Coffee Export Capabilities

Assessment of export capabilities of 20 coffee cooperatives in Burundi and Rwanda

Narrative report

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Prepared by AGRI LOGIC

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Contents

Glossary

AFI	Alliance for Financial Inclusion
ARFIC	L'Autorité de Régulation de la Filière Café (Coffee Board Burundi)
BIF	Burundian Franc
BRB	Banque République de Burundi
BRD	Rwanda Development Bank
CAGR	Compound Annual Growth Rate
CEPAR	Coffee Exporters and Processors Association of Rwanda
CGIAR	Consultative Group on International Agricultural Research
CNAC	Confédération Nationale des Associations de Caféiculteurs (Burundi)
COCOCA	Consortium des Coopératives de café (Consortium of Coffee Cooperatives Burundi)
DFID	UK's Department for International Development
DRC	Democratic Republic of Congo
EDPRS	Economic Development and Poverty Reduction Strategy Rwanda
FOB	Free on Board
FOT	Free on Truck
GIS	Geographic Information System
ICO	International Coffee Association
IFAD	International Fund for Agricultural Development
INTERCAFE	l'Association Interprofessionnelle du Café
IT	Information Technology
KfW	German Development Bank
KPI	Key Performance Indicator
LPI	Logistics Performance Index
MFI	Micro Finance Institution
NAEB	National Agricultural Export Development Board
NAEB	National Agricultural Export Development Board Rwanda
NCA	National Coffee Association
OCIBU	Office du Café du Burundi
OOH	Out of Home
PRICE	Project for Rural Incomes through Exports
PRICE	Project for Rural Incomes through Exports Rwanda
PSTA	Plan for the Transformation of Agriculture Rwanda
PSTA	Strategic Plan for the Agricultural Sector
ROW	Rest-Of-the-World
RWF	Rwandan Franc
SACCO	Savings and Credit Cooperations
SCA	Specialty Coffee Association
SODECO	Société de Déparchage et de Conditionnement (Coffee Curing and Packaging Company)
SOGESTAL	Société de Gestion des Stations de Lavage (Company for Managing Coffee Washing Stations)
TMEA	Trade Mark East Africa
USADF	US African Development Fund
USD	United States Dollar
WB	The World Bank

Executive Summary

Scope of work

TWIN in partnership with Trade Mark East Africa (TMEA) is implementing a two year project to strengthen export capabilities of twenty coffee cooperatives in Rwanda and Burundi with a specific focus on supporting cooperatives in: attaining certification, increasing access to Specialty Coffee markets, improving quality of the coffee produced and developing a traceability programme for coffee grown by women. This export capabilities study identifies actors, value addition, financial analysis, market demands and the enabling environment.

Specialty coffee market

Premium and specialty coffee is estimated to represent 14% of global coffee volume and is largely sold by premium brands and in the out of home (hospitality) segment. Premium and specialty coffee is largely defined by cupping quality. The specialty segment is often interested in other differentiations, instead of or in addition to coffee quality. The most common differentiations include: sustainability, traceability, innovation, certification, uniqueness.

There is a demand for specialty coffee, both from Burundi and Rwanda. However, the specialty coffee market is fragmented, with different definitions even of what specialty coffee is. Individual buyers have different preferences, and there are variations between geographies. The three largest coffee regions are North America, Europe and Asia Pacific. North America and Europe have very mature coffee market which is in a decline, and the growth will lie in the specialty sector. However, also that sector is maturing, and we see competition on the rise.

Rwandan and Burundian coffees are considered exotic coffees by the market and are certainly not on everyone's radar. The coffees are mostly sold to micro and midsize roasters. General quality of the coffees from Burundi and Rwanda is perceived as high, though buyers are still scared off by the risk of the 'potato defect', even though considerable improvements have been made. The coffees are high priced, but not sufficiently competitive in quality compared to coffees from Ethiopia or Kenya. Quality and volume are below the other East African origins, and logistics performance is below others in the region, especially Kenya. Also Tanzania is seen as a better coffee producing country, as in addition to quality it also offers more flexibility in sourcing.

Even though **Burundi** has very high quality coffee according to buyers, there are still a lot of basics that need to be covered to be able to market the coffee successfully. Major challenges still exist in logistics, speed, traceability, reliability of pre-shipment samples, communication and marketing.

Rwanda is seen as well-organised and it is a coffee of good quality, there are certain constraints put forward by the buyers with regards to the marketing of the coffee. Flavour is not as unique and other differentiation is needed to compete in the specialty segment. Cooperatives are not always able to provide reliable pre-shipment samples and have limited knowledge of the market and pricing.

Export capability Burundi

Coffee is an important crop to Burundi, and with its high altitude and high quality cup there is potential to access a differentiated market where premium prices for coffee are paid. However, several concerns need to be addressed:

- Farm gate prices as a percentage of FOB are among the lowest globally, and most coffee washing stations and dry mills operate below capacity. Local capacity to manage cooperatives, washing and milling is limited. There are also too few people with the skills to sell to the international market.
- Yield increase on farms is possible, but due to the extremely small farm size and lack of diversification, coffee does not provide a living income to a household. Climate change and population density put pressure on production volumes, and while coffee can remain a contributor to GDP it is not the sole solution.
- The bureaucracy related to the export procedures leads to many delays and Burundi ranks low in its export rating, due to its bureaucratic inefficiencies.
- National policies are not being implement as presented in the national strategy documents, whereby privatization of the sector is strongly promoted, but actions go against it.
- Access to finance is a major constraint both to the producers -especially women and youth - as well as the cooperatives.

Most of the ten partner cooperatives perform well on coffee quality, but the capabilities related prices, marketing, volumes, infrastructure and governance differ per cooperative. Segmentation of cooperatives reveals three clusters with similar characteristics. There is only one consistent high performer. Although all cooperatives are able to produce good quality coffee, market access does not automatically result from this. Better performers differentiate themselves with better access to finance and sufficient availability of sorting and drying tables. Low performers are struggling with governance, infrastructure and low capture rates.

Export capability Rwanda

Coffee is an important crop to Rwanda. The country is able to produce premium coffee, but quality is not exceptional. The structured supply chain pulls in international investors and buyers, and Rwanda benefits from premiums on sustainability certification and other forms of differentiation such as women's coffee.

However, there are also several concerns:

- The value chain appears to need professionalization and possibly consolidation. A large number of washing stations and mills are operating under their installed capacity and are not well managed. This closely correlates to a lack of access to finance, and an overall supply chain inefficiency.
- Improvement could be made with regards to costs of border compliance, which is high compared to its neighbours and potentially negatively influences differentials.
- Yield increase on farms is possible, but due to the small farm size and lack of diversification coffee would still not provide a living income for a coffee household. Climate change puts pressure on production volumes, and while coffee can remain a contributor to GDP it should not be seen as the sole solution.

Not all cooperatives in Rwanda are able to realize premium quality and prices. With good but not impressive cupping scores and a lack of cupping staff, cooperatives are unable to tap into the export market. Good performers have their own washing stations and in one case also a dry mill, and often have a large membership and capture rate. Management capacity is critical. Average performers report challenges in finance, knowledge of the market and finding buyers.

Recommendations

Whereas coffee is important to Burundi and Rwanda, the origins are not that important to the world of coffee due to their small size and lack of differentiation. Export capability for both Burundi and Rwanda is currently insufficient, and both origins struggle with similar challenges.

Farmers productivity and livelihoods

Productivity and profitability of coffee farms can be improved by implementing global best practices for agricultural practices, rejuvenation and inputs. Certification could improve prices for farmers, but should be implemented in partnership with roasters to ensure a return on investment.

For improved livelihoods and resilience, we would recommend to implement diversification on farms as well as for other supply chain actors. This should allow a response to climate change, complement coffee seasonality, and increase overall income.

Supply chain inefficiencies and access to finance

Coffee washing stations in both countries are operating inefficiently under their installed capacity for a number of reasons. Firstly, total installed capacity is higher than total coffee production in the countries. Secondly, locations are not always appropriate with longer distance to farms, further reducing sufficient supply of cherries and affecting coffee quality. Thirdly, a lack of working capital reduces capture rates for cherries. Cooperatives that are managing coffee washing stations could be supported in first mile logistics from farm to washing station, as well as access to finance. Increased coffee productivity will further improve processing efficiency.

Improving access to finance across the supply chain is expected to increase the share of fully washed coffee for the specialty segment, by removing the incentive to sell semi-washed coffee to local traders at a low price.

Government policy

Especially for Burundi, government policy is not understood by all supply chain actors and appears inconsistent. Taxes are relatively high, and its proceeds do not appear to flow back to the coffee sector.

Differentiation and innovation

Especially for Rwanda, quality alone is not sufficient to distinguish its coffee in the market. Interventions focusing on certification, women's coffee and processing innovation will improve its positioning and grow the market demand.

Market positioning

Rwanda and Burundi are relatively unknown as coffee origins. Market positioning is critical. TWIN Trading and other ethically driven traders are playing an important role in raising awareness with buyers and providing marketing materials for individual cooperatives. Government and industry associations could play a role in positioning the countries better as a whole in the specialty coffee market.

Other value addition

Value addition through roasting for the local market is and emerging opportunity. Local roasting would however need a minimum scale and significant investment. In addition to agribusiness opportunities, tourism is a growing sector especially in Rwanda.

1 Background and methodology

1.1 Scope of work

TWIN in partnership with Trade Mark East Africa (TMEA) is implementing a two year project to strengthen export capabilities of twenty coffee cooperatives in Rwanda and Burundi with a specific focus on supporting cooperatives in: attaining certification, increasing access to Specialty Coffee markets, improving quality of the coffee produced and developing a traceability programme for coffee grown by women. Within the framework of the ongoing project, TWIN in partnership with TMEA have commissioned this study, that is to serve as an evidence base for future project interventions geared at addressing bottlenecks and inefficiencies in the supply chain with the aim of improving the export capacity and the profitability of the cooperatives.

This export capabilities study identifies actors, value addition, financial analysis, market demands and the enabling environment. TWIN has requested that the result is practical and action oriented, in line with the objective to increase direct access to specialty export markets for these cooperatives. This report includes recommendations to impact coffee farmer livelihoods by addressing bottlenecks and realizing opportunities.

The report for this export capability study is primarily internal, although TWIN might decide to publish all or part of the report on their website.

This study is not a project evaluation, but does report on any stakeholder perceptions about the impact of the project that came up as part of the study.

1.2 Overview of methodology

The methodology for this study was agreed upon between Agri-Logic, TWIN and TMEA in an inception report. The purpose of the study as per ToR was the following:

Objective	Sections in this report
1. A broad overview of the coffee sector in Rwanda and Burundi	2 (global) 3.1, 3.2, 3.3 (Burundi) 4.1, 4.2, 4.3 (Rwanda)
2. Identifying all the actors involved in the supply chain, analyse their linkages, role, and added value (both descriptive and as a supply chain map), with a focus on the capabilities at each stage.	3.2, 5 (Burundi) 4.2, 6 (Rwanda)
3. Analyse dynamics of processing, value creation and distribution along the chain.	3.5, 3.6, 3.7 (Burundi) 4.5, 4.6, 4.7 (Rwanda)
4. Cost benefit analysis for key points along the value chain with a focus on certification, the access to niche markets and gender.	2.4 (global) 3 (Burundi) 4 (Rwanda)
5. Identify and examine constraints and opportunities within the coffee supply chain and recommend interventions to overcome constraints and make use of opportunities to promote efficiency.	2.9, 2.10,7 (global) 3.7.3.8, 3.9, 5 (Burundi) 4.8, 4.9, 4.10, 6 (Rwanda)
6. Identify the underlying policy, institutional, and infrastructural issues that affect the competitiveness of the cooperatives with reference to the role of government and private sector in the regions. Also develop a matrix indicating areas of priorities for which public sector and other organisations can intervene.	3.2, 3.7, 3.8, 3.9, 5 (Burundi) 4.2, 4.7, 4.8, 4.9, 6 (Rwanda) 7 (global)

Table 1: Summary of terms of reference

PHASE	METHOD	DESCRIPTION
A	Data analysis, capability rating and segmentation	Assessment of cooperative performance and capability level based on five indicator categories: quality, profitability, market linkages, volume and revenue and infrastructure. This assessment is based on the October 2017 marketing review as well as data from the baseline study, historic data where available, information requested via e-mail and phone, and other data obtained during the desk study.
B	Focus group interviews with cooperatives	Interviews with cooperatives in each performance segment (high, medium, low). These interviews are aimed at understanding challenges and identifying actionable solutions to increase export capability. The cooperatives will be selected to include those working with and without an umbrella body. The interviews will identify strengths and weaknesses in governance, market access and enabling environment.
C	Analysis of supply and demand	Desk research and analysis of internationally available figures and forecasts on supply & demand. This will distinguish between origins, specialty and certification demand.
D	Semi-structured interviews with supply chain actors and enabling environment	Interviews with key stakeholders in origin and in markets. These interviews are aimed at comparing market expectations to the expectations of cooperatives, and understanding challenges and identifying actionable solutions to increase export capability. It will also provide information on export processes and procedures.
E	Conclusion and recommendations	Analysis of quantitative and qualitative data for fact-based recommendations on how to improve export capability and create value though the export specialty segment.

Table 2: Overview of methodology

Each of the methods is further described below.

1.2.1 Data analysis, capability rating and segmentation

We have built on existing available information from the cooperatives in order to distinguish *good*, *average* and *low* performing cooperatives. This analysis allows to target cooperatives with specific support depending on their current strengths and weaknesses.

Source of information include:

- Cooperative marketing strategy review from October 2017
- Project baseline
- Phone survey conducted by Agri-Logic under all twenty cooperatives (included in appendix)
- Other documents provided by TWIN

The table below displays the indicators that have been used.

CATEGORY	INDICATOR	WEIGHT	MEASUREMENT
Quality & differentiation	Cupping scores	16%	>80% is satisfactory, >85% is specialty
	Certification	4%	Organic +6, Fairtrade +2, women's coffee +2, UTZ/RFA +1
Sales prices	Average price obtained 2017	10%	% of highest value in both origins combined
	Highest price obtained 2017	5%	% of highest value in both origins combined
	Price development 2016-2017	5%	Price decrease = 1, stable price = 6, price increase = 10
Market linkages	Number of different buyers	8%	% of highest value in peer group
	% of total volume exported	12%	Export share of volume converted to 1-10 scale
Volumes	Average volume marketed per year	7%	% of highest value in peer group in origin
	Volume captured per member	7%	% of highest value in peer group in origin
	Volume development 2016-2017	7%	Decrease = 1, stable volume = 6, volume increase = 10
Infrastructure & governance	Years in existence	2%	Existing >10 years = 10, 5-10 years = 5, <5 years = 1
	Number of management and staff	2%	>6 FTE = 10, 3-6 FTE = 6, <3 FTE = 1
	Cupping expertise	2%	Yes = 10, currently in training = 5, no = 1
	Inclusiveness	2%	% of female members; >50% is 10, >30% is 6
	Access to finance	4%	own capital +3, local buyers/govt +3, banks/international +6
	Washing stations	4%	No. of washing stations on 1-10 scale, >1 = 10, 1 = 6
	Sorting and drying tables	4%	No. of tables converted to a 1-10 scale

Table 3: Export capability indicators

1.2.2 Semi-structured interviews with supply chain actors and enabling environment

The assessment team conducted semi-structured interviews with supply chain actors in both origins and international buyers. Aim of these interviews is to understand the profile of both origins, as well as their supply chains.

Local stakeholders selected for interviews include government bodies, private sector and non-profit organizations. We interviewed eight international buyers of specialty coffee, including Twin Trading. Three were not directly linked to TWIN or the cooperatives. Most traders had quite some experience with buying from Rwanda, but much less so from Burundi. The traders interviewed each have 5-30 years of experience in the coffee sector.

A full list of interviewees as well as the questionnaires used are included as an appendix to this report.

1.2.3 Analysis of supply and demand

Supply and demand has been analysed based on both qualitative and quantitative sources. Statistics on production, consumption and bilateral trade have been sourced from Agri-Logic databases, Global Coffee Platform, International Coffee Organization, United States Department of Agriculture and others. This data was analysed, and interpreted based on interviews with buyers, desk research and our sector experience.

1.2.4 Focus group interviews with cooperatives

Focus group sessions with selected cooperatives were organized in order to understand the underlying factors influencing export capability. The interviews identify strengths and weaknesses in governance, market access and enabling environment. It allows to understand the factors underlying current export capability, and define an action plan for improving export capability.

Key staff was invited to the focus groups: management, procurement and marketing. A list of attendants as well as the questionnaire used is included as an appendix to this report.

1.3 Structure of the report

This report starts from an introduction to the coffee sector in general, and then describes the coffee value chains in Burundi and Rwanda in detail. After this, we describe the requirements and opportunities in the specialty coffee market for Burundi and Rwanda specifically. We continue with an assessment of the export capability of the twenty partner cooperatives TWIN and TMEA have been working.

Each chapter ends with key conclusions and insights. The final chapter contains recommendations to TWIN and TMEA regarding their further support to the coffee sector in both countries.

1.4 Interpretation and limitations

Some cooperatives were unable to provide or substantiate data regarding volumes, prices and cupping scores. We have assessed the most reliable data point in each case, prioritizing data received from third parties (COCOCA, buyers), TWIN marketing strategy review reports, and information received from the cooperatives in our phone survey.

Very few cooperatives were able to provide a multi-year overview of prices obtained, and we have used the 2017 price performance as an indicator. Although a multi-year average and/or trend would be preferred, this can still serve as a benchmark in comparing the cooperatives' performance to their peer group.

We were only able to obtain information regarding the number of units for each type of infrastructure, and not its processing capacity. Qualitative information from the phone survey about the infrastructural needs has been included in the report for the specific cooperative where this applies.

2 Specialty coffee market

2.1 Global supply and demand

According to the International Coffee Organization (ICO)[i], Global coffee production in 2017/18 is estimated at 159.66 million bags (~9.5 million MT), 1.2% higher than 2016/17 with an increase in Robusta output offsetting a 4.6% decline in Arabica production.

Overall[ii], Africa accounts for 11% of global coffee production, and 7% of consumption. Burundi and Rwanda each account for 0.1% and 0.2% of global production respectively.

In this context, Burundi and Rwanda are very small origins in the global coffee sector. Both origins mainly serve a niche market of coffee enthusiasts.

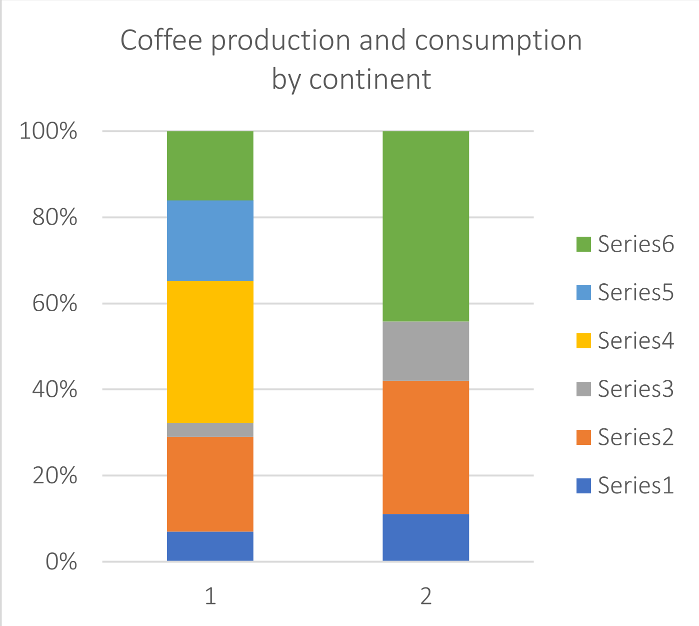


Figure 1: Coffee production and consumption by continent (source: ICO)

2.2 Market segmentation

Globally, the coffee market can be segmented along two axes: coffee quality and buyer typology. Coffee buyers can by categorized into private label roasters, brand owners, and out of home (OOH). The out of home segment includes offices and hospitality.

Generally used terminology for quality includes specialty, premium, mainstream and low quality[iii]. For mainstream and low quality coffee, quality assessment generally only assesses primary defects. For premium and specialty coffee, flavor and other differentiators play an important role. Generally, mainstream and low quality coffee has low margins and only becomes profitable for high volume actors. Premium and specialty coffee has the potential to attract higher margins.

The remainder of this report focuses on premium and specialty coffee, estimated to represent 14% of global coffee volume.

	Private label	Brand owners	Out of home	TOTAL
Specialty Premium	0%	3%	1%	4%
Specialty	1%	7%	2%	10%
Mainstream	5%	45%	15%	65%
Low quality	2%	15%	4%	21%

Table 4: Global coffee volume in % per market segment (source: ITC)

2.3 Characteristics of the specialty coffee segment

2.3.1 Cupping quality

Following the Specialty Coffee Association (SCA), specialty coffee is coffee in its green stage that is free of primary defects, has no quakers, is properly sized and dried, presents a cup free of faults and taints and has distinctive attributes. In practical terms this means that the coffee must be able to pass aspect grading and cupping tests (SCAA, 2009).

Specialty coffee is made of quality coffee beans. Embodying the flavours from the soils where they are cultivated. The coffee beans have distinctive aromas and textures in what makes a specialty coffee. These aromas and textures can be scored, during a 'cupping' process. An Arabica coffee which scores 80 points or above, on a 100-point scale, is graded 'specialty' according to SCA norms.

Though the scoring procedures are well defined, markets do differ in what they consider specialty quality. In the US, an SCA score under 85 would be considered premium and not yet specialty, also refer to Figure 2. In some cases, it also depends on the origin when coffee is considered specialty.

SPECIALTY COFFEE - Q GRADE SCORE SHEET

SCORE	GRADE	SPECIALTY YES/NO
90-100	Outstanding	Specialty Coffee
85-89.99	Excellent	Specialty Coffee
80-84.99	Very Good	Specialty Coffee
>80.0	Below Specialty Quality	Not Specialty Coffee

FINAL SCORE	CLASSIFICATION
95-100	Super Premium Specialty
90-94	Premium Specialty
85-89	Specialty
80-84	Premium
75-79	Usual Good Quality (UGQ)
70-74	Average Quality
60-70	Exchange Grade
50-60	Commercial Grade
40-50	Below Grade
< 40	< 40 Off Grade

Figure 2: Varying definitions of specialty coffee based on cupping scores (source: SCA)

2.3.2 Other differentiations

The specialty segment is often interested in other differentiations, instead of or in addition to coffee quality. The most common differentiations include: sustainability, traceability, innovation, certification, uniqueness. This is further explored in sections 2.5 and 2.9.

2.4 Pricing of (specialty) coffee

In buying and selling coffee, price is commonly expressed as a differential. While prices fluctuate in the futures market, a contract will specify how the price relates to the futures market price. A positive differential means the seller receives a specified amount on top of the futures market price, a negative differential means a discount is applied. Factors affecting differentials include quality, sustainability, traceability, certifications, logistics, finance cost etc. The contract will eventually be settled based on the futures market price on a specified date plus or minus the differential. The Coffee Exporter's Guide is a comprehensive resource to understand pricing, trading and hedging[iv].

In the specialty coffee segment, buyer and seller will sometimes agree on an outright price. In this case the price is fixed and will not depend on price volatility in the market.

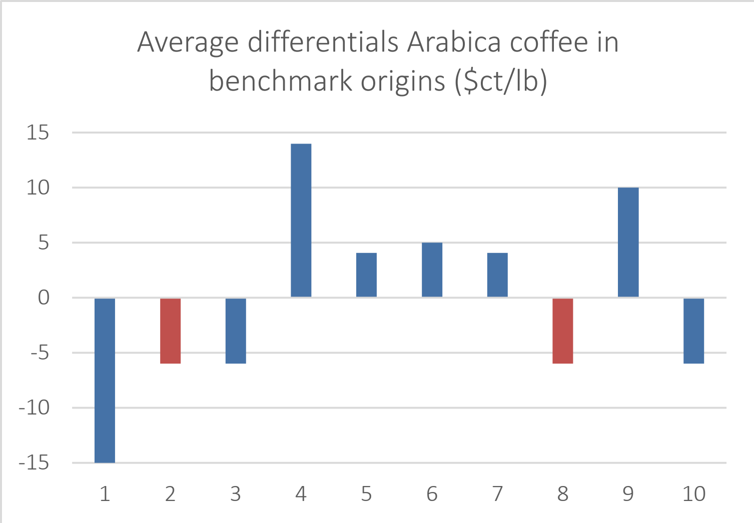


Figure 3: Average Arabica differentials in benchmark origins (source: GCP)

Both Burundi and Rwanda are generally sold at a discount to the futures market price, which can be explained based on inconsistent quality and logistics challenges.

Other East African origins are however able to obtain positive differentials.

Studies on price determinants in coffee[v] have shown that quality matters, and cup of excellence auctions show a correlation between cupping scores and prices obtained in the market. Beyond the value of the cupping score, the rank relative to others has an even greater impact: first rank winners obtain the best prices consistently. Single varieties from high altitude farmers generally perform best in competitions. Certification and the choice of variety have little to no impact on prices obtained.

The same study also shows that Europeans pay higher prices than Americans, and Asians pay lowest prices. Americans however, are more willing to differentiate prices based on different quality.

2.5 Sustainability and certification

UTZ is the largest certification label in coffee, which reports that 24% of certified coffee production was sold as UTZ in the market. Fairtrade is the most common certification label for TWIN partner cooperatives. Recent statistics have not been released, but the 2014 Coffee Barometer[vi] shows a 33% market uptake.

Specialty buyers observe that certification is relevant in some geographies, but often only valued in combination with good quality coffee and supply chain transparency and traceability.

The Sustainable Coffee Challenge commitments portal[vii] shows that climate, forest protection and technical assistance have surpassed certification as the main focus. Only 12% of commitments in the portal include certification. Gender, youth and education are appreciated in niche markets.

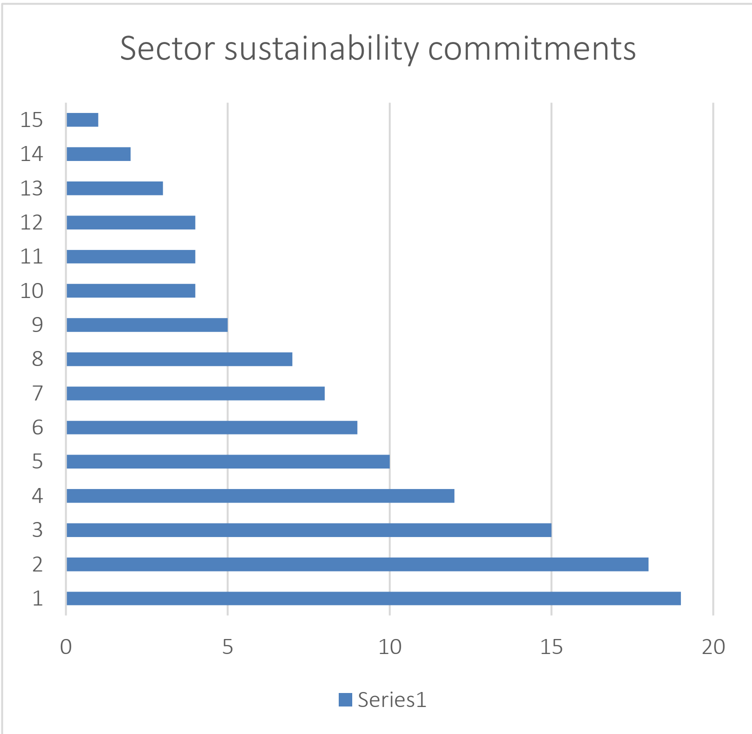


Figure 4: Sector focus for sustainability (source: Sustainable Coffee Challenge)

Although there is a demand for certification, the market appears relatively saturated, and certification alone is not expected to be sufficient for sustained market access.

2.6 Cost and benefit of certification

Cost and benefit of certification is dependent on a number of factors: total volume certified, % of volume marketed as certified, direct and indirect cost of certification, and premiums obtained for certification.

We estimate certification cost at $15,000 per farmer group, which includes the annual audit and Internal Management System operating cost. Although project cost are generally higher, the added value of trainings is beyond just premiums, and will more likely be in increased productivity and other social and environmental benefits.

The Coffee Sustainability Catalogue 2016 estimates average certification premiums at $119/MT (5$ct/lb), but starting from $25/MT (1$ct/lb). Based on input from buyers, we see that premiums have come down, and are currently around $40/MT (2$ct/lb) on average, with only organic coffee fetching significant premiums in the market of $650/MT (30$ct/lb).

The Coffee Sustainability Catalogue estimates an average supply & demand ratio for 31% of certified volume, which we believe is still valid. This means that about one third of any certificateholder's certified production is sold as certified and attracts a premium. The remaining two thirds of production are generally sold as uncertified conventional coffee, or might be sold under different certificate in the case of multi-certification.

Assuming premiums of $119/MT, certification has a positive business case for those cooperatives who are able to market >125MT annually as certified. Assuming current lower premiums of $40/MT, certification has a business case for cooperatives marketing >375MT annually as certified.

Currently, partner cooperatives in Burundi and Rwanda capture on average 54MT and 75MT respectively. Volumes and scale would need to increase significantly in order to reach a cost neutral business case for certification. If a break even point can be reached, the impact of training that can be accessed through certification will be valuable.

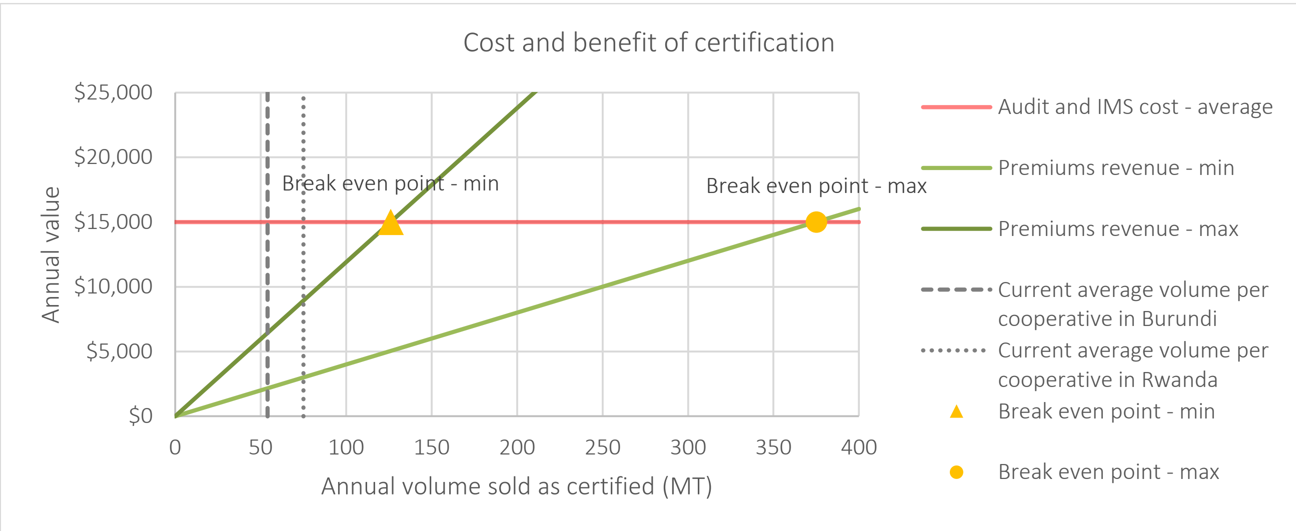


Figure 5: Cost and benefit of certification (source: Coffee Sustainability Catalogue, Agri-Logic)

2.7 Trends in demand by geography

2.7.1 Trends in demand in United States

The United States market is the fastest growing market for specialty coffees. The National Coffee Association (NCA) report on American coffee consumption 2017, shows that of all the coffee consumed, 59% is considered specialty or 'Gourmet'[viii]. The Specialty Coffee Association further breaks this down, indicating that in 1999 only 9% of US adults were drinking specialty coffee daily, and in 2017, this has grown to 41%[ix]. The National Coffee Association, has indicated that currently the US is moving towards a third wave. Whereby the first wave was about the introduction of coffee in the 1960s, the second wave about increasing the quality of the coffees readily available, and the current third wave is about understanding that an espresso isn't just made by a barista: the farmer and roaster also receive credit[x]. The direct relationship with farmers matters and paying a premium recognizes their effort and care.

Greater consumer knowledge and growing interest in single origin coffee fosters growth of sales of fresh coffee beans. We can see that despite this premiumisation trend, the fresh coffee beans category, appears to be slowing. The forecast given by sector stakeholders is somewhat more positive with an expected sales growth of fresh coffee beans between 1 and 2%. Single serving coffee now represents 41% of coffee retail sales in the US, a similar market share to ground coffee, although growth of single servings is slowing down to about 5% per year in 2016[xi].

Though fresh beans are not necessarily specialty beans, it does show a trend that growth might be limited. The US historically has a track record of consuming filter coffee, and this will likely maintain a significant market share, but looking at the product life cycle, we can expect that the more mature the specialty coffee sector gets - whereby an indicator is the slowdown in growth[xii] - the more pressure there will be on prices due to increased competition and it will require new product modifications to create brand distinctiveness.

US is the most important specialty market, also for Rwanda, and it is growing more substantially than that of Europe. However, standards are high and US generally only considers SCA cupping scores of 85+ as specialty. The coffees are bought outright at 2-3US$/lb, by container, going into micro lots. According to one specialty buyer, it would help to combine Organic with the Fairtrade certification in obtaining larger market share. However, this remains very niche. It would though support the thinking of Trends XTC[xiii], a global player in identifying trends in the food sector, which says that the products should be able to communicate at least two trends. For a very niche specialty market, this double certification, including a high quality might help grow market share of these coffees.

2.7.2 Trends in demand in Europe

The market in Europe has followed the US in the specialty market, though slower, much more convinced of the qualities they were already serving. The influence of specialist niche coffee shops is important. The expansion of coffee shops and consumers' desire to replicate the coffee shop experience at home is contributing to the growth of this segment[xiv].

Western Europe has the most mature market for coffee, and volumes are relatively stable. The majority of the growth in Western-Europe will continue to be driven by high-value categories and premiumisation. Consumer interest seems to grow in value adding characteristics, such as the origin of the coffee or ethical farming practices.

Certification such as Fairtrade, Rainforest Alliance/UTZ and organic, are not by definition needed for specialty coffee, and largely depends on the niche that is served. The UK, Germany, France and Italy have the largest volume in organic sales. These are also generally the countries of Fairtrade sales. Organic is fast growing in the countries where it is less mainstream. The Swedish and Danish consumers tend to be ethically and environmentally conscious. This fuels demand for certified and organic coffee. Coffee beans in these countries are benefiting from this at the expense of fresh ground coffee. The combination of certifying Organic and especially Fairtrade, does allow the coffees to reach a larger (growing) consumer segment. However, certification premiums for these coffees will come under pressure as the market continues to mature and new competitors enter. Several specialty roasters have started with small volumes, and they are now facing competition by large established retailers and roasters who are expanding their product portfolio into specialty coffee with new product introductions and acquisitions.

The European market is less demanding and would buy grades 82-84 as Specialty. Certification is important especially for the Scandinavian countries. From the Biofach Trade Fair 2018, we know that Germany is the largest organic market. However according to the German buyers, there is also strong price pressure on the Organic and Fairtrade coffees, as competition increases. It will in time likely influence the premium prices that buyers are able to pay down the chain.

2.7.3 Trends in demand in other regions

Asia

Asia Pacific is the third largest coffee market globally after Western Europe. Indonesia has shown a CAGR (2012-2016) of 19.6%, India of 15.1% and Vietnam of 14.9%[xv]. Coffee is a staple in most households and is projected to see steady growth. However, the instant coffees continue to dominate the market and spend by consumer is low compared to EU. Despite this, Asia Pacific is still a significant region, contributing as much as North America in global retail value sales. Japan leads, and accounts for 30% of the sales within Asia Pacific (2016). The specialty buyers interviewed, only mentioned Japan as specialty coffee market in Asia, seen as the only market driven by high-value products. Though Japan does demand premium coffees, prices are very much under pressure as consumers are not able to afford it. It is not directly seen as specialty market that has potential according to at least one of the buyers. Consumption in South East Asian market is driven by affordable products[xvi].

Australia

None of the buyers interviewed mentioned Australia or New Zealand. It is a very small coffee market, together they represent about 0,6% of the total coffee market. According to industry stakeholders, there is a growing coffee shop culture, leading to an increased sales of fresh coffee beans and coffee pods. Australia has a well-established, coffee shop culture where the independent coffee shop dominates the landscape. Over the last seven years 650 brands were created, in a market that only grows by modest 5% a year[xvii]. The rate at which specialty establishments close or change hands is extremely high in Australia: 75% within a year of opening[xviii]. Consumers are also expressing greater interest in social and economic sustainably. It is market that could potentially be of interest in future, when coffee tastes further mature.

East Africa

Mainstream consumption is still very low in East Africa. The exception is Ethiopia, which has the largest share of locally consumed coffees >50% (ICO). There is also local consumption in Tanzania, Kenya and Uganda, representing percentages lower than ten. For most East-African consumers, coffee is an expensive drink competing with many alternatives. Trend does not seem in favour of a growing regional coffee market.

2.7.4 Geographical proximity

The Coffee Sustainability Catalogue 2016 shows that trade and investment relations build on current physical flows of coffee, with strong ties between North and Latin America, and between Europe, Africa and Asia, and between Australia and Asia. Consumer palates differ between consuming regions and affect demand for a specific quality or flavour profile, also caused by historical availability. Geographical proximity is a key factor in supply chain relations.

2.8 Positioning of Burundi and Rwanda in buyers' market

Rwandan and Burundian coffees are considered exotic coffees by the market, this includes the US and European market, and are certainly not on everyone's radar. The coffees are mostly sold to micro and midsize roasters, therefore quantities bought from Burundi and Rwanda are small: "just a few containers a year".

General quality of the coffees from each of the countries, is perceived as medium to high, though prone to the 'Potato Defect'. Although it is now much less of a problem than it used to be, perception in the market remains and there are some roasters that do not want to work with these coffees for this reason.

Compared to other origins in East Africa, buyers have widely different opinions on the competitiveness and positioning of Burundi and Rwanda. There are strong advocates for both origins in terms of quality as well as other differentiations, while others mention a lack of competitiveness in price, volumes and logistics.

The coffees are high priced as in most of East Africa, though buyers indicate that the value for money from both Burundi and Rwanda does not compete with the coffees from Ethiopia or Kenya, which are considered to be in a different league. Quality and volume are below the other East African origins, and logistics performance and flexibility are seen to be below others in the region, especially Kenya and Tanzania. Asking which origin directly competes with Rwandan and Burundian coffee, one of the traders mentioned Malawi, because of the similar characteristics, in terms of coffee qualities and constraints with regards to volume and logistics being landlocked.

2.8.1 Positioning of Burundi

Burundi has very high quality coffees, with commonly SCA scores of 82-83 and regularly over 85+, as it grows at higher altitudes. It therefore could potentially compete in quality with Kenyan and Ethiopian coffees. However, quite some constraints were put forward by the buyers interviewed, such as the low volumes and the fact that it is landlocked. Historically Burundi has had extreme variations in its coffee production volumes ("20.000MT one year and then 10.000MT the next"). Even though according to COCOCA, this is much better under control, the (perceived) lack of predictability of the crop, scares off potential buyers.

Privatization of the Burundi coffee sector started relatively late. Most of the cooperatives in Burundi are affiliated to COCOCA, responsible for the milling and export. Though COCOCA does quite well according to the buyers, the private international operators on the ground, are much better organised, have better systems and processes in place and therefore the preferred business partner for the export of Burundian coffee. The buyers of Burundian coffee further mentioned constraints with regards to traceability, the lack of infrastructure and the fact that, political instability makes it difficult to visit cooperatives and therefore build direct relationships.

Inland logistics are challenging in Burundi. The coops are distant to the buying centers and it takes a lot of coordination to bring together all information. As is also mentioned by the local stakeholders, in the sections following, the buyers indicate that logistics are a constraints. Trucks are scarce, and the logistical providers have difficulties indicating when trucks are available, which makes arrivals of the coffee at the port (Mombasa) unpredictable and time consuming. Consequence is a loss of quality. GrainPro® bags, do mitigate this to a considerable extent, but some buyers just do not use it. GrainPro® bags are multi-layer plastic bags (a vapor barrier sandwiched between two layers of polyethylene) known to extend the flavour life of the coffee and prolong the storage life of the beans.

On the market side, both US and European side the coffee is not well known and this also goes for the country itself. It makes Burundian coffees very hard to sell in the market. One buyer remembered buying a small lot from Burundi, which he had to hang on to for two years, before being able to sell it and therefore prefers to stay away from it.

2.8.2 Positioning of Rwanda

Buyers find that Rwanda's coffee sector is very well organised, and the many coffee washing stations operate well. Majority of the coffee is now fully washed and of good quality. Buyers find Rwanda easy to buy from, very accessible to trade, and seen as a few years ahead to Burundi. The NAEB plays an important positive role herein.

The market recognises Rwanda, more and more as a specialty market. The US, is Rwanda's most important market for its specialty coffee. The coffees in Rwanda are described as having sweet, floral, citrusy flavour profiles with a moderate unmistakeable acidity. It can be sold as single origin, but still seems to be mostly used in blends, because it is less special than some of, for example the Ethiopian coffees.

Though the coffees are well appreciated, and the origin, Rwanda, is much better known than Burundi and has a good reputation, it still has relatively low demand and still is not very known in the larger coffee market, when comparing to other African coffee producing countries. Price wise the coffees are considered expensive and too expensive to use as a substitute blend, when for example a Tanzania, Malawi or Uganda is not able to supply.

The cooperatives in Rwanda vary largely in quality and capacity. It is important to select them carefully as there is a risk of bankruptcy and governance is an issue. Thereby the cooperatives do not always price their coffees very smartly, because of a lack of understanding of the market. Stakeholders have reported that several cooperatives rely too much on fixed price offers or wait for local price levels to go up before quoting. Others have reported that cooperatives quote unrealistically high prices and lose business as a consequence.

2.9 Buyers' observations

The assessment team conducted semi-structured interviews with eight international buyers of specialty coffee, including Twin Trading. Three were not directly linked to Twin or the cooperatives, in order to obtain an outsider's perspective. The other buyers were familiar with the Twin program and (some of) the selected cooperatives.

Rwanda was well known as a coffee country by the buyers interviewed, and most have experience buying from Rwanda. Burundi is a different story: only two buyers out of the eighth have had experience in buying from Burundi, and further visibility through trade shows and online marketing would likely help. A summary of the information obtained during the interviews is found below. Note though that it is a summary of the expert opinions provided by just eight individual buyers of specialty coffee and should also be read as such. However, together with the stakeholder interviews in the earlier section, they provide a rich insight on the constraints and opportunities of coffees from Burundi and Rwanda.

2.9.1 Quality & Price

The buyers all mentioned that the coffee pre-shipment samples sent to them (by the cooperatives), both from Rwanda and Burundi often do not match the quality received. The quality of the coffee is a key criterium for all of the buyers and cannot be compromised. Lower qualities just cannot be accepted, and thus a discount on quality generally does not work for the Specialty Coffee buyer. The specs of what defines the quality differs between the buyers, much depending on the markets they serve.

In terms of pricing, the cooperatives need to have a better understanding of competition, and not set their price above the market. Buyers see a need for cooperatives to be supported in the marketing and pricing of their coffees. A suggestion put forward was to be more price competitive on the lower grades and there are few line of thoughts here. Apparently, there is a very buoyant market of lower and standard grades of coffee, whereby origin is not relevant. These are coffees mainly used in blends. There are at least two traders that have suggested that it would be good for the countries, to further investigate marketing these qualities. This, next to the specialties, which they should also further improve on, to obtain higher prices. This will allow them to compete both in the specialty market as well as the standard quality and lower grades. Recommendation is thus to look at the different grades produced at a cooperative level, and use it to define product portfolio, targeting different client segments and developing different marketing approaches.

2.9.2 Flexibility

Flexibility is important. Even though long term relationship with cooperative is seen as important, in terms of risk management, other options need to be available to replace the coffees if something happens to the cooperative (e.g goes bankrupt). The other way around also goes, if coffees from neighbouring countries are difficult to get to, Rwanda/Burundi, could jump in to fill the gap. Example that was given of country that shows high flexibility, is Tanzania, which has good logistics, is commercially more viable in terms of differential, and general cupping quality is good.

2.9.3 Consistency and timeliness

The larger roasters have tight timeline as they operate mechanically. Buyers want immediate responses and sometimes delays mean coops miss out on option to quote. Samples also need to be sent on time. The smaller roasters generally have more patience. Infrastructure is good in Rwanda, there are less obstacles and predictability is relatively high, but Burundi herein definitely has its constraints. Quality needs to be consistent and be able to follow growth in demand. Even though cupping scores in recent years show more consistency, almost all buyers say they have an experience where quality at arrival did not meet the quality level of the sample.

2.9.4 Certification and traceability

The buyers seem to have different opinions on certification, depending again on the markets they serve. Certification is most important to those traders that have positioned themselves as an organic and/or fairtrade supplier to the market. For these buyers, quality remains the number one reason to purchase a coffee, but fairtrade and/or organic are a basic requirement to purchase it. The traders serving a broader market believe that if the quality and consistency of the coffee supplied meets or exceeds expectations, the certificate is not that relevant.

Generally, according to the buyers in our survey, there seems to be a slow-down in interest in organic and, especially, fairtrade coffee. US, Germany, France are quite large markets for organic, whereby the growth is especially noticeable in France and US. Fairtrade's market is largest in UK, but not growing much. One buyer said there is a tendency of “certificate fatigue” among consumers. Fairtrade, organic, specialty is very much a niche market. If the origin is unknown to a buyer, a certificate does help create confidence in the product, knowing that the farmers have a certain level of organisational capacity.

Traceability (to the farmers) and the guarantee that a fair price offered to the farmers, is more of a requirement than certification according to the buyers. Next to traceability and quality, the ability to directly be able to support the cooperatives in obtaining better qualities are considered being important especially for the specialty market. The Sustainable Coffee Challenge commitments portal shows that climate, forest protection and technical assistance have surpassed certification as the main focus.

A study from 2017 by Bray & Neilson[xix] shows that empirical evidence is largely inconclusive as causation is difficult to establish because of reliable baseline data or realistic control group.

2.9.5 Relationship with cooperatives and support

The buyers interviewed often in some way support the cooperatives on quality improvements in the processing of the coffee. The specialty buyers are really looking for long-term relationships, and are ready and willing to support the cooperatives. Twin has played an important role herein for many of the buyers. They facilitate the communication, administration and logistics and provide support in project development and implementation. Using Twin as intermediate, means that a buyer only has to deal with one organisation, which is of value for especially those buyers with a limited internal capacity.

2.9.6 Marketing

The coffees from Rwanda and Burundi are often overlooked by the market and from a trading point of view are relatively difficult to sell, especially when there is an Ethiopia and a Tanzania which have the volumes, flexibility and the quality available. Consumer education is needed and the stories are important, for the Rwandan and Burundian coffees to sell, as prices are high and in terms of quality and volumes they do not compete with the other East African countries. One of the suggestions, with regards to marketing was instead of using difficult cooperative names, to use brands. Each cooperative could develop their own brand name, and position themselves on social media.

Noted here should be the important role Twin played. All buyers that worked through Twin have very much appreciated the marketing materials for the coffees “wish I would get these from every partner”. They all use the material in their marketing and it very much pays off.

2.9.7 Product innovations

Roasters are demanding new cup profiles via innovations in processing, such as fermentation, natural coffees and full dry coffee. Other countries seem more forward thinking such as Colombia and Costa Rica, which are experimenting with processes and varieties, it is something that especially Rwanda could also look at.

The women grown coffee that Twin is supporting also adds value, and is much appreciated by buyers. This of course stays quite niche. However, being creative and innovative is something that could open up market opportunities. There is a branding opportunity in marketing women’s coffee.

2.9.8 Communication

To be able to react quickly to the market, continuous communication between the coops and trade teams should be possible. However specifically for Burundi, network issues and local capacity of the cooperatives make this challenging. Cooperatives in Burundi are very distant to the buying centres and it takes a lot of effort to get all the needed information. Cooperatives are competing against more efficient operators such as the international trading companies on ground, which are much better organised. Putting more attention to improving communication issues would support the Cooperative's competitive advantage.

2.10 Conclusion

There is a demand for specialty coffee. However, the specialty coffee market is fragmented, with different definitions even of what specialty coffee is. Individual buyers have different preferences, and there are variations between geographies.

The three largest coffee markets are North America, Europe and Asia Pacific. North America and Europe have a mature coffee market in a decline, and the growth will lie in the specialty sector. However, also that sector is maturing and we see competition on the rise. Marketing strategies would include product modifications to differentiate the product from competing products, price reductions while avoiding a price war, search for new distribution channels and incentives to resellers and promotion of the product and build brand loyalty.

Looking at the product lifecycle, the Asian market is at a growth stage, with Japan reaching maturity. Spend per customer though is still very low, and the markets demands affordable coffees. There is some demand for specialty, but they according to the buyers, they have high quality requirements, while not ready to pay for it. The Asian markets as they mature might become the new markets for specialty coffees in the future.

Even though **Burundi** has a very high quality coffee according to buyers, there are still a lot of basics that need to be covered to be able to market the coffee successfully.

- The logistics, which includes transport and traceability, are weak in Burundi and need attention in order for the country to be seen as a more reliable trading partner.
- The quality of the coffees can improve considerable the sooner the cherries are able to reach the coffee washing station and further investments in infrastructure would support this.
- Buyers cannot trust the samples they receive to be the coffee that will delivered. Specialty markets are very particular about their cup profiles and batches delivered have the exact same cup profile.
- Communication between buyers and cooperatives is difficult and takes a lot of effort and time, hereby the cooperatives lose out on opportunities and risk reputation.
- Burundi coffees even though they are of high quality, are difficult to sell in the market as they are unknown to trade and roasters. Continuing to put in effort into marketing and promotion is important to ensure a certain demand.

Rwanda is well-organised and produces a coffee of high quality, there are certain constraints put forward by the buyers with regards to the marketing of the coffee.

- The coffees in terms of flavours are not considered in the market as being that unique, and it is difficult for Rwanda to compete with the other specialty coffees. Part of the solution lies in innovations and further differentiation to distinguish themselves from the other markets.
- Like for Burundi, buyers indicated that they encounter problems with the coffee received when comparing it to an earlier sent sample.
- The cooperatives have limited knowledge of the markets and how to be competitive in it.

Less so than Burundi, Rwanda also is not that well known by roasters, and especially the smaller (specialty) roasters are scared off by the possibility of encountering potato defect.

3 Coffee sector and value chain in Burundi

3.1 Coffee and production characteristics

Burundi, with its 27,834 km^2, is one of the ten smallest countries in Africa. Its highest peak is Mount Heha at 2,685 m (8,810 ft). The country is landlocked, and is bordered by Rwanda to the north, Tanzania to the east and south, and the Democratic Republic of the Congo to the west. It has a fast growing population, estimated at 11,22 million (2018)[xx].

Burundi's economy is predominantly based on agriculture, and accounts for 40% of GDP and employs more than 90% of the population. Coffee and tea are Burundi's largest exports, and coffee accounts for about one third of the country's export income[xxi].

Total coffee volume (3 year average)	15,600 Mt
% of global production	0.1%
% natural – semi-washed – fully washed	0% – 25% – 75%
Number of Coffee Washing Stations	260 (25% Coop owned)
Average productivity kg/ha	320
Trading Economics Competitiveness rank[xxii]	129 (out of 137)
World Bank Doing Business rank[xxiii]	164 (out of 190)
Average GDP Annual Growth Rate (1961-2016)	2.59%
GDP Annual Growth rate (2016)	-0,5%
GDP	3.09 billion US$
GDP – agriculture	1.10 billion US$
GDP – coffee	0.04 billion US$

Table 5: Key indicators Burundi

The country's coffee is known for its excellent flavour[xxiv]. Almost all coffee produced is Arabica. Bourbon, is the predominant variety with a fruity acid taste, a result of the combination of the volcanic soil and altitude. In 2015, a Kayanza (largest growing region) coffee scored 91.09 in the Cup of Excellence. Burundi coffee flavours range from red fruit to jasmine, hibiscus, and dark chocolate which differs according to region and altitude. A specific issue affecting the coffee sector in the country is the potato-cup defect. Although it appears to improve, the internal market is still scared off by the risk.

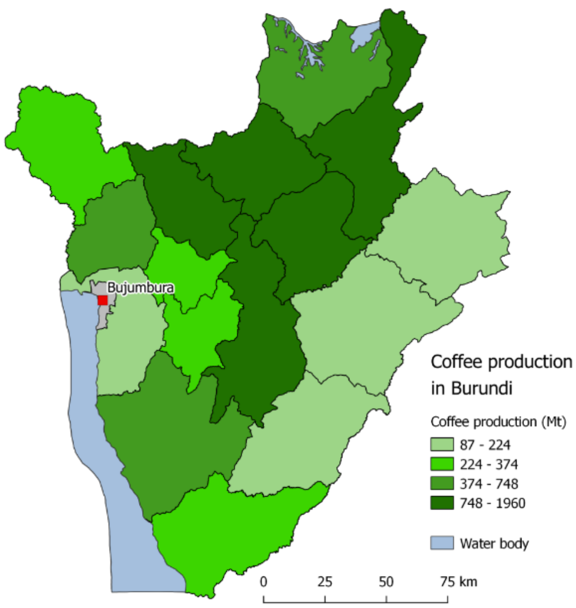


Figure 6: Coffee production areas in Burundi (source: GCP)

Coffee[xxv] accounts for the livelihoods of approximately 590,000 farming households in Burundi, while Burundi accounts for only 0.11% of the coffee grown worldwide. Arabica is grown throughout the country with a concentration in Ngozi province and the bordering provinces. Average landholdings are estimated at around 0.5 ha, of which 0.12 is used for coffee. Yields are estimated at 320kg green coffee per ha.

Based on customary practices, most coffee farmers are men. The land and the coffee belongs to the family and is managed by the heads of households. Women are very active in the maintenance works of coffee trees at the production level. They start having their own coffee fields and become involved at the processing level by collecting their own coffee cherries.

Population density is high and has almost doubled over the past 35 years to 412 people per square kilometre and farm sizes have declined through successive inheritance. Due to high population density there is no scope for expansion of acreage under Arabica, unless farmers uproot other crops. Coffee volumes have as a result been declining by 6.61% per year since 2001. Research by CGIAR[xxvi] indicates that impact of climate change would reduce suitable land for coffee production by 20-50% for 2050s.

3.2 History and value chain governance

In the 1980s and 1990s, all activities of the coffee sector, from production to export and processing, were in the hands of state structures. Since the early 1990s, the Government initiated a progressive coffee sector reform to privatize and further liberalize the sector.

One of the first activities was to separate coffee production from the processing. Whereby production was entrusted to state structures, and the coffee processing to privately held companies. In 1991, the SOGESTALs were founded, in each coffee province of importance. SOGESTALs are owned by a mix of private investors and government. They are responsible for managing the 133 coffee washing stations. Also (the publicly owned) SODECO *(La Société de Déparchage et de Conditionnement du Café)*, was set up, which was responsible for managing the two dry mills. All of the coffee infrastructure belonged to the State. On the marketing side, the coffee sector further opened up to the private actors, via weekly auctions, to which representatives of international traders were able to participate. Prices were regulated by the Coffee Board OCIBU (Office du Café du Burundi), this included the farm gate price of the cherries, the washed coffee parchment and the remunerations of the SOGESTALS and SODECO

In the second phase of the coffee reform, in 2005, a presidential decree was issued to revive the process. This decree brought about complete liberalization of the coffee sector and further opened the doors to private investors, who could invest in both the coffee washing stations as well as dry mills.

During the third phase, in 2008, the Government completed the reforms by further privatizing the washing stations and the dry mills and by fully liberalizing activities in the coffee sector. The coffee washing stations were put up for sale in batches of three to six and the dry mills each individually. In the first selling round, thirteen coffee washing stations were sold and during the second round (2012), another 28, as well as one dry mill. At the moment 92 washing stations are still owned by the state.

The new institutional and regulatory framework was defined in the third phase, in 2008, composed of two pillars replacing the previous coffee board OCIBU: ARFIC (L'Autorité de Régulation de la Filière Café du Burundi) and INTERCAFE (l'association interprofessionnelle du café).

ARFIC, the new Coffee Board, is responsible for:

- Defining the policies and the code of conduct of the industry stakeholders
- Monitoring all prices information and distribute widely adequate information
- Managing the Coffee Quality Laboratory and provide certification for export
- Issuing Coffee Washing Stations and Mill operation licenses and export licenses where applicable
- Ensuring that the relevant laws and standards are respected by the coffee sector
- Implementing market surveillance to ensure that competition rules are respected

INTERCAFE is the coffee industry stakeholders' association, which role is to:

- Promote and market the Burundi coffee industry internationally
- Finance (through and export levy) the industry plant protection programme
- Finance the Coffee Growers Association's (CNAC) budget and extension and research programmes
- Resolve disputes between its members
- Promote and implement the coffee industry standards
- Develop and manage its own coffee exchange platform

The stakeholders are organized in umbrella bodies. The main are CNAC (Confederation National des Cafeiculteurs, Coffee Growers federation), COWASA (Coffee Washing Stations Alliance), COCOCA (Consortium des Cooperatives du Café, the marketing body of 40 cooperatives).

Since 2012, the private investors continue to build processing units, while famer's cooperatives, with support of different donors, invested heavily in the washing stations.

3.3 Supply and demand

While global production volumes have shown a steady upward trend, production volumes[xxvii] in Burundi have been declining since and have been very volatile.

The main export market[xxviii] for Burundi has traditionally been the European Union, for the mainstream arabica's. Exports to the United States have though increased about 20% in recent years, indicating that the specialty segment might be opening up for Burundi.

Switzerland is a major export destination for both origins, and serves as a hub. Four international traders are responsible for 80% of the coffee exports.

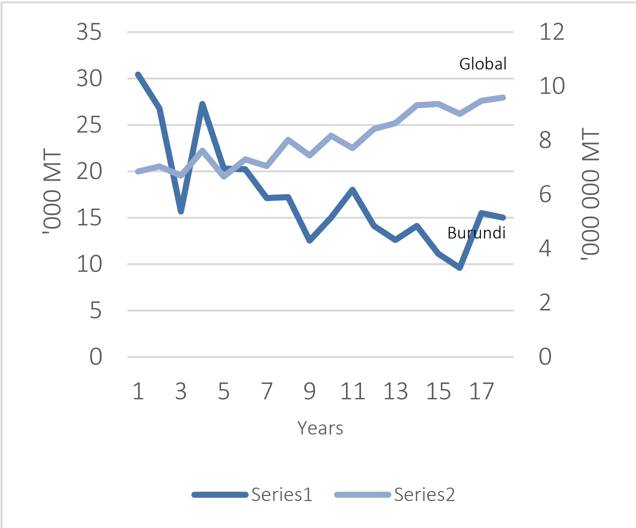


Figure 7: Coffee production 2000-2017 in Burundi and globally in MT (source: USDA, ICO)

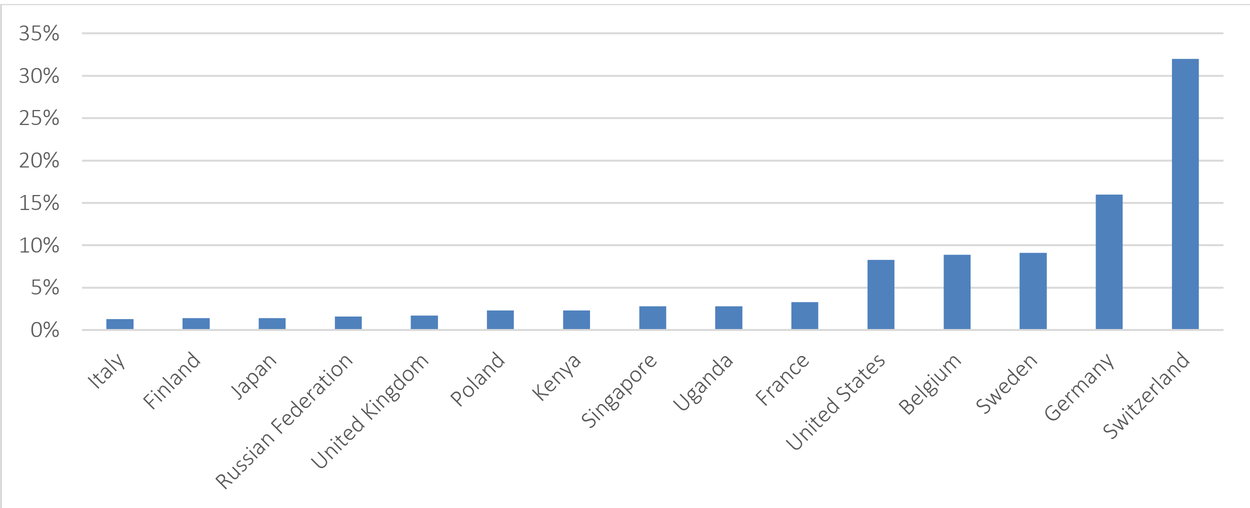


Figure 8: Export Destinations Coffee Burundi 2016 Export value % (source: OEC)

The percentage of Fully Washed coffee produced has increased considerably over the years and according to data from ARFIC, it is currently at 83%, and corresponds to about 12.000 MT for 2016/2017 season. The fast growth of Fully Washed coffees is mainly because of the measures that were applied by government. The semi-washed coffees are not allowed to be sold during the coffee harvesting season between march and July marketing. This rule was implemented in 2013 and its effects can be seen in the table below.

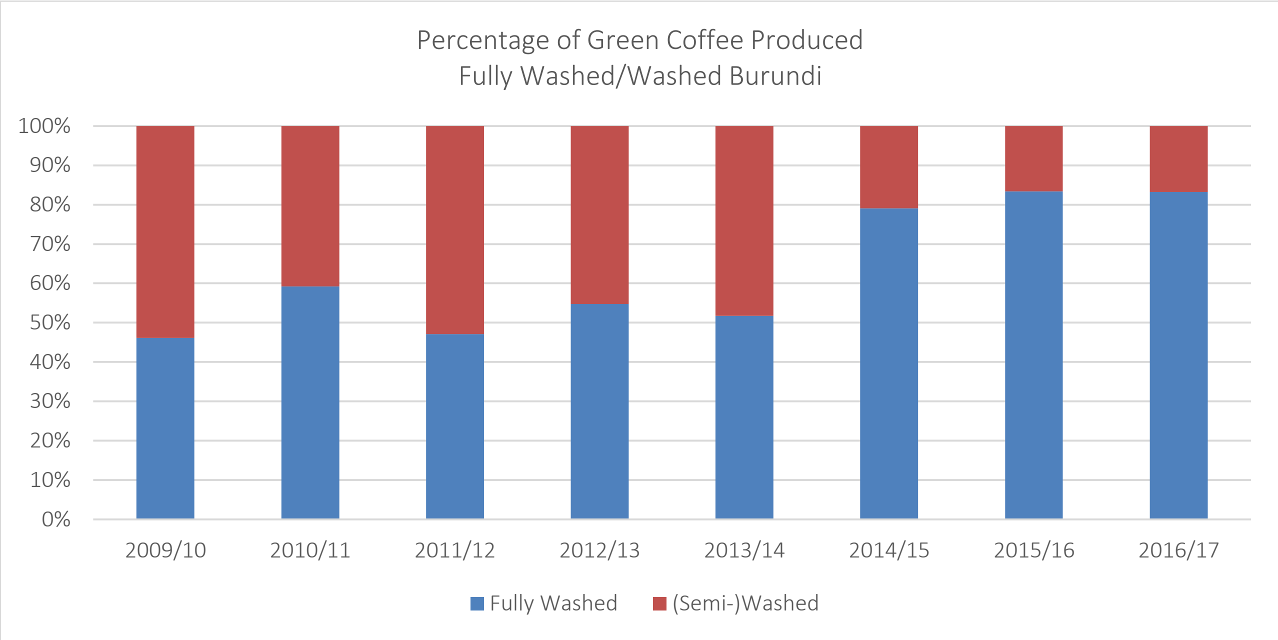


Figure 9: Percentage Fully Washed versus Washed Coffee produced (Source: ARFIC)

3.4 Value chain mapping

The Arabica coffee value chain in Burundi can be segmented into two, either fully washed coffee, or semi-washed (washed) coffee. Cherries being processed at coffee washing stations, result in "fully washed" coffee and, cherries processed using hand-held pulpers at farmers' homes, which produces a coffee of lesser quality called "(semi-)washed".

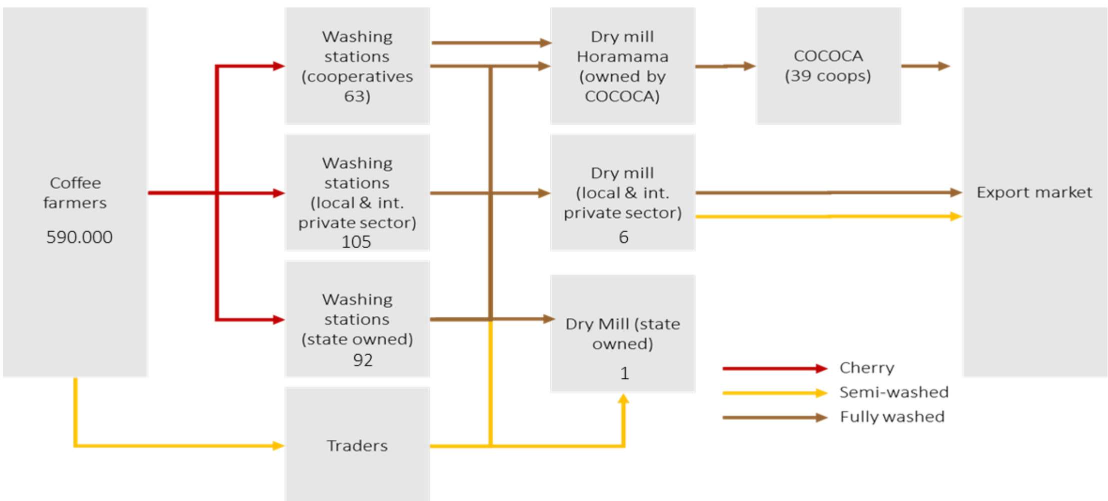


Figure 10: Coffee value chain map Burundi (source: Agri-Logic)

The table below describes the characteristics of each step in the value chain.

Coffee farmer	Support to the 590,000 farmers is mainly provided by two institutions, INTERCAFE responsible for all of the input supply (fertilizers, pesticides, seeds and pruning material) and the CNAC through its decentralized structures and network of coffee extension officers, who provide training on good agricultural practices and input distribution to the farmers. Not all coffees go to the coffee washing stations and some farmers will process their coffees on-farm into semi-washed coffee. The main constraint at production level is low productivity due to inadequate technical and financial support to coffee growers (see also section 3.5), poor application of good agricultural practices, low fertilizer use and poor pest and disease control. In addition farmers have been unhappy with the prices that have been paid for the cherries by the washing stations, affecting production. Farmers find them too low, and it is been a source of tension in the coffee sector, especially now with the specialty coffee market developing, farmers believe that the quality premiums are not being shared with them.
Coffee Washing Station	During the census of 2017, around 260 coffee washing stations were inventoried in Burundi with a processing capacity varying between 200 tons to 2000 tons of cherries. Of these 260 coffee washing station, 92 are state owned, 63 are owned by cooperatives, 77 by local private investors and 28 are owned by multinational companies. Many processing units operate below capacity. The average production for the last 5 years has been between 10,000 and 15,000MT of green coffee, while total capacity is estimated at 28.000 MT. This low production leads to a very competitive market for coffee cherries and the quality is compromised because of it, while the processing costs are high, because of irregular supply and overcapacity.
Dry mill	As a result of the Government's liberalization measure, the number of dry mills have increased rapidly. Nine factories were established so far, out of which one is still owned by the State. They are distributed over five regions: • Bujumbura (3): SODECO (State owned), CBC, COFICO and BUCAFE. COFICO is not operational since 2015 while BACAFE just closed the operations • Gitega (2): SONICOFF (managed by OLAM) and BUDECA (owned by SUCAFINA) • Kayanza (1): HORAMAMA Dry mill (owned by COCOCA) • Ngozi (1): SIVCA (owned by local investors) • Muyinga (1): IKAWA NZIZA (owned by OLAM) For the fully washed coffee, the washing stations pay milling fees, after which they export their coffee. The average milling fee is 260 BIF/Kg (0,15 US$) of green coffee produced, and if applicable, the coffee sorting fees. In some cases the washing stations sell their parchment coffee to buyers, who are then responsible for the milling and export.

	For the semi-washed coffee, the dry mills buy the parchment from traders, mill it and export it.
Export	The marketing of coffee for export is completely liberalized. The owner of the coffee has the latitude to negotiate the sales contract with the buyer. The export procedure is controlled by the Coffee Board (ARFIC), and is initiated with the contract validation, where the negotiated price of the contract is compared to the international market and the qualitative differential. The certificate of quality and the certificate of origin are issued by the Coffee Board ARFIC, while the phytosanitary certificate is issued by the services of the Ministry of Agriculture and Livestock. For the majority of cooperatives, including all those in scope of the TWIN-TMEA project, the export falls under the responsibility of COCOCA (the union of the Cooperatives of Coffee growers).

Table 6: Coffee value chain description Burundi

3.5 Access to finance

For the cooperatives in Burundi, COCOCA is providing the working capital needed for the purchase of the cherries. For other working capital (salaries, fuel and other), COCOCA can provide funds to cooperatives on request but they have to justify the funds already received and COCOCA performs a due diligence to ensure that they will able to pay back the funds. Several cooperatives are currently unable to pass this due diligence, based on their current management capacity as well as financial health.

COCOCA can only get finance from local banks as the new Central Bank regulations do not allow international financial service providers to the market. The Central Bank did however reduce annual interest rates from 16% to 9% to compensate. Some cooperatives are starting to use their own funds, but find themselves also limited by the Central Bank's regulation.

Out of the ten partner cooperatives, all have access to finance through COCOCA, whereas only two were able to leverage own funds or access finance through a bank.
When asking the cooperatives how they would score the financial access for working capital and investment, on a scale of one to ten. Access to finance scored very low.

Loan type	Score out 10
Working Capital	5.1
Investments	4.0

Table 7: Perceived ease of obtaining loans Burundi (source: partner cooperatives)

For investments, cooperatives are currently dependent on donor funding.

Looking at the farmers there is generally very limited access to financial services. In 2014 a study was conducted by the Banque République de Burundi (BRB) and the AFI Financial Inclusion Data Working Group[xxix]. Though it is some years back, the level financial inclusion scored low. There is a low level of financial literacy, the physical distance to financial service provider is far, there is high use of informal financial services and factors related to the financial system, such as account opening, geographical coverage of service points, fees, guarantees and financial services and products did not meet the needs of the majority of the rural population.

The demand for financial services in Burundi exceeds the supply, making the people vulnerable to 'loan sharks'. The International Fund for Agricultural Development (IFAD) has therefore, together with the Burundian Government set up a project of US$38.6m, dubbed Financial Inclusion in Burundi (PAIFAIR-B). According to their figures interest rates can go up to over 200% or even 1000% in some cases. The financial exclusion in Burundi especially hits the rural households (90%), rural women (92%), and youth between 18-30 (93%).[xxx] This is in line with the data from the earlier mentioned BRB & AFI (2014) report, where it was stated that men are twice as likely as women to have an account. 18-29 year olds are 50% less likely to have an account compared to those older than 30 years. The account ownership rate is 89.5% among state employees, 52.1% for private sector employees, 30.1% for traders and 5.3% for farmers. Thereby women constitute only 28.3% of Micro Finance Institution (MFI) clients, which low in comparison to what is observed in other countries, where women are generally highly represented.

From the above we can conclude that access to finance is still very much a constraint for the cooperatives as the farmers of the coffee, and especially the women and youth.

3.6 Price and value distribution

While the washed sub-sector was liberalized after 2005 reforms, the cherry price provided by the coffee washing station to the farmers, remained a point of tension as mentioned earlier.

SEASON	FARM GATE PRICE
2012/2013	457 BIF
2013/2014	400 BIF
2014/2015	566 BIF
2016/2017	415 BIF
2017/2018	500 BIF

Table 8: Farm gate prices per KG Burundi (source: COCOCA, Agri-Logic)

Until the 2016/2017 crop, farmers and owners of coffee washing stations negotiated the reference price for cherries through INTERCAFE. This price was revised every two weeks depending on the price development of the New York futures market. The price calculation took into account the price level of the international market, the average costs of the various stakeholders and different levies applied in the value chain.

Since 2017/2018 crop, steps have been undertaken to improve quality and protect the interests of small farmers, which includes the following measures:

- Middlemen are not allowed anymore to buy coffee cherries from the farmer and sell it to the washing station.
- For farmers who are distant coffee washing stations, collection centers buy at a fixed price. They are set by the Coffee Board in consultation with different partners, allocating it to different wet mills.
- The farmgate price of cherries has been fixed by government. For the 2017/2018 and 2018/2019 crop, it was set at 500 BIF/Kg (0,284 US$/kg).
- Cash payment is prohibited. Only an advance of 20% of the value of the coffee already delivered can be paid to the farmer.
- Farmer payment periods were fixed in May and August.

The farm gate price in Burundi is between 55% and 65% of FOB price, which is low compared to other origins such as Uganda (69%), Colombia (79%) and Brazil (83%). This is explained by the number of actors in the local chain: the more actors are involved, the more people need to gain a profit. We do not currently see an opportunity to reduce the number of actors, since individual cooperatives are too small and not sufficiently capable of accessing the export market directly. Supply chain efficiency can mainly be improved by optimizing the use of washing stations and other assets.

Cost of production in Burundi are low, around $0.22/lb for planting, fertilizer, labour and on farm processing according to the GCP African Investment Review 2016. With the current farm gate price of $0.82/lb green coffee, this does leave a significant margin for the farmer, although with very small volumes not a living income.

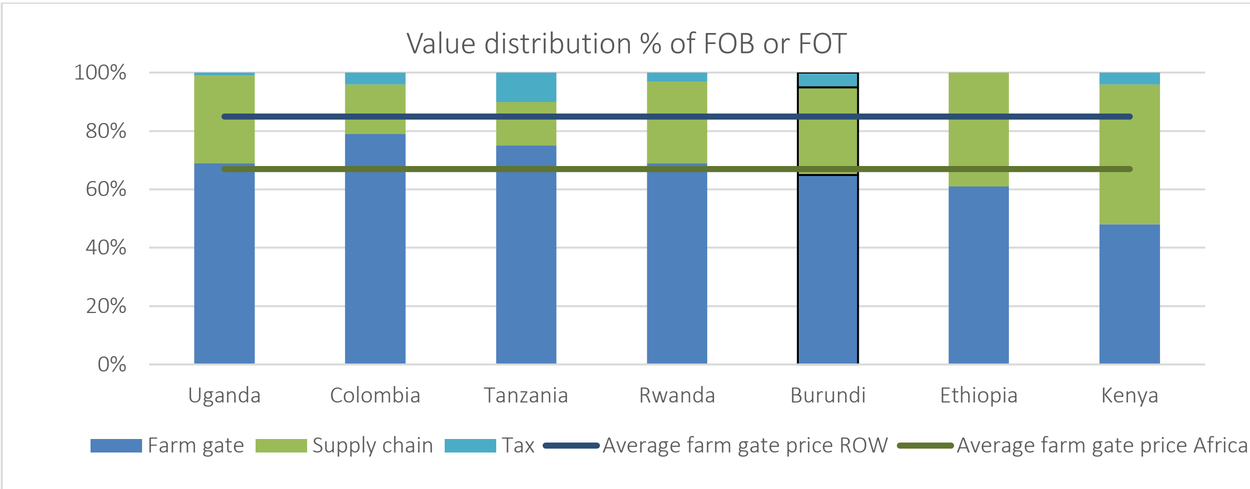


Figure 11: Value distribution (% of FOB) in Burundi and benchmark Arabica origins (source: GCP, Agri-Logic)

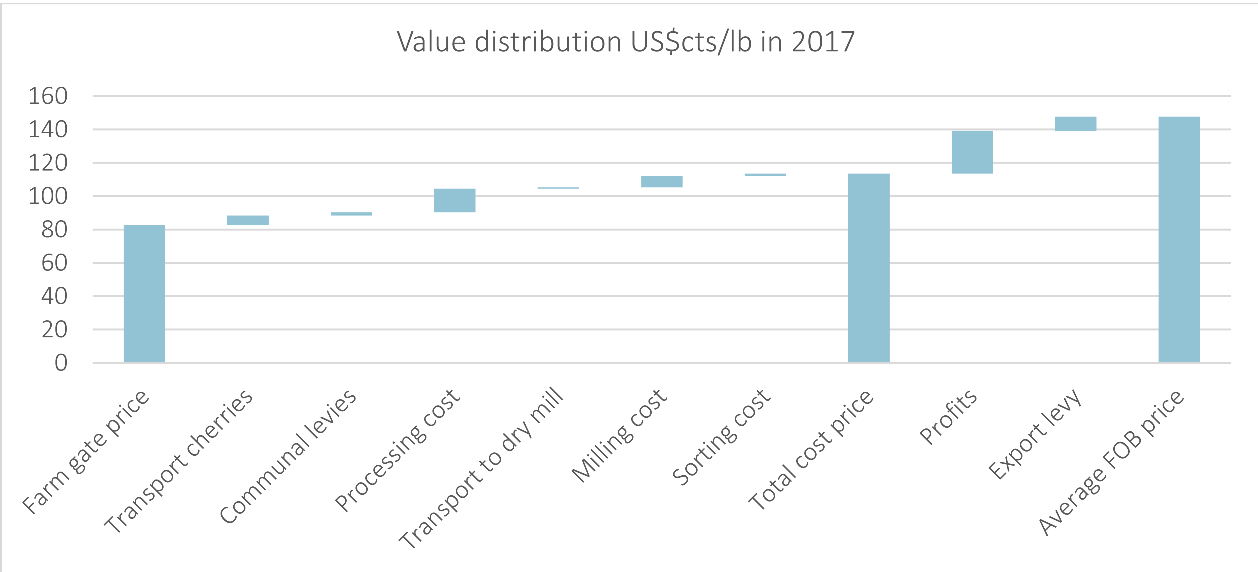


Figure 12: Value distribution ($ct/lb) in Burundi (source: COCOCA, ICO, Agri-Logic)

3.7 Farmer livelihoods

The 2016 African Investment Review[xxxi] for Global Coffee Platform and the African Development Bank indicated that even with investment in coffee productivity, the very small farms in Burundi will not allow for sufficient household income, with farming profits only up to about 7% of the international poverty line.

Wage Indicator[xxxii] suggests that a typical family living income would be BIF 467,600-561,500 (~$280) monthly.

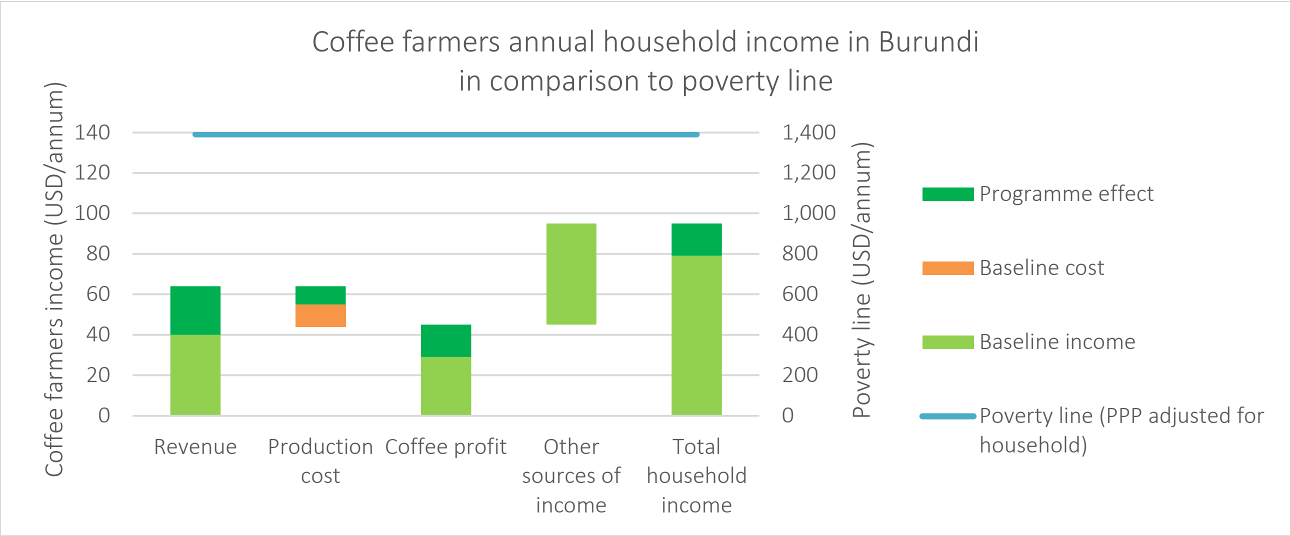


Figure 13: Coffee farmers annual household income in Burundi compared to poverty line (source: GCP)

3.8 Logistics & Export Performance

Logistics

The World Bank Logistics Performance Index[xxxiii] (LPI) compares countries globally in terms of logistics competitiveness. The LPI score is the weighted average of the country scores on the six key dimensions, as shown in Figure 14.

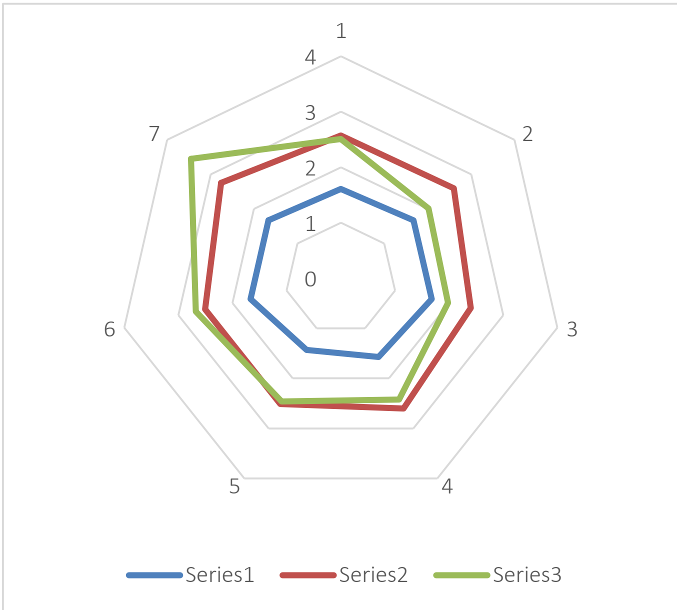


Figure 14: Logistics Performance Index of Burundi in 2012, 2014 and 2016 (source: World Bank)

Based on the latest available figures, in 2016, Burundi ranked 107 out of 160 countries, which is the same ranking it had in 2014. It has overall low scores on most dimensions. However, Burundi has come a long way since 2012, when it ranked 155 and was considered to have the least competitive logistics globally.

Largest improvement between 2014 and 2016 was made on timeliness from ranking 126 to 63, and rates the timeliness of shipments in reaching destination within the scheduled or expected delivery time. However, this comes with a drop in ranking between 2014 and 2016 on the customs operations by border control agencies (efficiency in clearing process) from 77 to 137 and deterioration of the infrastructure (quality of trade and transport related infrastructure such as roads and IT), whereby they dropped in rank from 104 to 147.

Export

In its Ease of Doing Business[xxxiv] report, Burundi ranks 164 out of 190 (Figure 15). Performing worse than Uganda but better than Tanzania (Table 9) and up from 157 the previous year.

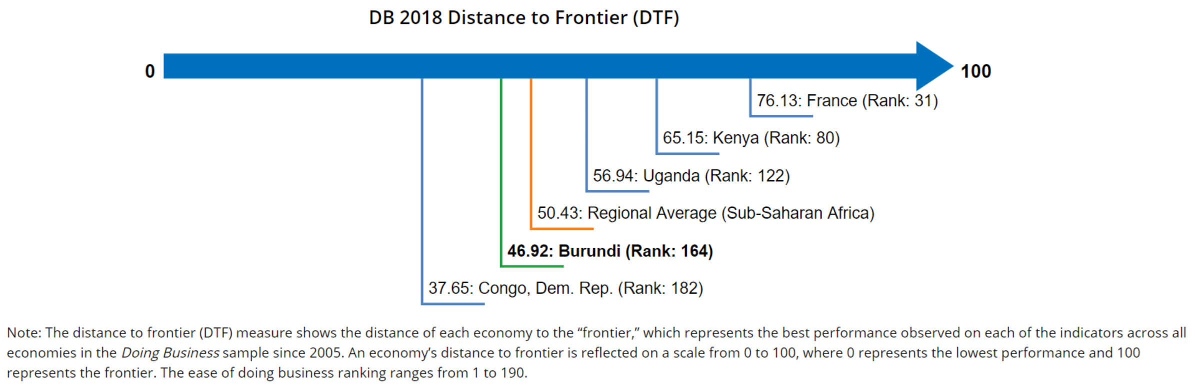


Figure 15: Trading across borders in Burundi and benchmark economies (Source: World Bank)

Focusing on the export related rankings. It can be seen that documentary compliance is where the bottleneck lies, which can also be clearly seen from stakeholder observations, where the hours for documentary compliance are 120 hours (3 weeks) compared to much lower levels in the other countries. The time for documentary compliance include the time it takes to obtain, prepare, process, present and submit documents.

Burundi is though scoring relatively well on time to export: border compliance, which is the time for obtaining, preparing and submitting documents during port or border handling, customs clearance and inspection procedures.

	Burundi	Rwanda	Kenya	Uganda	Tanzania	Sub-Saharan Africa
Trading Across Borders rank	164	87	106	127	182	137
Cost to export: Documentary compliance (USD)	150	110	191	102	275	215
Time to export: Documentary compliance (hours)	**120**	42	19	51	96	88
Cost to export: Border compliance (USD)	136	183	143	209	1160	592
Time to export: Border compliance (hours)	59	97	21	64	96	100

Table 9: Trading Borders Indicator ranking and benchmark economies 2018 (Source: World Bank)

3.9 Stakeholder observations

Our interviews with key informants in and along the supply chain, have revealed several common observations.

3.9.1 Policy reforms are not clear

The national coffee recovery strategy, including a large project funded by the World Bank are designed towards total privatization and liberalization of the sector. The measures however, taken in the last two years by the Government seem to be going into the opposite direction. There are still 92 cooperatives and one dry mill state owned. Government has recently also fixed the prices. Implementation of the national strategy related to the privatisation of the sector, and this is showing delays and brings uncertainty to the market. If there is no clear policy, there is a risk of creating serious dysfunctions that can jeopardize the proper functioning of the coffee sector.

On the macroeconomic level, the difference between the official exchange rate of the banks and that of the private Bureau de Change is generally very large and can be as high as 30%. In practice, this means that supply chain actors need a higher amount of Burundian Francs to buy an international trading currency (USD), whereas they receive a lower amount of Burundian Francs when they convert their USD revenue to BIF. This has a negative impact on the actors of the sector, especially for the producer for whom price of coffee becomes less and less competitive compared to the prices of other (food) crops.

3.9.2 Specialty coffee is a new and complex market segment

The development of specialty coffee production and marketing has seen significant progress in recent years. The share of specialty coffee in domestic production are estimated at 5% but key informants believe that its potential lies at 35%.

The main constraints are:

- Complex logistics when specialty coffee are micro-lots
- Promotion and awareness of Burundi as a specialty origin
- Lack of skills at the production and processing levels, where cupping quality assessment should be done at the early stage of the processing
- Premium which do not reach farmer due to lack of traceability

3.9.3 Certification

Certification is seen by the local stakeholders as becoming more and more of a minimum requirement for easy access to coffee markets. In addition, the implementation of a certification program is seen to bring several other advantages to small farmers:

- Improvement of farmer and cooperative organizational skills, which facilitates the implementation of different programs for the development of coffee production.
- The application of good agricultural and processing practices, which allows for the increase of productivity and quality in the field and at the processing level.
- Access to premiums potentially increases farmers' income.
- Important for the social-environmental sustainability of the sector.

The great challenge of certification programs are their high costs of implementation and the associated audits costs. The costs of certification, according to the stakeholders, cannot always be covered by the premiums. Using adequate monitoring tools and relevant Key Performance Indicators (KPI), measuring the social, economic and environmental benefits over a longer time period should help get more insight in this. The two years, the project has been running, is too short to conclude on this.

3.9.4 Lack of skills and capacity

Despite the lack of a clear regulatory and legal framework in the coffee sector, significant momentum has been observed in recent years. This is evidenced by the investments made by both national and international investors. However, the sector still faces many challenges, such as lack of professionalism of newcomers in coffee business, limited to no risk management skills, low investment capacity, lack of management and maintenance capacity of coffee processing equipment.

This is especially true for cooperatives whose members are sometimes small farmers with limited financial resources and knowledge. It is obvious that under these conditions, they require support that extends over a longer term period to reach the required level of professionalism.

3.9.5 Export Process

Even though the coffee sector being fully liberalized, the coffee export procedures in Burundi are lengthy and bureaucratic. The largest bottleneck is the validation of contracts, which can take several days and is slowed down by heavy bureaucracy: after signature of the contract, the exporter submits the request for contract validation to ARFIC. The analysis of this is done at three levels: the head of Economic Service, the Technical Director and the General Manager. This can take two to three days, add to this the time it takes to make the export license validation with the bank, pay the levies and obtain the authorization to export a lot of coffee. The whole procedure of contract validation takes up at least four to five days, and more in the event there is an absence of either one of the authorities. This comes on top of the lack of capacity within the cooperatives to follow up upon the complex logistics, especially for small volumes. This also confirms the report from the World Bank under section 3.8.

3.10 Conclusion

Coffee is an important crop to Burundi, and with its high altitude and high quality cup there is potential to access a differentiated market where premium prices for coffee are paid.

However, several concerns need to be addressed:

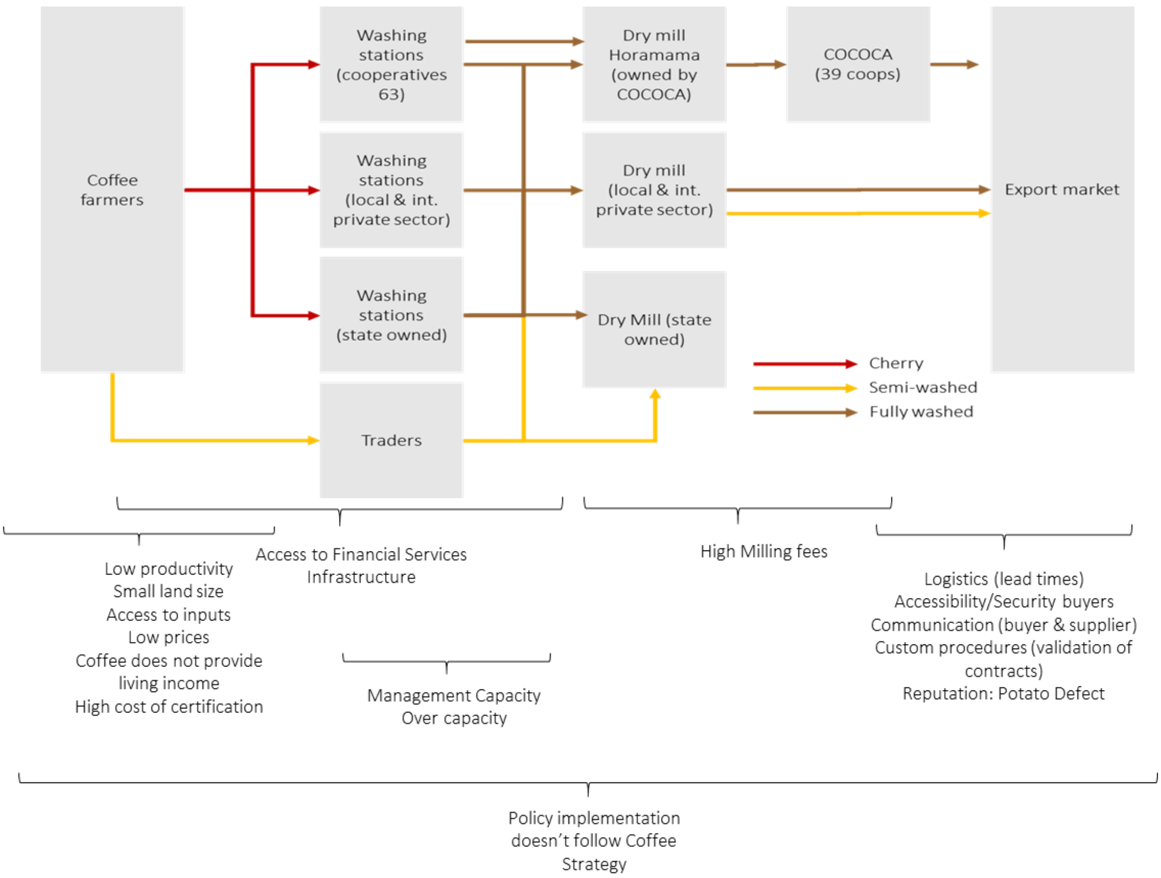


Figure 16: Burundi value chain constraints

Production & Processing - Farm gate prices as a percentage of FOB are among the lowest globally, and most coffee washing stations and dry mills operate below capacity. Local capacity to manage cooperatives, washing and milling is limited. There are also too few people with the skills to sell to the international market.

Yield increase on farms is possible, but due to the extremely small farm size and lack of diversification, coffee does not provide a living income to a household.

Climate change and population density put pressure on production volumes, and while coffee can remain a contributor to GDP it should not be seen as the sole solution.

Customs - The bureaucracy of the system leads to many delays and Burundi ranks low in its export rating, due to its bureaucratic inefficiencies. The time it takes to documents is three weeks according to the World Bank Data, whereby the main constraints lies with the validation of contracts according to the stakeholders. This is where major improvements should and could be made, also looking how poorly Burundi scores compared to its neighbours with exception of DRC.

National Policies are not being implement as presented in the national strategy documents, whereby privatization of the sector is strongly promoted, but actions go against it.

Access to Finance – is a major constraint both to the producers, especially women and youth as well as the cooperatives. They have very limited access to financial services and COCOCA does not provide sufficiently in the financing needs of the cooperatives.

4 Coffee sector and value chain in Rwanda

4.1 Coffee and production characteristics

Rwanda is located in Central Africa, bordered by the Democratic Republic of the Congo to the west, Uganda to the north, Tanzania to the east, and Burundi to the south. With a land size of 26,338 km^2, it is like Burundi, one of the smaller countries in Africa. The country is situated at a high altitude with its lowest point at the Rusizi River at 950 metres (3,117 ft) above sea level. Its geography is dominated by mountains in the west and savanna to the east, with numerous lakes throughout the country. The earlier mentioned research by CGIAR also indicates that the impact of climate change could reduce coffee production by 20-50% for 2050 for Rwanda.

Total volume (3 year average)	18,448 Mt
% of global production	0.2%
% natural – semi-washed – fully washed	<1% – 55% – 44%
Trading Economics Competitiveness rank[xxxv]	58 (out of 137)
World Bank Doing Business rank[xxxvi]	41 (out of 190)
Average GDP Growth Rate (2000-2017)	7.26%
GDP	8.3 billion US$
GDP – coffee	0.062 billion US$
Estimated coffee area	35,000 Ha
Arabica /Robusta	98 %/2%
Productivity (kg green coffee/ha)	400-700 Kg
Number of coffee farmers	400,000
Number of coffee washing stations	299
CWS installed capacity	104,000 MT cherries

Table 10: Key indicators Rwanda

Rwanda grows a combination of mainstream arabica and high quality arabica, with a small volume of Robusta. It is known for its creamy body, acid taste and the lemony/citrusy aroma. A specific issue affecting the coffee sector in the country is the potato-cup defect; an odour of freshly-peeled potatoes[xxxvii].

Since 2000 coffee[xxxviii] supply from Rwanda has declined by 0.86% per annum. Farming systems tend to be diversified with a mix of food crops and coffee. In times of low coffee prices other crops receive priority. Rwanda has an estimated 400,000 coffee farmers. Cost of production in Rwanda is competitive compared to other countries producing specialty coffee.

Coffee farm sizes are extremely small, on average 0.08 ha. Productivity is in the mid-range for Africa at 450 kg/ha but further scope for improvement is present.

Traditionally, most coffee farmers are men. In Rwanda, cooperatives are required to be inclusive, and as a consequence, women-only cooperatives are not allowed.

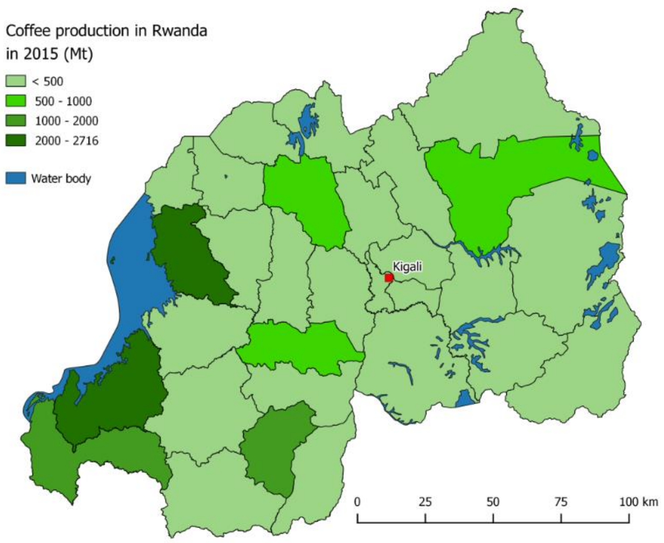


Figure 17: Coffee production areas in Rwanda (source: GCP)

4.2 History and value chain governance

Since its introduction in 1904, coffee has been one of the leading commodity exports from Rwanda. The coffee sector has undergone a significant upgrading from a low quality product to a high quality specialty major export commodity.

Before the liberalization of the coffee market in 1995, the coffees were mainly sold to one export company, RWANDEX, either directly through their field agents or through middlemen. The farmgate price was fixed by the Coffee Board at the beginning of the season, based on price expectations of the international market and estimations of production costs throughout the production chain, from farmer to exporter. No price differential was accorded to quality for the semi-washed coffee called 'Ordinary'.

In 1995, the new government opened the coffee market to competition. New exporters established operations. Some of the exporting firms were partially owned by coffee importers, mainly from Europe, which facilitated supply chain management. The government liberalized the sector, removing a variety of barriers to trade, creating new incentives for groups and individuals to invest in coffee production and facilitating entrepreneurship in the coffee industry.

The transformation of Rwanda's coffee sector has happened relatively quickly. In 2000, and before, farmers were producing semi-processed coffee. Farm gate prices paid to farmers were low and the prospects for farmers and exporters to increase income or profits were limited.

In 2002, a National Coffee Strategy, developed with the participation of all stakeholders, was adopted. It targeted investments of US$70 million in order to raise projected total receipts to above US$600 million by 2010. Members of the coffee cluster committed to coordinate twelve programs. Upgrading capacity of coffee associations and farmers, and replanting of trees were fundamental to building a strong Production pillar. Carrying out a GIS (Geographic Information System) study and ensuring that coffee washing station were placed in Rwanda's top 50 coffee producing districts were deemed a priority. Furthermore, quality control systems, market information and innovative branding activities were core actions needed in Sales and Marketing. Strengthening the capacity of Rwandan coffee authority, OCIR Café, and providing a financial framework throughout the coffee chain were identified as the priorities for upgrading the sector.

The coffee strategy targeted the niche markets. To improve coffee qualities and so to be able to supply to the needs of the targeted market, primary processing units were installed. From two units in 2002, Rwanda now counts today 299 coffee washing stations[xxxix] spread over the country owned by individuals, farmers organization, small enterprises and exporters.

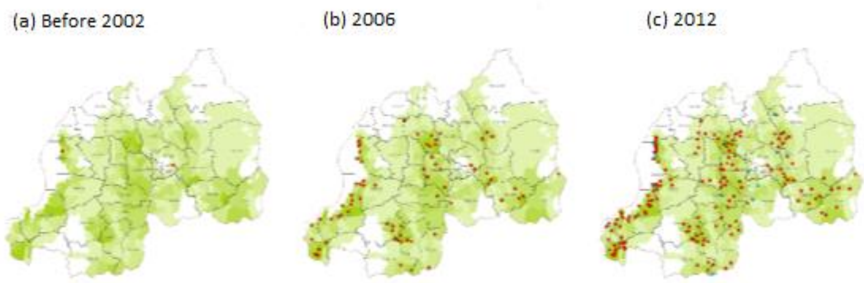


Figure 18: Expansion of coffee washing stations in Rwanda 2002-2011 (Source: Macciavello & Morjaria)

NAEB[xl] is the National Agricultural Export Development Board registered under the Ministry of Agriculture and Animal Resources. NAEB was set up to improve the balance of payment of Rwanda's economy by increasing agricultural exports. It brought together three government agencies responsible for the entire Agriculture Export and cash crop base under one management. The NAEB takes up the following roles:

- Provide support to coffee production by providing technical assistance and planting material to farmers
- Provide support to coffee processing
- Promote, market and export Rwanda coffee
- Participate in the development of the policy and strategies governing the sector and ensure the implementation of policies that affect production, processing, marketing research and training.

4.3 Supply and demand

Volumes of production and value have fluctuated over time due to the high sensitivity to weather conditions, diseases and international market prices fluctuations. Though volumes have stabilized in recent years and show a slight upward trend, due to the implementation of large scale sector projects.

Rwanda's main export destination[xli] for coffee is Europe, although market shares have been volatile over time. Rwanda appears to have access to a premium segment mainly in Europe and to some extent the US (Figure 20).

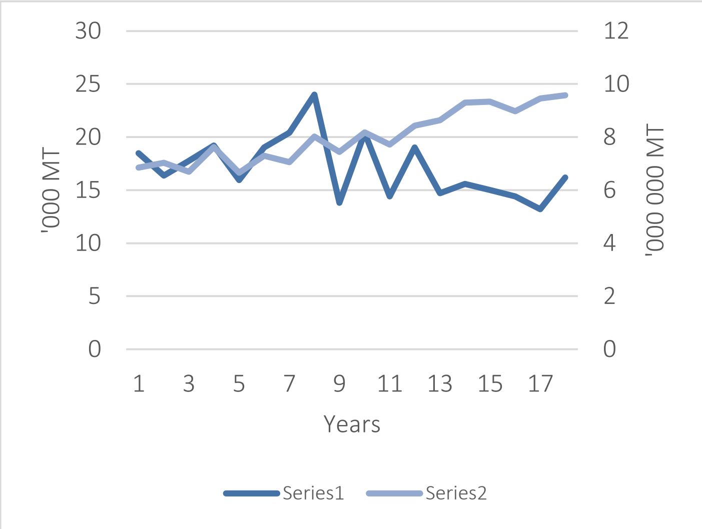


Figure 19: Coffee production 2000-2017 in Rwanda and globally in MT (source: USDA, ICO)

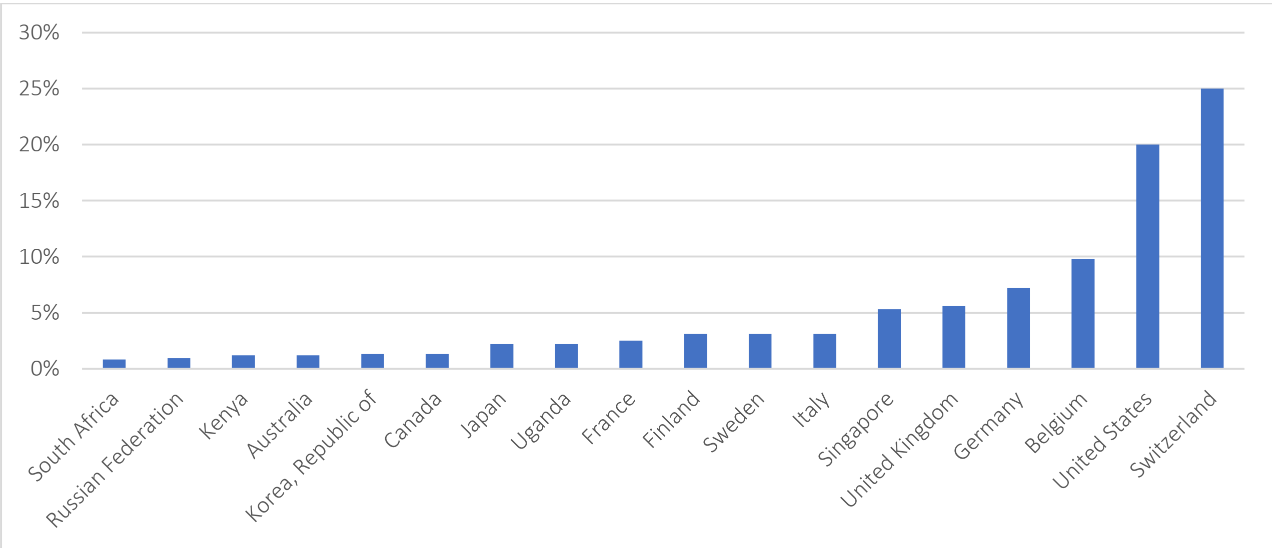


Figure 20: Export Destinations Rwanda 2016 Export Value % (source: OEC)

The government discourages the production of the semi-washed coffee and due to stimulation measures by government, the share of fully washed coffees, over the years, has increased from about 40% in 2011 to 52% in 2016/2017. Semi-washed coffee still remains an important market channel for the farmers in Rwanda.

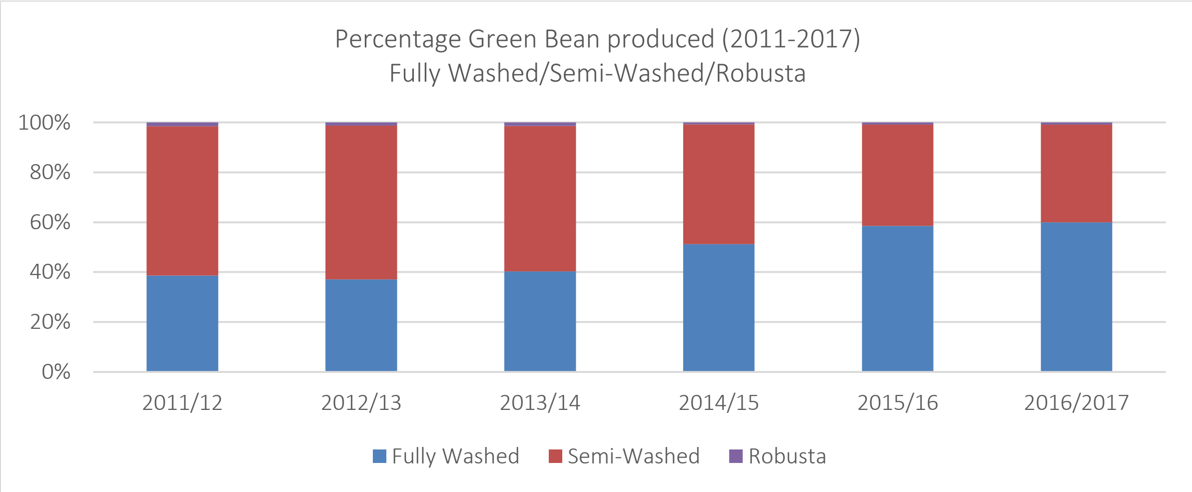


Figure 21: Exports of Fully Washed and Semi Washed green beans (Source: NAEB Annual Reports)

4.4 Value chain mapping

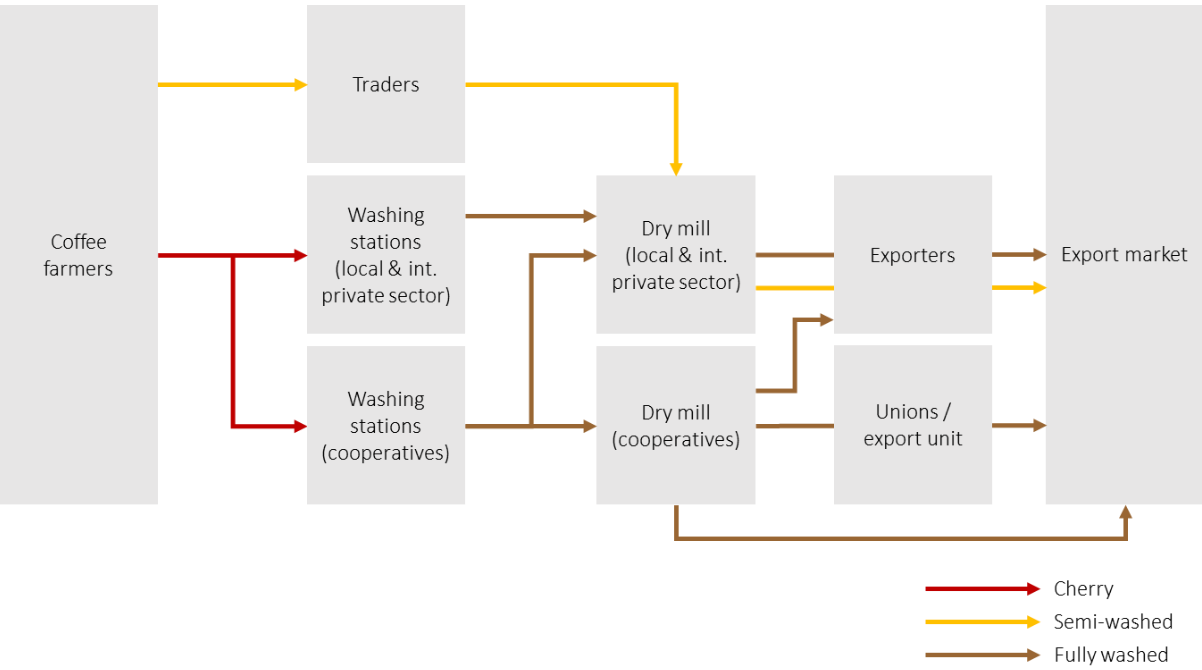


Figure 22: Coffee value chain map Rwanda (source: Agri-Logic)

The table below describes the characteristics of each step in the value chain.

Coffee Farmer	*Productivity* Coffee farmers generally have very small plots and low productivity. One of the reasons is that due to the high pressure put on the land, soils are depleted. The use of adequate mineral and organic fertilization could increase yield per tree from 2.4 to 4.0 kg of

cherry per tree (PSTA4[xlii]). Both the cooperatives and private sector parties distribute agricultural inputs among the farmers (both members and non-members).

A fee is charged by NAEB of 108 RWF/Kg (~0,10 US$/kg) of green coffee exported, to procure the needed fertilizers and chemicals for the coffee farmers. The Coffee Exporters and Processors Association of Rwanda (CEPAR) is responsible for buying and ensuring timely availability of the inputs and the local administration offices, that distribute the fertilizers. There are however often delays and statistics have proven unreliable to plan for input supply as it is estimated by sector stakeholders that the supply only covers about 40-50% of the farmers.

Old trees are another challenge to the productivity of the sector, about 25% of the smallholders have trees that need replacing. Seedlings have been financed through PRICE (Project for Rural Incomes through Exports), a project operating under NAEB. Its objective is to increase smallholder farmers' income by promoting sustainable returns from key export-driven agricultural value chains by increasing volumes, improving quality of production, improving marketing and increase effectiveness of farmer organizations. The last includes a 'turnaround programme', that aims at turning unprofitable coffee cooperatives into profitable ones. The project started in 2014 and will end this year 2018 and it is not known what is happening next.

Coop Relationship
Although 20% of farmers are members of cooperatives, the cooperative market share in coffee is only 6%. Side selling of coffees by members is very common due to competition and late access to finance for cherry payments.

Like in Burundi some farmers will process their coffee on-farm into semi-washed coffee, known locally as 'Ordinary coffee'. It is a labour intensive and normally undertaken by the farmers together with the family members (sometimes it may involve child labour). Nearly all farmers sell Ordinary coffee individually and not collectively. Government discourages semi washed coffee, i.e. the Rwanda Development Bank (BRD) is not financing the buying the semi processed coffee. However, it is still a very important market channel for farmers in Rwanda and estimated to represent between 50 to 70% of the total coffee production. The main reason for it to still exist, is that the farmers cannot rely on the coffee washing stations, being operational due to for example bankruptcy, caused by over-enthusiastic investors, ignorant of the working sector or just due to the generally poor management capabilities of the cooperatives.

Policy
To improve relationships with cooperatives, a new zoning policy, was introduced in 2017 by the government. The zoning policy seeks to strengthen the relationship between farmers, and coffee washing stations and mills. It involves the development of geographic "zones" around coffee washing stations. Coffee farmers within a geographic zone must sell to a specific Coffee Washing Station; that Coffee Washing Station must only buy from designated farmers. The stated purpose of this policy is to better organize the industry, improve the relationship between Coffee Washing Station and farmers, improve traceability of coffee, and reduce the role of middlemen[xliii]. Coffee washing stations and mills are called upon to extend support to farmers in the areas where they operate, by for example promoting fertiliser application, pests and disease control and management, weeding and pruning, as well as proper harvesting techniques. However, cooperatives do not always have the budget to hire the needed expertise and therefore

	the quality of the extension services is often poor. The zoning policy is still something that is much debated on. It is its first year of implementation, and we can't conclude about its effect at this stage.
Coffee Washing Station	From only two coffee washing stations in 2002 to almost 300 in 2018. Total capacity of the Coffee Washing Stations in Rwanda is over 20.000MT of green coffee, while only about 8.000 MT is being processed as fully washed. Many of these coffee washing stations are underutilised and making losses. The management capabilities of the cooperatives are generally weak and some are fully dependent on local exporters for financial and marketing services. Seasonality is a challenge in managing the coffee washing stations, as it is hard to retain staff for only three months. Many coffee washing stations do not have appropriate drying tables, or even moisture meters. There is often no calibration for weighing machines at collection centre, and there is no quality incentives for the cherries. Quality, of the cherries is a big challenge, especially there where recommended practices to prevent potato taste are not applied, like cherry flotation before pulping. Also, coffee is often over-fermented, caused by transport delays due to bad roads from the collection centers, or breakdown of machines and lack of spare parts. Cooperatives are struggling to capture farmers' produced volumes, and their approach to market access varies, with most cooperatives owning washing stations, but very few owning a dry mill and having direct export capability. Export units exist, but several cooperatives are currently using traders to access the market. The zoning policy mentioned earlier has caused problems for the larger cooperatives, losing out on supply, but is generally appreciated by the smaller cooperatives.
Dry mill	Nearly all mills are centred around Kigali and have no relation with rural area. Some millers assist cooperatives and their members with finance during production on the condition that the produce is sold to them. One cooperative under TWIN support has its own dry mill, KOPAKAMA. KOAKAKA is negotiating with US African Development Fund (USADF) for building its own dry mill. Other big millers and exporters have 80% of the market share. For semi-washed coffee, there are various challenges, that affect whole value chain. The lesser perceived quality of the semi-washed coffee makes that traders (and agents) are not too concerned about a dry and clean product, hence cause unneeded losses to the millers. Unfair practices exist in the trading, of especially the semi-washed product e.g. tampering of weighing scales and price cheating.
Export	Export is mainly FOB from Dar is Salaam. Whereby most of the coffee is still exported as ordinary (semi-washed) coffee and not as speciality coffee. The largest local exporters trade about 20%. Coffee cooperatives have various channels to export their coffees. There are two exporters, RWASHOSCCO and MISOZI which provide exporting services to about 10 cooperatives which are counted among the most organised cooperatives. Almost all the remaining cooperatives are supported by local exporters which provide the financial and marketing services. NAEB provides space in its stores for hand sorting, but the space is not well organized and green coffee is said to be smuggled during the operations.

Samples are sent by Courier. Jute bags are not always available, since there is no importer of jute bags in the country. GrainPro® bags are available locally through AgroTech. There were no major issues on export documents reported.

Table 11: Coffee value chain description Rwanda

4.5 Access to Finance

There are several providers of working capital available to cooperatives in the Rwanda coffee sector. These broadly fall into three categories: government bodies (e.g BRD), traders (e.g RTC) and private impact investors (e.g. Root Capital, Shared Interest, Beautiful Coffee, Fefisol, Inkunga). Challenges with regards to working capital is mainly the timeliness of the loan and the affordability.

The long term loans needed for investments are very hard to come by. Mostly it is provide either by donors or local banks, the last being very reluctant to finance such volatile high risk commodiy.

Loan type	Score out 10
Working Capital	7.3
Investments	3.9

Table 12: Perceived ease of obtaining loans Rwanda (source: partner cooperatives)

An estimated 15% of farmers has access to credit, much of this is provided by local traders or the informal sector, often at steep interest rates. Credit is usually short term for a coffee season of maximum 9 months. Local traders' interest rates are around 9% per month on average, which equals 108% annually or 81% per coffee season. Given high cost of credit much of its use is for emergency purposes, not investment.

While 20% of farmers are members of cooperatives, approximately 6% of coffee volume is traded through cooperative, and only 0.9% of farmers have access to finance through the cooperatives (GCP).

Of those farmers who do not have access to credit, reasons vary: buyers and cooperatives do not have sufficient credit to prefinance all farmers in their network, farmers might not be able to afford the high interest rates, or farmers might not qualify in a due diligence by the financial provider.

Rwanda has set the target of 90% financial inclusion by the year 2020. According to FinScope (2016) Rwanda had already reached 89% of financial inclusion, including both formal as informal financial products and services. The MFIs and SACCOs (Savings and Credit Cooperations) serve 65% of the population in Rwanda. The same report states that financial inclusion among farmers in Rwanda is relatively high and varies between 86% and 91%. However, subsistence farmers (86%), as well as the commercial farmers (83%) still mostly rely on the informal groups. There are quite some initiatives around access to finance in Rwanda, such as AFR funded by DFID, Sweden, USAID and the MasterCard Foundation and KfW, which works on: SACCOs, and Savings Group Development, Agriculture and Rural Finance, Digital Financial Services, Risk Mitigation and Market Development.

4.6 Price and value distribution

NAEB annually determines the minimum buying price of coffee cherries. This is determined at the beginning of the season. On average farmers receive 69% of the FOB value, which is better than most smallholders in Africa obtain. As a benchmark, farmers in Brazil who are larger and more professionalized receive 83% of FOB price. We do not currently see an opportunity to reduce the number of actors, since individual cooperatives are too small and not sufficiently capable of accessing the export market directly. Supply chain efficiency can mainly be improved by optimizing the use of washing stations and other assets.

There is a 3% fee on the export value of semi-washed coffees payable to the NAEB, which is used to cover its overheads. There is an additional fee, which applies to all coffees exported of 5,5 US$ ct/lb for fertilisers and 0,6US$ ct/lb for pesticides. The fee paid goes directly to CEPAR, which is responsible for the input purchases and providing it to the local administration offices for distribution among the coffee cooperatives.

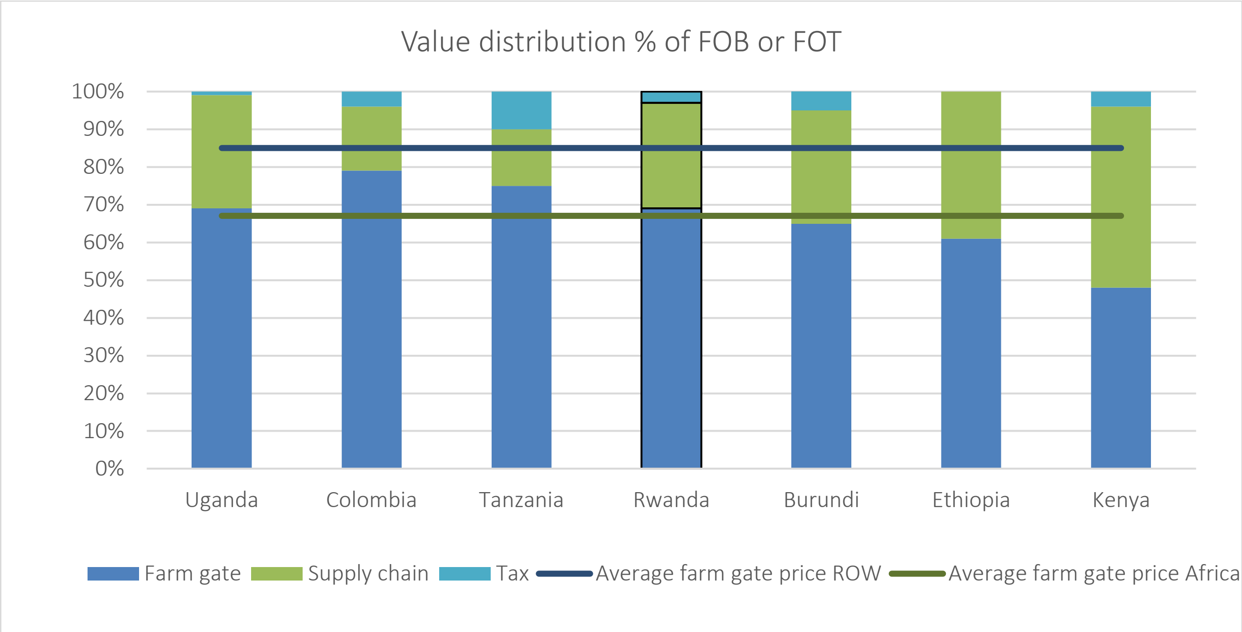


Figure 23: Value distribution (% of FOB) in Rwanda and benchmark Arabica origins (source: GCP, Agri-Logic)

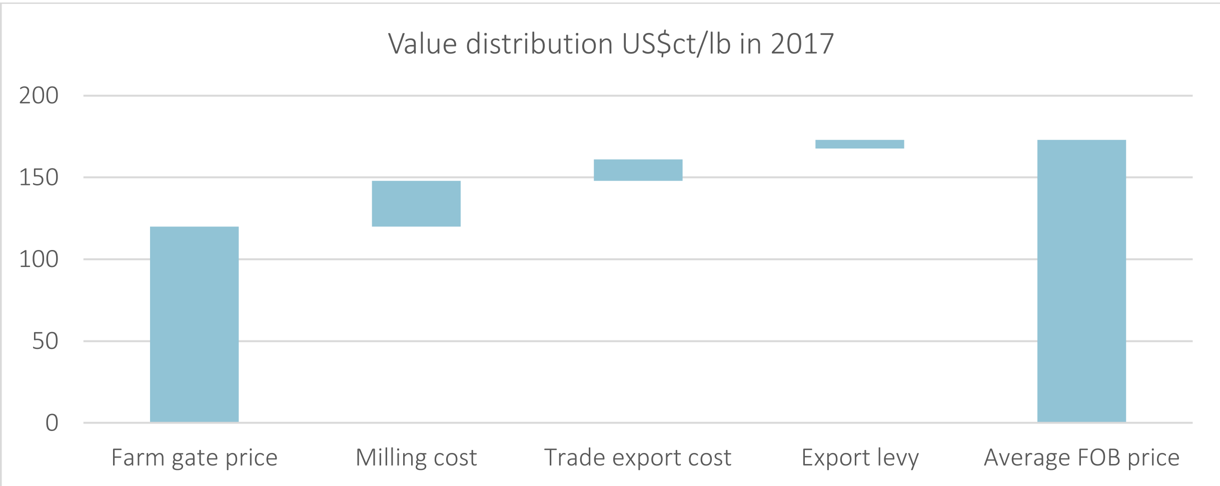


Figure 24: Value distribution ($ct/lb) in Rwanda (Source: ICO, Agri-Logic)

Cost of production in Rwanda are around $0.42/lb for planting, fertilizer, labour and on farm processing according to the GCP African Investment Review 2016. Depending on farm gate price developments, profits are small for the farmer.

Fees on coffee in Rwanda are lower than in Tanzania, Burundi and DR Congo and reportedly some smuggling into Rwanda takes place. Similarly Rwandan coffee is sometimes smuggled into Uganda to avoid levies. We however, do not know the scale of this issue and a more in-depth research, outside of scope of this research, would be needed to confirm the above.

4.7 Farmer livelihoods

The 2016 African Investment Review[xliv] for Global Coffee Platform and de African Development Bank indicated that although investment in coffee productivity can significantly increase incomes, the small farms in Rwanda will not allow for sufficient household income, with farming profits only up to about 17% of the international poverty line.

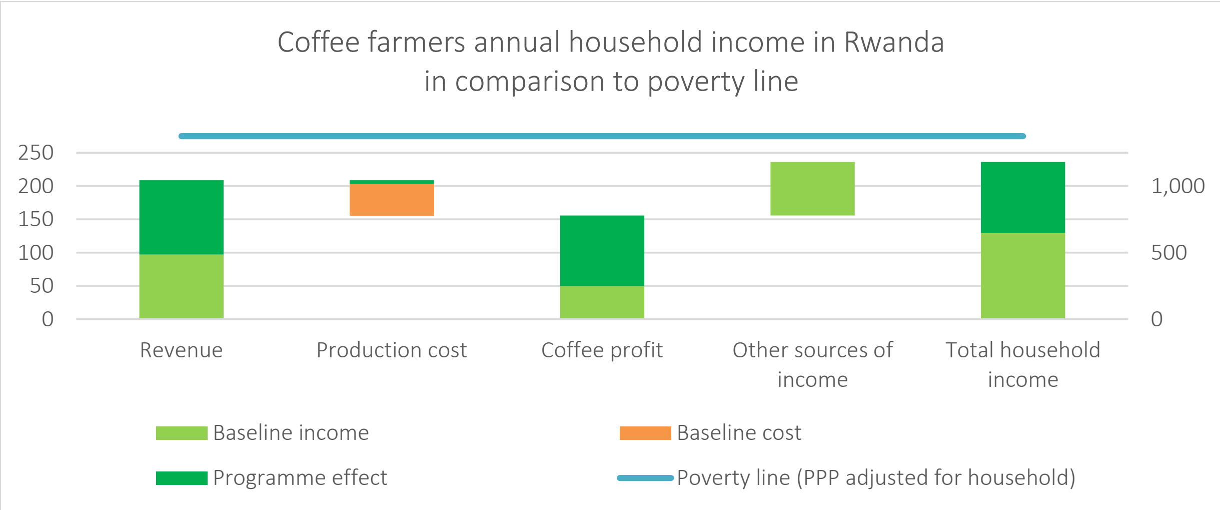


Figure 25: Coffee farmers annual household income in Rwanda compared to poverty line (source: GCP)

WageIndicator[xlv] suggests that a typical family living income would be RWF 185,800-350,700 (~$280) monthly.

4.8 Logistics & Export Performance

Logistics

The World Bank Logistics Performance Index[xlvi] compares countries globally in terms of logistics competitiveness.

In 2016, Rwanda ranked 62 out of 160 countries. Rwanda has shown consistent improvement in logistics performance since measurements began in 2007.

Improvements are being made on Customs (efficiency of clearing process), Infrastructure (quality of trade and transport related infrastructure) and International shipments (ease of arranging competitively priced shipments). Rwanda scores lowest on Infrastructure, Timeliness and

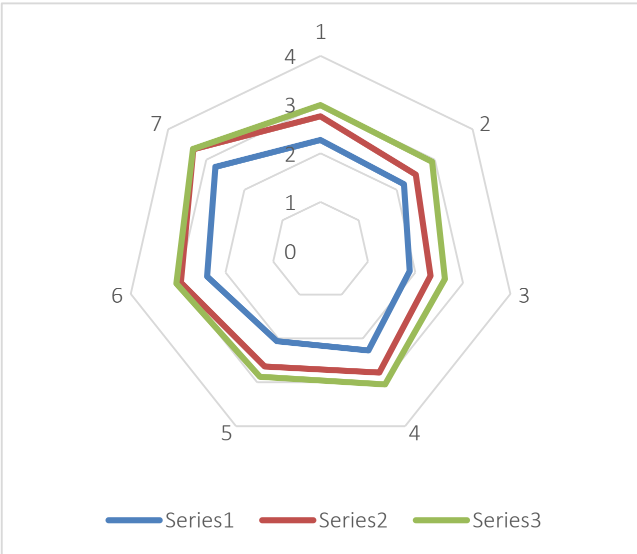
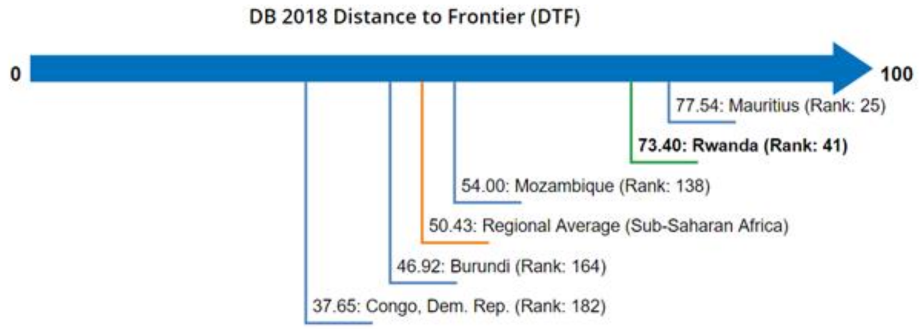


Figure 26: Logistics Performance Index of Rwanda in 2012, 2014 and 2016 (source: World Bank)

Logistic competence (quality and competence of logistic services), respectively 76, 69 and 63 out of the 160 countries.

Exports
The World Bank (2018) report on the Ease of Doing Business ranks Rwanda 41 out of the 190. Rwanda rose an impressive 15 places compared to the previous year, putting it second on the continent behind Mauritius.



Note: The distance to frontier (DTF) measure shows the distance of each economy to the "frontier," which represents the best performance observed on each of the indicators across all economies in the *Doing Business* sample since 2005. An economy's distance to frontier is reflected on a scale from 0 to 100, where 0 represents the lowest performance and 100 represents the frontier. The ease of doing business ranking ranges from 1 to 190.

Just focusing on the export indicators. Rwanda ranked 87 out of 190 in the 2018. It scores well compared to the other countries on Documentary Compliance, only 42 hours, a bit more than 5 working days. However it scores lower on the costs of export with regards to Border Compliance, which is the cost for obtaining, preparing and submitting documents during port or border handling, customs clearance and inspection procedures. This could negatively affect the differentials of the coffee, making Rwanda less competitive in the market.

	Rwanda	Burundi	Kenya	Uganda	Tanzania	Sub-Saharan Africa
Trading Across Borders rank	87	164	106	127	182	137
Cost to export: Documentary compliance (USD)	110	150	191	102	275	215
Time to export: Documentary compliance (hours)	**42**	120	19	51	96	88
Cost to export: Border compliance (USD)	**183**	136	143	209	1160	592
Time to export: Border compliance (hours)	97	59	21	64	96	100

Table 13: Trading Borders Indicator ranking and benchmark economies 2018 (Source: World Bank)

4.9 Stakeholder observations

Our interviews with key informants in and along the supply chain, have revealed several common observations.

4.9.1 Difficulty to access the specialty coffee market

Only about half of the exported coffee is fully washed, and cupping scores are often just under the internationally accepted norms for specialty coffee. As a consequence, it is challenging for cooperatives and exporters to tap into the specialty segment.

This challenge is increased by difficulties for supply chain actors to access finance needed to increase their volumes.

4.9.2 Risk management

Risk management has not been a priority but is currently on everyone's radar. One North American buyer has entered into contracts with several cooperatives this year and has defaulted on all of these contracts. What this should look like, and how the risks should be shared is currently not known, but risk management should be improved given that the value chain is not able to absorb losses.

4.9.3 Certification and differentiation

Certification, especially fairtrade, is common in Rwanda. Due to its export focus on Europe, the value chain is indeed able to obtain premiums for sustainability certification, and its returns are appreciated by the cooperatives. The promotion of coffee grown exclusively by women is also well-received by international markets and provides an opportunity.

4.9.4 Foreign ownership

The coffee sector is largely controlled by the foreign private sector. Several American organizations have recently purchased coffee washing stations, using them privately. Most dry mills are owned by foreign companies. Rwandan ownership and management is promoted, but not always realized.

4.9.5 Mismanagement and cheating

Some stakeholders indicate that mismanagement is common for washing stations, and cheating occurs regularly with traders of semi-washed coffee. This applies largely to those smallholder farmers that are not supplying directly to a cooperative, but pass through middlemen.

4.9.6 Growth of local (and international) roasting and consumption

Though still low at 400 T green coffee, local consumption has been increasing, mainly in Kigali and provides opportunities for roasting and developing local and international brands of coffee. A few pioneers have stepped into this opportunity already.

Also Rwashoscco has recently launched a roasted coffee brand in Europe (Germany).

4.10 Conclusion

Coffee is an important crop to Rwanda. The country is able to produce premium coffee, but quality is not exceptional. The structured supply chain pulls in international investors and buyers, and Rwanda benefits from premiums on sustainability certification and other forms of differentiation such as women's coffee.

However, there are also several concerns for the value chain which can be summarized in the figure below:

- The value chain appears to need professionalization and possibly consolidation. A large number of washing stations and mills are operating under their installed capacity and are not well managed. This closely correlates to a lack of access to finance, and an overall supply chain inefficiency.
- On the export side no constraints were mentioned, but the World Bank Ease of Doing business report (2018) suggests that improvement could be made with regards to costs of border compliance, which is high compared to its neighbours and potentially negatively influences differentials
- Yield increase on farms is possible, but due to the small farm size and lack of diversification coffee would still not provide a living income for a coffee household.
- Climate change puts pressure on production volumes, and while coffee can remain a contributor to GDP it should not be seen as the sole solution.

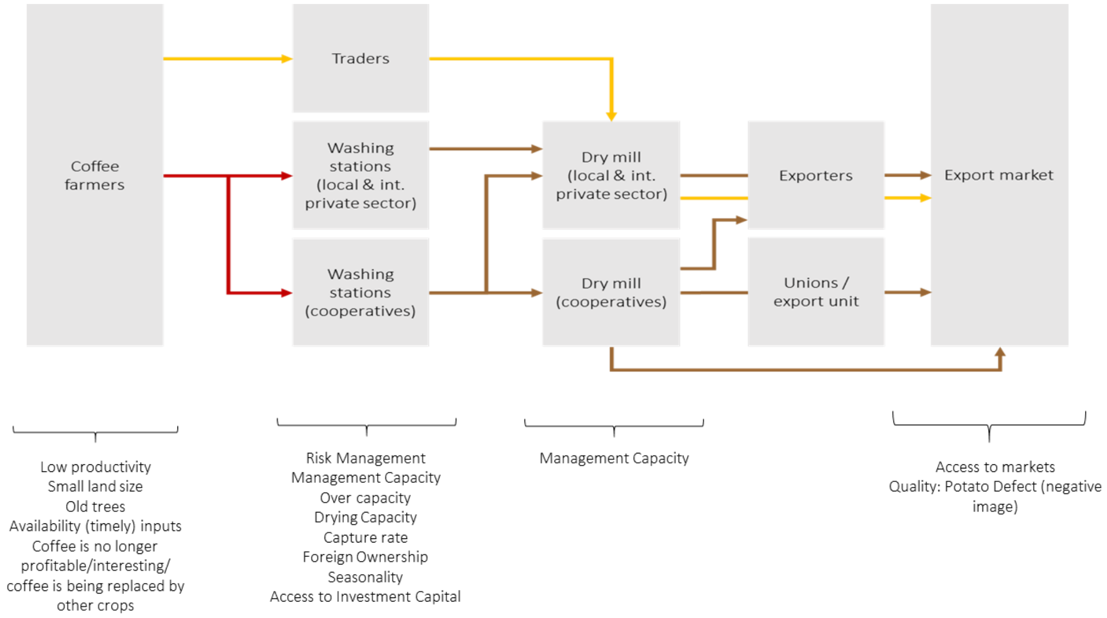


Figure 27: Rwanda value chain constraints

5 Export capability of TWIN partner cooperatives in Burundi

5.1 Overview

Most cooperatives perform well on coffee quality, but the capabilities related prices, marketing, volumes, infrastructure and governance differ per cooperative. Individual export capability of each of the cooperatives is described in the remainder of this chapter.

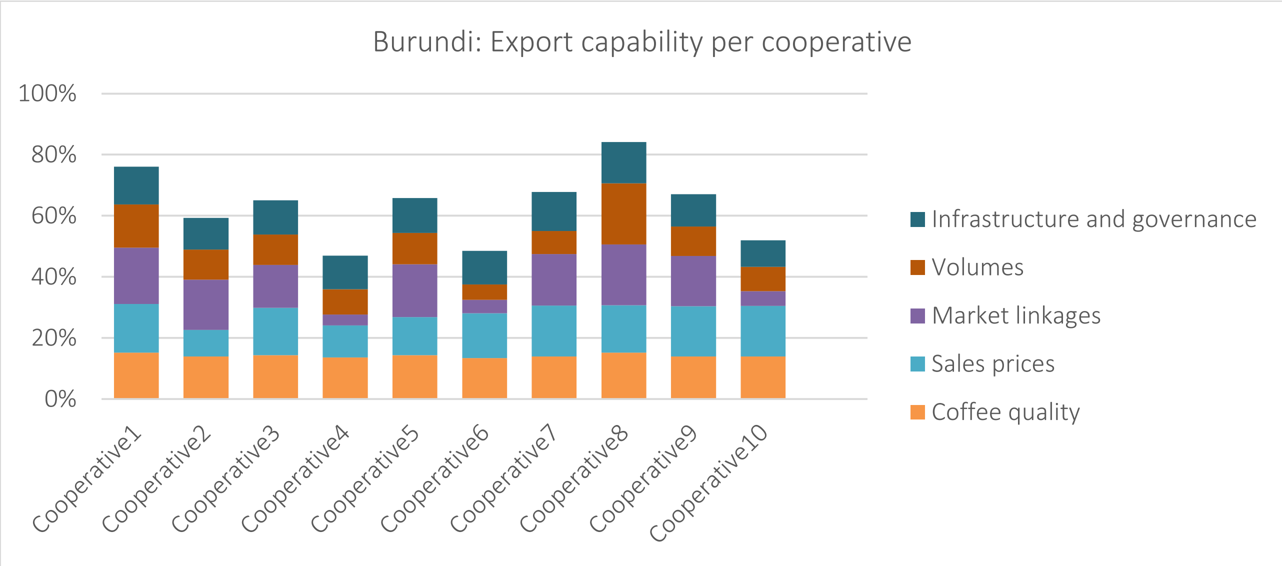


Figure 28: Export capability rating for ten cooperatives in Burundi

5.2 Segmentation

Segmentation of cooperatives reveals three clusters with similar characteristics. There is only one consistent high performer. Although all cooperatives are able to produce good quality coffee, market access does not automatically result from this. Better performers differentiate themselves with better access to finance and sufficient availability of sorting and drying tables. Low performers are struggling with governance, infrastructure and low capture rates.

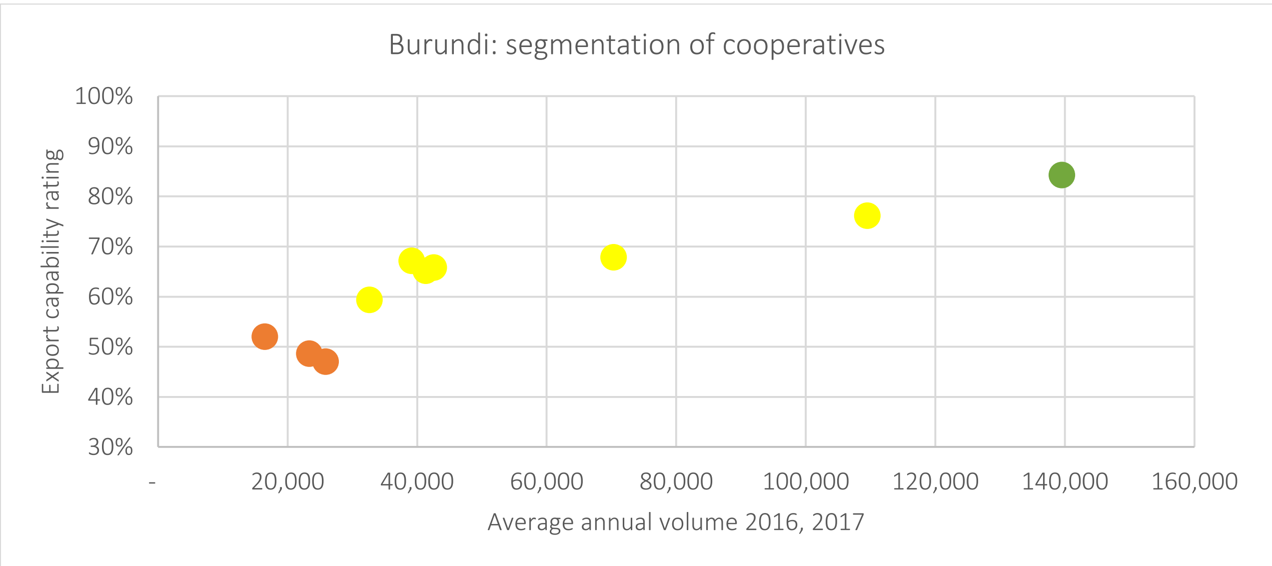


Figure 29: Partner cooperatives in Burundi segmented by export capability and annual volume

5.3 Export capability rating per cooperative

All cooperatives have been assessed based on their weighted performance on all categories, as well as their results on individual indicators. This section has been removed from this public version.

5.4 Conclusion

The cooperatives in Burundi all perform well on quality and obtain good prices for those volumes that they are able to market for export.

There is a pattern that becomes visible as a foundation of performance:

1. Governance and staffing: this is the foundation for any cooperative, and nothing happens when cooperatives are understaffed, not managed or underqualified.
2. Infrastructure: having a coffee washing station and sufficient drying tables is a requirement to serve an export market.
3. Farmer base and capture rates: farmer loyalty follow from the availability of infrastructure.
4. Access to finance: availability of funding allows cooperatives to grow volumes.

Most cooperatives are average performers, struggling with one or more of the above areas.

6 Export capability of TWIN partner cooperatives in Rwanda

6.1 Overview

High variability in cooperative performance in all categories of indicators. There is potential to achieve premium quality and prices, but this is not fully realized. Individual export capability is described in the remainder of this chapter.

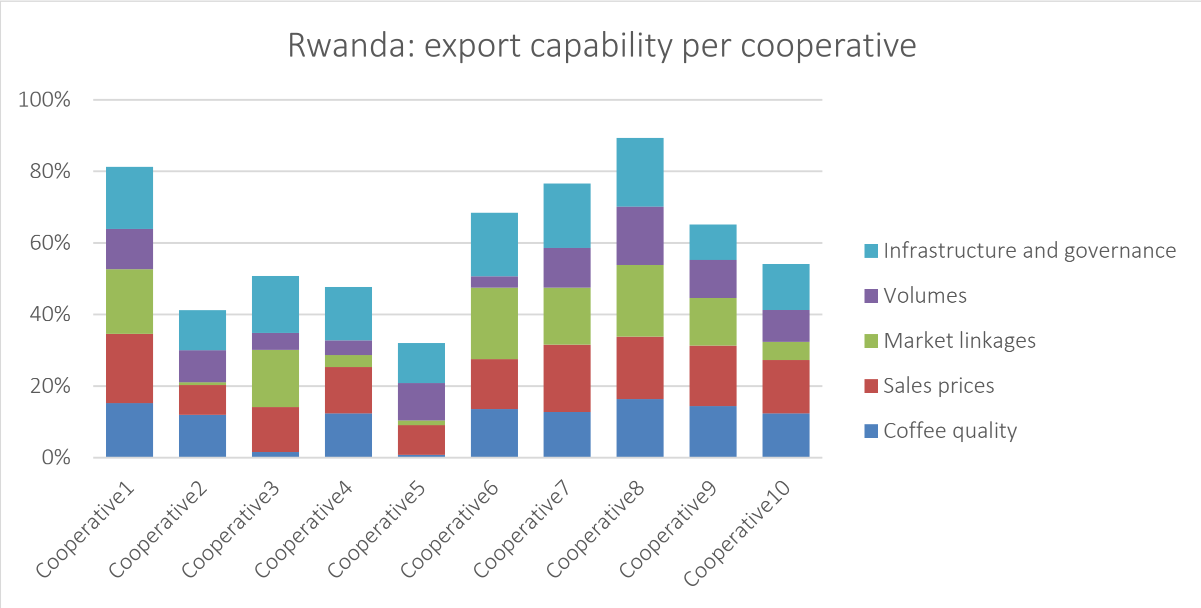


Figure 30: Export capability rating for ten cooperatives in Rwanda

6.2 Segmentation

Segmentation of cooperatives reveals three clusters with similar characteristics. Not all cooperatives in Rwanda are able to realize any premium quality and prices. High performers report achievements in infrastructure, volumes and prices and have a larger management team in place. Average performers report challenges in finance, knowledge of the market and finding buyers. Low performers do not achieve or cannot measure high cupping scores and have not exported any volume.

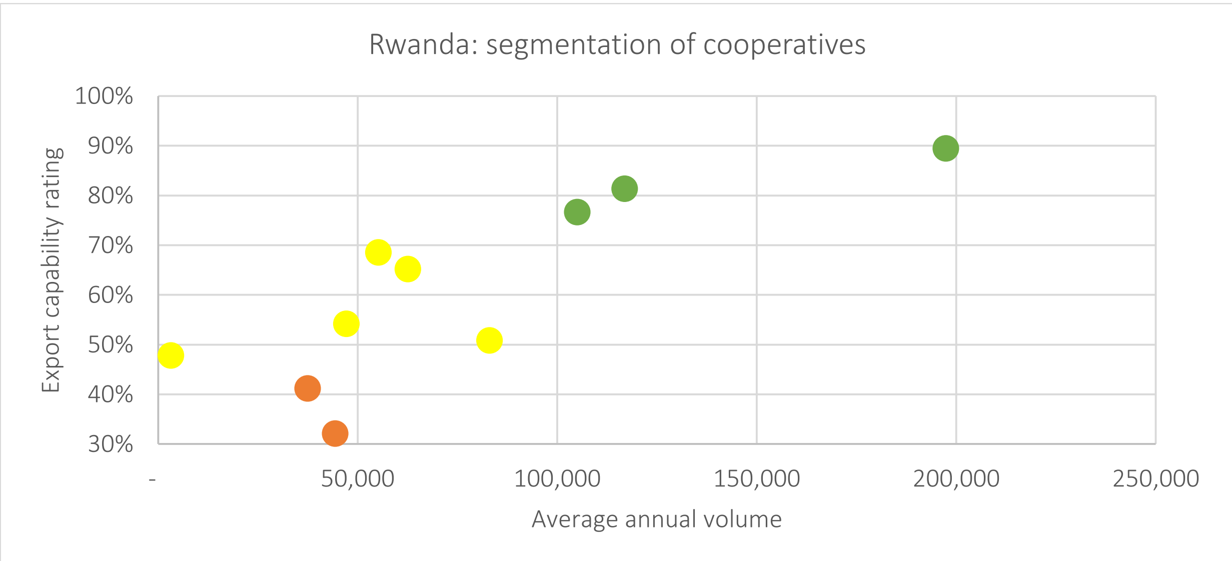


Figure 31: Partner cooperatives in Rwanda segmented by their export capability and annual volume

6.3 Export capability rating per cooperative

All cooperatives have been assessed based on their weighted performance on all categories, as well as their results on individual indicators. This section has been removed from this public version.

6.4 Conclusion

Not all cooperatives in Rwanda are able to realize premium quality and prices. With low cupping scores and a lack of cupping staff, cooperatives are unable to tap into the export market.

Good performers have their own washing stations and in one case also a dry mill, and often have a large membership and capture rate. Management capacity is critical. Average performers report challenges in finance, knowledge of the market and finding buyers.

7 Recommendations

Recommendations to improve the coffee value chain are addressed for each origin individually, considering the specific characteristics of the value chains.

Opportunities outside the current coffee value chain have been addressed separately.

Combining the export capability rating per cooperative with the overall recommendations, TWIN and the partner cooperatives will be able to develop individual plans for capacity building of each of the cooperatives. This is outside of the scope of this study.

7.1 Recommendations to improve the coffee value chain in Burundi

Supply Chain Level	Weaknesses and Threats	Recommendation and Opportunities for Intervention
Coffee Farmer	**Prices** – farmgate prices as percentage of FOB are among the lowest globally **Production** - poor application of good agricultural practices, low fertilizer use and poor pest and disease control. Resilience of farmers to climate change **Certification** – High costs of certification compared to small volumes. **Access to finance** – limited access to financial products and services, those who have access get charged very high interest rates compared to international benchmarks. Women and youth are hereby the vulnerable groups **Distance to CWS** – Coffee washing stations are distant to the locations of the farmers	*Short Term* • Train farmers and their adult children targeted as successors in GAP and other farm practices and support them in becoming more resilient to climate change through the support in implementation of certification schemes • Further support cooperatives in professionalisation to improve efficiencies through capacity building activities *Medium to Long Term* • Conduct an in depth study on production cost and prices, as well as cost and benefits of certification to understand the potential livelihood of coffee farmers this can be at cooperative level • Share certification cost by implementing certificates through COCOCA rather than individual cooperatives • Support government in improving transparency in the supply chain. Herein associate with and/or get more insight on the World Bank project. • Support existing cooperatives to increase cherry supply, by making means of transport available, using satellite stores for collection, and by allowing cherry delivery by non-member farmers in order to guarantee an optimal volume. • Collaborate with IFAD and others on access to finance and focus on women and youth.

Cooperatives (Coffee Washing Stations)	**Policy** – Implementation Coffee Policy is unclear, making it unpredictable and unreliable **Certification** – High costs of certification **Communication** – Communication between cooperatives and buyers is challenging **Access to Finance** – Access to finance is inadequate **Capacity & Skills** – The Specialty Coffee is a complex segment with complex logistics, management and maintenance skills **Overcapacity** – leading to high processing costs and inefficiencies. Seasonality of the coffee sector does not help. **Logistics & Infrastructure** – Lack of sufficient trucks and good road infrastructure **Traceability** – low traceability at the level of the washing stations, making it difficult to meet market requirements **Dependency** – Dependency of the cooperatives on COCOCA for milling, for export and for finance	*Short Term* • Support cooperatives to capture more cherries and optimize volumes with better logistics, working capital, growth of membership or allowing cherry delivery by non-member farmers • Provide trainings to cooperatives to better serve the market of specialty coffees and improve their management capacity. Focus hereby on the following topics: – Coffee washing stations management – Equipment and engine maintenance – Coffee trading and entrepreneurship – Selling skills – Coffee risk management – Coffee cupping • Improve on KPI monitoring of the challenges mentioned, ensuring a control group that is not related to specialty in order to capture the broader picture • Connect investors to coops who want to expand and work with local financers and donors to develop a financial service that can support working capital needs. *Medium to Long Term* • Support government in executing its Coffee Strategy (though already much planned in the World Bank project) • Intervene on improving communication infrastructure • Conduct study on the cost and benefits of different certification schemes and benefits/cost efficiencies of multiple certification to help guide the cooperatives. • Increase production and investigate alternatives for economic activity in low season of the coffee season for coops • Investigate options for technological innovations to improve traceability • Develop in collaboration with local forwarders solutions to the transportation challenges or support cooperatives in owning their own logistical means • Study alternative options to services provided by COCOCA or improve its capacity
Dry Mill & Export	**Documentary Compliance** – document process is very lengthy and inefficient	*Short Term* • Work with government on improving the efficiency of the documentation requirements for export, specifically validation of contracts

Market	**Marketing & PR** – knowledge of traders and roasters is limited	*Short Term* • Organizing Buyers' tours and cupping sessions during the harvest period. *Medium to Long Term* • Market and promote the coffee with roasters and while doing so improving the supply chain's performance, accessibility and traceability

7.2 Recommendations to improve the coffee value chain in Rwanda

Supply Chain Level	Constraints	Recommendation and Opportunities For Intervention
Coffee Farmer	**Productivity & Quality** – productivity is low due to depleted soils and availability of inputs. Quality in Rwanda, is high, but could further improve **Market** - local market is unreliable because the cooperatives that farmers are selling to are not considered reliable business partners, whereby zoning policy is much debated but generally not considered supportive. Middlemen are also not always reliable.	*Short term* • Improve access to enough input on time, soils analysis to adjust quality and quantity of inputs • Organize extension services for GAP (Good Agriculture Practices) to farmers • Support government in assessing and improving its zoning policy • Study on the best practices for climate change mitigation measures *Medium to Long Term* • Share certification cost by implementing certificates through partnerships or umbrella bodies rather than individual cooperatives • Investigate – and if found promote- technological innovations that could support the farmer in transparency in pricing and assessing performance of the cooperatives
Cooperatives (Coffee Washing Stations)	**Quality Control** – Potato defect is a serious threat to the reputation of the Rwandan Coffee. This should be fully controlled **Innovation** – Coffees from Rwanda are of high quality but do not specifically stand out. **Access to long term loans** – there is a need from cooperatives to obtain long-term loans **Capacity** – Can be divided into Management skills, incl. risk and quality management and Consumer focus skills which include branding, marketing & pricing and communication	*Short term* • Conduct a study for more insight on the semi-washed coffees • Conduct a study to map the cooperative landscape and their performance and/or create tool/app that could easily benchmark their performance • Expand the capacity building at the overall coffee business management • Support government in evaluating and further improving zoning policy, thereby support cooperatives with the implementation of the policy • Invest in improving the cooperative capacity with regards to marketing and pricing, risk management, quality control and communication, negotiation and contracting skills. Hereby taking into account their whole product portfolio in order to better manage risk and optimize portfolio.

		• Develop financial products that allow for short (working capital) and long-term loans, for high-potential cooperatives • Together with the relevant actors in the sector develop risk mitigation strategies for price volatility or clients that default on contracts e.g mutual insurance system *Medium to Long Term* • Further investigate and promote with the cooperatives promising value adding activities, which include women grown coffee, and other innovations that could give them an edge over the market (e.g in processing, tech such blockchain)
Dry Mill & Export	Costs of Export Border Compliance Control of Export	*Short term* • Support government in reducing transaction costs of border compliance in order to become more competitive in the region • Support government in improving security of goods
Market	Marketing & PR – knowledge of traders and roasters is still limited	*Short term* • Invest in marketing, branding and promotion of the specialty coffee with roasters and while doing so improving the supply chain's performance and coffee quality

7.3 Other opportunities and recommendations

7.3.1 Diversification

For improved livelihoods and resilience, we recommend for both Rwanda and Burundi, to invest into activities which support income diversification for farmers as well as for the other supply chain actors. This should allow a response to climate change, complement coffee seasonality, and increase overall income. Diversification is a risk management mechanism, for economic as well as environmental risks.

The Coffee Sustainability Catalogue 2016, based on a wide consultation of coffee stakeholders, provides a vision on sustainable smallholders farms. A diversified farm would need a combination of coffee, food crops, livestock, processing and/or renewable energy generation. Based on Agri-Logic experience in different origins, we have seen successful diversification on coffee farms with pepper, honey, livestock, sugar cane and several food staples such as maize and other grains.

This is a short and medium term intervention.

7.3.2 Horizontal and vertical integration

There are opportunities to create value through horizontal and vertical integration of the supply chains.

Horizontal integration means an integration of actors on the same level of the supply chain: farmers integrating with other farmers, cooperatives with other cooperatives, and traders with other traders. There is an opportunity for cooperatives to work together through partnerships, umbrella bodies or mergers to reach a larger scale. This will allow for a stronger position in the market, and the ability to build capacity internally to serve the market. It will also allow for coffee washing stations to use a larger share of their capacity and be more efficient.

Vertical integration means that one actor in the supply chain will start activities that are generally done by their suppliers or customers. For the cooperatives in scope of this project, there are opportunities on both sides.

Backward vertical integration means integrating some work from suppliers. In the case of the partner cooperatives, these suppliers are the farmers. Instead of farmers currently selling semi-washed coffee to trader, cooperatives should increase the share of cherry they buy from farmers and process it into fully washed coffee. By increasing market share of fully washed coffee, value addition will be achieved and higher prices can be obtained in the market. It will also allow for a stronger market position against the many international players in the sector and allow to profit from economies of scale in the sourcing, training and marketing.

Forward vertical integration means expansion to activities that are normally done by an organization's customers. For the partner cooperatives, this would be coffee roasting. Local roasting adds value to the coffee, and even though volumes are still low, there are quite some successful examples in the countries. There are currently even some organization roasting locally for export, such as is done by the Rwanda Farmers Coffee Company (RFCC) with its Gorilla coffees.

However, the local market needs to be further developed allowing for scale and sustainable growth. Roasted coffee is generally not competitive at the international market, because of the smaller scale of production, as well as the more complex and expensive transport cost of roasted coffee compared to green coffee. Specifically in the specialty segment, many roasters promote freshness in their roast, and a longer supply chain would contradict that. There is a trend of growing local demand, also driven by tourism, but promotion would be needed.

Scale is a requirement, since the smallest commercially viable coffee roasting facility would have an installed capacity of about 10MT per month, assuming a roaster that processes 50kg/hr. Cooperatives would need to work together to supply one roasting facility in order to operate it constantly at full capacity and realize a competitive cost price.

Combining horizontal integration with vertical integration, such as done by COCOCA, Misozi and Rwashossco further strengthens the position of the cooperatives.

7.3.3 Tourism

Whereas the above interventions can improve income for rural households through increasing efficiency in agriculture and adding value through agribusiness, relying on agriculture alone might not be sufficient to secure a living income and socio-economic development for all rural families. Hospitality training and promotion of farm stays for international tourists would be a significant source of income, at the level of farms or cooperatives.

Especially in Rwanda, tourism is growing fast and this could be implemented on short to medium term. For Burundi, the opportunity is not yet there, and there is more gain in optimizing the coffee value chain and agriculture.

7.3.4 Technological developments

Though innovations like blockchain have not proven themselves, there are quite some pilots being run in coffee. Rapid digital advancements are made in all sectors, and the coffee sector will not be an exception. Specialty coffee sector, being a high valued sector, offers herein an unique opportunity. It is this sector where transparency and traceability are key elements in the value of the coffee and is something which is pushed by the consumers. It is therefore recommended to seek partnerships where possible in order to build up experience and be able to quickly react when markets decide to pick up these technological innovations.

8 List of figures

9 List of tables

10 Appendix: references

[i] International Coffee Organization (2018). Coffee Market Report, March 2018.
[ii] International Coffee Organization (2017).
[iii] International Trade Center, The Coffee Exporters Guide. http://www.thecoffeeguide.org/
[iv] International Trade Center, The Coffee Exporters Guide. http://www.thecoffeeguide.org/
[v] Adam P. Wilson, Norbert L.W. Wilson (2014). The economics of quality in the specialty coffee industry: insights from the Cup of Excellence auction programs. Published by the International Association of Agricultural Economists.
[vi] Hivos (2014). Coffee Barometer. https://www.hivos.org/coffee-barometer-2014
[vii] Sustainable Coffee Challenge (2018). https://www.sustaincoffee.org/commitments/
[viii] Forbes (2017). https://www.forbes.com/sites/simransethi/2017/12/01/a-surprising-new-trend-in-coffee/#49ad949e5b31
[ix] Forbes (2017). https://www.forbes.com/sites/simransethi/2017/12/01/a-surprising-new-trend-in-coffee/#49ad949e5b31
[x] Perfect Daily Grind (2017). https://www.perfectdailygrind.com/2017/04/third-wave-coffee-different-specialty/
[xi] Rabobank IRI (2016).
[xii] NetMBA Business Knowledge Center http://www.netmba.com/marketing/product/lifecycle/
[xiii] Trends XTC. http://client.xtcworldinnovation.com/upload/uploads/Image/produits_services/XTC_tree_imp.jpg
[xiv] CBI (2017). https://www.cbi.eu/market-information/coffee/trade-statistics/
[xv] Beverage Daily.com (2017) Asia leads growth, while global market leans toward premiumization https://www.beveragedaily.com/Article/2017/03/02/Asia-leads-coffee-growth-global-market-moves-to-premium
[xvi] Adam P. Wilson, Norbert L.W. Wilson (2014). The economics of quality in the specialty coffee industry: insights from the Cup of Excellence auction programs. Published by the International Association of Agricultural Economists.
[xvii] 6 trends shaping Australian Coffee in 2018 https://www.mycuppa.com.au/6-trends-shaping-Australian-coffee-in-2018
[xviii] Coffee Sustainability takes on the business and economic sustainability challenge (2018) http://host.fieramilano.it/tr/node/7662
[xix] Bray & Neilson (2018) Reviewing the impacts of coffee certification programmes on smallholder livelihoods https://www.tandfonline.com/doi/full/10.1080/21513732.2017.1316520?scroll=top&needAccess=true
[xx] World Population Review http://worldpopulationreview.com/countries/burundi-population/
[xxi] World Bank WITS (2015). https://wits.worldbank.org/CountrySnapshot/en/BDI/
[xxii] Trading Economics (2018). https://tradingeconomics.com/burundi/competitiveness-rank
[xxiii] World Bank (2018). http://www.doingbusiness.org/data/exploreeconomies/burundi
[xxiv] Perfect Daily Grind (2017). https://www.perfectdailygrind.com/2017/06/a-guide-to-buying-importing-coffee-from-burundi/ and https://www.perfectdailygrind.com/2017/06/introducing-the-flavors-regions-of-burundian-coffee/
[xxv] Global Coffee Platform & Agri-Logic (2016). African Coffee Sector: Addressing National Investment Agendas on a Continental Scale, Burundi. http://www.agri-logic.nl/portfolio/coffee-sector-studies-in-africa/ and http://www.globalcoffeeplatform.org/resources/african-investment-review-full-reports
[xxvi] CGIAR (2015). Climate change impacts on African crop production. https://ccafs.cgiar.org/blog/crops-under-changing-climate-what-are-impacts-africa#.WuBhzpco_b0
[xxvii] United States Department of Agriculture (2000-2016), Production, Supply & Distribution. https://apps.fas.US$a.gov/psdonline/app/index.html
[xxviii] The Observatory of Economic Complexity (OEC, 1995-2015). https://atlas.media.mit.edu/en/visualize/stacked/hs92/export/bdi/show/0901/1995.2016/
[xxix] GPFI & AFI (2014) The Use of Financial Inclusion Data Country Case Study http://www.gpfi.org/sites/default/files/documents/The%20Use%20of%20Financial%20Inclusion%20Data%20Country%20Case%20Study_Burundi.pdf
[xxx] IFAD (2017) Projet d'Appui à l'Inclusion Financière Agricole et Rurale du Burundi (PAIFAR-B) https://webapps.ifad.org/members/lapse-of-time/docs/french/EB-2017-LOT-P-8-Document-de-conception.pdf
[xxxi] Global Coffee Platform & Agri-Logic (2016). African Coffee Sector: Addressing National Investment Agendas on a Continental Scale, Burundi. http://www.agri-logic.nl/portfolio/coffee-sector-studies-in-africa/ and http://www.globalcoffeeplatform.org/resources/african-investment-review-full-reports
[xxxii] WageIndicator (2018). https://wageindicator.org/main/salary/living-wage/living-wage-series-burundi-january-2018
[xxxiii] World Bank Logistics Performance Index (2016). https://lpi.worldbank.org/international/scorecard/radar/254/C/BDI/2016#chartarea

[xxxiv] World Bank (2018) Ease of doing business in Burundi
http://www.doingbusiness.org/~/media/wbg/doingbusiness/documents/profiles/country/bdi.pdf
[xxxv] Trading Economics (2018). https://tradingeconomics.com/rwanda/competitiveness-rank
[xxxvi] World Bank (2018). http://www.doingbusiness.org/data/exploreeconomies/rwanda
[xxxvii] http://www.scanews.coffee/2014/07/07/risk-responsibility-and-potatoes-a-rwandan-coffee-story/
[xxxviii] Global Coffee Platform & Agri-Logic (2016). African Coffee Sector: Addressing National Investment Agendas on a Continental Scale, Rwanda. http://www.agri-logic.nl/portfolio/coffee-sector-studies-in-africa/ and http://www.globalcoffeeplatform.org/resources/african-investment-review-full-reports
[xxxix] Macciavello & Morjaria (2015) https://www.theigc.org/wp-content/uploads/2015/02/Macciavello-and-Morjaria-2015-Project-Memo.pdf
[xl] National Agricultural Export Development Board (NAEB). www.naeb.gov.rw/
[xli] The Observatory of Economic Complexity (OEC, 1995-2016).
https://atlas.media.mit.edu/en/visualize/stacked/hs92/export/rwa/show/0901/1995.2016/
[xlii] Strategic Plan for the Agricultural Sector (PSTA 4) under Rwanda's Economic Development and Poverty Reduction Strategy 3 (EDPRS 3), covering the period 2018-2024
[xliii] AGLC (2017) Policy Research brief 42 http://foodsecuritypolicy.msu.edu/uploads/resources/Policy_Brief_42.pdf
[xliv] Global Coffee Platform & Agri-Logic (2016). African Coffee Sector: Addressing National Investment Agendas on a Continental Scale, Burundi. http://www.agri-logic.nl/portfolio/coffee-sector-studies-in-africa/ and http://www.globalcoffeeplatform.org/resources/african-investment-review-full-reports
[xlv] WageIndicator (2018). https://wageindicator.org/main/salary/living-wage/rwanda-living-wage-series-january-2018
[xlvi] World Bank Logistics Performance Index (2016).
https://lpi.worldbank.org/international/scorecard/radar/254/C/RWA/2016#chartarea