Czech University of Life Sciences Prague Faculty of Economics and Management Department of Economics



Diploma Thesis

Fairtrade Certification for Coffee Production in Rwanda

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CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

DIPLOMA THESIS ASSIGNMENT

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Economics and Management Economics and Management

Thesis title

Fair Trade certification for coffee production in Rwanda

Objectives of thesis

The aim of this thesis is to examine the impact of Fair Trade certification on the coffee sector in Rwanda.

The objectives below will be taken into consideration:

- Analyze the implementation of Fair Trade certification and its impact on coffee production in Rwanda,
- Assess the impact of fair trade certification of the coffee farmers livelihood,
- Identify the effect of coffee certification on the value of Rwandan export.

This thesis aims to answer the question: Can Fair Trade certification on coffee production guarantee an improvement in living standards of the farmers?

Methodology

The comparative methodology will be used for this research thesis. The project will have two main parts: theoretical and practical. The theoretical part will focus on specialized literature of Fair Trade with an emphasize on Fair Trade Certification for Coffee Production in Rwanda. The practical part will conduct an effective data analysis on financial and socio-economic development for the coffee production cooperatives.

The thesis data will be obtained from primary and secondary data to be compared and evaluated.

- Primary source of information conducting a survey on selected coffee production cooperatives. Received data from the survey will be processed and developed using quantitative method.
- Secondary source of information Data from different organization such as International Coffee Organization, World Bank, Food and Agriculture Organization of the United Nations (FAO)and Food and Agriculture Organization Corporate Statistical Database (FAOSTAT), Rwanda National Coffee Strategy, National Agricultural Export Development Board.

The proposed extent of the thesis

60-80 pages

Keywords

Fair Trade, Fairtrade international, Fairtrade Certificate, Coffee production, Coffee Farmers, Cooperatives, Living Standards, Social Standards, Agricultural Practices, Rwanda

Recommended information sources

Joshua G. Bray & Jeffrey Neilson (2017) Reviewing the impacts of coffee certification programmes on smallholder livelihoods, International Journal of Biodiversity Science, Ecosystem Services & Management, (2017) Vol 13, No. 1, 216 – 232, DOI: 10.1080/21513732.2017.1316520

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Sara D. Elder, Hisham Zerriffi, Philippe Le Billon. "Is Fair-trade Certification greening agricultural practice? An analysis of Fair-trade environmental Standards in Rwanda." Journal of Rural Studies 32 (2013): 264-274.

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	Declaration					
	I declare that I	have worked o	n my diploi	ma thesis en	titled "Fairtra	de Certificat
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Fairtrade Certification for Coffee Production in Rwanda

Abstract

Fair Trade's main purpose is to enrich the economic, social and environmental conditions of marginalized farmers in the developing world by using production and trade standards. The most recognized aspect of the movement is Fairtrade International, the biggest Fair Trade certification organization. The system was created to give advantages in international trade to farming cooperatives that decided to join the movement. During the past few decades, standardized coffee production certifications have gradually become popular amongst consumers globally. The certification seals often give the impression that, by buying certified coffee, the consumer is contributing to the improvement of socio-economic conditions in the coffee production process. Nevertheless, numerous certifications depend on producer cooperatives to influence the individual farmer. Subsequently, studies exploring how certification standards are implemented at cooperative-farm level in Rwanda are rare, making it unclear what limitations they face. This thesis will carry out a case study that portrays how Fairtrade certification procedures are implemented in two selected coffee farmers' cooperatives in Rwanda and the respective socio-economic impact of the certification on the livelihood of coffee farmers in Rwanda.

Keywords: Fair Trade, Fairtrade International, Fairtrade certification, Coffee production, Coffee farmers, Living standards, Social standards, Cooperatives, Agricultural practices, Rwanda.

Fairtrade Certifikace pro výrobu kávy v Rwandě

Abstrakt

Hlavním účelem hnutí Fair Trade je obohatit hospodářské, sociální a environmentální podmínky marginalizovaných zemědělců v rozvojovém světě pomocí výrobních a obchodních standardů. Nejuznávanějším aspektem tohoto hnutí je Fairtrade International, největší certifikační organizace Fair Trade. Systém byl vytvořen, aby poskytoval výhody v mezinárodním obchodu zemědělským družstvům, která se rozhodla připojit se k hnutí. Během posledních několika desetiletí se mezi spotřebiteli po celém světě postupně staly populární standardizované certifikace výroby kávy. Certifikační pečeti často vyvolávají dojem, že nákupem certifikované kávy spotřebitel přispívá ke zlepšení sociálně-ekonomických podmínek v procesu výroby kávy. Často se ale stává, že certifikace jsou závislé na vlivu výrobních družstev na jednotlivé zemědělce. V důsledku toho jsou studie zkoumající, jak jsou certifikační standardy implementovány na úrovni zemědělských družstev ve Rwandě, vzácné, takže není zřejmé, jakým omezením družstva čelí. Tato diplomová práce provede případovou studii, která objasní, jak jsou implementovány certifikační postupy Fairtrade ve dvou vybraných družstvech pěstitelů kávy ve Rwandě a jaký je socio-ekonomický dopad certifikace na živobytí pěstitelů kávy ve Rwandě.

Klíčová slova: Fair Trade, Fairtrade International, Fairtrade certifikace, Výroba kávy, Kávovníci, Životní úroveň, Sociální standardy, Družstva, Zemědělská praxe, Rwanda.

Table of contents

1. Introd	luction	12
2. Object	tives and Methodology	14
2.1	Objectives	14
2.2	Methodology	14
3. Literat	ture Review	16
	Fair Trade movement concept	
3.1.1	-	
3.1.2	Fair Trade history, principles and goals	17
3.1.3	Organizations of Fair Trade	18
3.2	Fairtrade Trademark	19
3.2.1	Fairtrade certification	20
3.2.2	Pairtrade pricing	20
3.2.3	Main commodities of Fairtrade	22
3.2.4	Fairtrade on worldwide level	22
3.3	Fairtrade certification for coffee products	23
3.3.1	Worldwide coffee production	23
3.3.2	History of Fairtrade coffee	24
3.3.3	Fairtrade coffee minimum price and premium	26
3.3.4	Fairtrade coffee market on global level	27
3.3.5	Fairtrade coffee and sustainable agriculture practice	29
3.4	Overview of common certification programs	31
3.4.1	UTZ	31
3.4.2	Shade/Bird Friendly	31
3.4.3	Rainforest Alliance	31
3.4.4	Organic	32
3.4.5	Direct trade	32
3.4.6	Comparison of Direct Trade with Fairtrade	33
4 Practic	cal Part	34
	Coffee sector in Rwanda	
4.1.1		
4.1.2		
4.1.3	•	
4.1.4		
4.1.5		
	Fairtrade impact on coffee farmer's income	
4.2.1	-	
4.2.2		

4.2.3	Different countries - distribution of farmer income	
4.2.4	Coffee yield and profit per hectare	
4.2.5	Rwandan coffee farmers' household income distribution	
4.3 Fair	rtrade impact on coffee cooperatives55	
4.3.1	Cooperative 1 – Fairtrade certified COOPEC	
4.3.2	Cooperative 2 – Fairtrade certified RWASHOSCCO57	
4.3.3	Socio-economic impacts of Fairtrade in the community59	
4.4 Fair	rtrade impact on Rwandan trade60	
4.4.1	Rwandan economy overview	
4.4.2	Rwanda coffee export price 1996 – 2018	
4.4.3	Certified coffee impact on Rwandan export sector	
4.5 Por	ter's five forces analysis65	
4.5.1	Threat of new entrants65	
4.5.2	Rivalry among existing competitors	
4.5.3	Threat of the substitute's products	
4.5.4	Bargaining power of buyer67	
4.5.5	Bargaining power of supplier	
4.6 SW	OT analysis	
4.6.1	Strengths	
4.6.2	Weaknesses	
4.6.3	Opportunities69	
4.6.4	Threats	
5. Results ar	nd Discussion71	
	sults Summary71	
	commendations and discussion	
6. Conclusio	on75	
7. Reference	es	
List of ta	ibles	
Table 1: Wor	rld top coffee producing countries 2019	24
	erview of various common certifications	
	fee farm size per household – 2015	
	anda coffee share on global production (1000 T) 2015 - 2019andan Coffee export destinations and the main exporters 2017	
	port share in the coffee production 2000-2017	
	o 10 products as per RCA for Rwanda	
List of fig	gures	
_	irtrade International key facts in 2019	10
	irtade producer countries by number of certified producer organizations 2017	

Figure 3: Facts about Fairtrade Certified coffee 2018	26
Figure 4: Arabica coffee market 1989 - 2019 (New York Price vs. Faitrade Price)	28
Figure 5: Coffee total production changes in Tonnes from 2000 to 2018	35
Figure 6: Total coffee production in Rwanda 2000-2018	36
Figure 7: Coffee value chain in Rwanda 2018	37
Figure 8: Rwanda coffee plantation yearly cycle	
Figure 9: Area harvest and yield for coffee in Rwanda 2000-2018	39
Figure 10: Export value forecast up to 2030	43
Figure 11: Production and export of coffee in Rwanda 2000-2017	44
Figure 12: Farmer household income model	49
Figure 13: Rwandan Farmer's household income in comparison to neighbouring countries 2017.	51
Figure 14: Distribution of farmer household income per country (USD/year)	52
Figure 15: Yield and coffee profit per hectare per country	
Figure 16: Farmer household income distribution of Rwanda	54
Figure 17: Coffee export value trendline 1995 – 2030 in US \$ 1000	61
Figure 18: Rwanda coffee exports monthly price and quantity January 1996 - February 2018	
Figure 19: Rwanda coffee export growth trend 2000-2017	62
Figure 20: Export revenue for Rwandan coffee in 2018 - 2019	63
Figure 21: Export destinations of Rwandan coffee in 2018 - 2019	
Figure 22: Production and sales of UTZ certified green coffee in Rwanda 2012 – 2017	64
List of Pictures	
Picture 1: WFTO Logo	18
Picture 2: Fairtrade logo	18
Picture 3: UTZ logo	31
Picture 4: Rainforest Alliance Logo	31
Picture 5: Fully washed green arabica coffee prices	48
List of abbreviations	
COOREC Constitution was to Down the Astinities Coff	

COOPEC - Coopérative pour la Promotion des Activités-Café

EUR – Euro currency

FAO - Food and Agriculture Organization of Unites Nations

FAOSTAT - Food and Agriculture Organization Corporate Statistical Database

FLO - Fairtrade Labelling Organization

FLO-CERT – Fairtrade Labelling Organizations International - Certification

GDP - Gross Domestic Product

GoR - Government of Rwanda

Ha - Hectare

ICO – International Coffee Organization

MT – Metric Tonnes

NAEB - National Agricultural Export Development Board

NGO - Non-Governmental Organization

RWASHOSCCO - Rwanda Small Holder Specialty Coffee Company

RWF - Rwandan francs

USD – United States Dollar

WFTO – Word Fair Trade Organization

1. Introduction

Recently, certification initiatives and voluntary standards for sustainability have been a mutual feature of many agricultural landscapes worldwide. The rapid expansion of such initiatives has not only lately been accompanied by intensive attempts to evaluate the lived experience of producers but also expand their products sales through mainstream market channels.

The concept of Fair Trade is a complex movement established with the fundamental purpose of helping disadvantaged small producers from developing countries through trade. Fair Trade is often connected with the terms fair price on global market between developed and developing countries where the interests of farmers and the environment are put first. Fairtrade International works to share the benefits of trade more equally – through standards, certification, producer support, programmers and advocacy.

The ambition of Fairtrade¹ is to see small-scale farmers earning a living income that provides them with a sustainable, dignified livelihood, which is a core part of Fairtrade's 2016-2020 strategy. In order to better understand how much the farmer benefits from the program and what Fairtrade's potential impact is on farmers' household income is, the Pricing Unit of Fairtrade International commissioned a study to assess the farmers' household income. Quality delivers higher prices for producers and higher value for product consumers; Fairtrade therefore supports the growth of the higher products quality as well as better living standards for farmers.

Coffee as the major topic of this thesis, is one of the most-traded products in commodities. Over the past few decades, coffee production certifications have gradually become popular amongst consumers globally. The certification seals often stimulate the impression that by buying certified coffee, the consumer is contributing to environmental and socio-economic conditions improvement in the coffee production process. Numerous certifications depend on producer cooperatives to influence the individual farmer. Nevertheless, studies exploring how theoretical certification standards are put into practice at farm-and-cooperative level are rare. Subsequently, it is not clear what limitations farmers and cooperative managers face in properly implementing practices as intended for by certifications. (Tardif-Douglin, et al. 1996). Fairtrade has great potential in the coffee

¹ This thesis uses the term 'Fair Trade' (written in two words) to refer to the movement and the practice of trade that is based on better conditions of producers and environment. Whereas 'Fairtrade' (written as one word) is used to refer to product certification by the Fairtrade Labelling Organization International (FLO).

sector considering that this is produced in developing countries where the welfare of the farmers is likely not the primary goal of multinational organizations who buy, process and sell the coffee.

In Rwanda, coffee production has been at the core of family farm incomes for many generations. Today, it is the primary source of income for over 355,771 households across the country (NAEB, 2016). The coffee value chain has enjoyed a renaissance focusing on the specialty coffee that has become the darling of coffee markets and consumers around the world. The construction of 301 privately and cooperatively owned washing stations contributed to the tremendous value added to the Rwandan coffee sector. In addition, this change has attracted dry mills and export business both domestically and internationally. Therefore, this transformation exposed Rwandan coffee to the Fairtrade concept. Even though, this is still quite new in Rwanda compared to other African countries such as Kenya and Ethiopia, for Rwandan coffee farmers the Fairtrade certification system provides both resources and guidelines for changing conditions within their farms, households and communities.

2. Objectives and Methodology

2.1 Objectives

The aim of the thesis is to examine how the Fairtrade certification program impacts the coffee sector in Rwanda. The objectives of the study focus on analysing the implementation of Fairtrade certification and its impact on coffee production, assessing the impact of Fairtrade certification on the coffee farmers' income by identifying the ways in which Fairtrade certification can affect the income of the coffee producers in Rwanda, and identifying the effects of coffee certification on the value of Rwandan export. While the thesis focuses on analysing economic aspects of coffee certifications, it also explores the social and environmental impact of coffee certifications.

The thesis answers the questions: Do Fairtrade programmes encourage Rwandan farmers towards sustainable agriculture practices? Can Fairtrade coffee certification guarantee an improvement in income for certified farmers in Rwanda? Does Fairtrade certification premium contribute to an improvement of Rwandan export value?

2.2 **Methodology**

The thesis uses a mixed-methods approach, combining both quantitative and qualitative data. The comparative and descriptive methodologies are used. First, the theoretical part of this research reviews specialized literatures on Fair Trade with an emphasis on Fairtrade certification and coffee production industry. The practical part uses an effective data analysis of the financial and socio-economic development of coffee in Rwanda to analyse the impacts of Fairtrade certification on the livelihood of coffee farmers.

Used data were obtained from different sources. Secondary data mainly from available studies, journals, policies, strategies, reports and publications are reviewed to determine in which way Fairtrade influences farming practices and farmer's living standards through the cooperatives. The practical part combines information obtained by author with gained knowledge of other authors.

The first and the second chapters offer an introductory background of the thesis, in which the research objectives and methodology are defined. In the third chapter the theoretical basis is presented and in the fourth chapter different data are analysed. Chapters five and six contain a discussion of the thesis findings, recommendations on future development, and the conclusion of the thesis.

The reasearch practical part is based on data obtained from researches that studies the same topic. The time scope of the data is limited from 2000 to 2018. This is mainly due to absence of feedback from cooperatioves that were to be interviewed in order to capture the farmers' observations about the impact of certifications. A structured questionnaire with open and closed questions was shared with the roofing associations and primary cooperatives managers through emails and telephonic converations follow-ups, yet no positive feedback was reveived. This lead to the research lacking primary quantitative data on Fairtrade sales contracts to support conclusions and perform a detailed analysis of cost benefits and impact analysis for considered cooperatives. The research is therefore mainly a qualitative analysis complemented with quantitative data on the coffee prices, quantities and quality. Another limitation of the research is that some data were incomplete or incorrect. Consequently, the thesis combines own secondary data analyses with knowledge gained by other authors.

Detailed data on consumption, production and trade figures for Rwanda are hard to come by in Rwanda. Secondary data sources came from publically available reports, such as Rwanda's National Agricultural Export Development Board (NAEB), National Institutes of Statitics of Rwanda (NISR). Other data used are from Food and Agriculture Organization Corporate Statistical Database (FAOSTAT), the International Trade Centre (ITC), International Coffee Organisation (ICO) and the US Department of Agriculture (USDA). International trade statistics for import/export data such as United Nations Comtrade Database had partial data reported, thus it was hardly used in the thesis. In addition, statistics such as volumes and values varied depending on the source. For the purpose of this research analysis, one source was mainly used. Therefore, totals and average statistics might differ from other existing sources. A detailed cross-check of secondary data has been done in order to display various trends.

3. Literature Review

3.1 Fair Trade movement concept

3.1.1 Fair Trade definition

The Fair Trade movement can be defined by more than one way, but the most widely known is that "Fair Trade is a trading partnership, based on dialogue, transparency and respect, that seeks greater equity in international trade. It contributes to sustainable development by offering better trading conditions to, and securing the rights of, marginalized producers and workers – especially in the South[...]" (A charter of Fair Trade principles 2012: 6).

Fair Trade Organisations have a strong commitment to Fair Trade as the principal core of their mission. They, supported backed by consumers, are actively engaged in supporting producers, awareness raising and in campaigning for changes in the rules and practice of conventional international trade to show how successful business can also put people and environment first.² On the other hand, Fair Trade can be explained as specified by (Nicholls & Opal, 2005): "Fair Trade attempts to address some of the key problems in the increasingly deregulated global marketplace by addressing the producers' needs, as well as those of consumers, big corporations and their shareholders. Fair Trade represents a new way to do a business that looks holistically at a supply chain to address market failures and their social impacts at source, but which still acknowledges the need for profitability. Fair Trade is not about aid, charity, or just 'doing good': it is about recognizing the global community as having rights and responsibilities that extend across all of its stakeholders."

In addition, for the purpose of this thesis, it is essential to distinguish between the terms Fair Trade and Fairtrade: Fair Trade is a general concept of trading partnership, whereas the term Fairtrade is used to designate the product certification system operated by Fairtrade International FLO. As pointed out by Fairtrade Organization, Fair Trade is more than just trading:

- It is a vision of business and trade that put people and planet before profit;
- It fights poverty, climate change, gender inequality and injustice;
- It is a proof of concept that showcases the enterprise models of the new economy.

² World Fair Trade Organisation - Who we are, 2019. [Online]. Accessed November 20, 2019.

3.1.2 Fair Trade history, principles and goals

Fair Trade history began after Wold World II with an initiative established by Oxfam, a British charity organisation that started to import products for their humanitarian and development projects. The first organized phase of Fair Trade started in mid-1950 when European Alternative Trade Organization started to trade directly with "disadvantaged" producers from developing countries. Later the Dutch development agency Solidaridad restricted the Fair Trade movement by focusing on creating fair treatment of producers who were overlooked by their exporters.

The rise of a Fair Trade label can be tracked back to 1988, when the Dutch non-profit organisation Stichting Max Havelaar, under the initiative of Solidaridad, launched the first Fairtrade Certification Mark, initially applied to coffee and later expanded to other products with the aim of balancing the production of crops to be exported, as well as crops for the local population in Dutch colonies. Over the next half decade, Max Havelaar was replicated in other countries across Europe and North America, with several similar organizations, such as TransFair and Global Exchange. In 1997, the various national labelling initiatives formed an umbrella association called the Fair Trade Labelling Organizations International. In 2002 a common Fair Trade Certification mark was launched.

WFTO prescribes 10 principles that Fair Trade Organizations must follow in their day-to-day work and carries out monitoring to ensure these principles are upheld:

- 1. Creating opportunities for economically disadvantaged producers;
- 2. Transparency and accountability;
- 3. Fair trading practices;
- 4. Payment of a fair price;
- 5. Ensuring no child labor and forced labor;
- 6. Commitment to non-discrimination, gender equity and freedom of association;
- 7. Ensuring good working conditions;
- 8. Providing capacity building;
- 9. Promoting fair trade;
- 10. Respect for the environment.³

Fair Trade's main goals are to improve the life and working conditions of disadvantaged producers, providing them a fair price for their products, helping them to access markets and

³ World Fair Trade Organization - 10 Principle of Fair Trade, 2019. [Online]. Accessed February 15, 2020.

supporting the continuity of long-term business relationships. The emphasis is placed on economic, environmental and social criteria.

3.1.3 Organizations of Fair Trade

Several organizations support and promote the Fair Trade concept or provide the certification trademark. The most important of them are described below.

a. World Fair Trade Organization (WFTO)

Word Fair Trade Organization is a global community of verified Fair Trade Enterprises. Formally created in 1989 under the name of International Federation of Alternative Traders "IFAT", it is currently a global association of over 400 organizations who are committed to improving the livelihoods of economically marginalised producers. WFTO has members in 75 countries.⁴



Members are primarily Fair Trade enterprises, whose business model is Picture 1: WFTO Logo verified by independent audits and though peer reviews (World Fair Trade Organization, 2017).

Verification done at enterprise level covers all aspects of the business and supply chain. WFTO verification should not be confused with commodity certification systems, such as Fairtrade certification, where only a component of the product is covered.⁵ The WFTO product label can only be used by verified Fair Trade enterprises, which consist of producer cooperatives and associations, export marketing companies, importers, retailers, national and regional Fair Trade networks and Fair Trade Support Organizations who must observe the ten standards defined by WFTO. The organization is democratically run on a one member one vote basis.⁶

b. Fairtrade International Organization (FLO)

Initially known as Fairtrade Labelling Organization International, the FLO was established in 1997 in Bonn, Germany. It indicates the world's largest and most recognised Fair Trade organisation. In 2002, FLO launched a new International Fairtrade Certification Mark. Two years later in 2004, Fairtrade



Picture 2: Fairtrade logo

Labelling Organization International was divided into two autonomous organizations: Fairtrade International which defines Fairtrade standards for FAIRTRADE®

⁴ World Fair Trade Organisation - 2017 Annual Report, 2017. [Online]. Accessed November 20, 2019.

⁵ What is the difference between the FTO mark and the Fairtrade label? New Internationalist Fair Trade Shop -Australia, 2019. [Online]. Accessed November 20, 2019.

⁶ World Fair Trade Organisation - Home of Fair Trade Enterprises by Sarcauga Michael, 2018. [Online]. Accessed November 20, 2019.

trademark certification and provides producer business support; and FLO-CERT which inspects and certifies producers and traders to ensure they comply with Fairtrade standards.

Currently, Fairtrade International has over 25 labelling initiatives and producer networks that are its members or associate members. Fairtrade International activities are funded largely from grants and Fairtrade trademark usage fees (Fairtrade International, 2019).

Figure 1: Fairtrade International key facts in 2019







Source: Fairtrade International 2019

The Figure 1 shows that Fairtrade International has grown to be the most widely recognised ethical label.

c. Fairtrade Africa (FTA)

Established in 2005, Fairtrade Africa is the independent non-profit network organisation representing all Fairtrade certified producers in Africa and working with disadvantaged small-scale producers producing traditional and non-traditional export commodities. Fairtrade Africa is owned by its members.

Fairtrade Africa operates across 33 countries and represents over 1,050,000 Fairtrade producers. Fairtrade Africa's main vision is to support a world in which all producers can enjoy secure and sustainable livelihoods, fulfil their potentials and decide on their future.⁷

3.2 Fairtrade Trademark

The Fairtrade trademark is recognized worldwide and enables customers to identify Fairtrade products on the global market and simplify cross border trade. When products carry the FAIRTRADE mark, this verifies that they meet the Fairtrade Standards. If the criteria are not met, a producer organization can face suspension until remedial action can be undertaken and verified, or ultimately be decertified.

Labelling has become a symbol or a mark that makes the product recognition by consumer effortless. Fairtrade also has a Trader Standard aimed at ensuring that businesses buying products

⁷ Fairtrade Africa - 2018 Annual Report, 2018. [Online]. Accessed January 08, 2020.

from Fairtrade producers treat them fairly. It is assumed that the Fairtrade trademark guarantees that the product is organic as this has a higher moral and financial value attached to it.

3.2.1 Fairtrade certification

The Fairtrade inspection and certification processes are protected by FLO-CERT. The Fairtrade farmers must meet a large range of criteria on production such as restrictions on child labour, use of pesticides, herbicides, genetically modified products, etc. (Fairtrade International, 2019). All products marked with a Fairtrade® logo must be certified on all stages of the trade chain. All actors in the supply chain, including producers, importers and exporters must be Fairtrade certified.

For a product to be sold under the Fairtrade trademark certification and for producers to obtain Fairtrade certification, (1) an application form must be submitted to FLO-CERT. Upon application acceptance, (2) the organisation goes through an inspection done by a representative auditor, (3) the auditor sends a report to a FLO-CERT analyst who coordinates and administers the certification. If the minimum requirements are met, (4) the organisation receives a one year certificate. Once certified, (5) an organisation has entered a three-year 'certification cycle' and further audits for follow-up might be carried out. A certificate renewal is done at the end of the first certification cycle.

In earlier years of Fairtrade, inspection and certification were free. However, since 2004 fees for application processing (€565) and initial certification for the first 12 months must be paid, and further annual certification costs must be paid in order to maintain Fairtrade status. These fees can be significant to the extent that Fairtrade cooperatives could use about one-third of the total Fairtrade premium received to pay for certification costs.

3.2.2 Fairtrade pricing

Fairtrade provides better financing, longer-term contracts that are intended to offer higher incomes and greater financial stability to farmers, and to advance stronger buyer-seller relationships.

Guaranteed Minimum Price and Fairtrade Premium are paid to Fairtrade producers to support the farmers and their community:

Minimum Price aims to cover costs of production and act as a safety net when market prices
fall beneath a sustainable level. In case the market price goes above the Fairtrade Minimum
Price level, then farmers receive the market price.

Fairtrade Premium is an extra payment over the market price that is paid to producer organisations such as exporters for selling their commodity on Fairtrade standards. It goes into a communal fund for workers and farmers to use – as they choose – to improve their social, economic and environmental conditions. It is based on a percentage of the volume of produce sold.

The amount of Fairtrade Premium farmers receive differs from product to product and across regions and is reviewed every three to four years. Fairtrade producer organisations are required to be able to show what happened to the money, and FLO-CERT should check whether they have such a system in place.

a. Fairtrade certification benefits to small-scale farmers

The stated main goal of Fairtrade certification is to improve the living conditions of the farmers and workers in developing countries by guaranteeing the Minimum Price and the Fairtrade Premium. These are paid to the exporting firm (usually a second tier cooperative) not to the farmer. They are paid for the proportion of their output for sales with the brand "Fairtrade Certified".

The minimum price mechanism guarantees producers in cooperatives or plantation settings that the price for the produced goods will not be lower than a fixed base price. In practice it covers the costs of maintaining production in periods of low prices on the international market. The Fairtrade premium can be used for capacity building among farmers and their organisations. Fairtrade certified producers have 50% ownership of Fairtrade International and are involved in decisions influencing price, premiums, standards and overall strategy.

Even though, Fairtrade certification is associated with significantly greater incomes for farmers, it is not associated with increased incomes for hired workers. Another distributional concern is whether Fairtrade results in greater difference between certified farmers and those who are not. Fairtrade certified farmers enjoy benefits that conventional farmers do not.

b. Fairtrade certifications benefits to certified plantations

While Fairtrade standards of a minimum price, a premium, and longer-term buyer-seller relationships apply to all farm producers, there are also specific requirements for plantations. Rather than forming cooperatives of small producers a hired labour organisation or workers' union is formed, which includes both elected worker representatives as well as management appointees.

Remarkably, the impacts of Fairtrade on workers in large plantations certification are more noticeable. Fairtrade regulations focus on workers who make a larger group relative to farm owners, and it ensures protection of workers' rights and safe and equitable working conditions and reassure an absence of forced or child labour, and fair salaries that are at least as high as the established minimum wage.

3.2.3 Main commodities of Fairtrade

There is a large variety of products covered by the Fairtrade Certification mark. The FLO-CERT now certifies the following products: bananas, tea, sugar, cocoa, honey, rice, mangoes, cotton, honey, fruit juices, fresh fruits, quinoa, herbs, nuts, cut flowers, spices, wines and footballs, with coffee remaining one of the most-traded product in commodities (Fairtrade International, 2019).

3.2.4 Fairtrade on worldwide level

Fair Trade has many aspects and forms. There are several international certification initiatives, such as Fairtrade International, IMO (owner of Fair for Life certificate), Naturland (with certificate Naturland Fair) or World Fair Trade Organization, whose Fair Trade standards cover a broader set of criteria across production and trade. Fair Trade also has a strong and vital movement of volunteers and NGO's, especially in Western Europe, who campaign for the use of ethically produced products.

In addition, Fair Trade is fast developing a more direct model of trading with much stronger relations between the producers in developing countries and manufacturers or traders in the countries of consumption. The movement and its actions are powerfully recognized in Western Europe, particularly in the United Kingdom (82% of UK consumers care about Fairtrade), the United States and other developed countries.

Fairtrade International Monitoring Report (2019), states that there are over 1.71 million farmers and workers in 1,599 Fairtrade certified producer organisations across 75 countries. The small farmer organizations make up 82% of farmers and workers, 21% of which are women. 50% of all Fairtrade farmers produce coffee and 45% of all Fairtrade workers produce tea. Smallholder producers make up 80% of Fairtrade farmers and 84% of certified producer organisations are in Africa, Latin America and the Caribbean.⁸

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⁸ Fairtrade International - 2019 Monitoring Report 10th Edition: Facts and Figures, 2019. [Online]. Accessed January 16, 2020.

Figure 2: Fairtade producer countries by number of certified producer organizations 2017







Asia and Pacific
261 producer organizations
in 20 countries

World 1,599 producer organizations in 75 countries

Source: Fairtrade International 2019

In 2017, Fairtrade premium paid to producers amounted to \in 188.8 million, on average each Fairtrade producer organisation received more than \in 118,000 in Fairtrade premium and 50% of Fairtrade premium received by certified plantations was invested in education and housing improvements. Small producer organisations invested 50% of their Fairtrade premium in services to farmers such as providing agricultural tools and inputs. In 2018, the revenue generated by Fairtrade products globally reached \in 9.8 billion. Fairtrade has around 300,000 products sold in more than 150 countries all over the world.

3.3 Fairtrade certification for coffee products

Millions of people start the day with a coffee, an estimated 1.6 billion cups of coffee are brewed every single day. Worldwide, over 125 million people depend on coffee to support and maintain their livelihoods, yet many are unable to earn a reliable living from this cherished and valued crop. Around the world, 25 million smallholders produce 70-80 percent of the world's coffee, which is one of the reasons why Fairtrade focuses its efforts on small producer organisations.

3.3.1 Worldwide coffee production

There are two main commercially grown types of coffee beans: Arabica, which accounts for 70% of the world's coffee, and Robusta which is far cheaper and easier to grow. The coffee production volume and the number of producers involved continue to make it the most significant Fairtrade product. The 10th Edition of Coffee Monitoring Report 2019, states that there are 582 Fairtrade certified coffee producer organisations in 32 countries with 762,392 farmer members. From 2016 to 2017, the sales volume presented a 15% increase with 214, 335 metric tonnes. The production was 633,854 metric tonnes of coffee produced, showing a growth of 17%. Of all Fairtrade coffee 86% comes from Latin America and the Caribbean. The coffee farmers' organisation received € 84 million Fairtrade Premium. Women make up 18% of all coffee farmers.

Global coffee consumption over the last 40 years more than doubled, from 4.2m tonnes in 1970 to 8.7m tonnes in 2015. Coffee producing countries consume 30% of the world's coffee, led by Brazil whose consumption reached 1.2 million tonnes in 2015. The remaining 70% is traded internationally; the US is the biggest importer, followed by Germany and Italy. (Fairtrade International, 2019). In 2018, worldwide coffee export amounted to US \$31.1 billion. Europe accounted for a total shipment valued at \$11.6 billion or 37.4% of globally exported coffee. Latin America came second at 32.9% excluding Mexico but including the Caribbean with 16.7% of coffee exporters' share in Asia. Africa's share was 6.7%, North America had 5.7%, then Oceania had 0.6% led by Papua New Guinea ahead of Australia.

Over 70 countries produce coffee, yet 60% of the world's coffee is produced by only four of them. The World Atlas⁹ ranks Brazil as the world's top coffee producer followed by Vietnam, Colombia and Indonesia.

Table 1: World top coffee producing countries 2019

Rank	Country	Coffee production (Metric Tonnes)	Coffee Production (Pounds) ¹⁰
1	Brazil	2,592,000	5,714,381,000
2	Vietnam	1,650,000	3,637,627,000
3	Colombia	810,000	1,785,744,000
4	Indonesia	660,000	1,455,050,000
5	Ethiopia	384,000	846,575,000

Source: World Atlas 2019; Own processing

3.3.2 History of Fairtrade coffee

Coffee is more than a drink - it is a commodity that is part of peoples' everyday lives and which has created a huge, separate industry. History has it that the coffee bean was first recognised by a 9th-century goatherd in the Kaffa province of Ethiopia, where the coffee tree originated. The first bag of coffee was brought to England from Turkey in 1652. As already mentioned, global consumption has almost doubled over the last 40 years and is expected to increase in the future. Nonetheless, it is a colonial commodity with a complicated past. Coffee is the very first Fairtrade certified commodity and the history of this first certification is connected to the Max Havelaar label, established in 1988.

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⁹ World Atlas - Top coffee producing countries, 2019. [Online]. Accessed February 08, 2020.

¹⁰ One pound equals to 453 grams

Worldwide standards are established under the International Organisation for Standardisation (ISO) that was founded after the Second World War in Geneva. The aim of using internationally unified standards is to meet the needs and expectations of consumers worldwide. Standards ensure required character of products and services such as quality, environmental consideration, safety, reliability, efficiency and interchangeability. The ISO's importance is that it had an influence on modern global economies (Yates & Murphy, 2007).

The objectives of the certifications are to raise the quality of output, to protect workers, consumers or the environment from potential hazards, or to ensure compatibility among products or intermediates (Moenius, 2004). The reliability of the quality labels depends on the type of external audit and their implementation. The important character of a certification system is the fact that inspections are carried out by independent bodies (Schulze, et al., 2008).

Prior to fair trade, coffee prices were regulated by the International Coffee Organisation according to the regulations set forth by the International Coffee Agreement of 1962. This agreement, which was negotiated at the United Nations by the Coffee Study Group, set limits on the amount of coffee traded between countries so there would be no excess supply and consequent drop in price. The ICA existed for five years and then was renewed in 1968.

The agreement was renegotiated in 1976 due to increasing coffee prices, largely a result of a severe frost in Brazil. The new agreement allowed for the suspension of price quotas if the supply of coffee could not meet the demand and enabling them if prices dropped too low.

In 1984, the agreement was again redrawn, creating a database on coffee trade and implementing stricter import and export regulations. Coffee Fairtrade certification was introduced in 1988 resulting from a coffee crisis in which the supply of coffee was greater than the demand; since no price quotas had been reimplemented by ICA, the market was flooded. Launched in the Netherlands, fair trade certification organisation Max Havelaar created a label for products that met certain standards. Quotas remained a part of the agreement until 1989, when the organisation was unable to negotiate a new agreement in time for the next year. It was decided that the 1983 agreement would be extended, but without the quotas because they had not yet been determined. A new agreement could not be negotiated until 1992. From 1990 to 1992, without the quotas in place, coffee prices reached an all-time low because coffee price quotas could not be decided.

The agreements of 2001 and 2007 aimed to stabilise the coffee economy by promoting coffee consumption, raising the standard of living of growers by providing economic counselling, expanding research to include niche markets and quality relating to geographic area, and conducting studies of sustainability, principles like fair trade. Following the inception of fair trade certification, the "Transfair" label was later launched in Germany, and within ten years three other labelling organisations commenced: The Fairtrade Foundation, TransFair USA, and Rättvisemärkt. In 1997, these four organisations jointly created Fairtrade International, which continues to set Fairtrade standards, inspecting and certifying coffee farmers. (International Coffee Organisation, 2020).

Subsequently, certified coffee spread rather quickly during the 90's, mainly in Western Europe.

Figure 3: Facts about Fairtrade Certified coffee 2018

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76.4 million

Amount of Fairtrade Premium coffee farming organizations received in 2018

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762,392

Number of Fairtrade coffee farmers in 2017

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1988

The year coffee - the first Fairtrade product - hit store shelves (Mexican coffee in Dutch shops)

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From cherry to bean

Coffee beans start to grow as coffee cherries. After the red cherries are picked, they are washed, dried, and hulled. This yields green coffee beans, which are then roasted and ground to make coffee.

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Number of years for a new coffee bush to yield fruit. It takes 5-6 years for a bush to reach optimal yields, so farmers must plan new investments carefully.

Source: Fairtrade International 2019

3.3.3 Fairtrade coffee minimum price and premium

The price base and premium are set separately for each product. Prices vary for different types of coffee. Prior to 2009, the price for washed conventional Arabica coffee was \$1.25 per pound (one pound is 453 grams) and \$1.40 per pound for washed organic Arabica. Currently, the minimum prices are \$1.40 and \$1.70 per pound, respectively (US \$ 0.30 more if organic), extra US \$ 0.20 per pound Fairtrade Premium, to invest as they see fit, US \$ 0.5 of which is dedicated to improving productivity and quality. Decisions about how to use the Fairtrade premium are supposed to be taken democratically by members of the co-operative or members of the workers union if it is a private plantation.

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¹¹ <u>Fairtrade Australia & New Zealand, Coffee Facts Sheet: Fairtrade - A powerful way to mak a difference,</u> 2015. [Online]. Accessed December 06, 2019.

Table 2: Various coffee Fairtrade Minimum Price and Fairtrade Premium

Product	Quality	Form	Currency/Unit	Minimum	Premium	Date of
				Price		Validity
Coffee	Conventional	Arabica natural	USD/pound	1.35	0.20	1/Apr/2011
Coffee	Conventional	Arabica washed	USD/pound	1.40	0.20	1/Apr/2011
Coffee	Conventional	Robusta natural	USD/pound	1.01	0.20	1/Apr/2011
Coffee	Conventional	Robusta washed	USD/pound	1.05	0.20	1/Apr/2011
Coffee	Organic	Arabica natural	USD/pound	+0.30	0.20	1/Apr/2011
Coffee	Organic	Arabica washed	USD/pound	+0.30	0.20	1/Apr/2011
Coffee	Organic	Robusta natural	USD/pound	+0.30	0.20	1/Apr/2011
Coffee	Organic	Robusta washed	USD/pound	+0.30	0.20	1/Apr/2011

Source: Fairtrade International 2019; Own processing

The Table above lists the Fairtrade Minimum Prices and Premiums for coffee certified products. When the market price is higher than the Fairtrade Minimum Price, producers should receive the current market price, or the price negotiated at contract signing. The price level Incoterms is Free on Board applicable for Small Producer Organisations (SPO).¹²

3.3.4 Fairtrade coffee market on global level

Coffee supports over 25 million smallholder farmers worldwide. In 2017/2018, there were an estimated 161.4 million 60 kg bags of coffee consumed (International Coffee Organisation - ICO, 2019), and coffee consumption is increasing approximately 2% globally per year since 2012. The world's biggest coffee producing countries are Brazil, Vietnam and Colombia, producing 62 million, 29.5 million and 14 million bags of coffee per year, respectively (ICO, 2019).

The market for Fairtrade goods is estimated at more than 9 billion Euros in sales for the Fairtrade certification movement alone (Fairtrade International 2019). Fairtrade coffee farmers benefited from a 24.5 % percent sales increase.

Farmers are also the worst affected by the notorious volatility of world coffee prices. In recent years the price of Arabica coffee has swung from a 30-year low of 45 cents a pound in 2001 to a 34-year high of almost 309 cents in 2011. Between May 2011 and December 2013, prices fell by 65%

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¹² <u>Fairtrade Internationa - Fairtrade Minimum Price and Premium Informaton</u>, 2019. [Online]. Accessed December 06, 2019.

as a result of the Eurozone crisis and oversupply of coffee. And after a drought in Brazil saw prices rise briefly in 2014, prices fell back to a range of 115 to 145 cents a pound in 2015 and 2016.

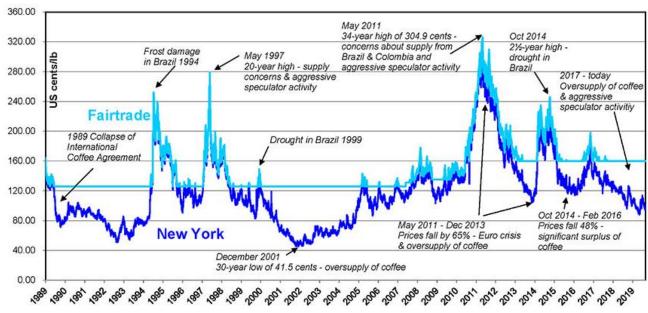
The price volatility has significant consequences for those who depend on coffee for their livelihood, making it difficult for growers to predict their income for the coming season and budget for their household and farming needs. When prices are low, farmers have neither the incentive nor resources to invest in good maintenance of their farms by applying fertilizers and pesticides or replacing old trees. When prices fall below the costs of production, farmers struggle to put adequate food on the table and pay medical bills and school fees. (Fairtrade Foundation 2019)

Growing coffee is further complicated by the impacts of climate change that have caused disturbances to weather patterns and temperatures in producing countries increasing the risks faced by farmers depending on coffee sales.

Figure 4: Arabica coffee market 1989 - 2019 (New York Price vs. Faitrade Price)



The Arabica Coffee Market 1989-2019 (August): Comparison of Fairtrade and New York Prices



Source: Faitrade International 2019

The above graph clearly shows that whenever the market price is higher than the Fairtrade minimum price, producers receive the market price or the price negotiated at contract signing. When the market price falls beneath the Fairtrade minimum, all Fairtrade contracts have to guarantee at least the Fairtrade minimum price (Fairtrade International, 2019).

3.3.5 Fairtrade coffee and sustainable agriculture practice

Fairtrade certified coffee guarantees that coffee farmers are paid a liveable wage, which is unlikely to be the case under conventional trade. It supports the sustainable development of coffee-dependent communities in impoverished areas of Africa, Asia and the Americas. Not exploited, they are better able to protect the environment, feed and educate their children, and develop greater independence.

Some of the reviewed studies acknowledged improved living standards from certification under specific recognised and suitable settings, but the relationship between the certification and the living standards improvement is mostly hard to establish. Most of the publications reviewed use observed studies, involving a field-based methodology in coffee-producing regions to find either neutral or varied impacts, and only a few publications mentioned negative impacts.

A more valuable publication by Blackman and Rivera (2011) presents a detailed discussion around selection of counterfactuals as part of their methodology, which have generally followed, although they did not dismiss other studies with less apparent rigour in ascertaining cause and effect. Indeed, they reported that the absence of a counterfactual 'did not outgrowth unreasonably positive assessments of certification benefits.'

The study about the impact of Fairtrade on producers was conducted by Joshua G. Bray, (2017). It examined 51 studies focusing on the specific outcomes for coffee production while analysing the impacts of sustainable agriculture on the environment. The results of the analysis across these 51 studies highlighted regional focus, scheme type, methods, coverage of living standards, and general impact, and suggest considerable contextual diversity both within and between countries, making generalised statements difficult. Joshua G. Bray, (2017) did not identify any precise impacts of certification initiatives on the environment, which might more rigorously minimise the influence of considered factors.

Taking into consideration other countries such as Costa Rica, where coffee production is on exemplary standards, a research by Snider Anna, (2016) noted that changes in farming practices due to group certifications could only occur to a very limited degree. In the case of other certification such as Rainforest Alliance, the main differences are due to practices that involve certification of farmers, showing an increased use of vegetation barriers and the banning of certain types of agrochemicals. For example, Anna Snider (2016) noticed that since the introduction of certifications could be observed as "greening" of farming practices. This affects the use of herbicides, shade that

providing species in coffee fields, and to a limited extent concerning the use of compost/coffee pulp as soil amendments.

In her research, Anna Snider, (2016) identified one major constraint for a sustainable coffee production being fostered by certifications on the farm-level: the occurrence of a new pest, a new generation of farmers using more inputs as well as the farmers' perceptions of organic fertilizers/soil amendments as being inefficient and impractical. On the cooperative level, the major constraints show the two-fold strategies of the cooperatives that must balance productivity and environmental sustainability goals, as well as a lack of capacity to disseminate information. The research suggests strengthening the cooperatives' capacities and/or technical assistance as a key to mediating a "greening" impact of certifications on farming practices.

Studies found that certification done on cooperative level leave farmers largely not aware of their participation in the programs. Considered studies noted a positive effect on environment where the certification is applied on the level of the coffee farmers.

Coffee as a global commodity has a value chain comprising a multitude of participants, from the producers to intermediaries to the final consumer. The extensiveness and closeness among these various participants of the coffee supply chain make the sector one of vital importance for sustainable development at all levels - local, regional, and global.

Consumers are more discerning about the coffee products they consume, and they have numerous combinations to make a choose that align with sustainability. Most sustainable practices focus on fair trade, organic, and shade grown and specialty types of coffee's variety, origin, brewing and grinding methods, packaging, and flavouring approaches.

In the coffee industry, sustainability has become of utmost importance. Numerous programs have been created to address specific characteristics of sustainability within the coffee sector, to address social, economic, and environmental issues. Several of the programs focus on providing a structure for applying, administering, and monitoring social and environmental standards throughout the product chain, especially at the production level. This has led to certification and labeling being an easy way to identify products in respect with the consumers' choice.

3.4 Overview of common certification programs

Although the certifications share some common overlapping goals, each has its own set of priorities that shape the specifics of their standards.

3.4.1 UTZ

UTZ, formerly called UTZ Certified, is a program and a label for sustainable farming. Like Fairtrade, has a strong economic objective to improve livelihoods in a socially and environmentally healthy way. Established in 2002, UTZ Certified is a non-profit organisation that focuses on sustainable production of coffee, tea and cocoa.



Picture 3: UTZ logo

UTZ Certified products prove sustainable farming, social responsibility, proven agriculture methods and monitoring of the suppliers' chain.

3.4.2 Shade/Bird Friendly

Bird-Friendly has a well-defined ecological goal, to protect bird habitat as an indicator of ecological health, accomplished by encouraging the production of shade-grown coffee. The concept of Bird Friendly coffee was established in 1997 and the monitoring body and procedure is the same as the UTZ one. Annual monitoring and certification of land is done by private certifiers approved by the initiative. Bird Friendly coffee offers all the environmental benefits of organic coffee.

3.4.3 Rainforest Alliance

The aims of Rainforest Alliance are ecological, but with a broader scope to protect the ecosystem, people, and animals through the promotion of good land-use practices. Rainforest Alliance is a non-profit organization established in 1987. It has 35,000 members, more than 300 employees and global offices in nine countries.



Picture 4: Rainforest Alliance Logo

Rainforest Alliance provides certification to coffee and other products, upon fulfilment of certain standards. Farms can acquire the certification even if they do not meet the requirements but must introduce an exact plan how the changes will be implemented.

3.4.4 Organic

Organic certification sharply focuses on environmental issues and aims to promote adoption of ecologically sustainable agriculture, particularly using less chemical-intensive farming methods.

Table 2: Overview of various common certifications

Initiative	Fair Trade	Organic	Utz Kapeh	Rainforest Alliance	Shade / Bird Friendly
Year Established	1980s	1970s	2002	1996	1997
Standard Setting Body	NGO (Fairtrade Labeling Organizations International)	Initially NGO; now state/NGO (International Federation of Organic Agricultural Movements)	Initially industry; now industry/NGO (Utz Kapeh)	NGO (Sustainable Agriculture Network)	State/NGO (Smithsonian Migratory Bird Center)
Monitoring Body	Autonomous non-profit certifier; one private certifier approved by initiative	Private Certifiers regulated by state and accredited by NGO	Private certifiers approved by initiative	Certification by member organizations	Private certifiers approved by initiative
Monitoring Procedure	Annual monitoring and certification of producer groups and importers	Annual monitoring and certification of land; chain of custody monitoring	Annual monitoring and certification of farms; chain of custody monitoring	Annual monitoring and certification of farms	Annual monitoring and certification of land
Market Strategy	Mainstream marketing with use of consumer labels	Mainstream marketing with use of consumer labels	Mainstream marketing; consumer labels often used	Mainstream marketing; consumer labels rarely used	Mainstream marketing with use of consumer labels
Production Strategy	Small farmers	Mostly Small farmers; some plantations	Mostly plantations; some small farmers	Mostly plantations; some small farmers	Mostly small farmers; some plantations
Social production specifications	Standards for democratic organization, collective use of social premium, and upholding 10 ILO conventions (right to association and collective bargaining, freedom from discrimination and unequal pay, no forced or child labor, minimum social an labor conditions, rights to safe and healthy working conditions.	No social standards required for certification, but IFOAM members are expected to uphold key social standards. ^b	Standards upholding eight ILO conventions (rights to association and collective bargaining, freedom from discrimination, no forced or child labor, minimum social and labor conditions).	Standards for fair treatment and good conditions for workers upholding key ILO conventions (freedom from discrimination and unequal pay, no forced or child labor), occupational health and safety, and community relations.	None
Ecological production specifications	Standards for reduction in agrochemical use, reduction and composting of wastes, promotion of some fertility, prevention of fires and avoidance of GMOs.	Standards barring use of synthetic herbicides, fungicides, pesticides and GMO and chemically treated plants; land clearing restrictions.	Standards for protection of primary and secondary forests.	Standards for ecosystem and wildlife conservation, integrated crop management and integrated management of wastes.	Requires organic certification. Additional standards for shade cover, canopy structure, secondary plant diversity and stream buffers.
Trade specifications	Standards for trade relationship, long-term contracts, and credit advances.	None	None	None	None
Producer price premiums (Arabica in 2004)	Guaranteed price floor (US\$ 1.21 per pound) and social premium (US\$ 0.05) corresponding to a US\$ 0.59/lb. Additional US\$ 0.15 per pound guaranteed for organic coffee.	Varies with the market:	Varies with the market: estimated at US\$ 0.01-0.15/lb.	Varies with the market: estimated at US\$ 0.10-0.20/lb.	Varies with the market: estimated at US\$ 0.07-0.10/lb.

Notes: Information is from Raynolds, Murray and Heller (2007) and are based on interviews with initiative representatives and initiative documents. A These are FLO entry requirements. They also have progress requirements in these areas. Floam members are expected to uphold key ILO conventions (rights to association and collective bargaining, freedom from discrimination), and employed children are to be given educational opportunities. These are Utz Kapeh major requirements. They also have additional minor requirements. These are Rainforest Alliance critical criteria. They also have numerous additional expectations.

Source: Raynolds, Murray and Heller 2007

3.4.5 Direct trade

Direct Trade is less of an organisation and its concept is relatively new. It is a form of sourcing practiced where coffee roasters, chocolate makers, tea sellers (distributors) build direct relationships with the farmers and processors who sell their products (producers). Direct Trade

places its focus on the quality of the coffee. It involves distributors who buy straight from the growers, cutting out both the intermediares, enabling monitoring of the quality and transparency of the chain. Sometimes exporters and/or importers are still used to facilitate the process.

3.4.6 Comparison of Direct Trade with Fairtrade

a) Advantages

The main advantage of Fairtrade from the farmers' viewpoint is the Minimum Price which ensures that producers can cover their average costs of sustainable production. It provides them some sort of certainty and security. Fairtrade products are widely accessible which is an advantage for consumers. From the farmers' viewpoint, Direct Trade enables direct interaction. The farmer endeavours to provide products of the highest quality. The distributors and producers put an emphasis on negotiation, discussion and information sharing which lead to transparency of the process. There is direct influence on both quality of goods and the prices.

b) Disadvantages

Direct trade relies entirely on the ethics and honesty of the distributors. The latter can take advantage of the system without considering the expected transparency. The Direct Trade advantage for distributors' freedom to choose the best product from the farm could be at the same time a disadvantage for farmers if there are unfavourable climatic conditions and poor harvest. Direct Trade implies that the farmers know the market and can find a direct purchaser. Moreover, during fruitful seasons Direct Trade enables the farmers to earn supplementary money that allow them to survive unproductive ones.

Fairtrade's concern regarding transparency has increased. The movement focuses on ethical consumerism and this affects the advancement of the coffee industry. Quality control has raised some concerns, as has coffee that is believed to be an artisanal craft rather than a commodity. The cost for certification is higher for most cooperatives in a developing country.

c) Summary

Both systems' intentions and goals are to provide sustainable income to small-scale farmers in developing countries; still, neither is perfect. Fairtrade's insufficient transparency and the quality control issue raises concerns about whether everyone is benefiting as expected. Direct Trade system has no official standard of what should be expected. It has no straight impact on society and does not directly support community development.

4. Practical Part

4.1 Coffee sector in Rwanda

According to the coffee census done in 2015, Rwanda has 355,771 coffee farmers, 32% female and 68% male. Currently, they are estimated to be over 400,000. Individual coffee growers account for 74% of all production and 26% of production comes from consolidated coffee blocks (NAEB, 2019). A small minority of individual growers have large coffee plots of 1,000 to 6,000 trees each (National Coffee Census, 2015:4).

4.1.1 Evolution of coffee in Rwanda

In Rwanda, Coffee was introduced in 1904 by German missionaries and subsequently became a focal point of the Government of Rwanda (GoR) policy and an important source of GoR revenue. Significant government involvement in Rwanda's coffee sector began in the 1930s, when the Belgian colonial government launched a series of "coffee campaigns".

a) Traditional state-controlled export 1960s to 1999

In 1963, the post-colonial government passed a law that explicitly prohibited uprooting coffee trees, introduced price restrictions, imposed mandatory quality guidelines, and issued special licenses that allowed only some firms to purchase coffee. Export taxes were imposed on coffee sales, and individual income taxes were imposed on producers. These coercive measures were complemented with a set of positive stimuli, such as the free distribution of seeds and fertilizers and by guaranteeing stable prices. Thus, a carrot-and-stick approach was used to stimulate and maintain coffee production. (Tardif-Douglin, 1996). Still coffee producers had little incentive to invest in the production of high-quality coffee, and so for decades Rwandans produced a small volume of low-quality coffee.

The coffee was purchased by a government agency called OCIR-café and sold on the international market through Rwandex and Etiru, two companies in which the government held a high capital share. The farm gate price was set by the GoR. During the 1970s and 1980s, as world coffee prices rose, coffee exports provided between 60 and 80 percent of Rwanda's export revenue (Capéau and Verwimp 2012).

In 2002, the GoR issued a National Coffee Strategy that outlined a plan for capturing a larger share of the specialty coffee sector. The shift away from low-quality coffee to high-quality specialty coffee was designed to break a perceived "low-quality, low-quantity trap." As noted, Rwandan

farmers were producing low-quality coffee that sold for a low price. Low sales prices meant that farmers lacked revenue to invest in improvements. Without enough income, farmers could not invest in capital to improve the quality of their beans—hence, the trap.

b) Liberalisation to exposed markets 2000 to 2018

The transformation of Rwanda's coffee sector happened relatively quickly. In 2000 Rwandan farmers were producing semi-processed coffee for sale on world markets. Farm gate prices paid to farmers were low (60 Rwandan francs a kilogram), and prospects for farmers and exporters to increase income or profits were limited. In 1995, the GoR liberalized the sector by eliminating a variety of barriers to trade, generating new incentives regarding investing in coffee production, and facilitating entrepreneurship in the coffee industry in order to improve Rwandan economic growth.

Positive developments over the past 18 years have been to increase the production of high value, premium mild coffee from central washing stations and the phasing out of home-processed coffee. Yields have increased from an average of 2.8 kg cherry per tree to 5kg/tree. Fertilizer application increased from 4700 MT to 18,750 MT and land under cultivation has increased from 37,500 ha to 50,000 ha largely due to consolidation of land which improved the production of coffee in larger units from 1.0 to 6.0 ha. Coffee production processing and marketing has also been liberalised leading to an export increase of 71% (NAEB, 2015).

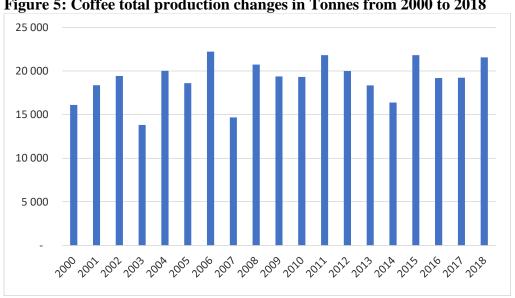


Figure 5: Coffee total production changes in Tonnes from 2000 to 2018

Source: FAOSTAT 2020; own processing

During this phase, working with the private sector and international donors, the GoR reshaped the coffee industry. The regulatory framework for production has been modified, more than 100 coffee-washing stations have been built, donors supported the development of market links between producers and foreign buyers, cooperatives were formed; and smallholder farmers are working together in an effort to improve the quality, marketing, and branding of their coffee (NAEB, 2015).

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Figure 6: Total coffee production in Rwanda 2000-2018

Source: FAOSTAT 2020; own processing

The transformation of the Rwandan coffee sector created social benefits in addition to economic benefits. Working together at coffee-washing stations—typically located in the rural, hilly, and relatively inaccessible areas where coffee grows and where little other commercial infrastructure exists—farmers have new opportunities to interact with other Rwandans. These recurrent interactions reduced the sense of ethnic distance among members of Rwandan society. As farmers and other workers at coffee-washing stations experience the increased economic satisfaction from higher income earned from coffee, they felt greater levels of trust toward people with whom they interact and thus develop more positive attitudes toward reconciliation. In Rwanda, coffee is mostly grown by poor, smallholder farmers who make up 90 percent of the population. These positive changes have the potential to benefit a broader part of Rwandan society.

The Rwanda Tea Development Authority (OCIR-Thé), the Rwanda Coffee Development Authority (OCIR-Café) and the Rwanda Horticulture Development Authority (RHODA) were merged in 2011 to form the National Agriculture Export Development Board (NAEB). Its main goal is to improve the balance of payments of Rwanda's economy through increased agricultural exports. NAEB oversees the entire agricultural export and cash-crop base under one management, regulation and monitoring.

At present, NAEB oversees the full value chain of coffee from farming to exportation. It now has two programs, namely Turn Around, which supports coffee washing stations (CWSs), especially for cooperatives, and Zoning, which is concerned with improving the relationship between the farmer and the coffee washing station.

Currently, NAEB supports farmers, providing them with export licenses. It links farmers to coffee washing stations, promotes the market and guarantees that exportation happens in a smooth manner. NAEB encourages the farmers to improve the quality and production of coffee by providing them with fertilizers and pesticides on time. NAEB in partnership with the local governance has agronomists all over the country and they must know all the coffee trees in their localities.

Figure 7: Coffee value chain in Rwanda 2018



Source: Technoserve 2018

4.1.2 Coffee production and distribution

In the Rwandan coffee industry, farms tend to be small and family-owned, with a small number of hired workers, most of which are seasonal coffee pickers. In addition, there may be workers hired by the cooperative/mill.

control

Coffee makes a long journey to arrive in a cup. From the time beans are planted, picked and purchased, coffee beans go through a series of steps to enhance their final quality. According to the National Coffee Association USA (2020)¹³, there are ten steps from seed to cup: planting, harvesting the cherries, processing the cherries, drying beans, milling the beans, exporting the beans, tasting the coffee, roasting the coffee, grinding the coffee and brewing coffee. The most expensive part is to purchase and process the coffee (28% out of the final price), then the retail part (18%) and thirdly, the importers' expenses (13%).

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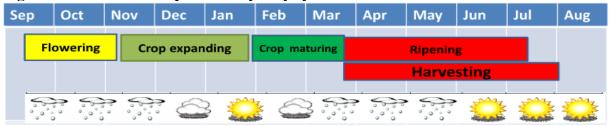
¹³ USA National Coffee Association - 10 Steps from seeds to cup, 2019. [Online]. Accessed January 16, 2020.

a) Coffee production in Rwanda

Rwandan coffee is grown by some 400,000 small-scale farmers and their families, most of whom own less than quarter a hectare of land each. In 2019, the total area under production covered 50,625 ha. The average farm size is 0.08 ha (FAOSTAT, 2019; NAEB, 2017). Productivity is 450 kg/ha, or about 2–3 kg per tree, and consistent with the average for Sub-Saharan Africa (GCP, 2016).

The types of coffee grown in Rwanda include Caturra, Catuai, Bourbon (Arabica) with varieties like Harrar; POP3303/21; Jackson 2/1257; BM 139; BM 71. Almost all of Rwanda's coffee is Arabica, with 95% of it being one of several long-established Bourbon varieties. Coffee plants flower in September and October and between April and July, the coffee cherries are ready for harvest with coffee arriving in Europe between August and November. The coffee area harvest increased from 43,085 ha in 2017 to 50,625 ha in 2018, an increase of 17.5%. (FAOSTAT 2020).¹⁴

Figure 8: Rwanda coffee plantation yearly cycle



Source: National Agriculture Export Board – NAEB, 2016

The Rwandan growing season takes seven months. Harvest takes five months, which makes the farmer busier over the year with the coffee growing process activities. Rwanda's specialty coffee production rate moved from almost zero in 2000 to 58 percent in 2017 and is projected to grow to 80 percent of total coffee produce by 2020 (NAEB, 2019).

Table 3: Coffee farm size per household – 2015

Cultivated area	Coffee trees	Farmers	% of farmers
Less than 0.04 ha	Less than 100	189 626	53.3
0.05 – 0.12 ha	101 - 299	121 674	34.2
0.13 – 0.24 ha	300 - 599	28 746	8.08
0.25 – 0.49 ha	600 – 1 199	11 740	3.3
0.5 – 1 ha	1 200 – 2 499	2668	0.75
1.1 – 4 ha	2500-10000	712	0.2
Above 4 ha	Above 10,000	605	0.17
40 356 ha	+90 000 000	355,771 farmers	100%

Source: NSR 2019; NAEB, 2015

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¹⁴ FAOSTAT - Data Crops, 2020. [Online]. Accessed March 05, 2020

In 2015, Rwanda had over 90 million coffee trees with over 355,771 coffee farmers operating on an estimated area of about 40,356 hectares, an average range between 150-300 plantation trees on an average farm area of 0.07 hectares with an average yield of 0.7 Tonnes of green coffee per hectare. The coffee farm size per household is represented in the table above (NAEB, 2015).

The annual quantity production in Rwanda ranges from 20,000 to 22,000 metric tons and has been relatively stable, but slightly on the decline. There is an increase of fully washed and ordinary coffee export volumes and revenues every year. (Rwanda Development Board, 2019) Coffee represents about 2% of the total agricultural production area in Rwanda (AfDB/OECD/UNDP, 2016). Rwandan production volume represents less than 1% of the global coffee production. Of this volume about 98% is arabica, mainly of the "Bourbon" variety, and the rest is Robusta, according to the National Agricultural Export Board (2017).

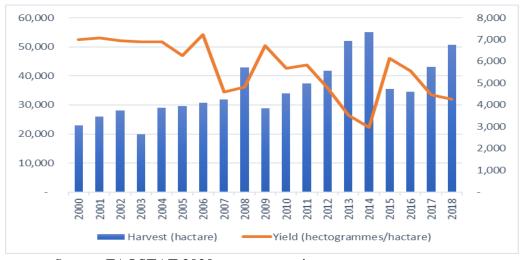
Table 4: Rwanda coffee share on global production (1000 Tonnes) 2015 - 2019

Year	2015/16	2016/17	2017/18	2018/19	Jun 2019/20	Dec 2019/20
Rwanda	1,080	828	990	990	1,080	1,080
Global	550,580	582,134	571,072	628,704	608,868	609,588
Share %	0.20	0.14	0.17	0.16	0.18	0.18

Source: USDA (United States Department of Agriculture), 2019

Due to aging trees, 25.8% being over 30 years old, both yields and production areas for coffee decrease. Given the limited incomes of farmers to acquire new trees, the yield varies over the years. The dispersed farmer production areas contribute to low yields, 0.5 - 0.6 metric-tonnes/ha contributing to a reduction of 0.50% from 2017 to 2018 (FAOSTAT 2020).

Figure 9: Area harvest and yield for coffee in Rwanda 2000-2018



Source: FAOSTAT 2020; own processing

Figure 9 shows that, yield has a decreasing trend. The yield loss is mostly due to pests and diseases, ageing trees, degraded soils and negative impacts of climate change.

b) Sustainable agriculture of Rwandan coffee

In their research, Elder, Zerriffi and Billon (2013) discovered that Fairtrade standards do not have a strong effect on agriculture practices in Rwanda thus understanding Fairtrade certification may influence farmer practices above and beyond cooperative organisation. The study published on Rwanda by Elder, Zerriffi, & Le Billon, (2012) shows that Fairtrade farmers do earn less from coffee sales than non-certified certified cooperative and private farmers. This speculation is at least partly a result of Fairtrade certification targeting the poorest farmers. After the 2009 survey of 175 Rwandan coffee farmers and informant interviews using logit regressions, they estimated the link between Fairtrade certification and social capital— measured as farmer trust and participation—while controlling for various other factors that could have an influence on social capital, particularly membership in a cooperative organization.

The study conducted by Elder, S. D., Zerriffi, H., & Billon, P. L. (2012) in which the authors observe that Fairtrade in Rwanda is not very efficient and has several disadvantages: engagement of farmers in the decision making of cooperatives is very low, benefits from Fairtrade tend to apply mostly to owners of Washing Stations Centres, who may or may not be the actual farmers, and the Fair Trade standards implementation impact on the environment is still minimal.

The impact of climate change on coffee production shows that rising temperatures and changing rainfall patterns affect the suitability of land used for coffee production. Coffee production is expected to be severely affected by climate change, resulting in lower yields, deteriorating quality, with negative consequences for producers whose livelihood depends on coffee cultivation.

4.1.3 Coffee certification in Rwanda

Coffee from Rwanda was previously classified as low-quality in the 1990s making it difficult to sell on the global market and attractive low commodity prices. Rwanda and other East African countries were unknown in the specialty coffee market. But in the early 2000s, Rwanda placed an emphasis on producing high quality fully washed coffee, thus the introduction of coffee farmers' Fairtrade certification through cooperatives.

This resulted in Rwanda being recognized as a producer of high-value coffee, with the percentage of fully washed coffee increasing from 1% in 2002 to 35% in 2013, owing to an increase

in the number of coffee washing stations. Rwanda's coffee industry has gained a positive profile and created tremendous demand for its high-quality bourbon Arabica. International long-term relationships both in the retail and wholesale markets have the potential to complete the transformation of the industry.

Rwandan Cup of Excellence that is held every year since 2008 has not only promoted the high quality Rwandan Coffee to the discerning high end world Coffee market but has also created long lasting relationships between Rwandan farmers and their global clients. They are committed to taking good care of the coffee plantations through different certifications (RDB, 2019).

Although not a quality, certification has often been considered a quality specification by the market, and premium levels are generally lower than those of the mainstream certified coffees, which are UTZ/Rainforest Alliance and Fairtrade certified. Since 2014 a large share of the Rwandan coffee production has been certified or verified. In 2018, production of UTZ was 5.7% of the total production around 1,372 MT (UTZ/RA), while Fairtrade production was 3,340 MT a share of 14.02% of total production; of which 60% is organic certified. The two certifications represent 20% of Rwandan total production. In 2016, according to NAEB (2016), the total Fairtrade coffee production was 6,229 ha (organic coffee was 2013 ha), which is less than 20% of the total area under production of coffee. Other certifications available in Rwanda are C.A.F.E. Practices initiated by Starbucks, Nespresso's AAA Sustainable Quality Program and 4C Compliant Coffee. The share of certified coffees is expected to keep rising, especially organic certified coffee due to the growing demand.

Rwandan coffee has been one of the best brewed and has scooped some international awards such as "Best of the Best" and "Coffee Lover's Choice" in a competition that attracted brands from nine countries around the world.

4.1.4 Fairtrade coffee market in Rwanda

a) Traders and exporters organisations

Following a dry run in 2007 with the 'Crop of Gold', ¹⁵ Rwanda held its first Cup of Excellence competition in 2008 and since then has introduced many more buyers to the exceptional Bourbon coffees that this country produces. Since 2012 Rwanda has gone from five trade partners worldwide

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¹⁵ The Rwanda cup of gold is the pre cursor competition to the cup of excellence program. Its a trial run for a country to check out the logistics and how to conduct a coffee competition.

to over 70. Rwanda's coffee export is dominated by traders and exporters, such as RTC, IMPEXCOR, Dormans and RWACOF. Together they are thought to be responsible for at least 85% of the exported volume. In 2017, there were 88 registered exporters.

Table 5: Rwandan Coffee export destinations and the main exporters 2017

Destination Country	Switzerland	UK	Singapore	USA	Uganda	Belgium	Japan	Kenya	South Korea
Export in %	44.67%	23.86%	4.05%	2.17%	0.36%	9.40%	0.50%	9.38%	11%
Exporters	Rwacof, Impexcor, Rwashoscco, RTC, CBC	Dormans, Rwashoscco, Mountain Coffee	Dormans	Rwacof, Coopac, RCFC,	Volcano Coffes	CBC	Cyahinda Coffee	RCFC	KAMG, GIG,

Sources: NAEB, 2019

b) Volume of exported coffee

Coffee export in Rwanda is growing especially by the growing European market for speciality coffee. Rwanda exports over 60% of its coffee to the EU, 20% to the US, and in smaller quantities to the Asia/Pacific region (NAEB, 2019). The organisation of the coffee export in Rwanda is solid, meaning opportunities can be seized and issues addressed collectively. Some issues related to quality are already being addressed, such as final quality coffee control through the National Agricultural Export Development Board and the provision of inputs to farmers.

Currently, UN Comtrade available data in connection to Rwanda coffee export are 13,205 Metric Tonnes. These data represent 57.04% of the volume reported by National Agriculture Export Development Board in 2019. An analysis of these data show that 0.60 Metric Tonnes were exported to Switzerland in 2019 while 152 Metric Tonnes are reported to have been exported to the Czech Republic.¹⁶

These changes have had significant effects, coffee continues to generate important export revenue for the GoR. In 2018, coffee export amounted over US \$69 million increase in comparison to \$64 million in 2017. In 2018/2019, coffee revenues decreased to US \$ 68 million whereas the export quantities increased by 6% from 22,046 Metric tonnes to 23,149 Metric tonnes in 2018/2019 (NAEB, 2019).

Higher profits benefit farmers, their families, and their communities in various ways - farmers can improve their home, pay medical expenses or school fees and, even better, provide food security.

¹⁶ Comtrade - Trade Statistics, 2020. [Online]. Accessed April 04, 2010.

And when cooperatives earn a profit, they can hire workers, purchase capital, and support community projects such as construction of schools, health centres, etc.

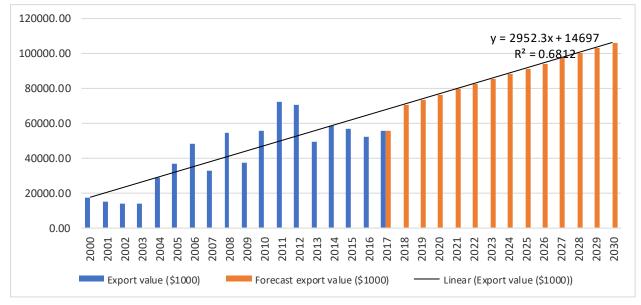


Figure 10: Export value forecast up to 2030

Source: FAOSTAT 2020; own processing

Despite strong governmental and international support, the Rwandan coffee industry faces significant challenges, which impact the productivity and the export volume. In 2006/2007 there was the peak harvest of which nearly 24,000 Metric Tonnes were exported. In 2016/2017, the number had fallen to 17,000 Metric Tonnes (FAOSTAT, 2019). Reduced rainfall is seen as the main reason to affect the production while the amount of export coffee was affected by the fall in international prices. Also, coffee leaf rust and coffee berry disease contributed to this decline (NAEB, 2019).

Currently, most of Rwanda's coffees are exported, amounting to 20,000 metric tonnes (MT). Rwanda exports its semi-washed coffees generally to Switzerland, and the fully washed and higher grade coffees frequently to the US. Other coffees exported from Rwanda are Robusta varieties, roasted coffees, and since recently also natural and honey processed coffees. Over the years production has slightly decreased, but qualities have gone up considerably from 30% fully washed coffees in 2010, to 69% in 2019. However, this was not directly translated into value, because of low coffee prices and declining volume. (Agri Logic 2019).

Coffee revenue decreased from 69 million in 2017/2018 to 68 million in 2018/2019 whereas the export quantities increased by 6% from 22,046 Metric tonnes to 23,149 Metric tonnes in 2018/2019. The average price of Rwanda green coffee was \$3.41 per kg in 2017/2018, which reduced by 7% to \$3.18 a kg in 2018/2019 (NAEB, 2019).

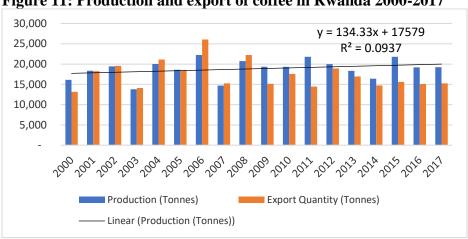


Figure 11: Production and export of coffee in Rwanda 2000-2017

Source: FAOSTAT 2020; own processing

Rwandan export of coffee is very high, due to a low domestic consumption. Only 1% of the coffee produced in Rwanda is consumed locally (NAEB, 2016). Recently there have been campaigns to encourage Rwandans to consume Rwandan roasted coffee and this is growing on a satisfactory level. Rwanda has a roasting company with the capacity to process 1,500 tonnes a year. The table below shows the share of coffee export compared to the produced coffee in Rwanda over the years.

Table 6: Export share in the coffee production 2000-2017

Year	Production (Tonnes)	Export Quantity (Tonnes)	Share Prod-Exp %
2000	16,098	13,137	81.61%
2001	18,366	18,230	99.26%
2002	19,427	19,556	100.66%
2003	13,805	14,099	102.13%
2004	20,017	21,117	105.50%
2005	18,597	18,463	99.28%
2006	22,223	26,075	117.33%
2007	14,683	15,256	103.90%
2008	20,724	22,254	107.38%
2009	19,372	15,109	77.99%
2010	19,319	17,571	90.95%
2011	21,820	14,442	66.19%
2012	19,995	18,907	94.56%
2013	18,346	16,960	92.45%
2014	16,379	14,740	89.99%
2015	21,808	15,613	71.59%
2016	19,189	15,071	78.54%
2017	19,231	15,228	79.18%
2018	21,548		0.00%

Source: FAOSTAT 2020; own processing

c) Processing and distribution challenges

The East African region has been plagued by the potato defect which led to Rwanda focusing on promoting cultivation of Red Bourbon for export. Rwandan producers and washing stations are investing in processing – sorting, sorting and sorting again – to insure any and every suspect bean is removed before the coffee reaches the dry mill. Also, there are a few ways to treat the problem which help reduce the risk, such as pruning, removing the green beans attacked by the antestia bug, target spraying (which can be organic), application of strict post-harvest sorting protocols and floating the coffee cherries.

On the farmer side they relate to low productivity, which has multiple causes, such as low soil fertility and increased pest and disease pressure, and which is also due to changing weather patterns. Farmers are tempted to invest in other subsidised crops that fetch higher prices in the market.

Despite Rwanda's huge potential for quality coffee production, its specialty coffee industry is still young and facing several challenges. To start with, Rwanda's landlocked geographical status and poor infrastructure mean that coffee producers face high transport costs. Moving coffee cherries quickly over Rwandan roads is difficult, as is moving processed beans out of the country in a timely and cost-effective manner. Since air transportation for an acceptable delivery time to the client is expensive, for export, Rwandan coffees exporters use a 1,500 km overland transport mean to Kenya – Mombasa or Tanzania - Dar-es-Salam. The road transport can usually be expensive and costs more than shipping a container from Africa to Europe or the US!¹⁷

In the case of green coffee export, the transport from Kigali to the port is done at the seller's expense, and additional cost per kg is incurred. Additional concerns are related to the costs in the industry. Production costs remain high. Many of the newly built coffee-washing stations are operating at much less than full capacity, and labour costs are higher than in neighbouring countries. Rwandan farmers are also less productive than farmers in neighbouring countries. Although some have received support and training from NGOs, regular visits from extension agents are limited.

Other challenges involve the broader institutional environment. As Rwanda implements a new land law, some smallholder farmers may face uncertainty about the rights to the land that they work. Women may be especially vulnerable. The GoR, NGOs, and other stakeholders are taking measures to deal with these various challenges, however. If capacity issues can be addressed, marketing and

¹⁷ Footprint Coffee: Rwanda - Kinunu, 2020. [Online]. Accessed March 30, 2020.

sales problems resolved, incentives strengthened to produce higher-quality beans, and harmful government interference avoided, then the positive gains of the past several years should continue, and Rwanda's smallholder farmers can look forward to earning more income from coffee production. This income should, in turn, filter through local economies to spread benefits to other Rwandans.

4.1.5 Fairtrade coffee farmer's income

A study commissioned by Fairtrade looking at Fairtrade coffee farmers' income found that, on average, farmers in India, Indonesia and Vietnam earned a living income, with Indonesian farmers earning this living income from coffee production alone. Kenyan Fairtrade coffee farmers did not earn a living income. In fact, Kenyan coffee farmers were on average, producing coffee at a loss.

Febelets, V. et al. (2017) mentioned that this is mainly due to the cost of productions versus the profit earned per hectare which lead to this conclusion. Kenyan farms use high amount of labour force per hectare which indicates a relatively low labour productivity. Also, a large part of them cultivate coffee on an area that is less than 0.1 hectare. It is noticed that the nature of this analysis didn't take in consideration other factors such as soil fertility, input used and climate conditions to make a solid conclusion.

The study informs Fairtrade's Living Income strategy, aimed at creating an environment where all Fairtrade farmers can receive a living income and (when hiring labour) can pay living wages. Processed according to Febelets, V. et al. (2017).

There are no available studies comparing Fairtrade certified farmers with non-certified cooperative farmers and non-cooperatively organised farmers in order to discern whether benefits to farmers result primarily from Fair Trade certification or cooperative organisation. Most studies of Fairtrade implicitly assume certification is the cause of cooperative organisation, but cooperatives can also exist in the absence of Fairtrade certification. "The 'non-certified' cooperatives can have social capital benefits for producers, for example by providing a platform for frequent interaction of members and a democratic structure for participation in economic activities." This statement was noted by Elder, Zerriffi, & Le Billon, (2012).

The lowest incomes were those of smallholder farmers living in small villages. The annual cash income of the household is estimated at less than US \$ 500, which means that most families live below the extreme poverty line set by the World Bank. Members of the households survive by

consuming the food crops they grow. Low incomes, however, create a barrier to financing the education of children or investing in other sources of income.

Families from medium size communities are in a better situation. They live closer to the market or have members of the extended family working in the cities. But even then, their income is not significantly higher than members of households in small villages. Only a few households enjoy higher incomes. The typical pattern of the well-situated rural family is that the owner of the farm is a retired government employee, which gives him an opportunity to provide his children with a proper education and the possibility of finding a good job in the city. Agriculture alone is not providing a good living for all coffee producer farmers.

Fairtrade does not have a visible impact on the lives of the coffee production farmers. Much more important are other factors: the additional occupations of family members, place of residence (city, village, small village), access to local markets (to sell food crops), and education of the farmers.

a) Coffee price volatility in Rwanda

Market risk is related to volatile coffee prices that can vary significantly over production seasons. The volatility of coffee prices, which was higher in the 2000s than in previous decades, is likely to contribute to increased market risk. For various reasons, the global price of coffee is highly volatile, for example as noted in Figure 4. Fairtrade aims to give farmers stability in this unpredictable environment by offering a Fairtrade Minimum Price, which protects them from sudden price drops. Organically grown coffee receives an additional price incentive.

Coffee farmers also receive a Fairtrade Premium – an extra sum of money paid on top of the selling price that farmers and workers invest in business or community projects of their choice. A set portion of the Fairtrade Premium goes toward improving production or quality. By supporting smallholder farmers to organize themselves into small producer organisations – such as cooperatives and associations – farmers can negotiate better terms of trade and reach wider markets.

b) Rwandan coffee market

In 2018, Rwandan coffee started trading on the world's largest e-commerce platform, Alibaba after the GoR entered into a partnership with the e-commerce giant to trade Rwandan products on the online market. So far, sales volumes of Rwandan coffee have grown by 700% on Tmall Global, an Alibaba's cross-border Business to Customer (B2C) platform.

The East Africa Commodities Exchange (EAX), the commodity market platform based in Kigali, Rwanda, has announced plans to add coffee and tea to their list of traded commodities in 2018. This is yet to be implemented as currently, AEX trades soya, maize and sorghum on its platform that connects farmers and brokers, using a NASDAQ application.

Picture 5: Fully washed green arabica coffee prices



Fully Washed Low Grade Green Arabica Coffee

\$2.50 - \$3.50 19.2 Metric Tons (MOQ)



Semi-Washed Low Grade Arabica Green Coffee

\$2.00 - \$3.50 19.2 Metric Tons (MOQ)



Fully Washed Green Coffee -Triage 2 Machine Sorted

\$2.50 - \$3.00 19.2 Metric Tons (MOO)



Cafe Aromec Classic Blend Roasted Coffee

\$7.00 - \$9.00 1 Metric Ton (MOQ)



Semi-Washed Green Coffee -Triage 1 Machine Sorted

\$1.80 - \$2.50 19.2 Metric Tons (MOO)

Source: Alibaba 2020¹⁸

Certification is important to access the market, reflecting credibility. However, for the specialty buyer this is less relevant, as quality prevails. Organic might be the exception, though there is a trend towards more organically produced and certified products. Since Rwanda is a small country, volume is less relevant, opportunities probably mostly lie in focusing on the smaller consumer countries exhibiting faster growth, countries that appreciate high-value coffees. In the above picture, Rwandan brand Aromec coffee has the highest price, yet it is not certified. Alibaba platform for Rwandan coffee intends to target global customer to increase market share and improve brand recognition.

4.2 Fairtrade impact on coffee farmer's income

Rwanda is known for its quality Arabica and Robusta coffee. The coffee market is identified as a highly unstable with price fluctuations on the market. The fluctuation is caused mainly by non-constant supply, which is influenced by current climatic conditions, vegetation cycles of coffee trees, the political, social and economic situation in certain regions, pest activity or by accessibility of fertilizers.

Moreover, the supply is not able to react immediately on the market changes such as increase in demand and vice versa.

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¹⁸ Alibaba: Fully washed green arabica coffee - Origin Rwanda, 2020. [Online]. Accessed March 30, 2020.

4.2.1 Coffee Farmers household income model

Not only the costs of sustainable coffee production is considered but all the income that the farmer receives on a member level, costs and revenues of other goods, in-kind income and off-farm income. As such, the farmer household income is defined as all income that a farmer can have, both on and off-farm and both financial and in-kind, minus all financial and in-kind costs the farmer has for the production of coffee and other farm goods.

Labour costs of household members are excluded as the farmer household income is considered to provide for the household and should therefore not be reduced by an additional wage income for household members. A household is defined as the family members for which the farm must provide and who live permanently in the farmer's household. This is in line with the definition of a household of OECD.¹⁹

Farmer Household **Financial** In-kind farm Off-farm farm income income Income Deduct In-Finanacial Incrrease in Net profit In kind farm Wage Net profit Income from invested kind farm other goods coffee revenues income capital other farms expenses

Figure 12: Farmer household income model

Source: Processed according to Febelets, V. et al. 2017

Figure 12 provides a breakdown of the farmer household income model. To explain the above list of variables it is noted that the farmers' household income consists of **financial farm income** monetary value of coffee stock in last crop year or other farms, plus net profit from coffee and other goods.

The increase in invested capital such as working capital together with **in-kind farm income** made of exchanged goods received, in-kind contributions from the cooperative are considered to increase the income whereas in-kind expenses such as in-kind goods given to works and exchanged goods given decreases the householder's income.

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¹⁹ OECD - Glossary of Statistical Terms: Household, 2020. [Online]. Accessed March 05, 2020.

The net income of the farmer's household also includes the **off-farm income** which takes into consideration of income from sources other than the household's farm(s) such as wage income and other employment benefits.

4.2.2 Rwandan coffee farmers' household income

Unlike its East African neighbours, Rwanda has little competitive advantage compared to the other specialty coffee producing countries in East Africa. Its competitive advantage is very much related to its relatively consistent good qualities.

An analysis for Revealed Comparative Advantages (RCA) of Rwanda's export competitiveness using the Balassa index has been carried out at 4 Digit and 6 Digit level HS-1996 Classification. At the aggregate level, the RCA in terms of types of goods traded demonstrate that Rwanda has enjoyed comparative advantage in 24 out of 76 chapters it exported in 2015 (Gupta and Kumar 2015).

Top Spot was occupied by Coffee, Tea, Mati & Spices (C-09). Since 2003 to 2015, Tea and coffee have been generating over 20% of Export Revenue for the GoR. The table below shows the top ten products as per RCA.

Table 7: Top 10 products as per RCA for Rwanda

Chapter	Chapter name	RCA 92015)
09	Coffee, tea, matï and spices.	81.46
11	Prod. mill. indust; malt; starches; inulin; wheat grains	42.79
26	Ores, slag and ash.	22.2
01	Live animals	9.3
41	Raw hides and skins (other than furskins) and leafs	8.58
78	Lead and articles thereof.	7.25
15	Animal/veg fats & oils & their cleavage products;	6.66
25	Salt; sulphur; earth & ston; plastering mat; lime	5.68
10	Cereals	4.71
07	Edible vegetables and certain roots and tubers.	2.97

Source: Processed according to Gupta and Kumar, 2015.

Even though certified coffee is sold at higher prices, this does not translate to increasing household incomes or farmer assets and wages for workers that are not in certified production are higher than those in certified production.

The Figure 13 shows the comparison of income between Rwandan farmers and those from the 3 neighbouring countries namely: Tanzania, Uganda and Kenya.

Figure 13: Rwandan Farmer's household income in comparison to neighbouring countries 2017

				#
	Rwanda	Tanzania	Uganda	Kenya
Average farm size (hectare) / average area of coffee production (hectare)	1.00 / 0.43	0.96 / 0.96	1.09 / 0.57	0.71/0.23
Average yield (kg dried cherry/hectare)	1.625	688	702	1.959
Average yield (kg green coffee/hectare)	812	344	351	980
Average yield (kg parchment/hectare)	1.015	430	439	1.224
Average total sales (USD/farm)	\$1.446	\$703	\$496	\$1.608
% of total sales revenues from coffee	50%	80%	65%	36%
% of revenue from coffee sold as Fairtrade	100%	45%	75%	7%
Household FTE/hectare	2.85	1.73	3.82	1.23
Hired FTE/hectare	1.62	0.63	0.38	2.00
Average household size	4.8	5.52	5.68	3.35

Source: Processed according to Febelets, V. et al. 2017

From Figure 13 an overview of the reported yield are in dried cherry, parchment or green coffee. The most reported units in Rwanda is green coffee. However, for comparability reasons, all yields in this table in row 2 were converted to dried cherry, in row 3 to green coffee and in row 4 to parchment. The most reported units for Rwanda are green coffee, dried cherry for Tanzania, dried cherry for Uganda, green coffee for Kenya.

The conversion ratios that have been used were 1.6 for dried cherry to parchment and 2 for dried cherry to green coffee. Tanzania, Uganda reported for Robusta whereas Kenya and Rwanda reported for Arabica. The percentage of revenue from coffee sold as Fairtrade in Tanzania was provided by the local partner (expert).

One FTE²⁰ represents a Full Time Employee which consists of 48 weeks/year, 5 days/week, 8 hours/day. The FTE's reported here are the FTE's working on coffee production only. All average yields are per hectare of area of coffee production. (Febelets, Rusman, & Ruiz, 2017).

51

²⁰ FTE refers to Full Time Equivalent (the equivalent of one employee that works full time)

4.2.3 Different countries - distribution of farmer income

In Kenya, the farmer household income is mostly earned off-farm and it is noted that Kenyan farmers make a significant loss on coffee production. Both Rwanda and Kenya demonstrate that the in-kind farm income contributes meaningfully (>10%) to the farmer household income. This in-kind farm income results mostly of in-kind income from other farms and in-kind farm goods consumed by the household. By contrast, in Tanzania income derived from coffee contributes more than half of the financial farm income. As a result, differences in coffee prices can result in large differences between farmer household incomes.

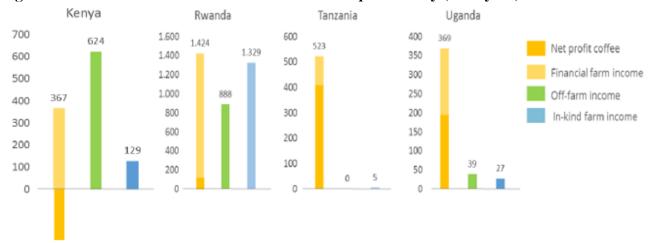


Figure 14: Distribution of farmer household income per country (USD/year)

Source: Processed according to Febelets, V. et al. 2017

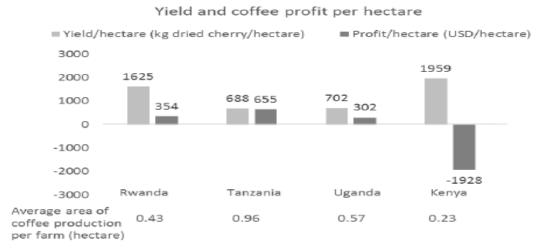
Figure 14 offers an overview of various distribution of different sources of farmer household income per country. The graphs display that in Tanzania and Uganda farmer household income contains largerly of financial farm income, which is mainly due to net income obtained in coffee. The net income from coffee is explained by the yield and farm size.

4.2.4 Coffee yield and profit per hectare

However, while Kenyan farmers have higher yields per hectare than farmers from Tanzania and Uganda, they have a negative profit per hectare. This is because in Kenya the costs of coffee production are much higher than the revenues, implying that either coffee prices are too low, or production costs are too high.

Rwandese farmers have the largest yield per hectare of the considered Eastern African countries, but still have a small profit on coffee per hectare, because revenues are not much higher than costs.

Figure 15: Yield and coffee profit per hectare per country



Source: Processed according to Febelets, V. et al. 2017

Figure 15 shows that coffee yields and net coffee profits per hectare are naturally correlated. This correlation has been further tested by carrying out a regression analysis of net coffee profit per kilogram on yield. For example, in 2017. Rwandan coffee yield was 1,625 kg/ha with a profit of USD 354/ha, which results in a profit of USD 4.6/kg.

This analysis showed a significant positive correlation (p-value of 0.009 and correlation factor of 0.001), which means that if the yield increases with 1 kg dried cherry per hectare, then the profitability increases with US \$ 0.001/kilogram of dried cherry.

Granting the total income of a coffee farmer's household varies depending on the farmer's local background and the farm productivity or size, a higher coffee price is the main key influencer for households to earn a living income that can contribute to an improvement of their living standards.

Over the years, the good quality of Rwandan coffee encouraged its demand, and this led to an increase in income for farmers from coffee revenues. As a result, there is an increase in demand for coffee seedlings and the expansion of coffee plantations. Another significant contribution to achieving an improvement in income generated by coffee is the change of many coffee farms into profitable coffee farming projects. The use of appropriate inputs such as mineral and organic fertilizers, mulching and pruning processes achieve high productivity or high yield.

4.2.5 Rwandan coffee farmers' household income distribution

The Figure 16 shows the Rwandan specific distribution of the household income. This chart is extended with more information on labour costs (USD 186), the average price of coffee per kg of dried cherry (USD 0.26/kg of coffee) and the percentage of beans (51%) and maize (31%) shares in the sales of other farm goods (USD 707). The total annual income of the household amounts to USD 3,641.



Figure 16: Farmer household income distribution of Rwanda

Source: Processed according to Febelets, V. et al. 2017

In order to provide solid conclusions on the drivers of the profits, more insights on used input, soil fertility and climatic conditions should be taken into consideration.

Apart from providing higher coffee prices to certified farmers, Fairtrade Standards also require that buyers pay the Fairtrade Premium, an extra sum of money paid on top of the selling price that farmers invest in business or community projects of their choice. These projects are democratically decided upon by the cooperative during their General Assembly meeting. They can include projects which provide training, agricultural input, health care or farm security, or projects to benefit the community by building roads, electricity lines, water facilities or sanitary facilities.

4.3 Fairtrade impact on coffee cooperatives

Social criteria for small-scale producers include requirements on democratic self-organisation (typically in cooperatives), participatory decision-making, transparency, and non-discrimination (including gender equity).

In plantation-type locations where hired labour is the standard, Fairtrade standards involve companies to operate with non-discriminatory employment practices, pay rates equal to or higher than the legal or regional minimum wages, freedom of association and collective bargaining rights for the workforce, safeguards for worker safety and health, and facilities to allow workers to manage the Fairtrade Premium. Forced labour and child labour are prohibited under the Fairtrade Standards.

Cooperatives and private washing stations may also serve as vehicles for increasing cooperation among members. Building on reports in the media of informal reconciliation at coffee cooperatives, (Tobias and Karol 2011) conducted an exploratory survey of 10 coffee-washing stations in 2008 to investigate possible social benefits associated with the liberalization of the sector. A total of 239 completed surveys were obtained from a subsection of rural Rwandans associated with these stations—some were farmers with seasonal jobs at the washing stations and others were at the stations to sell cherries. Statistical analysis of the surveys showed significant correlation between economic satisfaction or general perceptions of life satisfaction and more positive attitudes to reconciliation. This finding was particularly true the older a washing station was and the longer it had been a part of the local community.

As noted, farmers come to coffee-washing stations either to sell beans or to do seasonal work. Seasonal employees, working side by side, help at drying tables. During harvest season, farmers may bring cherries to a washing station several times a week. This means that farmers and seasonal workers are at the washing stations repeatedly from March or April through June or July. This organisational structure is relatively new in Rwanda, from only 2 coffee-washing stations in all of Rwanda in 2002 to nearly 300 washing stations centre today, and farmers may well be experiencing working under contract, a surely new type of working for them.

In addition, a variety of management concerns have plagued the cooperatives that many coffee farmers join. One specialist of Rwanda's cooperatives observed, "After five years of extensive cooperative capacity building, Rwanda's coffee cooperatives remain surprisingly fragile, unorganised, and dysfunctional" (SPREAD 2007). Some cooperatives have mishandled loans, while

others have failed to fulfil contracts in a timely manner or have encountered trouble marketing their products. Some of these problems are the result of a lack of training or financial management skills.

Shared success stories from two selected cooperatives in the Southern Province and the Western province of Rwanda will shed light on impact of the Fairtrade in cooperatives.

4.3.1 Cooperative 1 – Fairtrade certified COOPEC

COOPAC (Coopérative pour la Promotion des Activités-Café) started as a small cooperative in 2001 in the Southern Province of Rwanda.

COOPAC process coffee which mixes the varietals Bourbon and Mayaguez which are grown at an elevation of 1500-200 meters and the farmers area is positioned on the steep slopes of the volcanic mountains above Lake Kivu. It began with approximately 110 coffee farmers in the two districts of Rubavu and Rutsiro and soon increased its production volume by installing three environmentally friendly washing station centres. Two years later, COOPAC had more than 2,200 members organised in six basic associations: Ack, Ubuzima, Tuzamurane, Kopabm, Abakundakurima and Abanyamurava. Since 2003, COOPAC is a Fairtrade certified cooperative and it had gone through an outstanding expansion since then working with more than 8,000 coffee producers.

The cooperative successes can be ascribed to a large degree to the importance that COOPAC attaches to the superiority of its product. Thus, since its conception, the cooperative has significantly invested in modern infrastructure and in strengthening its members' livelihood standards. The revenue generated by selling to Fair Trade importers are also used to provide plenty training to the coffee farmers especially in organic farming techniques.

The continuous search for quality earned the cooperative several awards, among which the respected "Cup of Excellence 2010" presented in several countries by CoE association for each country's best coffees. Since 2010, the cooperative has been involved in a new project financed by the Trade for Development Centre (TDC), a Belgian Development Agency that promotes fair and sustainable products. Its aim is to assist the cooperative to obtain organic certification for the 2,200 coffee producers. With Trade for Development Centre support, the cooperative aims to increase its turnover by 150% over a three-year period.

²¹ COOPAC - About us, 2020. [Online]. Accessed February 18, 2020.

Currently the cooperative participates in the global trade business while respecting the values of the Fair Trade system. "Beside our respect for food crops, our production employs about 20,000 people who are well paid. The Fairtrade business imposes very detailed specifications on us and guarantees a fair price. The quality of our product enables us to really negotiate such a fair price." Emmanuel Rwakagara President of COOPAC.²²

Cooperative coffee prices have been steadily climbing in recognition of the quality improvements, and, in turn, the wellbeing of its members has drastically improved through Fairtrade initiatives that guarantee the farmers get their fair share. Due to organic coffee production, COOPAC coffee has great body like a Kenya AA, bold rich texture like a Democratic Republic of Congo and the sweet juiciness of an Ethiopian Yirgacheffe. Very balanced, slightly crisp and delicious flavours of honey, rhubarb and lime soda.

Not only COOPAC is helping its farmers produce high quality coffee, it ensures that local educational and health systems are improved. From the construction of schools to health clinics, it is supporting the livelihood improvement of its farmers and their families, improving local infrastructure through building bridges and roads. The cooperative is dedicated to environmental and social sustainability. Waste by-products from processing are used as fertilizer instead of emptying this waste into three nearby rivers and lakes, and shade trees are distributed to farmers to prevent soil erosion.²³

COOPAC has supported the construction of a school, health-care clinics, roads and bridges in the community. The cooperative also has a program to distribute cows and goats to the most productive farmers and provides farmers with an agricultural advisor to teach the latest production methods.

Currently, COOPEC export the green coffee to US, Switzerland and Italy. In 2017/2018, its exported volume was 900 Metric Tonnes a share of 3.88% of the total coffee export in Rwanda (NAEB, 2019).

4.3.2 Cooperative 2 – Fairtrade certified RWASHOSCCO

Another successful case is that of RWASHOSCCO - Rwanda Small Holder Specialty Coffee Company, is a Fairtrade certified farmer-owned coffee business made up of eleven cooperatives in Rwanda: Bufcaffee, Cocagi, Cocahu, Generalities Ltd, Gisums, Koakaka, Musasa, Nyampinga,

²² Trade for Development Center 2013 Report - Coopac Interview, 2013. [Online]. Accessed February 18, 2020.

²³ F atpuppy Coffee: New Coffee Fairtrade - Rwanda Coopac, 2020. [Online]. Accessed February 24, 2020.

Sholi, Simbi and Twongerumusaruro. Farmers at RWASHOSCCO have been able to go beyond coffee production and move towards exporting and roasting their own coffees. The coffee is sourced from specialty coffee farmers (coffee assigned a grade of 80+ points in cupping score). ²⁴ To ensure quality production of fully washed coffee, the cooperative farmers follow guidelines provided by the GoR. Farmers receive regular training from government agronomists, as well as resident cooperative agronomists, on how to take care of their coffee trees and cherries. At the roastery owned by the farmer cooperative, each lot of coffee is roasted separately which is considered a good practice in specialty coffee production. The coffee is then cupped at the in-house cupping laboratory to ensure quality compliance.

RWASHOSCCO has partnered with the German social business start-up Kaffee-Kooperative.de²⁵ which imports the roasted and packed high-quality Fairtrade certified coffee and sells it directly to consumers and businesses. The coffee brands Angelique's Finest and Café de Maraba are the only Fairtrade certified coffee roasted at source that is available on the German market. A growing number of Fairtrade coffee producer organisations are following this path and gaining greater recognition for their premium coffees. In order to support the efforts of the farmers, Fairtrade is increasingly focusing on promoting and positioning Fairtrade coffee as premium coffee, both in well-established Fairtrade markets and in new markets such as the Middle East and South East Asia.²⁶

In terms of farmer income, it is difficult to see how the farmers associated in the two Fairtrade certified cooperative differ from each other. As noted, their income is very different, but not necessary dependent on membership in a cooperative. However, in either case it doesn't translate into a clear improvement in the living standards of farmers. It should be noted that it is difficult to expect any clear effects that Fairtrade can have on the lives of members of cooperatives, because in the case of COOPAC sales of Fairtrade has only been a large share of the total sales since 2010, while in the RWASHOSCCO case no earlier than 2011.

In 2017/2018, RWASHOSCCO had a total export volume of around 1,288 Metric Tonnes, which was 5.56% of the total Rwandan export quantity. Currently, the cooperative exports its coffee to Switzerland, Norway and UK (NAEB, 2019).

²⁴ Commodity grade coffee is treated as uniform while specialty grade coffee has a positive flavor attributes and is assigned a score of + 80 based on numerous attributes which contribute to its taste.

²⁵ Rwashoscco: Roasted Fairtrade Coffee - Angeliques' Finest, 2020. [Online]. Accessed February 24, 2020.

²⁶ Fairtrade International: Monitoring Report - Successful Story Rwanda, 2018. [Online]. Accessed February 18, 2020.

In conclusion, locally COOPEC sells its cherries for US \$ 4/kg, which is slightly higher than RWASHOSCCO, which sells washed coffee at US \$ 3.26/kg. Yet on the global market COOPEC Fairtrade roasted coffee is sold by Coffee Pupulace under Rwanda Kabirizi brand at US \$ 66 per Kg.²⁷ RWASHOSCCO's locally roasted Café de Maraba Fairtrade brand is sold at around US \$ 20 per Kg,²⁸ the Union Coffee, a roasting house sells its Maraba brand over US \$ 35 per Kg.

4.3.3 Socio-economic impacts of Fairtrade in the community

Living standards of the inhabitants of the Western Province in Rwanda, where the Fairtrade coffee standards are implemented through cooperatives, and other communities are mostly similar. In both communities they have similar conditions of life, similar occupations, and have experienced the same changes in the development of their communities in the last 10 years (a new school), although in one case this was due to the government's actions, and in the second it was through Fairtrade premium funds.

Effects of Fair Trade on physical capital evidence in the Fair Trade literature indicates that Fairtrade certification positively affects the social determinants of health through three main processes: improvement of material conditions (physical capital); better education (human capital); and more extended and robust social networks (social capital). The higher price paid to certified producers is cited as the most direct benefit from Fairtrade certification contributing to improved material living conditions (Raynolds, Murray and Taylor 2004).

Using a regression model, Arnould, Plastina, and Ball (2009) corroborate the claim that Fairtrade producers obtain higher prices than non-certified producers. Fair Trade has been associated with positive average net household incomes (Ruben, Fort, & Zúñiga-Arias, 2009), and as a result of higher prices, it is possible that Fairtrade producers could have higher incomes than non-Fair Trade producers. However, in order to understand the impact of Fair Trade on producer income, there is a need to distinguish between the cooperative price - the price the cooperative receives from the buyer and the producer price - the price the producer receives from the cooperative, and to know the proportion of exports sold as Fairtrade and whether the producer is a member of a cooperative.

The Fair Trade guaranteed price standard applies at the cooperative level; once transportation, processing, export, certification, debt repayment, and other cooperative costs (which may benefit producers indirectly, and in the longer term) are deducted, the price to farmers can be less than the

²⁷ Populace Coffee - Rwanda Kabirizi, 2020. [Online]. Accessed April 1. 2020.

²⁸ Gundara Shop: Rwandan Fairtrade Coffee - Cafe de Maraba, 2020. [Online]. Accessed April 1, 2020.

Fair Trade market price (Utting, 2009; Utting-Chamorro, 2005). In his study of Nicaraguan coffee farmers, Bacon (2005) found that certification has a more positive and significant effect on cooperative price than altitude, a proxy for coffee quality, but does not specify whether this translates into a higher producer price.

Utting (2009) claims that Fairtrade certification can still increase producer incomes, even when close to half of the income from the Fair Trade market price is retained at the cooperative level. When farmers sell to the conventional market in addition to the Fair Trade market, which is usually the case, then the average price for all the coffee sold by the producer can be significantly less than Fair Trade prices (Bacon, 2005; OPM & IIED, 2000).

4.4 Fairtrade impact on Rwandan trade

Rwandan coffee plays a major role in the economy of the country, contributing significantly to foreign exchange earnings and to the monetization of the rural economy. The major markets of Rwandan coffee are the United States, Europe and Asia (Switzerland, UK, Belgium, Singapore)

4.4.1 Rwandan economy overview

Rwanda is a low-income country with a population of 12.5 million (2018). The nominal GDP of Rwanda in the long term slumped drastically in the 1994 Genocide. The official inequality measure, the Gini index, declined from 0.52 in 2006 to 0.43 in 2017. Subsequently, it skyrocketed from USD 1.7 billion in 2003 to USD 9.135 billion in 2018 at an average annual growth rate of 12%²⁹. For this dramatic reconstruction and development, Rwanda has been called "the miracle of Africa". Real GDP growth (2011 base) between 2010 and 2015 shows that it fell from 8.8% in 2012 to 4.7% in 2013 but recovered to 8.6% in 2018. Nominal GDP per capita is also gradually increasing from USD 572 in 2010 to USD 830 in 2018 (2018 IMF). The average nominal GDP per capita of sub-Sharan Africa was USD 1,594 in 2015 (World Bank, 2019).³⁰

Goods and services account for respectively 50.8% and 49.2% of exports. Over five years the exports of Rwanda have increased at an annual rate of 9.7%, from USD 554 million in 2011 to USD 869 million in 2016. The most recent exports are led by gold, which represents 20.5% of total Rwandan exports, followed by tea, which accounts for 13.3%. Coffee represents about 7% of total export value, and 20% of the total agricultural export value from Rwanda (AfDB/OECD/UNDP,

60

²⁹ The average annual growth rate was computed based on the nominal GDP, World Development Indicators.

³⁰ The World Bank in Rwanda: Rwanda At-A-Glance, 2019. [Online] Accessed December 16, 2019.

2016). Rwanda's coffee export revenues increased to more than 69 million U.S. dollars in 2018 from around 64 million U.S. dollars the previous year, (NAEB, 2019). The coffee export value is expected to have steady increase for the next decade to come.



Figure 17: Coffee export value trendline 1995 – 2030 in US \$ 1000

Source: FAOSTAT 2020; own processing

Based on the linear trend function it can be expected that in following years the value of Rwandan coffee export will increase with reliability of 68.12%. The increase in coffee export value is a result of an improvement of coffee processing practices through coffee washing stations. To sustain this positive trend, NAEB has taken measures such as directing a strong sensitization to coffee growers to supply cherries to coffee washing stations, setting up an attractive minimum farm gate price, putting in place measures to discourage the ordinary coffee production and to promote zoning policy³¹ practices in all zones (NAEB, 2019).

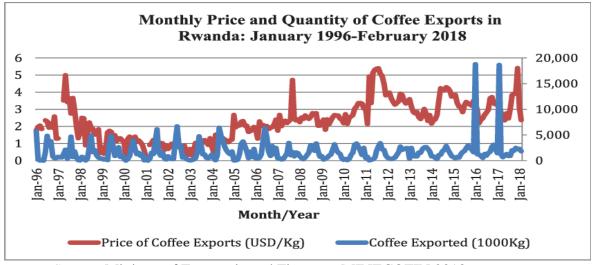
4.4.2 Rwanda coffee export price 1996 – 2018

While the Asian regions were able to obtain significant growth rates in exports, the African exports suffered a significant decrease (-18%) due to an average 50% reduction in coffee production in most African countries, although Ugandan exports increased by 14% and Ethiopian exports stand out with a strong growth of 134%. Rwanda showed a decline of -27% in 1992–1996 and 2012–2016 (ICO, 2019). Various factors such as old trees, production practices, policies, climate change, prices, have influenced this change.

³¹ The goals of the zoning policy are: to improve traceability of coffee from farm to market, to eliminate the trader in the sales process, to strengthen relationship between farmers and coffee washing stations, to improve predictability of the supply of coffee, to increase farmer income, to improve coffee quality (NAEB, 2016).

The average price of Rwanda coffee was \$3.41 per kilogramme in 2017/2018, which reduced by 7% to \$3.18 a kilogramme in 2018/2019 (NAEB, 2019).

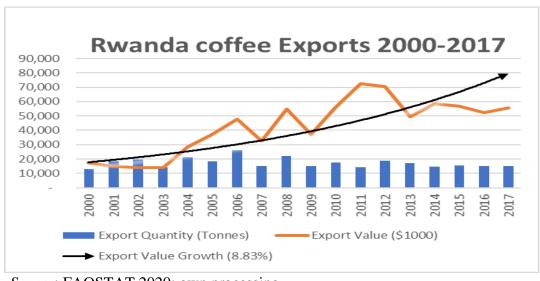
Figure 18: Rwanda coffee exports monthly price and quantity January 1996 - February 2018



Source: Ministry of Economic and Finance - MINECOFIN 2018

Coffee is one of Rwanda's leading export crops, yet it witnessed unstable growth over the past two decades. The value of exported coffee had been unstable in the past decade but grew at 8.83% compound annual growth rate between 2000 and 2017. In the course of June 2016 to July 2017, NAEB focused on the development of agri-export value chains for key commodities such as coffee and tea to increase the production of processed goods and add value to the crops which explains the sharp peak of coffee exported in the same period. In 2016/2017 good prices on the global market boosted Rwanda's coffee export volume during the first 11 months (NAEB, 2017).

Figure 19: Rwanda coffee export growth trend 2000-2017



Source: FAOSTAT 2020; own processing

4.4.3 Certified coffee impact on Rwandan export sector

Economically, the Fairtrade Minimum Price aims to provide producers with a safety net against falling prices and allow long-term planning, along with a fixed Fairtrade Premium that provides farmers and workers with additional money to invest in improving the quality of their businesses and communities. ³²

With an estimated Fairtrade coffee production volume of 3030 MT of which 67% has been exported at an average price of USD 3.41 per kg, Fairtrade export value amounted to USD 7.71 million a share of 0.085% of the Rwandan GDP of USD 9.135 billion in 2017 (NAEB, 2019; World Bank, 2017).

The largest importer of Rwandan coffee is Switzerland, with an average over the last three years of almost 40% of total export value (NAEB, 2015; NAEB, 2016; NAEB, 2017; ITC, 2017).

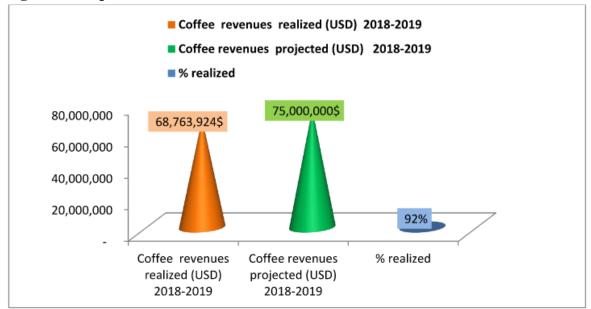


Figure 20: Export revenue for Rwandan coffee in 2018 - 2019

Source: NAEB, 2019

The coffee exports volume increased by 6% in 2018/2019 compared to 2017/2018. This increase is attributed in the increase of the production. Export revenues decreased from 69 million in 2017/2018 to 68 million in 2018/2019. Rwanda coffee export went to the five major clients, Switzerland (44.67%), United Kingdom (17.30%); South Korea (10.76%); Kenya (9.38%) and Sweden (1.11%). The diagram below shows volume in percentage of coffee purchased by each country destination (NAEB 2019).

³² Fairtrade International - Fairtrade Standards, 2020. [Online]. Accessed January 16, 2020.

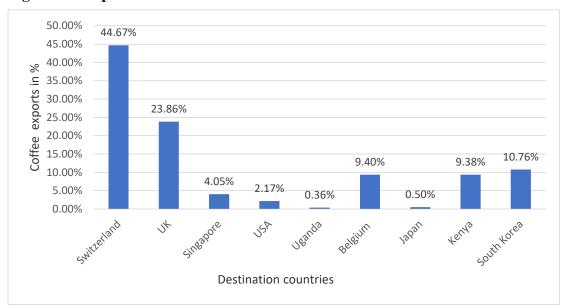
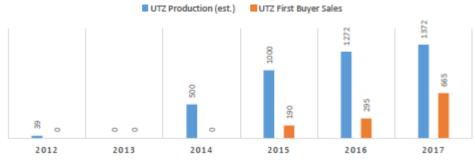


Figure 21: Export destinations of Rwandan coffee in 2018 - 2019

Source: NAEB, 2019

Worldwide, voluntary sustainability standards have grown their volumes of certified and verified coffee at farm level, although only 20% of verified coffee is procured and sold as certified. This is mainly because coffee yields different qualities, and only the premium qualities are sold as certified. Then, there is more supply than demand of coffee. The figure 22 shows the production versus sales for UTZ certified coffees from Rwanda. In 2016, of all produced coffee, 67% was sold as Fairtrade certified (International Trading Company, 2018).

Figure 22: Production and sales of UTZ certified green coffee in Rwanda 2012 - 2017



Source: International Trading Company Trade Map 2016

It is essential to note that no public record of value of the Fairtrade, Rainforest Alliance and organic sales from Rwanda is available.

Certification has become a market requirement of several buyers and retailers, especially for the medium and large coffee companies. Drivers for the smaller coffee roasters and the speciality segment are quality, combined with storytelling (CBI, 2018).

4.5 Porter's five forces analysis

In this part the Porter's five forces by Michael Porter model analysis is done in order to analyse and identify the five competitive forces that shape the Fairtrade coffee industry. These forces are Threat of New Entry, Threat of Substitutes, Buyer Power, Supplier Power and overall Competitive Rivalry and to each of them a level classified as low, moderate or high is given. This is an essential framework for the purpose of evaluating the future perspectives of improvement within the coffee industry.

4.5.1 Threat of new entrants

In the present world, coffee is globally one of the most important commodities. It is popular, and it is possible to say that the coffee industry is very attractive. Threat of new entry means examining how easy or difficult it is for new coffee brands to enter the market and gain the Fairtrade certification.

A company that tries to acquire the Fairtrade trademark for its coffee must submit an application form, meet the determined requirements and to be approved by the entry FLO-CERT audit region representative. Beyond the initial investment to run the business, the fee needs to be covered. The first year this fee is equal to € 565 and the payment repeats every three years (for small enterprise). These additional payments can be perceived as a barrier to entry the Fairtrade market. Also, the companies cannot benefit from the economies of scale. On the other hand, once the Fairtrade license is awarded, the company gains the competitive advantage over non-Fairtrade businesses in the form of support, assistance and reputation.

Barriers to entry are lowered by the fact that there are no major brands that would have high market shares, people buying Fairtrade coffee usually do not have exact preferences regarding brand. Therefore, it is easier for new entities to enter the market. Overall barriers to entry are evaluated as a moderate.

4.5.2 Rivalry among existing competitors

All the five forces - moderate threat of new entry, high threat of substitutes, high buyer power and low supplier power are reflected in the overall competitive rivalry.

The typical Fairtrade consumer is an environmentally conscious person and is concerned about social responsibility. Consequently, he is willing to pay extra money as a premium price for Fairtrade products to comply with his or her values. Potential competitors therefore must be willing to focus on social responsibility and environmental sustainability. Few organisations provide different kind of certification mostly focusing on the same customers as Fairtrade. Yet currently Fairtrade holds the major position in this market segment. Therefore, concerning companies and organisations being focused on the social responsibility and the like, the competitive rivalry is relatively low yet increasing progressively.

On the contrary, Fairtrade is not able to fully compete with the large coffee corporations and top selling brands in retails. Not enough people are willing to pay more for the Fairtrade trademark, since they can easily find a cheaper alternative at no switching cost. In this case the competitive rivalry is significantly higher.

Recently, a lot of companies have set goals to be more sustainable, socially responsible and more environmentally friendly and it is probable that people will require these changes. Therefore, it is important to understand that in the future some major changes might occur in the coffee industry. It is reasonable to conclude that even though the coffee industry has some barriers to entry and several requirements to acquire the Fairtrade certification, it is still considerably attractive with great market potential. The Fairtrade trademark ensures to a certain extent better visibility of a product to customers.

4.5.3 Threat of the substitute's products

The second market force is based on the level of threat that customer will choose alternative product. Taking into consideration the fact that the Fairtrade coffee is often perceived as a luxury good, the threat of substitutes is characterized as high. In Rwanda, the Fairtrade brand Café de Maraba is sold at RWF 15,000³³ a kg, around US \$ 16.12 per kg while Kinunu coffee of the same quantity in sold at RWF 12,400³⁴, around US \$12,45 per kg a difference of 22.76% (BNR, 2020)³⁵. People buying Fairtrade coffee are usually aware of social responsibility and sustainability and price is not the primary factor for them. Moreover, potential customer is always able to find a cheaper, non-Fairtrade alternative at no switching cost.

66

³³ Rwashoscco: Shop - Cafe de Maraba Roasted, 2020. [Online]. Accessed March 30,2020.

³⁴ Shop Mart: Drinks Tea and Coffee - Kinunu Coffee, 2020. [Online]. Accessed March 30, 2020.

³⁵ Rwanda National Bank Exchange Rate as at March 30, 2020 – USD 1 = RWF 930.50

In order to maintain the position on the market, it is crucial, more than in other forces, for Fairtrade to build its reputation and raise public awareness in Rwanda.

However, in the context of socially responsible products, Fairtrade is undoubtedly the most famous and top-selling one, and there are only few substitutes (in terms of other certification) such as Rainforest Alliance or UTZ.

4.5.4 Bargaining power of buyer

Next market force focuses on the bargaining power of buyers or customers, which in other words means how powerful the buyers within Fairtrade coffee industry are.

It is obvious that customers are important and the whole industry depends on them. Without customers buying and drinking coffee, there would be no marketplace. The facts that buyers pay no switching cost when choosing an alternative product, the buyer volume is big and at this time of internet shopping, all of this contributes to buyers' negotiating leverage.

Fairtrade targets a relatively specific kind of people, being interested in what they are buying and from where. Therefore, Fairtrade is dependent on its customers who are interested in these issues, believe in the system but have expectations. These are the main reasons why the buyer power is high.

4.5.5 Bargaining power of supplier

This force examines the bargaining power of suppliers, which means whether suppliers have enough impact to affect Fairtrade margins and volumes. This force is quite a specific case because the suppliers are unlike new entrants, substitutes and buyers' part of the Fairtrade concept which is the subject of this analysis.

Nevertheless, the supplier power is characterized as low. Mainly because the Fairtrade certification is voluntary, members are part of the huge organisation which affords them significant advantages, but they are obliged to meet the determined requirements. It is up to the members whether they want to be part of the Fairtrade system or not.

The typical Fairtrade producer is a small scale farmer or manufacturer, so they do not have enough power to bargain. Moreover, the suppliers can be easily substituted on the market and the switching cost is not high.

4.6 **SWOT** analysis

In order to be able to propose some steps as to how the Fairtrade coffee market can be developed and improved in the future, the SWOT analysis was chosen. It is a basic analytical and strategic tool that defines the external – opportunities and threats and internal factors – strengths and weaknesses. The following statements are defined for the Fairtrade organization system.

4.6.1 Strengths

Reputation, market position, steadily increasing sales, sustainable production. Foremost, these are strengths as an internal factor. The main advantage of whole Fairtrade initiative is its reputation. It is undoubtedly the most famous organization of its kind that is connected to its strong market position, which is proved by steadily increasing sales worldwide.

Since Fairtrade puts emphasis on sustainable development, the farmers, producers, and even the whole process is more resistant to some inconveniences such as market changes that can occur. Moreover, Fairtrade focuses on environment protection that is beneficial for farmers in the long term.

4.6.2 Weaknesses

High elasticity of demand, lack of transparency, quality is not guaranteed - farmers' motivation for improvement, entry and administration fees. This internal factor shows a declining production and productivity of the Rwandan coffee sector. Coffee industry in Rwanda reveals insufficient input and high risk of labour exploitation. This internal factor show a high elasticity of demand which means that for instance during an economic crisis it is probable that Fairtrade coffee consumer will choose cheaper, non-certified coffee instead of Fairtrade coffee because it is not a basic need and there are no switching costs when choosing an alternative product. It is sometimes considered as a kind of luxury good.

Since mediators are often involved in the process, Fairtrade is often criticized because of lack of transparency. Some people also argue that because there is no level of quality guaranteed, farmers are not motivated to improve the harvest. No quality guarantee and lack of motivation are therefore considered as an important weakness of this system.

In addition to this, entry and administration fees that must be paid by farmers or organizations in case they want to be part of the Fairtrade system, should be also mentioned as a weakness. Even

though it is necessary to build capital in order to provide farmers with the Fairtrade Minimum price and sustainable production conditions and farmers profit from Fairtrade trademark's several benefits, still some farmers cannot afford it and are therefore excluded from this opportunity.

4.6.3 Opportunities

One of most-traded product in commodities, growth of public social responsibility, implementation of stricter market regulations, involvement of large coffee companies. According to MIT's Observatory of Economic Complexity (OEC), coffee is the world's 98th most-traded product in commodities and repeatedly one of the top-selling Fairtrade products. In 2017, Fairtrade report on Monitoring coffee (2019), stated that about 214,335 MT of Fairtrade coffee volume was sold, which proves the importance and big potential of the initiative Rwanda coffee industry for brand recognition purpose.

Recently, the growth of public social responsibility contributes to the general popularity of Fairtrade coffee and is therefore a big opportunity. People become conscious of social responsibility of their behaviour and started to be more interested in the background and impacts of products they buy. In addition to this, as mentioned before their willingness to pay more for products that are compatible with their opinions is slowly increasing.

The two next opportunities as external factors are hypothetical, however, due to current economic and social movements, are likely to happen. Primarily, there is a possibility of new, stricter market regulations that would be implemented either in the exporting or importing country. These regulations can apply to export, import, transport, manufacturing process or working conditions and human rights. Without regard to the industry sector, it is obvious that large corporations and market leaders will be more likely to run into troubles than Fairtrade that pays attention to paying a fair price to farmers or to prohibition of child labour, etc.

Furthermore, there is a future chance that some large company with a strong position in the market would be interested in the acquisition of a Fairtrade license. Or a shop may significantly increase its volume of Fairtrade coffee supply. If this company would be able to fulfil the given requirements, it would give Fairtrade meaningful strength and a competitive advantage. However, as was mentioned before, there is a trend of private brands established by big retail shops which are focused on deluxe, premium or organic food products in order to satisfy the customers' demand.

Since this business strategy is created by themselves, under their own conditions and rules, it is a much easier way to target new customers.

4.6.4 Threats

Market leaders, competition - alternative certification, economic crisis. The main external force that might threaten Fairtrade is competition in this industry. Primarily, strong market leaders such as Nestlé or Procter & Gamble hold more than half of the coffee market share. Fairtrade struggles to compete with these market leaders, yet it focuses on the general increase in the social responsibility and customers' concern not only for price. Rwandan coffee sector has little competitive advantage compared to neighbouring East African countries.

Furthermore, Direct Trade is a new trend in coffee market competition that focuses on increasing coffee quality, direct trade and greater emphasis on sustainability (people, planet, profit), transparency and innovative brew methods. Direct Trade buys coffee directly from growers and cuts out the traditional middlemen. The transparency in the trade chain is a challenge to Fairtrade's biggest imperfection. Lastly, there is the occurrence of long-term and distinct market fluctuations or economic crises. A potential crisis can lead to a decrease in Fairtrade coffee sales and weaken its market position.

5. Results and Discussion

5.1 **Results Summary**

In evaluating Fairtrade, many researchers draw attention to the positive impact of the movement on coffee farmers. In the case of Rwanda, evaluation of Fairtrade's impact on farmers is nearly unobserved due to the low representation of Fairtrade farmers in the local population as well as the large number of other important development factors. The research resulted in the conclusion that farmers and cooperatives function differently in relation to processing coffee. Cooperatives are operating in the interest of creating business potential, thus losing the trust of farmers who decide to work independently.

Eventually, the fact that farmers often cannot rely on cooperatives due to issues such as bankruptcy or generally poor management, they process their coffee at home and sell it semi-washed or as ordinary coffee via middlemen. With no proper structure, the farmers cannot be Fairtrade certified. The GoR discourages semi-washed coffee, in order to control quality and make Rwanda's coffee more competitive on the world market. However, the Ordinary Coffees or semi-washed coffees are still an important market outlet for the farmers in Rwanda, representing about 24% of the volume and 17% of the value (TWIN & TMEA, 2018).

It appears that the best solution to the difficulties of coffee cooperatives would be to change the decision-making system around the allocation of the Fairtrade premium. I would recommend the introduction of a guiding principle for cooperatives that details the use of benefits from Fairtrade to be decided at the lowest level of the organization structure so that the decision-making process could include all members of the cooperatives. For example, at least 70% of the Fairtrade premium funds should be spent this way.

A scheme should be developed to use the Fairtrade premium where cooperative members can make decisions - and to call on the advice of sustainable development experts if need be. This would be of a greater benefit of local communities whose members would have more opportunities intended for more significant involvement in local life.

Other organisations and concepts that place emphasis on the social responsibility and target the customer segment, such as Direct trade could have a competitive advantage to Fairtrade in terms of providing a reliable income to the farmers. However, being based on confidence and trust it is more feasible for smaller or medium size entities. The disadvantage is that the Fairtrade principles and goal of addressing inequalities or supporting marginalised producers are completely absent in Direct Trade.

The main problem faced by coffee farmers in Rwanda is the low market price. With low coffee prices, there is not much possibility for improvement in the farmers' quality of life. The great majority of coffee farmers' families make a living, not from the money generated by their farms, but by the additional food crops they cultivate. The money generated by coffee sales is not enough for survival. This situation won't change unless the price of coffee for farmers is increased.

Regarding sustainability, the coffee sector faces a wide range of sustainability challenges, from recorded low market prices to the negative effects of climate change, from decreasing soil fertility to gender imbalances and aging coffee producers. Given these threats, deepening the benefits of Fairtrade and providing education on Good Agricultural Practices (GAP) have become more important than ever. Climate change interventions are still very small-scale, though it is a serious threat to the sector and is already being felt by many of the growers. There seems to be limited focus on youth employment. Opportunities here lie especially in improving the skills of labourers, increasing employment as business service providers to the sector and potentially also as promoters of Rwandan coffee domestically, as well as in the tourism industry as baristas and/or guides.

The weakest part of the Fairtrade system is the exporters. Due to a combination of fees, extra cost, and low demand, export cooperatives often incur losses rather than profits from dealing in Fairtrade certified coffee.

The losses eventually affect the profit of farmers. Farmers who work with the washing stations have seen their income at least double. However, when these organizations do profit, the surplus is devoted to social betterment projects. These are aimed at improving the communities in which the cooperatives are based and can include anything from classrooms to recreational facilities to support organizations.

Fairtrade Certification encourages cooperatives to increase farmer's occupational health and safety hazards for workers and restrict unfair terms of employment. Improved coordination between the smaller processors and exporters, improved access to finance, and improved processing efficiencies, in order to achieve better qualities, better business relationships and increased competitiveness would enable farmers to improve their coffee quality and volume eventually providing them with a fair income that would support farmers' households.

The model of Porter's Five Forces and SWOT analysis, which are essential frameworks for the purpose of examining the future perspectives within the market, are done in order to analyse and identify the five competitive forces that shape the Fairtrade coffee industry and its strengths, weaknesses, opportunities and threats. It is noted that there is a moderate threat of new entry, a high threat of substitutes, high buyer power, low supplier power and the last part includes evaluation of the overall competitive rivalry.

5.2 Recommendations and discussion

The Fairtrade trademark undoubtedly focuses on social responsibility and sustainable development of producers. However, it is noticeable that there is an increasing number of other organizations promoting alternative trading systems and/or certification and as the demand for those products is expected to increase in the future, there is a big market potential.

Some of the shortcomings connected to Fairtrade are relatively high entry and certification renewal fees that must be paid by farmers or cooperatives. A slight decrease of these costs would attract more farmers. The customer's perspective of consuming and buying organic coffee has changed a lot during past years. In my opinion, Fairtrade should focus on motivating farmers for quality improvement. The need to focus on environmental sustainability clearly showed up in this research due to the negative impact it had on a farm's overall sustainability performance.

In general, traders do not directly benefit financially more from trading in Fairtrade products than in non-Fairtrade products. The Fairtrade certification is to a large extent used for branding and positioning in competitive markets. Rwandan organisations use Fairtrade certification for market expansion, promotion and improvement of Rwandan coffee brand, to build its customer base and raising it to the global market. There is a need of efficient market and value addition in coffee traceability, certification, promotion of domestic consumption, marketing & branding and communication.

Small organisations operate more effectively than big ones. They are more transparent and flexible, despite not having a professional office and administration. Also, individual farmers have more impact on the functioning and shaping of the cooperative. In small organisations, it is also easier to see the effects of actions taken or training delivered.

In large, corporate co-operatives, the influence of each member on the shape of the organization is minimal and complex decision-making structures limit the impact of the majority, emphasizing the role of the minorities of the central authority and the office of the cooperative.

Unfortunately, in both cases there was a noticeable false understanding of the relationship between the farmers and the authorities of the cooperative. Office employees and management tend to treat farmers more like employees than owners of the cooperatives. Also, farmers do not have a sense of ownership of the organizations but feel subordinate to its authority.

Factors such as productivity interventions, yield, farm size, coffee price, how farmers sell coffee - whether to private buyers, to middle men, or directly to the small producers' organizations, need to be taken into consideration to determine how these affect farmer household incomes. Another interesting area for future research is the mapping of productivity constraints - soil fertility, land tenure change opportunities, climate for certain countries and regions (Febelets, Rusman, and Ruiz, 2017). Moreover, in extension to the current research, future research could focus on a financial analysis of the Fairtrade Premium projects and its incorporation into the income calculation. This could help prove the impact of Fairtrade certification.

6. Conclusion

To analyse the implementation of Fair Trade certification and its impact on coffee production in Rwanda is more supported by the facts that Fairtrade programmes encourage farmers to implement sustainable agriculture practices.

There is a high degree of consistency between the Fairtrade objectives and coffee production quality in Rwanda, especially with respect to improving developing countries' access to global and regional markets, improving local agendas for economic growth, advancing access to new technology and innovation, increasing production and processing, and working with the most vulnerable. This research found the level of consistency between the implementation of Fairtrade's approach and the coffee production was generally good, with overall impact on the environment not being negative, particularly where Fairtrade is linked to organic certification, as in the case of coffee, sustainable agriculture practices has been considered with the utmost importance. However, additional support programs need to be done by Fairtrade to the farmers' cooperatives to better monitor the implementation impacts and to consider the issue of climate change.

It is acknowledged that in smallholder coffee farms, women and child labour is most likely to occur as generally the smallholder coffee producers rely heavily on family labour. Women and children involved in coffee production often take on a variety of tasks, such as picking and sorting berries, pruning trees, weeding, fertilising, and transporting beans and other supplies. Women and children are even more vulnerable to the risks of carrying heavy loads and being exposure to pesticides and dust.

There are opportunities to increase sustainable agriculture. The Fairtrade certifications program can be a motivating force for coffee farmers to use tools that allow them to analyse the impact that an increase in extreme weather events has on production, sales, and on the delivery of coffee products, energy and water to deal with climate change, to focus on skills and capacity development to reduce high risks of youth employment, to establish measure that prevent child labour exploitation and providing protective procedures to women in the coffee sector.

To assess the impact of Fairtrade certification on the coffee farmers' livelihood improvement imply an analysis of whether Fairtrade coffee certification guarantee an increase in income for certified farmers in Rwanda.

The Fair trade concept and Fairtrade trademark aim at improving the visibility of Fairtrade products and enables customers to quickly recognise the products on global market. Fairtrade seeks greater fairness in the international trade, supports sustainable development, environment protection and human rights. Moreover, through Minimum Price and Fairtrade Premium, it enables customers to contribute to poverty alleviation mainly in the developing countries. In other words, it is more than just trading - it is based on social responsibility and can offer an alternative form of globalisation that takes into consideration economic growth, social development as well as protection and respect for the environment.

Certification is associated with better sustainability performance mainly due to higher farm revenues that contribute to improvements in livelihoods. Training that helps farmers to improve their knowledge and skills on various farm practices also had a positive impact. However, the researcher found that the difference between Robusta and Arabica as well as organic methods and conventional methods may have a bigger role to play in terms of how coffee farms are managed and may affect their performance.

The research found that certification can have some positive effects still context matters. There is evidence to suggest that certification can lead to improvement in prices for farmers and thereby increase income, yet for various reasons such as the cost of certification and share of sales, these benefits may not automatically lead to increases in livelihood standards. There are mixed effects on quality and productivity mainly through increased access to training but little or no effect on wages for workers on smallholder coffee farms. This research focused on smallholder coffee in both Robusta and Arabica coffee production. An analysis of social, environmental and economic aspects has been used to compare income of Fairtrade coffee in Rwanda with other certified coffee farms from the neighbouring countries namely Tanzania, Kenya and Uganda. The analysis of data demonstrated that Rwandan farmers enjoy a higher income compared to farmers in Kenya. It is however essential to recognise that there is generally a lack of significant evidence on this point, making it difficult to draw strong conclusions either way. In general, the certification standards, such as Rainforest Alliance, UTZ and Fairtrade, have little direct additional value for growers, when only taking the premium into account. On the other hand, it does provide the grower with access to another market and a higher skill set which improve the farmer's profitability.

A breakdown of the revenue of coffee certification on the value of Rwandan export helped in determining how much Fairtrade certification premium contribute to the Rwandan GDP value.

In Rwanda, Fairtrade is developing slowly, and its recognition and general popularity is still increasing. Most Fairtrade products are also organic, and the percentage of Fairtrade products being organic seems to be increasing. Several cooperatives seem to choose to combine the organic and Fairtrade labels in order to attract consumers characterised by consciousness of sustainability in a wider sense and loyalty to labels. In general, Fairtrade premiums seem to be under pressure and are believed to follow a descending trend.

Little control over the fluctuation of global prices, dispersed production areas and aging trees puts Rwanda at a disadvantage to compete on the global market with large-scale producers. Diversification into specialty and single origin coffee can achieve tremendous international trade.

An agro-processing industry in Rwanda can be established based on the stable supply of quality inputs. Despite its importance as a foreign currency earner, even coffee cannot be produced in a manner stable enough to meet the demand. Introduction of new varieties that are better for processing may be also important if the processing industry development is taken into account. World Atlas ranks Rwanda the 37th for coffee export in 2018 with an 0.2% of the world total exported coffee at \$ 69,003,000. In 2017, Fairtrade Certified coffee exports amounted to USD 7.71 million a share of 0.085% of the Rwandan GDP of USD 9.135 billion.

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