/Jillian_Freidman_LEGAL_AND_INSTITUTIONAL_BARRIERS_TO_FAIR_TRADE.pdf

General Assembly of the United Nations. (2015). *Resolution 70/1. Transforming our world: The 2030 Agenda for Sustainable Development*. *A/RES/70/1*.

Getz, C., & Shreck, A. (2006). What organic and Fair Trade labels do not tell us: Towards a place-based understanding of certification. *International Journal of Consumer Studies*, *30*(5), 490–501.

Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, *15*(9), 1277–1288. http://doi.org/10.1177/1049732305276687

International Trade Centre. (2015). Standards map. Your roadmap to sustainable trade. Retrieved January 27, 2017, from http://www.standardsmap.org/identify

International Trade Centre. (2017). List of exporters for the selected product: 1806 Chocolate and other food preparations containing cocoa. Retrieved January 8, 2017, from http://www.trademap.org/tradestat/Country_SelProduct_TS.aspx?nvpm=1%7C%7C%7C%7C%7C1806%7C%7C%7C4%7C1%7C1%7C2%7C2%7C1%7C2%7C1%7C%0A

Kilian, B., Pratt, L., Jones, C., & Villalobos, A. (2004). Can the private sector be competitive and contribute to development through sustainable agricultural business? A case study of coffee in Latin America. *International Food & Agribusiness Management Review*, *7*(3), 21–45.

Komives, K., & Jackson, A. (2014). Introduction to voluntary sustainability standard systems. In C. Schmitz-Hoffmann, M. Schmidt, B. Hansmann, & D. Palekhov (Eds.), *Voluntary Standard Systems. A Contribution to Sustainable Development* (Natural Re, Vol. 1, pp. 3–12). Berlin, Germany: Springer-Verlag. http://doi.org/10.1007/978-3-642-35716-9

Krain, E., Millard, E., Konan, E., & Servat, E. (2011). *Trade and pro-poor growth: Introducing Rainforest Alliance certification to cocoa production in Cote d'Ivoire*. Bonn, Germany: Federal

Ministry for Economic Cooperation and Development. Retrieved from https://www.oecd.org/aidfortrade/47405615.pdf

Lindt & Sprüngli. (n.d.). Sustainably sourced cocoa farming program. Retrieved July 27, 2015, from http://www.lindt-spruengli.com/fileadmin/user_upload/corporate/user_upload/Medias/Publications/Sustainability/LINDT_Farming_Program-Brochure_EN.pdf

Lindt & Sprüngli. (2016). *Sustainability Report 2015*. Kilchberg, Switzerland: Lindt & Sprüngli. Retrieved from http://www.lindt-spruengli.com/fileadmin/user_upload/corporate/user_upload/Medias/Publications/Sustainability/Report_2015_E.pdf

Méndez, V. E., Bacon, C. M., Olson, M., Petchers, S., Herrador, D., Carranza, C., … Mendoza, A. (2010). Effects of Fair Trade and organic certifications on small-scale coffee farmer households in Central America and Mexico. *Renewable Agriculture and Food Systems*, *25*(3), 236–251. http://doi.org/10.1017/S1742170510000268

Molle, W. (2011). *European Economic Governance: The Quest for Consistency and Effectiveness*. Abingdon, United Kingdom: Routledge. Retrieved from https://books.google.com/books?id=2X6sAgAAQBAJ&pgis=1

Mondelez International. (2016). *Cocoa Life: Empowering cocoa farmers and communities*. Retrieved from https://www.cocoalife.org/~/media/cocoalife/Files/pdf/Library/Cocoa Life Progress Report

Nelson, V., & Galvez, M. (2000). *Social impact of ethical and conventional cocoa trading on forest-dependent people in Ecuador*. Chatham, United Kingdom: University of Greenwich.

Nestlé. (2014). *Nestlé in society. Creating shared value and meeting our commitments 2013*. Retrieved from http://www.nestle.com/asset-library/Documents/Library/Documents/Corporate_Social_Responsibility/nestle-csv-full-report-2013-en.pdf

Nestlé. (2015). *Nestlé in society: Creating shared value and meeting our commitments 2014*. Retrieved from http://www.nestle.com/asset-library/documents/library/documents/corporate_social_responsibility/nestle-csv-full-report-2014-en.pdf

Nestlé. (2016). *Nestlé in society. Creating shared value and meeting our commitments 2015*. Retrieved from https://www.nestle.com/asset-library/documents/library/documents/corporate_social_responsibility/nestle-in-society-summary-report-2015-en.pdf

Oxford Policy Management, & International Institute for Environment & Development. (2000). *Fair Trade: Overview, impact, challenges. Study to inform DFID's support to Fair Trade*. Retrieved from http://portals.wi.wur.nl/files/docs/ppme/ACF3C8C.pdf

Potts, J., Lynch, M., Wilkings, A., Huppé, G., Cunningham, M., & Voora, V. (2014). *The State of Sustainability Initiatives Review 2014*. Winnipeg, Canada: International Insititute for Sustainable Development. Retrieved from http://www.iisd.org/pdf/2014/ssi_2014.pdf

Rainforest Alliance. (n.d.-a). Certify your farm. Retrieved January 28, 2017, from http://www.rainforest-alliance.org/business/agriculture/certification/farm

Rainforest Alliance. (n.d.-b). Chain of custody certification for agricultural products. Retrieved January 28, 2017, from http://www.rainforest-alliance.org/business/agriculture/certification/coc

Rainforest Alliance. (2012a). *Rainforest Alliance certification on cocoa farms in Côte d'Ivoire*. Retrieved from http://www.rainforest-alliance.org/sites/default/files/2016-08/ra-certification-cocoa-cote-divoire-cosa.pdf

Rainforest Alliance. (2012b). The Participation Agreement. Retrieved from http://www.rainforest-alliance.org/business/sites/default/files/uploads/396/Participation-Agreement-FAQ-Apr2012.pdf

Rainforest Alliance. (2014). Rainforest Alliance certified cocoa. Retrieved January 28, 2017, from

http://www.rainforest-alliance.org/articles/rainforest-alliance-certified-cocoa

Rainforest Alliance. (2016a). Requirements and guidelines for use of the Rainforest Alliance trademarks. Retrieved from http://www.rainforest-alliance.org/sites/default/files/uploads/4/rainforest-alliance-marks-guide.pdf

Rainforest Alliance. (2016b, April 22). Breathing life into global sustainability goals. Retrieved from http://www.rainforest-alliance.org/articles/breathing-life-into-global-sustainability-goals

Rainforest Alliance. (2017). About us. Retrieved January 28, 2017, from http://www.rainforest-alliance.org/about

Ronchi, L. (2002a). *Monitoring impact of Fairtrade initiatives: A case study of Kuapa Kokoo and The Day Chocolate Company*. *twinsight*. London, United Kingdom: Twin and Twin Trading. Retrieved from http://divine.uber-london.com/Assets/Documents/Impact_Assessment.pdf

Ronchi, L. (2002b). *The impact of Fair Trade on producers and their organisations: A case study with Coocafe in Costa Rica*. *Poverty Research Unit at Sussex Working Paper*. Falmer, United Kingdom. Retrieved from http://www.sussex.ac.uk/Units/PRU/wps/wp11.pdf

Technical Center for Agricultural and Rural Cooperation. (2014). *Small-scale farmers, certification schemes and private standards: Costs and benefits of certification and verification systems for small-scale producers in cocoa, coffee, cotton, fruit and vegetable sectors*. Wageningen: Technical Centre for Agricultural and Rural Cooperation. Retrieved from http://edepot.wur.nl/336063

Tellman, B., Gray, L. C., & Bacon, C. M. (2011). Not fair enough: Historic and institutional barriers to Fair Trade coffee in El Salvador. *Journal of Latin American Geography*, *10*(2), 107–127. http://doi.org/10.1353/lag.2011.0037

Tulane University. (2011). *Oversight of public and private initiatives to eliminate the worst forms of child labor in the cocoa sector*. New Orleans, LA: Tulane University. Retrieved from http://www.childlaborcocoa.org/images/Payson_Reports/Tulane_Final_Report.pdf

UTZ Certified. (2011). UTZ, Mayan for "Good." Retrieved from http://www.befair.be/sites/default/files/all-files/brochure/UTZ_Certified_EN.pdf

UTZ Certified. (2015a). Chain of custody standard + cocoa annex. Retrieved from https://utzcertified.org/attachments/article/26584879/EN UTZ Chain of Custody Standard + Coffee Annex version 1.1 December 2015.pdf

UTZ Certified. (2015b). How to join UTZ for cocoa companies. Retrieved January 28, 2017, from https://www.utz.org/join-utz/join-as-company/steps-join-utz-companies-cocoa/

UTZ Certified. (2016a). Certification bodies. Retrieved January 28, 2017, from https://www.utz.org/who-we-work-with/certification-bodies/

UTZ Certified. (2016b). UTZ guidance document. UTZ premium. Retrieved from https://www.utz.org/wp-content/uploads/2015/12/Premium-Guidance-document-UTZ.pdf

UTZ Certified. (2016c, November 24). How the Sustainable Development Goals can help your company set a sustainability agenda. Retrieved from https://www.utz.org/better-business-hub/strengthening-your-reputation/sustainable-development-goals-can-help-company-set-sustainability-agenda/

UTZ Certified. (2017). About UTZ. Retrieved January 28, 2017, from https://www.utz.org/who-we-are/about-utz/

Valkila, J., Haaparanta, P., & Niemi, N. (2010). Empowering coffee traders? The coffee value chain from Nicaraguan Fair Trade farmers to finnish consumers. *Journal of Business Ethics*, *97*, 257–270. http://doi.org/10.1007/s10551-010-0508-z

Waarts, Y., Judge, L., Brons, J., & Ruyter de Wildt, M. de. (2013). *Upscaling the impact of sustainability certification initiatives. Enabling conditions and policy recommendations for regional development*. The Hague, the Netherlands: LEI Wageningen UR.

Walrecht, A., Basso, K., & Hime, S. (2012). *Certification and biodiversity*. Amstelveen, the

Netherlands: KPMG Advisory N. V.

Wolfswinkel, J., Furtmueller, E., & Wilderom, C. P. M. (2013). Using grounded theory as a method for rigorously reviewing literature. *European Journal of Information Systems*, *22*, 45–55. http://doi.org/10.1057/ejis.2011.51

World Cocoa Foundation. (2014). *Cocoa market update*. Washington, DC. Retrieved from http://worldcocoafoundation.org/wp-content/uploads/Cocoa-Market-Update-as-of-4-1-2014.pdf

Annex

Annex A: Tables of FAOSTAT Data

Table A-1: World Production of Cocoa Beans in 2014 in tonnes (Food and Agriculture Organization of the United Nations, 2016).

Area	Tonnes	Share*	Description
total world	**4,450,263**	**100.0%**	
Côte d'Ivoire	1,434,077	32.2%	FAO data based on imputation methodology
Ghana	858,720	19.3%	Official data
Indonesia	728,400	16.4%	Official data
Brazil	273,793	6.2%	Official data
Cameroon	269,902	6.1%	FAO data based on imputation methodology
Nigeria	248,000	5.6%	Unofficial figure
Ecuador	156,216	3.5%	Official data
Peru	81,651	1.8%	Official data
Dominican Republic	69,633	1.6%	Official data
Colombia	47,732	1.1%	Official data
Papua New Guinea	45,019	1.0%	FAO data based on imputation methodology
Togo	30,516	0.7%	FAO data based on imputation methodology
Mexico	26,969	0.6%	Official data
Venezuela	21,735	0.5%	Official data
Uganda	20,979	0.5%	FAO data based on imputation methodology
Sierra Leone	15,879	0.4%	FAO data based on imputation methodology
India	15,000	0.3%	Official data
Haiti	14,633	0.3%	Official data
Guatemala	13,109	0.3%	Official data
Guinea	9,439	0.2%	FAO data based on imputation methodology
Madagascar	8,818	0.2%	FAO data based on imputation methodology
Liberia	7,500	0.2%	Unofficial figure
Bolivia	7,164	0.2%	Official data
Tanzania	5,645	0.1%	FAO data based on imputation methodology
Philippines	5,428	0.1%	Official data
Congo	5,000	0.1%	Unofficial figure
Solomon Islands	4,825	0.1%	FAO data based on imputation methodology
Sao Tome and Principe	3,200	0.1%	Unofficial figure
Malaysia	2,665	0.1%	Official data
D. R. Congo	2,500	0.1%	Unofficial figure
Cuba	2,188	0.0%	Official data
Nicaragua	1,870	0.0%	FAO data based on imputation methodology
Sri Lanka	1,812	0.0%	Official data
Vanuatu	1,663	0.0%	FAO data based on imputation methodology
Jamaica	1,154	0.0%	Official data
Honduras	941	0.0%	FAO data based on imputation methodology
Grenada	900	0.0%	Unofficial figure
Costa Rica	700	0.0%	Official data

Equatorial Guinea	668	0.0%	FAO data based on imputation methodology
Panama	641	0.0%	Official data
Samoa	484	0.0%	FAO data based on imputation methodology
Guyana	469	0.0%	FAO data based on imputation methodology
Angola	414	0.0%	FAO data based on imputation methodology
El Salvador	366	0.0%	Official data
Trinidad and Tobago	329	0.0%	Official data
Dominica	297	0.0%	FAO data based on imputation methodology
Saint Vincent and the Grenadines	217	0.0%	FAO data based on imputation methodology
Gabon	207	0.0%	FAO data based on imputation methodology
Timor-Leste	163	0.0%	FAO data based on imputation methodology
Thailand	144	0.0%	Official data
Central African Republic	133	0.0%	FAO data based on imputation methodology
Benin	117	0.0%	FAO data based on imputation methodology
Belize	75	0.0%	Official data
Saint Lucia	63	0.0%	FAO data based on imputation methodology
Comoros	42	0.0%	FAO data based on imputation methodology
Micronesia	32	0.0%	FAO data based on imputation methodology
Fiji	20	0.0%	FAO estimate
Suriname	6	0.0%	FAO data based on imputation methodology
American Samoa	1	0.0%	FAO data based on imputation methodology
Guadeloupe	0	0.0%	FAO data based on imputation methodology
total world	**4,450,263**	**100.0%**	

* Share calculated by author

Table A-2: World Imports of Cocoa Beans 2013 in tonnes (Food and Agriculture Organization of the United Nations, 2016)

Country	Tonnes	Share*	Description
sum world	**2,943,227**	**100,00%**	
sum EU 28 countries	**1,591,897**	**54.09%**	
Netherlands	630,800	21.43%	Official data
United States of America	445,203	15.13%	Official data
Malaysia	311,608	10.59%	Official data
Germany	292,416	9.94%	Official data
Belgium	235,753	8.01%	Official data
France	121,974	4.14%	Official data
Spain	102,668	3.49%	Official data
Italy	89,165	3.03%	Official data
Turkey	82,188	2.79%	Official data
Singapore	77,725	2.64%	Official data
United Kingdom	73,104	2.48%	Official data
Canada	70,529	2.40%	Official data
Russian Federation	61,974	2.11%	Official data
China, mainland	48,943	1.66%	Official data
Japan	40,976	1.39%	Official data
Switzerland	40,925	1.39%	Official data
Indonesia	30,766	1.05%	Official data
Mexico	22,953	0.78%	Official data
Ukraine	20,804	0.71%	Official data
Brazil	17,003	0.58%	Official data
Thailand	16,767	0.57%	Official data
Austria	13,864	0.47%	Official data
India	13,828	0.47%	Official data
Poland	10,592	0.36%	Official data
Slovakia	7,578	0.26%	Official data
Algeria	7,287	0.46%	Official data
Belarus	6,972	0.24%	Official data
Tunisia	5,243	0.18%	Official data
Kazakhstan	4,891	0.17%	Official data
Republic of Korea	4,712	0.16%	Official data
Serbia	4,011	0.14%	Official data
Iran	3,744	0.13%	Unofficial figure
Denmark	3,422	0.12%	Official data
Ireland	3,019	0.10%	Official data
Greece	2,645	0.09%	Official data
Croatia	2,323	0.08%	Official data
Colombia	2,316	0.08%	Official data
Latvia	2,135	0.07%	Official data
Sri Lanka	2,128	0.07%	Official data
Armenia	1,695	0.06%	Official data

New Zealand	1,385	0.05%	Official data
Guatemala	878	0.03%	Official data
El Salvador	810	0.03%	Official data
Peru	624	0.02%	Official data
Viet Nam	405	0.01%	Estimated data using trading partners database
Occupied Palestinian Territory	350	0.01%	FAO estimate
Portugal	331	0.01%	Official data
Australia	286	0.01%	Official data
Argentina	253	0.01%	Official data
Philippines	218	0.01%	Official data
United Arab Emirates	203	0.01%	Estimated data using trading partners database
Bosnia and Herzegovina	190	0.01%	Official data
Angola	101	0.00%	Estimated data using trading partners database
Qatar	85	0.00%	Official data
Panama	70	0.00%	Official data
Estonia	28	0.00%	Official data
Ecuador	26	0.00%	Official data
Gabon	25	0.00%	Estimated data using trading partners database
Lebanon	25	0.00%	Official data
Israel	23	0.00%	Official data
Sweden	21	0.00%	Official data
Bolivia	20	0.00%	Official data
Slovenia	19	0.00%	Official data
Azerbaijan	17	0.00%	Official data
Jamaica	15	0.00%	Official data
Former Yugoslav Republic of Macedonia	15	0.00%	Official data
China, Hong Kong SAR	12	0.00%	Official data
China, Taiwan Province of	12	0.00%	Official data
Czechia	12	0.00%	Official data
Bulgaria	10	0.00%	Unofficial figure
Ghana	10	0.00%	Official data
Uganda	10	0.00%	Official data
Kenya	9	0.00%	Official data
South Africa	9	0.00%	Official data
Finland	7	0.00%	Official data
Bahrain	6	0.00%	Official data
Norway	6	0.00%	Official data
Oman	6	0.00%	Official data
Zimbabwe	5	0.00%	Official data
Honduras	4	0.00%	FAO estimate
Madagascar	4	0.00%	Official data
Romania	4	0.00%	Official data
Barbados	3	0.00%	Official data
Hungary	3	0.00%	Official data
Lithuania	3	0.00%	Official data
New Caledonia	3	0.00%	Official data

Benin	2	0.00%	Official data
Iceland	2	0.00%	Official data
Morocco	2	0.00%	Official data
Bahamas	1	0.00%	Official data
Côte d'Ivoire	1	0.00%	Official data
Chile	1	0.00%	Official data
Kuwait	1	0.00%	Official data
Luxembourg	1	0.00%	Official data
Namibia	1	0.00%	Official data
Nepal	1	0.00%	Official data
Nigeria	1	0.00%	Estimated data using trading partners database
Pakistan	1	0.00%	Official data
Sudan	1	0.00%	Estimated data using trading partners database
Zambia	1	0.00%	Official data
Cyprus	0	0.00%	Official data
Malta	0	0.00%	FAO estimate
sum world	**2,943,227**	**100,00%**	
sum EU 28 countries	**1,591,897**	**54.09%**	

*Share calculated by author

Table A-3: World Imports of Cocoa Butter in 2013 in tonnes (Food and Agriculture Organization of the United Nations, 2016)

Country	Tonnes	Share*	Description
Sum world	**823,479**	**100.00%**	
Sum EU 28 countries	**423,871**	**51.47%**	
Germany	114,623	13.92%	Official data
Netherlands	92,355	11.22%	Official data
United States of America	80,664	9.80%	Official data
Belgium	76,070	9.24%	Official data
France	63,618	7.73%	Official data
United Kingdom	50,604	6.15%	Official data
Russian Federation	39,211	4.76%	Official data
Italy	30,308	3.68%	Official data
Switzerland	28,797	3.50%	Official data
Canada	25,910	3.15%	Official data
Poland	25,126	3.05%	Official data
Japan	24,262	2.95%	Official data
Australia	17,902	2.17%	Official data
Turkey	14,069	1.71%	Official data
China, mainland	13,389	1.63%	Official data
Ukraine	12,734	1.55%	Official data
Argentina	9,771	1.19%	Official data
United Arab Emirates	8,908	1.08%	Provisional official data
Bulgaria	6,552	0.80%	Official data
Sweden	6,191	0.75%	Official data
Ireland	5,888	0.72%	Official data
Austria	5,413	0.66%	Official data
South Africa	5,048	0.61%	Official data
Spain	4,558	0.55%	Official data
Singapore	4,224	0.51%	Official data
Norway	4,141	0.50%	Official data
Israel	3,906	0.47%	Official data
Finland	3,897	0.47%	Official data
Czechia	3,748	0.46%	Official data
Malaysia	3,194	0.39%	Unofficial figure
Slovakia	3,052	0.37%	Official data
Greece	2,891	0.35%	Official data
Chile	2,881	0.35%	Official data
New Zealand	2,808	0.34%	Official data
Republic of Korea	2,224	0.27%	Official data
India	2,141	0.26%	Official data
Iran	2,029	0.25%	Provisional official data
Serbia	1,808	0.22%	Official data
Saudi Arabia	1,608	0.20%	Official data
Egypt	1,539	0.19%	Official data

Croatia	1,188	0.14%	Official data
Romania	1,030	0.13%	Official data
Peru	1,009	0.12%	Official data
Syrian Arab Republic	887	0.11%	FAO estimate
Pakistan	881	0.11%	Official data
Belarus	833	0.10%	Official data
Estonia	656	0.08%	Official data
Lithuania	612	0.07%	Official data
Morocco	608	0.07%	Official data
Iceland	551	0.07%	Official data
Mexico	504	0.06%	Official data
Lebanon	447	0.05%	Official data
Hungary	437	0.05%	Official data
Portugal	406	0.05%	Official data
Indonesia	403	0.05%	Official data
Former Yugoslav Republic of Macedonia	402	0.05%	Official data
Philippines	376	0.05%	Official data
Bosnia and Herzegovina	351	0.04%	Official data
Denmark	341	0.04%	Official data
Slovenia	328	0.04%	Official data
Uzbekistan	304	0.04%	Provisional official data
Jordan	291	0.04%	Official data
Algeria	276	0.03%	Official data
Ethiopia	204	0.02%	Official data
Brazil	187	0.02%	Official data
Uruguay	178	0.02%	Official data
Latvia	158	0.02%	Official data
Costa Rica	154	0.02%	Official data
Trinidad and Tobago	134	0.02%	Provisional official data
Bolivia	133	0.02%	Official data
Nigeria	131	0.02%	FAO estimate
Bangladesh	97	0.01%	Provisional official data
Republic of Moldova	96	0.01%	Official data
Libya	94	0.01%	Provisional official data
China, Taiwan Province of	91	0.01%	Official data
Thailand	84	0.01%	Official data
Qatar	69	0.01%	Official data
Sri Lanka	60	0.01%	Official data
Kuwait	59	0.01%	Official data
Guatemala	55	0.01%	Official data
Kyrgyzstan	47	0.01%	FAO estimate
Tunisia	32	0.00%	Official data
Yemen	25	0.00%	Official data
Colombia	23	0.00%	Official data
Cyprus	19	0.00%	Official data
Cameroon	18	0.00%	FAO estimate

Azerbaijan	13	0.00%	Unofficial figure
Namibia	12	0.00%	Official data
Iraq	11	0.00%	FAO estimate
Luxembourg	10	0.00%	Official data
Kazakhstan	8	0.00%	Official data
Niger	7	0.00%	Official data
Botswana	6	0.00%	Official data
Oman	6	0.00%	Official data
Saint Vincent and the Grenadines	6	0.00%	FAO estimate
Armenia	5	0.00%	Official data
Bahrain	5	0.00%	Official data
Uganda	5	0.00%	Official data
Nicaragua	4	0.00%	Official data
Rwanda	4	0.00%	Official data
Aruba	3	0.00%	FAO estimate
D. R. Congo	3	0.00%	Provisional official data
Mongolia	3	0.00%	Provisional official data
Barbados	2	0.00%	Official data
Burkina Faso	2	0.00%	Official data
Burundi	2	0.00%	Official data
Georgia	2	0.00%	Official data
Kenya	2	0.00%	Official data
Mali	2	0.00%	FAO estimate
Malta	2	0.00%	Official data
Mauritius	2	0.00%	Official data
Tanzania	2	0.00%	Official data
Zambia	2	0.00%	Official data
Zimbabwe	2	0.00%	Official data
Bahamas	1	0.00%	Official data
Cabo Verde	1	0.00%	Official data
China, Hong Kong SAR	1	0.00%	Official data
Congo	1	0.00%	Official data
Dominica	1	0.00%	FAO estimate
El Salvador	1	0.00%	Official data
Ghana	1	0.00%	Official data
Honduras	1	0.00%	FAO estimate
Jamaica	1	0.00%	Official data
Malawi	1	0.00%	Official data
Maldives	1	0.00%	Official data
New Caledonia	1	0.00%	Official data
Panama	1	0.00%	Official data
Sao Tome and Principe	1	0.00%	Official data
Senegal	1	0.00%	Official data
Sum world	**823,479**	**100,00%**	
Sum EU 28 countries	**423,871**	**51.47%**	

*Share calculated by author

Table A-4: World Imports of Cocoa Paste in 2013 in tonnes (Food and Agriculture Organization of the United Nations, 2016)

Country	Tonnes	Share*	Description
sum world	**679,347**	**100.00%**	
sum EU 28 countries	**351,085**	**51.68%**	
Netherlands	98,498	14.50%	Official data
France	96,202	14.16%	Official data
Germany	82,807	12.19%	Official data
Belgium	52,410	7.71%	Official data
Russian Federation	41,695	6.14%	Official data
Poland	40,921	6.02%	Official data
Malaysia	24,164	3.56%	Official data
Canada	18,786	2.77%	Official data
Ukraine	18,564	2.73%	Official data
China, mainland	18,450	2.72%	Official data
United States of America	18,379	2.71%	Official data
Turkey	17,751	2.61%	Official data
Italy	14,547	2.14%	Official data
Singapore	10,236	1.51%	Official data
United Kingdom	9,929	1.46%	Official data
Argentina	8,696	1.28%	Official data
Japan	8,489	1.25%	Official data
Australia	7,650	1.13%	Official data
Bulgaria	6,655	0.98%	Official data
United Arab Emirates	6,180	0.91%	Estimated data using trading partners database
Spain	5,567	0.82%	Official data
South Africa	4,685	0.69%	Official data
Czechia	4,645	0.68%	Official data
Israel	4,591	0.68%	Official data
Switzerland	4,124	0.61%	Official data
India	4,041	0.59%	Official data
Republic of Korea	3,540	0.52%	Official data
Sweden	3,535	0.52%	Official data
Finland	3,500	0.52%	Official data
Greece	3,321	0.49%	Official data
Norway	3,309	0.49%	Official data
Croatia	3,251	0.48%	Official data
Kazakhstan	2,950	0.43%	Official data
Chile	2,775	0.41%	Official data
Egypt	2,371	0.35%	Unofficial figure
Serbia	2,225	0.33%	Official data
New Zealand	1,782	0.26%	Official data
Peru	1,313	0.19%	Official data
Romania	1,135	0.17%	Official data
Saudi Arabia	1,115	0.16%	Official data

Austria	1,054	0.16%	Official data
Portugal	1,025	0.15%	Official data
Algeria	944	0.14%	Official data
Lithuania	800	0.12%	Official data
Belarus	751	0.11%	Official data
Brazil	742	0.11%	Official data
Estonia	729	0.11%	Official data
Republic of Moldova	713	0.10%	Official data
Hungary	665	0.10%	Official data
Morocco	652	0.10%	Official data
Denmark	651	0.10%	Official data
Iran	470	0.07%	Estimated data using trading partners database
Lebanon	428	0.06%	Official data
Pakistan	428	0.06%	Official data
Thailand	378	0.06%	Official data
Former Yugoslav Republic of Macedonia	366	0.05%	Official data
Bosnia and Herzegovina	355	0.05%	Official data
Iceland	348	0.05%	Official data
Slovenia	336	0.05%	Official data
Jordan	279	0.04%	Official data
Costa Rica	246	0.04%	Official data
Mexico	244	0.04%	Official data
Indonesia	241	0.04%	Official data
Uruguay	216	0.03%	Official data
Slovakia	195	0.03%	Official data
Guatemala	180	0.03%	Official data
Latvia	166	0.02%	Official data
Philippines	155	0.02%	Official data
China, Taiwan Province of	140	0.02%	Official data
Trinidad and Tobago	119	0.02%	Estimated data using trading partners database
Cuba	78	0.01%	Estimated data using trading partners database
Nicaragua	75	0.01%	Official data
Ecuador	73	0.01%	Official data
Bolivia	63	0.01%	Official data
Syrian Arab Republic	42	0.01%	Estimated data using trading partners database
Cyprus	35	0.01%	Official data
Armenia	29	0.00%	Official data
Malta	28	0.00%	Official data
Nigeria	20	0.00%	FAO estimate
Bangladesh	19	0.00%	Estimated data using trading partners database
Colombia	16	0.00%	Official data
Togo	10	0.00%	Official data
Tunisia	9	0.00%	Official data
Kyrgyzstan	8	0.00%	FAO estimate
Nepal	6	0.00%	Official data
Azerbaijan	4	0.00%	Official data

Bahrain	4	0.00%	Official data
Luxembourg	4	0.00%	Official data
Paraguay	4	0.00%	Official data
Angola	3	0.00%	FAO estimate
Ireland	3	0.00%	Official data
Botswana	2	0.00%	Official data
Somalia	2	0.00%	FAO estimate
Uganda	2	0.00%	Official data
Brunei Darussalam	1	0.00%	Official data
Georgia	1	0.00%	Official data
Namibia	1	0.00%	Official data
New Caledonia	1	0.00%	Official data
Oman	1	0.00%	Official data
Papua New Guinea	1	0.00%	Estimated data using trading partners database
Sri Lanka	1	0.00%	Official data
Zimbabwe	1	0.00%	Unofficial figure
sum world	**679,347**	**100.00%**	
sum EU 28 countries	**351,085**	**51.68%**	

*Share calculated by author

Table A-5: World imports of Cocoa Powder and Cake in 2013 in tonnes (Food and Agriculture Organization of the United Nations, 2016)

Country	Tonnes	Share*	Description
sum world	**963,253**	**100.00%**	
sum EU 28 countries	**337,290**	**35.02%**	
United States of America	150,039	15.58%	Official data
France	65,087	6.76%	Official data
Germany	62,882	6.53%	Official data
Spain	56,497	5.87%	Official data
Netherlands	49,067	5.09%	Official data
Malaysia	45,146	4.69%	Unofficial figure
Russian Federation	37,715	3.92%	Official data
China, mainland	33,117	3.44%	Official data
Italy	26,630	2.76%	Official data
Canada	25,318	2.63%	Official data
Australia	22,103	2.29%	Official data
Poland	20,159	2.09%	Official data
Ukraine	19,364	2.01%	Official data
Belgium	19,336	2.01%	Official data
Turkey	18,914	1.96%	Official data
Indonesia	17,836	1.85%	Official data
Brazil	17,372	1.80%	Official data
Japan	15,899	1.65%	Official data
Argentina	15,129	1.57%	Official data
United Kingdom	14,680	1.52%	Official data
Philippines	13,433	1.39%	Official data
Thailand	11,553	1.20%	Official data
Egypt	11,199	1.16%	Unofficial figure
Iran	9,832	1.02%	Provisional official data
Algeria	8,197	0.85%	Official data
Singapore	8,162	0.85%	Official data
Chile	8,153	0.85%	Official data
Republic of Korea	7,747	0.80%	Official data
Sweden	7,441	0.77%	Official data
Hungary	6,188	0.64%	Official data
India	6,134	0.64%	Official data
Romania	5,797	0.60%	Official data
South Africa	5,718	0.59%	Official data
Mexico	5,261	0.55%	Official data
Morocco	5,238	0.54%	Unofficial figure
Israel	5,199	0.54%	Official data
Saudi Arabia	4,835	0.50%	Official data
Serbia	4,817	0.50%	Official data
Switzerland	4,543	0.47%	Official data
Greece	4,505	0.47%	Official data

Austria	4,251	0.44%	Official data
Bulgaria	4,159	0.43%	Official data
Czechia	3,899	0.40%	Official data
Viet Nam	3,584	0.37%	Provisional official data
Colombia	3,333	0.35%	Official data
China, Taiwan Province of	3,280	0.34%	Official data
United Arab Emirates	3,134	0.33%	Provisional official data
Portugal	3,070	0.32%	Official data
Pakistan	2,870	0.30%	Official data
Uruguay	2,581	0.27%	Official data
Uzbekistan	2,526	0.26%	Provisional official data
Denmark	2,348	0.24%	Official data
Slovakia	2,300	0.24%	Official data
New Zealand	2,249	0.23%	Official data
Syrian Arab Republic	2,237	0.23%	Provisional official data
Belarus	2,031	0.21%	Official data
Tunisia	2,000	0.21%	Official data
Cuba	1,694	0.18%	Provisional official data
Peru	1,665	0.17%	Official data
Bolivia	1,618	0.17%	Official data
Jordan	1,588	0.16%	Official data
Norway	1,509	0.16%	Official data
Sri Lanka	1,507	0.16%	Official data
Lebanon	1,465	0.15%	Official data
Former Yugoslav Republic of Macedonia	1,445	0.15%	Official data
Guatemala	1,434	0.15%	Official data
Croatia	1,189	0.12%	Official data
Kenya	1,158	0.12%	Official data
Kazakhstan	1,134	0.12%	Official data
Lithuania	987	0.10%	Official data
Bosnia and Herzegovina	982	0.10%	Official data
Slovenia	933	0.10%	Official data
Senegal	925	0.10%	Official data
Libya	853	0.09%	Provisional official data
Bangladesh	814	0.08%	Provisional official data
Finland	794	0.08%	Official data
Venezuela	793	0.08%	Official data
Republic of Moldova	779	0.08%	Official data
Yemen	774	0.08%	Official data
Costa Rica	757	0.08%	Official data
Latvia	590	0.06%	Official data
China, Hong Kong SAR	545	0.06%	Official data
Kuwait	477	0.05%	Official data
Armenia	405	0.04%	Official data
Azerbaijan	404	0.04%	Official data
Estonia	399	0.04%	Official data

El Salvador	381	0.04%	Official data
Georgia	379	0.04%	Official data
Trinidad and Tobago	372	0.04%	Provisional official data
Nicaragua	366	0.04%	Official data
Jamaica	352	0.04%	Official data
Dominican Republic	342	0.04%	Provisional official data
Iraq	315	0.03%	Provisional official data
Ethiopia	299	0.03%	Official data
Ireland	298	0.03%	Official data
Paraguay	269	0.03%	Official data
Myanmar	226	0.02%	Provisional official data
Zambia	215	0.02%	Official data
Panama	206	0.02%	Official data
Sierra Leone	195	0.02%	Provisional official data
Albania	184	0.02%	Official data
Kyrgyzstan	179	0.02%	Provisional official data
Fiji	173	0.02%	Official data
Tajikistan	147	0.02%	Provisional official data
Oman	140	0.01%	Official data
Iceland	135	0.01%	Official data
Madagascar	135	0.01%	Official data
Cyprus	134	0.01%	Official data
Brunei Darussalam	130	0.01%	Official data
Qatar	123	0.01%	Official data
Zimbabwe	114	0.01%	Official data
Luxembourg	105	0.01%	Official data
Ghana	97	0.01%	Official data
Honduras	92	0.01%	Provisional official data
Nepal	91	0.01%	Official data
Mozambique	84	0.01%	Provisional official data
Suriname	70	0.01%	Provisional official data
Mauritius	62	0.01%	Official data
Cameroon	60	0.01%	Provisional official data
Angola	51	0.01%	Provisional official data
Djibouti	51	0.01%	Provisional official data
Gambia	48	0.00%	Official data
Ecuador	43	0.00%	Official data
Bahrain	42	0.00%	Official data
Samoa	42	0.00%	Official data
Sudan	42	0.00%	Provisional official data
Swaziland	41	0.00%	Provisional official data
Barbados	39	0.00%	Official data
Tanzania	38	0.00%	Official data
Malta	37	0.00%	Official data
Montenegro	37	0.00%	Official data
Belize	36	0.00%	Official data

Mongolia	29	0.00%	Provisional official data
Kiribati	28	0.00%	Provisional official data
Namibia	27	0.00%	Official data
Togo	27	0.00%	Official data
Guinea	26	0.00%	Provisional official data
Cabo Verde	25	0.00%	Official data
French Polynesia	24	0.00%	Official data
Uganda	24	0.00%	Official data
Saint Vincent and the Grenadines	22	0.00%	FAO estimate
Bahamas	21	0.00%	Official data
D. R. Congo	20	0.00%	Provisional official data
New Caledonia	20	0.00%	Official data
Solomon Islands	19	0.00%	Official data
Guyana	18	0.00%	Official data
Benin	17	0.00%	Official data
Tonga	17	0.00%	Official data
Lesotho	13	0.00%	Provisional official data
Malawi	13	0.00%	Official data
Rwanda	13	0.00%	Official data
Cambodia	12	0.00%	Official data
Faroe Islands	12	0.00%	Provisional official data
Papua New Guinea	12	0.00%	Provisional official data
Nigeria	11	0.00%	Provisional official data
Guinea-Bissau	10	0.00%	Provisional official data
Maldives	8	0.00%	Official data
Aruba	7	0.00%	Provisional official data
Antigua and Barbuda	6	0.00%	Official data
Botswana	6	0.00%	Official data
Congo	6	0.00%	Official data
Mali	6	0.00%	Provisional official data
Bermuda	5	0.00%	Official data
Niger	5	0.00%	Official data
Vanuatu	4	0.00%	Provisional official data
CÃ´te d'Ivoire	3	0.00%	Official data
Seychelles	2	0.00%	Provisional official data
Burkina Faso	1	0.00%	Official data
Burundi	1	0.00%	Unofficial figure
Cook Islands	1	0.00%	FAO estimate
Gabon	1	0.00%	Provisional official data
Saint Lucia	1	0.00%	FAO estimate
Saint Pierre and Miquelon	1	0.00%	Provisional official data
Tuvalu	1	0.00%	Provisional official data
sum world	**963,253**	**100.00%**	
sum EU 28 countries	**337,290**	**35.02%**	

*Share calculated by author

Annex B: Table of International Trade Centre Data

Table A-6: Value of World Exports of Chocolate and Other Food Preparations Containing Cocoa in thousand USD in 2014 (International Trade Centre, 2017)

Exporters	Exported value in thousand USD	Share*
World	**28,019,732**	**100.00%**
EU 28 countries	**12,502,296**	**44.62%**
Germany	4,964,014	17.72%
Belgium	2,952,838	10.54%
Netherlands	1,989,122	7.10%
Italy	1,713,673	6.12%
United States of America	1,646,525	5.88%
France	1,617,426	5.77%
Poland	1,405,253	5.02%
Canada	1,197,698	4.27%
United Kingdom	935,862	3.34%
Switzerland	869,532	3.10%
Russian Federation	650,936	2.32%
Turkey	576,405	2.06%
Mexico	565,434	2.02%
Austria	535,180	1.91%
Spain	469,365	1.68%
Singapore	469,241	1.67%
United Arab Emirates	413,045	1.47%
Sweden	353,757	1.26%
China	338,695	1.21%
Ireland	319,157	1.14%
Czech Republic	318,270	1.14%
Ukraine	288,727	1.03%
Slovakia	222,518	0.79%
Australia	190,281	0.68%
Denmark	189,380	0.68%
Hong Kong, China	185,610	0.66%
Hungary	172,424	0.62%
Malaysia	150,124	0.54%
Egypt	148,373	0.53%
Argentina	143,876	0.51%
Lithuania	139,167	0.50%
New Zealand	127,371	0.45%
Brazil	110,940	0.40%
Bulgaria	97,515	0.35%
Finland	92,187	0.33%
Colombia	91,380	0.33%
Croatia	84,773	0.30%
India	77,419	0.28%
Japan	72,531	0.26%

Côte d'Ivoire	68,267	0.24%
South Africa	65,896	0.24%
Romania	58,413	0.21%
Iran, Islamic Republic of	58,179	0.21%
Serbia	55,878	0.20%
Korea, Republic of	54,872	0.20%
Belarus	51,888	0.19%
Lebanon	50,483	0.18%
Indonesia	45,053	0.16%
Kazakhstan	42,202	0.15%
Norway	36,982	0.13%
Thailand	34,510	0.12%
Tunisia	32,975	0.12%
Greece	31,805	0.11%
Latvia	27,408	0.10%
Ecuador	26,112	0.09%
Portugal	25,473	0.09%
Saudi Arabia	24,462	0.09%
Panama	20,869	0.07%
Slovenia	19,780	0.07%
Chile	18,979	0.07%
Israel	16,331	0.06%
Philippines	15,589	0.06%
Cameroon	14,097	0.05%
Bosnia and Herzegovina	13,876	0.05%
Peru	13,486	0.05%
Azerbaijan	11,864	0.04%
Macedonia, The Former Yugoslav Republic of	11,362	0.04%
Taipei, Chinese	11,101	0.04%
Estonia	10,985	0.04%
Luxembourg	10,315	0.04%
Guatemala	9,271	0.03%
Viet Nam	9,081	0.03%
Jordan	8,735	0.03%
Trinidad and Tobago	8,630	0.03%
Costa Rica	8,259	0.03%
Swaziland	7,177	0.03%
Palestine, State of	7,005	0.03%
Sri Lanka	6,291	0.02%
Malta	5,871	0.02%
Senegal	5,839	0.02%
Moldova, Republic of	5,493	0.02%
Ghana	5,253	0.02%
Morocco	5,109	0.02%
Montenegro	4,929	0.02%
Uruguay	4,833	0.02%
El Salvador	4,787	0.02%

Kenya	4,266	0.02%
Syrian Arab Republic	3,606	0.01%
Turkmenistan	3,213	0.01%
Dominican Republic	3,193	0.01%
Iceland	2,973	0.01%
Uzbekistan	2,940	0.01%
Bahrain	2,505	0.01%
Namibia	2,492	0.01%
Kuwait	2,269	0.01%
Tajikistan	1,934	0.01%
Armenia	1,928	0.01%
Oman	1,670	0.01%
Madagascar	1,401	0.01%
Georgia	1,136	0.00%
Jamaica	1,115	0.00%
Zambia	1,082	0.00%
Venezuela	1,036	0.00%
Brunei Darussalam	762	0.00%
Free Zones	746	0.00%
Zimbabwe	627	0.00%
Suriname	532	0.00%
Bangladesh	514	0.00%
Mauritius	500	0.00%
Gabon	423	0.00%
Macao, China	315	0.00%
Uganda	310	0.00%
Sao Tome and Principe	260	0.00%
Mongolia	258	0.00%
Congo	251	0.00%
Cabo Verde	248	0.00%
Rwanda	236	0.00%
Nigeria	222	0.00%
Grenada	210	0.00%
Kyrgyzstan	204	0.00%
Albania	190	0.00%
Bolivia	182	0.00%
Cuba	173	0.00%
Pakistan	164	0.00%
Netherlands Antilles	136	0.00%
Barbados	128	0.00%
Fiji	118	0.00%
Togo	111	0.00%
Yemen	107	0.00%
Paraguay	98	0.00%
Tanzania	94	0.00%
New Caledonia	80	0.00%
Dominica	74	0.00%
Cyprus	71	0.00%

Saint Lucia	71	0.00%
United States Minor Outlying Islands	57	0.00%
Mozambique	53	0.00%
Nicaragua	53	0.00%
French Polynesia	45	0.00%
Libya, State of	40	0.00%
Gambia	29	0.00%
D. R. Congo	28	0.00%
Niger	26	0.00%
Ethiopia	21	0.00%
Botswana	13	0.00%
Nepal	12	0.00%
Equatorial Guinea	12	0.00%
British Virgin Islands	10	0.00%
Lesotho	10	0.00%
Solomon Islands	10	0.00%
Aruba	9	0.00%
Algeria	8	0.00%
Lao People's Democratic Republic	6	0.00%
Vanuatu	6	0.00%
Honduras	5	0.00%
Samoa	4	0.00%
Saint Helena	4	0.00%
Tokelau	3	0.00%
Sudan (North + South)	3	0.00%
Andorra	2	0.00%
Mali	2	0.00%
Papua New Guinea	2	0.00%
Antigua and Barbuda	2	0.00%
Belize	1	0.00%
Haiti	1	0.00%
Palau	1	0.00%
Korea, Democratic People's Republic of	1	0.00%
Sum world	**28,019,732**	**100.00%**
Sum EU 28 countries	**12,502,296**	**44.62%**

*Share calculated by author