



FairChain Farming Whitepaper



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FairChain: The Lowdown

1.1. FairChain in a tweet



1.2. Mission

We whole-heartedly believe that tomorrow's economies will be driven by inclusive business models that combine entrepreneurial competitiveness and social impact.

We believe in a world dominated by businesses that are able to look beyond corporate social responsibility to create shared value.

We believe in a global society that embraces social entrepreneurship over development aid - we call that trade over aid.

We believe in borderless communities that actively empower entrepreneurs in developing countries to compete on quality rather than poverty.

1.3. Why FairChain?

THE PROBLEM: POWER IMBALANCE

Over the centuries, multinationals have discovered the art of selling premium products at colossal profits. The majority of their products are made from valuable commodities sourced at rock-bottom prices in developing countries.

This system of buying low and selling high has created an enormous power imbalance, making it virtually impossible for developing economies to grow. Even countries blessed with valuable commodities like coffee, cocoa and tea have no prospect of ever catching up.

Development aid attempts to compensate for this imbalance, with the negative side effect that it actually masks the problem.

THE SOLUTION: INCLUSIVE BUSINESS MODELS

We think that with the rise of new (transparent) technologies, open-minded companies and vocal global consumers, the time has come to change all that. The stars are aligned, so to say, to bring an end to unfair trade and introduce inclusive business models that actively create shared value and promote open entrepreneurship.

In this light, FairChain is a disruptor. FairChain envisions the future of business not as purposeless corporations, but as social enterprises. Enterprises that leave behind a greater share of the value they create in the countries that produce the commodities their >



Smallholder Farming: The Problem

businesses need to survive. Like, for example, paying fairer prices for these commodities. This can, quite literally, be introduced overnight. That's all it takes to shift the balance in a value chain.

But the fact is, there are not a lot of options open to businesses with social enterprise ambitions. That's why we created FairChain. FairChain is a proven value chain shifter. With FairChain, businesses have a roadmap whose end goal is to leave behind up to 50% of the value created in the countries of origin. And that begins by paying a fair price for the commodities coming from those countries.

1.4. The FairChain Principles

There are three underlining principles driving FairChain. If you have to summarize what we do to your boss, all you have to do is remember these 11 words.

1. Creating shared value

FairChain is single-minded in its purpose: to create shared value with the countries where the majority of the world's raw commodities originate from. Not just a little bit of sharing – our aim is an even 50/50 split between producers in developing economies and consumers in the West. But just tiny shifts towards that goal will radically – and positively – alter the world as we know it.

2. Trade over Aid

Trade is not going to replace government aid

overnight. But that doesn't mean it's impossible. Take Ethiopia, a country FairChain is extremely active in. As the origin of Arabica coffee, Ethiopia has some of the world's best beans. More to the point, Ethiopia has enough premium coffee beans to be a well-off nation with enviable quality of life. If we could shift some of the value-adding activities – such as roasting and packaging – back to Ethiopia, we would exponentially increase the country's earning capacity. Roasting and packaging coffee in Ethiopia is a very realistic option, and it's already being done on a small scale. Done on a larger scale however, or multiplied across all coffee-producing countries, the impact would be extraordinary. And dare to think beyond coffee – to, say, cashews or cocoa – and we're talking a real revolution! And, we repeat: it's something that could literally be implemented tomorrow.

3. Compete on Quality, not Poverty

Too often quality is seen as a first world word, while poverty something reserved for developing worlds. Admittedly, that's an easy way for multinational corporations to justify their low prices. But quality begins with commodities. In some cases, raw commodities are premium brands in and of themselves, such as Ivory Coast cocoa or Ethiopian Arabica. FairChain is built around the idea of competing on quality, not poverty. The way we do that is by transforming how we think of bulk commodities. Not as anonymous and emotionless items, but as diversified quality products. ◀

In 2013 we launched our first FairChain coffee project in Ethiopia. Since then, we've unveiled similar FairChain initiatives with Kenyan, Rwandan and Colombian coffee companies. What we discovered while interacting with these coffee companies is how dire the situation is for their most important stakeholders: the smallholder farmers.

Smallholder Farming: The Problem

There are an estimated 570 million smallholder farming families tending small plots of land around the world. These smallholders are extremely important to everyday life in the West, because they are responsible for approximately 70% of the global food production. As important as they are, they remain the most vulnerable, underpaid and invisible link in the global food value chain. These small, family-run farms also make up the majority of people living in absolute poverty, and represent half of the world's undernourished people.

FairChain is familiar with smallholder farming's many downsides, but we also believe the downsides are countered by many more upsides. Every single solution begins with the important shift from competing on poverty to competing on quality. There's a market for it, probably in your own neighborhood. Conscious consumers appreciate high-quality cocoa and coffee, both for their taste as well as the stories of the beans and the people behind them. Whereas most people just see 570 million smallholders, we see an enormous well-armed army of Fair-Fighters whose craft and quality will eventually win over the global masses. FairChain strives to put the quality of their commodities on the map: ▶

FairChain Farming: Theory of Change

DOWNSIDERS

There are a number of important downsides standing in the way of smallholder farmers and a decent, living income. Amongst the most important downsides are:

Smallholder farmers:

- The lack of collective organization and market power, leading to low and volatile prices for their produce
- The lack of agricultural knowledge and tools, leading to low yields and iffy quality. And when training is available, the adoption rate amongst farmers is terribly low
- The lack of formal access to land and finance
- They are the first to be exposed to the effects of climate change, endangering their source of income and livelihood.
- They operate on a very small scale, in many cases arguably too small to achieve a living income.
- Their large families puts education out of reach of most or all of the children

UPSIDES

There are, however, a number of important upsides that paint a positive picture about the future of smallholders. Amongst those upsides are:

- They are the backbone of agricultural production in developing countries
- They are often self-sufficient in terms of food supply
- They often live in very fertile and resilient areas that are rich in biodiversity
- They farm many of the finest products enjoyed by people around the world
- They are proud and have a keen understanding of their multi-generation heritage.
- In some cases they benefit from direct trade programs and premium prices
- They have strong practical know-how bolstered by their day-to-day field experience
- They run their family business as a team! Wife and husband are equally important.

To capture all these down- and upsides, these many challenges and opportunities, we created a FairChain Farming Theory of Change. ◀

“FairChain Farming means farmers and workers earn living incomes and wages by managing profitable farms and getting involved in value added activities, in order to improve livelihoods and communities.”

Our Theory of change focuses on living income. Remember President Clinton when he said: “It’s the economy, stupid?” Well, farmers can’t enjoy a high quality of life if they don’t produce enough food to earn a decent wage.

What is a living income?

“A living income means the net income a household would need to earn to enable all members of the household to afford a decent standard of living. Elements of a decent standard of living thereby include: food, water, housing, education, health care, transport, clothing, and other essential needs including provision for unexpected events.”¹

3.1. Impact Framework

FairChain Farming Living Income Roadmap

What value-added activities are needed to run a profitable smallholder farm? To better understand which activities and investments will have the greatest impact on smallholder livelihoods, we created a framework we call the FairChain Farming Living Income Roadmap. This Roadmap explores the opportunities and technologies currently available, such as Blockchain, to help us reach our 50/50 goal. This image offers a quick overview of our framework. For a more detailed explanation, please see the annex.

It is one thing to create a roadmap; it is another to test our theories in practice. So in 2017 we hiked into Ethiopia’s celebrated coffee farming region of Limu. Working closely with Moyee Coffee, an ambitious FairChain Dutch coffee brand, we created a clear impact framework: ▶

1. Work within the current system

Our goal is to maximize the yield and quality of smallholder farmer produce by working within the current limitations of the system. By 'the system' we mean the typically small plots of land available to smallholder farmers and their current (poor) position in the value chain.

2. Invest in co-managed washing stations

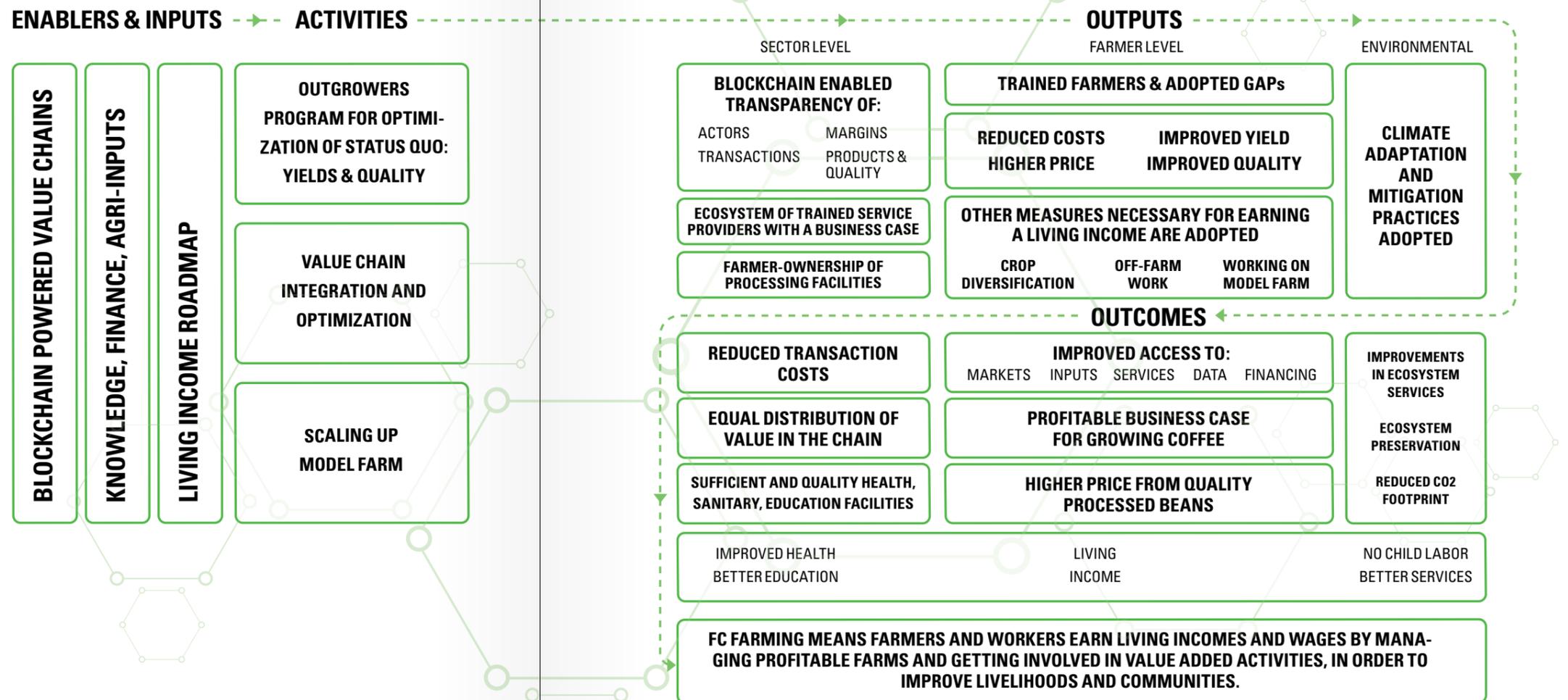
We began by offering FairChain premiums of 20% to smallholder. This was a good start. But while a much-needed extra, clearly more than 20% FairChain incentive is needed. To create real added value

requires investing in co-managed washing stations in and around these farming regions. We decided that the real added value for the FairChain farmers required integrating all processing activities in the FairChain business model. Addressing this issue, FairChain launched a crowdfunding campaign in the spring of 2018 to raise money for washing stations (see *Oneplanetcrowd project page*).

3. More scale, more efficiency

To benefit from economies of scales, smallholders must collaborate on large-scale plantations that use the latest farming/harvesting technologies.

The FairChain Foundation is currently working with leading universities to bring more precision agricultural methods to Ethiopia. This is the first step in what we hope to create in the next few years: a model farm where we can test new ideas and transfer the knowledge gained to the region's smallholders.



3.2. Impact Claim

FairChain has real – and realistic – impact goals. To convince our partners of the value of what we do, we have outlined in the diagram below three key cause-effect relationships of our FairChain Farming program. The three cause-effect relationships involve knowledge and efficiency, Blockchain technology and improved agricultural practices. These are just three examples, but they each show how specific outputs can lead to our outcome of choice: a living income for smallholder farmers.”

1. Knowledge and efficient processing

Integrating and optimizing the value chain

requires focusing on the right outputs, namely: farmer training and efficient processing practices (outputs). Significantly improving these leads to higher prices from better products. FairChain company Moyee Coffee is already proving that higher quality beans lead directly to higher prices paid, drastically improving the chances of a living income (outcome) for coffee farmer households.

2. Blockchain

Blockchain is an important enabler of value chain integration and optimization as it improves quality grading and farmer payment methods

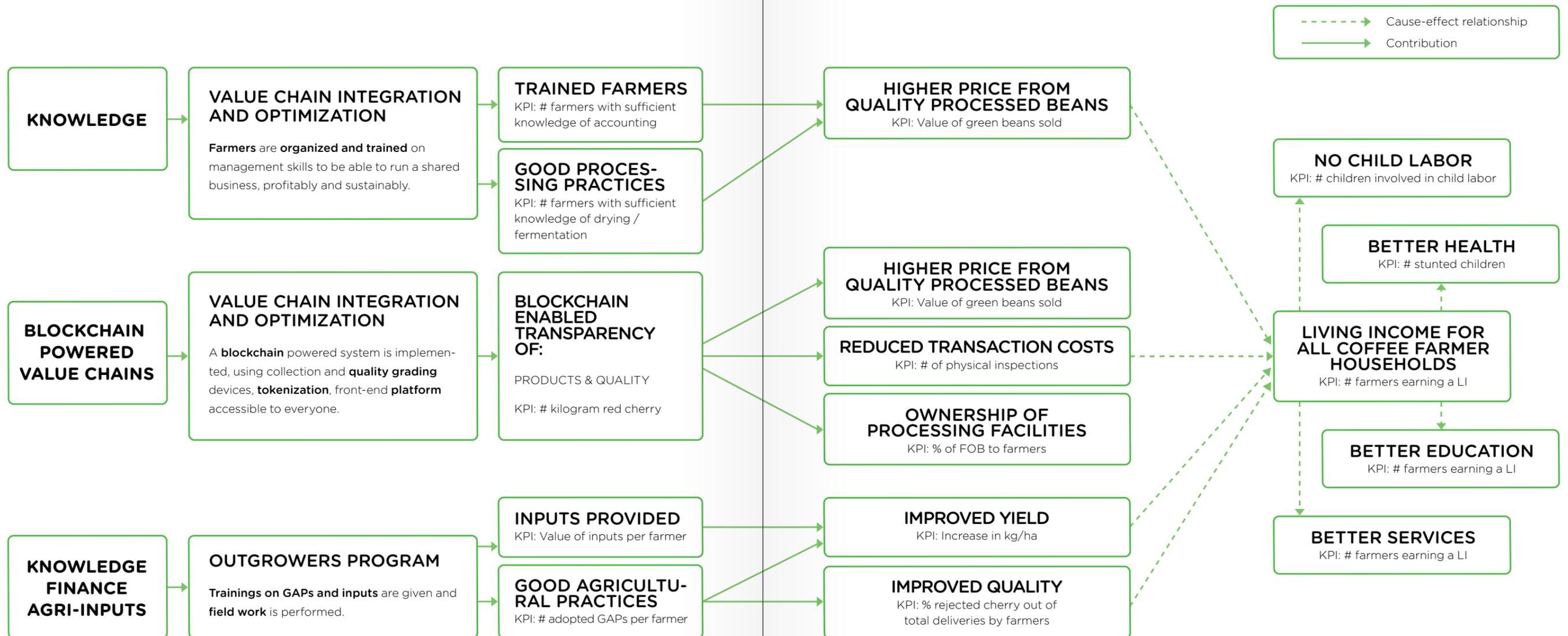
(activities). Blockchain technology makes both of these outputs instantly measurable. The ability to grade and pay coffee farmers for coffee cherries at washing stations is a radical improvement over existing systems, all made possible by Blockchain. By reducing on-site transaction costs and recognizing higher quality beans, Blockchain arguably contributes to a living income for those farmers that use it.

3. Improved agricultural practices

Good agricultural practices (initial outputs) lead to improved quality and yields (outputs). Both

these outputs have a direct positive effect on our ultimate outcome: a living income. To realize this, we are supporting farmer training programs, working with leading universities and organizing fieldwork. Here, too, Blockchain technology plays an important role as enabler.

The above examples are just three of numerous cause-effect relationships and contributions we are currently working on. What unites them all is the outcome: they all contribute to a living income. And with a living income comes better health and education, lower child labor rates and better services. ➤



3.3. Living Income Roadmap

To start the long road towards reaching our impact goal, we have visualized our theory of change as a Living Income Roadmap. This enables us, in case we fail the first time, to keep trying in what no other company succeeded yet (to the best of our knowledge): to close the income gap of small coffee farmers.

Steps 1 and 2 consisted of a realistic assessment of the current situation. How far is the path to a living income for the farmers, considering their land sizes, number of family members and other critical factors?

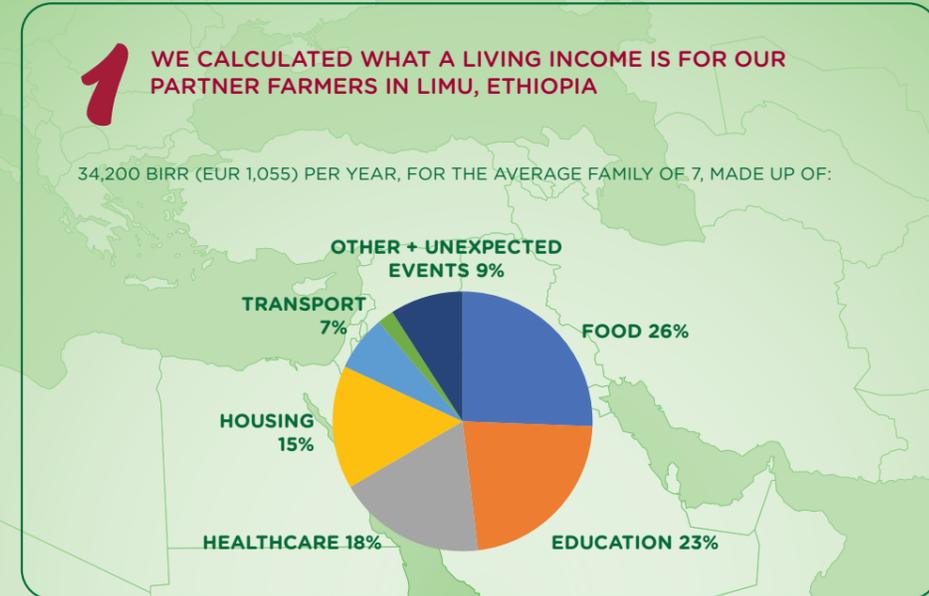
How much do we need to change for them to reach a living income? We calculated what a living income is in Limu, Ethiopia, and also how much are smallholder farmers actually earning right now.

Step 3 is under development, as we are analyzing different levers for the different types of farmers (e.g. coffee income, off-farm income, etc). A roadmap was designed, showing every action, either planned or implemented. We're inviting anyone to think or partner with us, on any of those actions. ◀



FAIRCHAIN FARMING - IMPACT GOAL

FAIRCHAIN FARMING MEANS FARMERS AND WORKERS EARN LIVING INCOMES AND WAGES BY MANAGING PROFITABLE FARMS AND GETTING INVOLVED IN VALUE ADDED ACTIVITIES, IN ORDER TO IMPROVE LIVELIHOODS AND COMMUNITIES.



Why Blockchain?

Blockchain. Sure, everyone is talking about it, but few actually know what it is. Even less understand why it will single-handedly transform food value chains across the planet. Put simply, Blockchain is a great lie detector. It's one thing to say FairChain is all about sharing the value created, but it's another thing to prove it. Blockchain introduces much needed transparency to an industry that's big on purchasing certificates, but small on delivering on its grand promises.

Using Blockchain technology, we are creating a scalable farming model based on FairChain principles – a model that we can replicate in other regions of the world. Blockchain is a technology that functions entirely within the current system. The technology provides a reliable and transparency system for tracking every single transaction in the value chain, including the smallholders. Making transparent the gross underpayments typical in the coffee industry is a radical step towards fairness. Blockchain shows every single value-adding step in the chain. It is decentralized, unalterable and publicly available.

Which is to say, companies that use Blockchain, can't lie.

<https://medium.com/@MoyeeCoffeeIRL/worlds-first-blockchain-coffee-project-cd04ff9e510>

<https://cryptocoin.news/news/blockchain-news/moyee-coffee-aiming-to-use-blockchain-to-bring-transparency-to-coffee-industry-3553/>

<http://blocktribune.com/blockchain-traceable-coffee-tapped-bext360-moyee/>

<https://irishtechnews.ie/using-the-blockchain-to-bring-transparency-to-coffee-industry-moyee-coffee/>

Benefits of Blockchain:

- Accelerates transition from bulk commodity to diversified quality product by providing farmers with 'smart' contracts
- Introduces a transparent quality grading system to rural areas
- Gives farmers access to loans and savings account through instant mobile and/or crypto payments
- Direct feedback improves processes
- 100% traceability
- Makes farmers visible to consumers
- Verifies payments on local level



"With Blockchain it's the chain that becomes transparent, not the farm, not the agricultural practices, not the labor practices, not the potential human rights issues (child labor, protective equipment, gender inequality, etc). The audits of certification would still have this role. Proposal: through Blockchain we check that impact trickles down, and through setting up trainings and lobbying at a national and local level, we make sure the local ecosystem takes care of itself in preventing human rights abuses. So as a brand you're active and involved at a high level, showing you care, through dialogue." (source unknown)

Blockchain + Coffee

Imagine an Ethiopian coffee farmer – we'll call him Ahmed, a common name in the Limu region – picking the first ripe red cherry (1) of his harvest. Now picture Ahmed bringing his entire harvest to a FairChain harvest centre in Limu (2). Upon delivery, he signs a 'smart contract' with FairChain. The price Ahmed is paid per kilogram is determined by an A.I. grading machine that is directly connected to a Blockchain system. The system sends a machine to Ahmed's mobile telephone asking if he accepts the grading of his coffee and the price being offered. Ahmed confirms and instantly receives payment in his digital 'farmer wallet'. His coffee is then processed in a washing station (4, 5), the cost of which is logged on the Blockchain and converted to a price per kg. The coffee is properly labeled and stored (6) so that it is completely traceable, both physically and on the blockchain.

With Blockchain, even the supply chain is completely documented – from truck transports (7) and official grading (8) to roasting (9) and packaging (10). We can follow the coffee as it is shipped to Europe (11) and the brands that sell FairChain coffee, such as Moyee, to end consumers (12).

All these value-added steps are logged on the Blockchain by way of invoices and payments. Consumers are able to trace the coffee not only back to its origin, but see exactly where every cent of your coffee went. Meanwhile, back in Ethiopia, Ahmed is managing his money via a virtual bank account instead of hiding bank notes underneath his bed mattress. The instant payments at the washing station and higher prices paid quality beans are real incentives for Ahmed and his other coffee farming neighbors to learn more and improve their yields on their path to a living income. ▶

1. Smallholder Coffee Farming Ethiopia: The Problem

This white paper positions FairChain Farming as a global, multi-sector concept. As a proof of concept, however, we focused on coffee farming in Ethiopia. Working both independently and with Moyee Coffee, we put our theories to the test and tackled real challenges facing this industry. Just as many smallholders around the world, coffee growers in Ethiopia are extremely vulnerable. On the one hand they lack access to reliable financial, technical and/or social services, and on the other hand they face inefficient and opaque trading channels. Yet despite these obstacles, they still manage to produce 95% of Ethiopian coffee!

The specific problems facing Ethiopia's smallholder coffee farmers include:

- At least 2 million coffee farmers live off less than \$2 / day (i.e. under the international poverty line). They lack access to health care, education and services. There is structural child labor. > Need for living income.
- Farmers have no direct access to markets and therefore cannot benefit from the quality of their beans. The cheaper their beans, the higher the profits are down the chain. > Need to de-commoditize.
- The vast majority has no access to an active coffee cooperation. > Need to organize
- The farm-gate price of beans has stayed virtually the same for the past 40 years, while price consumers pay has increased dramatically > Need to include true costs
- The average farmer grows on a plot smaller than 1 hectare. Using outdated agricultural practices, they produce on average an annual yield of 150kg of green beans per hectare > Need to increase yield through training and innovation
- Those farmers who are organized and certified still lack market access to fully benefit from the quality of their beans > Need to gain full market access
- Because they sell only unprocessed cherries, farmers miss out on the value added at the washing station. > Need for value chain integration

- Ethiopia's highly inefficient supply chain means that farmers receive only 60% of coffee's export value >> Need to cut out middle men
- Farmers are not encouraged to think like entrepreneurs. If they receive training at all, it is of very low quality > Need to design coffee farming as a business case

2. FairChain Coffee Farming @Limu, Ethiopia

In 2017 we began an ongoing FairChain Farming test case involving some 350 smallholder farmer families in Limu, Ethiopia, a historic high-quality coffee growing region in Ethiopia. Every step taken in this project is aimed at helping all the smallholder farmers realize a living income. With this project, we hope to lay the foundation of a replicable and scalable farming model based on the FairChain principles, using blockchain technology, and geared towards realizing a living income for all the farmers in the region.

The simple facts of the project:

- Location: Limu Kosa, Oromiya, Ethiopia
- Elevation: 1.800 - 2.200 masl
- Participants: 350 smallholder families.
- Total coffee farmer families in Limu Kosa: +/- 2.500
- Avg family size: 7
- Avg farm size: 1-3 hectare
- Avg yield: 150kg green/ha
- Farm type: subsistence farming plus coffee as a cash crop.
- Type of coffee growing: mostly semi-forest
- Farmer organization: none
- Access to washing station: no
- Religion: Islam

(Socio-economic figures based on our own questionnaire September-December 2017)

A more detailed explanation of this test case is to follow, but here is a summary of our initial findings.

- The FairChain premium alone - a 20% fee we pay for high-quality coffee cherries - increased smallholder income by at least 65%, or 155 euro per farmer.

- Working with Jimma University (Ethiopia) and Wageningen University (Holland), we carried out the first soil assessments and laid the groundwork for precision agriculture.
- Through our Training-of-Trainer program we are educating 25 high potential coffee trainers to offer training as a commercial service to farmers across the Limu region.
- Through our Farmer Training program we have created a pool of 15 lead farmers responsible for organizing local farmers and creating boards of representatives.
- The quality of our first harvest from exceeded expectations, with cupping scores ranging from 83 to 85 - truly grand-cru coffee!
- Every transaction during the harvest could be followed live on our beta Blockchain website.

3. FairChain Coffee Farming: Training Model

FairChain promotes a training model built around the idea of 'cascading' knowledge. In other words, making sure useful knowledge trickles down through various layers of the coffee chain, eventually benefitting everyone involved. We facilitate a continuous feedback loop so that practical field insights are passed on from one farmer to the next.

The following diagram visualizes our approach to the project. The project began by entering a close collaboration with Jimma and Wageningen universities to help discover key insights for our Training-of-Trainer (ToT) program and to establish an effective farmer training curriculum based on real local needs. The collaboration involves some 60 researchers and students whose responsibilities include carrying out local soil assessments as well as monitoring and evaluating our program. A few academics train our trainers, while some of the ToT trainees also participate in the academic program.

The ToT program plays a pivotal role in our Limu test case. They are the link between the farmers in the field and the academics at the university. The ToT curriculum uses didactic skills and practical know-how to realize agronomic innovation. Didactics are crucial to achieving high adoption rates of common practices; innovation know-how is indispensable to improving quality and yield. The main goal of the ToT

CASCADING KNOWLEDGE



program is to establish a commercially viable service model, meaning farmers will pay for training from these trainers, because these trainings will directly increase their yield and their income.

The 350 farmers were organized into two groups, each with self-elected boards of representatives. During the first harvest, 15 lead farmers were elected to lead the entire group. They followed a curriculum built around common practices and designed to accelerate the adoption of innovative measures on the frontline of coffee farming.

Our ToT program was designed for instant scale-up. This means, in the short term, the ToT program can accommodate 12,500 farmers so as to impact the entire region.

4. FairChain Farming: a Business Case

This whitepaper has outlined the problems facing smallholder coffee farmers in Ethiopia. With our Limu test case, we are exploring viable solutions to these problems. These are the first steps to a larger business case.

The goal - as we've shouted out many times - is to create a system that brings smallholders closer to

a living income. Not just a few hundred coffee farmers in Limu, but across Ethiopia as a whole. And not only Ethiopia, but in coffee growing regions around the world. The main step to realizing a living income is greater yield. More beans, more money. To improve their yields, farmers need to improve their farming methods. To improve those methods, they need quality training with the necessary follow-through.

We believe all this is possible, but only when the farmers buy-in to the model themselves. In other words, farmers are most likely to alter their behavior and improve their practices when they themselves invest in know-how. They buy into a system that is customized to their regional farming specifications - i.e. precision agriculture based on detailed soil assessments such as those we are securing with the help of our academic partners.

In order to be replicable and scalable, our model needs to make business sense. The training needs to be part of an inclusive business model that matches our FairChain Principles.

What we learned from our first harvest is that the price we pay for quality beans is way above local market standards (ref Triple Premium blog). We also learned that farmer yields are terribly low. Our business case is therefore built around increasing farmer yield. Using our training program and agricultural innovations, we will help Limu's farmers do just this. The money they earned from their increased yields will contribute to sustaining the training program.

The following diagram offers a glimpse at our Limu test case for the coming 3 years.

Year 1

To boost quality and build trust with local farmers we 'over pay' for our FairChain beans (way above local market standards). We invest in training programs geared towards improving future yields. The average farmer household earns 19,585 birr (TBD) (€ xx), which is right on the International Poverty Line and half of what is necessary for an estimated Living Income (which we estimate to be 41,442 birr or € 1,295,- per year.)

Year 2

We 'over pay' for FairChain beans (above local market standards), but less so than in year 1. The difference (red line in diagram) is used to pay for trainings and agri-inputs. We have also budgeted for hired labor, as we assume that more coffee trees and improved practices will require more time to farm and harvest. Total income for the average farmer household (after subtracting these new costs) reaches 22,035 birr (€ 689). Better, but still not enough.

Years 3 and 4

The budget for training increases substantially. As farmers continue to integrate new farming practices - the rejuvenation and rehabilitation of existing coffee trees, picking of red cherries and better soil management -- their yields will increase to levels that are close to (but still not) a living income - from 29,385 birr to 35,880 birr.

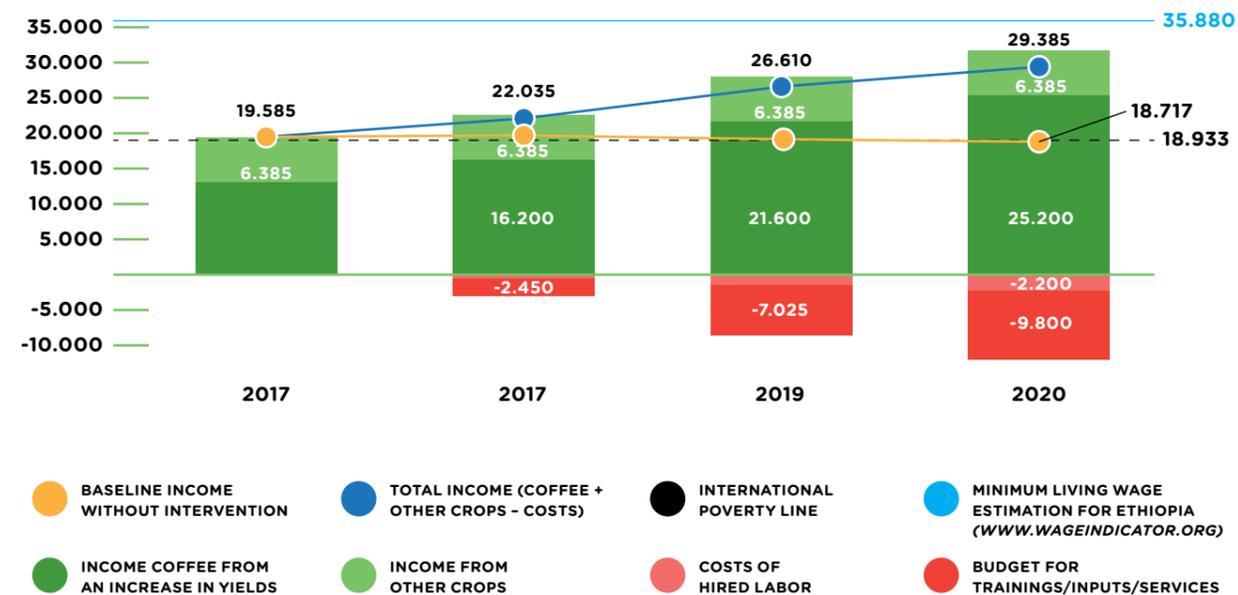
Even as most studies (e.g. Incae, 2010) identify productivity (yield) as the main driver of profitability, the majority of coffee farmers still view the price paid for beans as the key to more money. This is an obstacle and an opportunity. Using FairChain principles, we believe we can achieve both - greater yield and greater quality (i.e. higher prices). The combination of trainings, inputs and services outlined in this whitepaper is, in our opinion, the most promising path towards achieving a living income for smallholder farmers.

On 'Financial Sustainability'

Financial sustainability of the model can be defined by this description by IDH (2017):

The model runs at least at break-even or realizes a profit if:

- the costs of the model are covered through service revenues: farmers paying for services, or
- the costs covered through commercial revenues (sourcing of higher volumes / higher quality)
- There is a positive return on investment for they key actors in the model: farmers, service providers and investors



- The model offers sufficient value for farmers to continue to make use of the services offered, for service providers to continue to offer the services and for investors to continue investing

In models where the service provider is also sourcing produce (FairChain), the loyalty rate is an additional factor that influences farmer performance.

5. Questions Left

Despite having written a whitepaper on FairChain Farming, there are still numerous questions that elude us, many of which keep us up at night, including:

- How to prepare the poorest farmers in the world for a Blockchain revolution? How to encourage farmers in highly remote regions to use a phone, a Blockchain app and a virtual money account?
- How to convince farmers to remain loyal to

FairChain after all our up-front investments in their training and education? Once empowered, they could easily side-sell to others organizations.

- How can we achieve gender equality in coffee regions - realizing a higher rate of female participation? After all, gender is not high on every coffee farmer's list of priorities.
- Are our estimations for a living income realistic?
- How to avoid farmers becoming the new middlemen in an industry traditionally dominated by middlemen. Some farmers could strong-arm their neighbors into selling to them at a minimum price and then selling to us as a premium price, pocketing the difference for themselves.
- ...

These are just a few pertinent questions. We invite you to think along with us and to share with us your own questions or concerns about our FairChain Farming revolution! How?

Get in touch with Mark Kauw - mark@fairchain.org <

ANNEX

Impact Framework

This annex functions as a quick guide through the conceptual jungle of our FairChain impact framework.

Enablers & Inputs (Stuff that's supports our goals)
We use blockchain technology for transparency, quality, pricing and payments. We apply agri-knowledge, financing tools and agri-inputs to modernize farming. We implement a Living Income method.

Activities (Things we do to reach our goals)
All our activities are approached in the same, three-layer fashion:

- First, we aim to optimize the current situation, not completely alter the system. In practice this means maximizing the yield and quality of farmers' produce within the boundaries of their small plot and their position in the value chain. The key to making this work is to establish a viable business case for the farmers to buy into.
- Second, the fastest way to empower farmers is to integrate the value chain. True to FairChain principles, farmers benefit from the valued added by integrating processing activities in their business.
- Third, we truly believe the it takes more than common sense farming practices and innovation to achieve a living income. It also requires greater efficiency and scale. To increase their income smallholder farmers must collaborate with large-scale plantations in order to benefit from economies of scale.

Outputs (Direct measurable results from our activities)

- Blockchain brings transparency to the entire chain: the people in it, the transactions, margins, products and quality control. All these aspects are gathered on a blockchain system and visible to all, strengthening the farmers' position and enabling consumers to verify the impact claims of their FairChain product(s).
- By moving roasting and packaging to Ethiopia, Moyee Coffee has proven that integrating the value chain is possible and profitable (check out the crowdfund website [LINK] for more details). FairChain actively encourages and supports groups of farmers managing and owning their own facilities, leading to greater control over their own products and greater quality sold at a higher price.
- Trained farmers and the adoption of good agricultural practices. FairChain offers training certificates and monitors results of improved practices.
- Ecosystem of trained service providers. Sounds nice, but what is it? This is a paid-for system of services paid for by farmers that improve their yields and the quality of their products. This is the business case. The farmer invests his/her increases earnings in value-added services.
- Adoption of other measures that lead to a living income. Examples of activities that could also contribute towards a living income include crop diversification and off-farm work.

Outcomes (The higher goals we contribute to)
We have many goals - those benefiting individual farmers (i.e. improved market access), those benefiting regional economies (i.e. higher export prices), to those benefiting humanity (i.e., less child labor, quality education and access to healthcare). It's the humanity outcomes that we feel truly define a good quality of life. This is the end of the rainbow for FairChain.

Disclaimer:

This Theory of Change (ToC) is NOT a formal document to be completed at the beginning of a program and put on a shelf. It is a process that never 'closes' and is not 'controllable'. It is constantly changing. There are multiple combinations of activities, outputs and outcomes, which makes it difficult to show in a single visual. This ToC should be used to record learnings and adjust the program and the ToC itself. The ToC changes from region to region, specific local problems, key player and opportunities.

Get in touch

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