KIT Royal Tropical Institute

OXFAM Novib

Value Chain Approaches for Social Change

Rob Kuijpers, Anne Rappoldt, Stefan Petrutiu, Andrea Vos, Froukje Kruijssen, Rogier Verschoor, Alex Maitland

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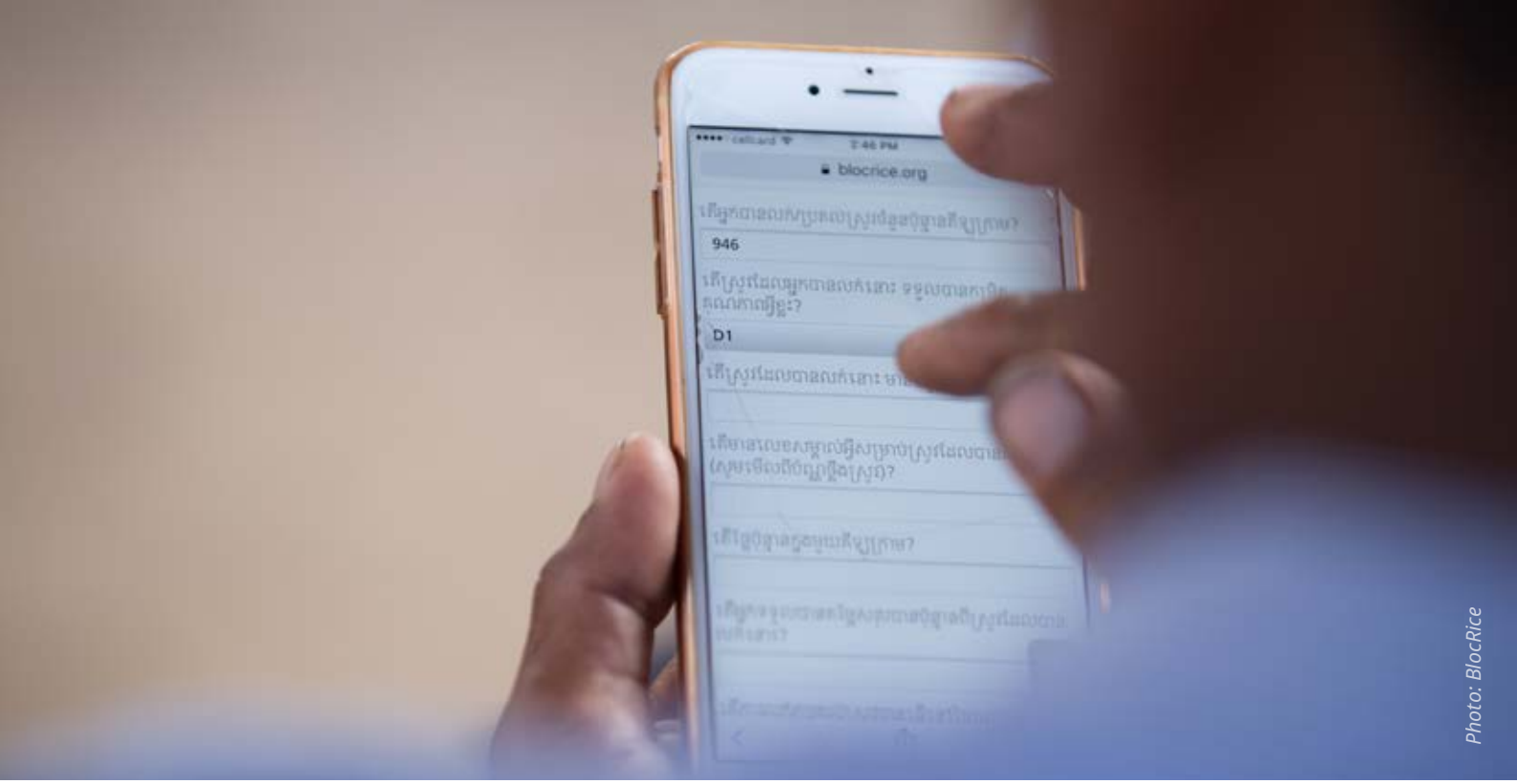

Photo: BlocRice

Introduction

Over the past decades, there has been an extensive transformation in global agri-food value chains,[1] resulting in advances in efficiency, food quality, and food safety. Despite this transformation, many farmers and labourers active as primary producers in these chains have not experienced improvements in their living standards. In fact, the social inequality between rich and poor, the powerful and the powerless, and men and women in international value chains, remains manifest. Based on a study conducted in 2020 by KIT Royal Tropical Institute and Oxfam Novib, this paper explores value chain approaches that reduce social inequality and enable smallholder farmers and labourers to have decent livelihoods.

What contributes to persistent social inequality in agri-food chains?

- Maximization of profit and other financial gains for company owners, shareholders and/or investors has led to an international "race-to-the-bottom" in terms of trade conditions — with buyers procuring agri-food products at the lowest price possible, while adverse social and ecological impacts are not accounted for (Buhman et al., 2019).
- Smallholder farmers and agricultural labourers tend to have weak bargaining positions in agri-food value chains. Primary production is predominantly undertaken by a vast group of farmers with low levels of individual output and collective organisation, while input supply, trading, processing and retail are increasingly dominated by a few parties. Usually, farm work at large farms and plantations does not require specific skills or education, and such companies can therefore choose from a large number of people in need of income, even if it is for temporary employment. In competitive markets, the above is likely to induce inequality. This impact is worsened when farmers in price competition make social and/or ecological sacrifices to compete (Sexton, 2013).
- Institutional barriers, such as high transaction costs, information asymmetries, weak regulations, as well as constraining social and gender norms may result in poor access to land, water, inputs, finance and technical assistance, and may trap farmers and labourers in low-margin agriculture and perpetuate their poverty (Croppenstedt et al., 2003; Lynch et al., 2017). Social and gender norms may determine, for example, who has access to and ownership of productive resources such as land, inputs and (start-up) capital, or who has the time and is allowed to engage in income-generating activities in addition to domestic (unpaid) tasks (Kruijssen et al., 2018).

1. A value chain describes the full range of activities that are required to bring a product forward through the different phases of production to final consumers (Kaplinsky and Morris 2001). Agri-food value chains have products moving from input suppliers to farms, and from farms to processors, traders, retailers, and finally to consumers. Finance and information flow in the opposite direction, conveying consumer preferences as well as process and product requirements

Exploring value chain approaches that reduce social inequality and enable smallholder farmers and labourers to have decent livelihoods.

There are many different initiatives out there, pursued by governments, businesses and non-governmental organisations (NGOs) to address the social inequality in international agri-food value chains. This paper aims to understand the potential of such value chain approaches and serve as a source of inspiration to entrepreneurs, practitioners and policymakers to apply them for the reduction of social inequality. The objectives of this paper are threefold:

1. Describe and analyse eight different value chain approaches observed in practice;
2. Provide examples of approaches as an inspiration for application;
3. Provide lessons learned for entrepreneurs, practitioners, and policymakers who aim to contribute to more social equality and inclusive value chains.

We consider value chain approaches as ways of structuring interactions between different actors in value chains. They can be introduced by the enterprises active in the value chain – in this case, we call it a 'business model' – or by actors not directly active in the chain, such as governments, associations, sector boards or NGOs – in this case, we refer to a 'value chain intervention'.

In this paper, we assess value chain approaches on their potential to create long-term sustainable change at scale, and on their potential to create social change through three 'drivers' (see the table below).

In this paper, we first discuss the eight value chain approaches, each accompanied by one or two examples, as well as the conditions for the approach to be effective in reducing social inequality. We then present key lessons learnt about these approaches and their potential, based on the above mentioned drivers of social change.


Photo: Mark Caicedo

'Drivers' of social change in value chains

Drivers	Example considerations
1. Redistribution	• Redistribution of power, control, risks, ownership or (added) value in the chain to achieve more social and gender equality
2. Improved value chain functioning	• Access to assets, inputs, services and information • Access to high-value or high-margin output markets • Long-term business reliability and stability
3. Wellbeing	• Purpose-driven models (versus profit-driven models) • Creation of social cohesion, decent livelihoods, household resilience, living income, social participation • Regeneration of land, water, forest and other commons

Overview of Approaches

Collective action models

Smallholder farmers face high transaction costs and limited bargaining power due to their low production and sales volumes, geographical dispersion and large numbers. Collective action to purchase inputs, aggregate, process and market crops, is at the core of several value chain approaches empowering farmers. Producer organisations are widespread, perceived as beneficial (at least by their members), scalable and sustainable. They can improve farmers' market access, increase their bargaining power and shift power towards farmer communities, enabling them to capture a larger share of the value generated in the chain (Grashuis and Su 2018). However, collective action by farmers has so far been an insufficient solution for the millions of smallholder farmers who still find themselves in poverty.

Collective action models can be initiated from the bottom up—by the farmers themselves — or externally by NGOs, government or private actors. Regardless of the initiator, there are mixed experiences, and it has proven challenging to create autonomous, efficient, sustainable and inclusive producer organisations doing business collectively (Poole and Donovan, 2014; Grashuis and Su, 2018; Fałkowski and Ciaian 2016).

Conditions for the approach to enable social change:

- Extent to which the terms for collective action can be considered equal for poorer farmers;
- Degree to which diverse interests are admitted and decisions are consensus-based;
- Facilitation and technical advice is provided by external parties during initial or incubation phase; and
- Degree to which the collective has governance structures that ensure democracy and transparency in decision-making and accountability of leaders towards their members.

Farmer-owned enterprises

In this approach, farmers take ownership in a company downstream in their value chain (e.g. trading, processing, or manufacturing). This comes with rights such as voting power and decision-making power on company policies and the use of profits. This allows farmers to capture a larger share of the value generated in the chain as they share in the company's profits and can influence trade terms regarding farm-gate prices and input support provided by the company (e.g. providing credit, seeds, productive equipment or training) (see e.g., Maertens and Vande Velde 2017).

Box 1. The case of FAIR company-community partnerships

Oxfam and local civil society partners support independent smallholders and their communities in demanding fair benefit from mills, negotiating better prices and in improving quality and productivity. Oxfam also engages with local government agencies to demand that they protect the rights of smallholders and their communities and to hold the mills to account. In addition, Oxfam engages with the downstream actors, traders, manufacturers and retailers to apply due diligence and use their leverage over their suppliers for the benefit of the smallholders and their communities. Investors are also influenced by Oxfam to apply due diligence and to invest in the traders while promoting the principles of the FAIR partnership.

Potential for transformative change

- Organisation and collective management can increase the power and control by communities and smallholders.
- This landscape-based and collective action approach can enhance biodiversity and farm diversity, which are crucial to families' resilience and food security.
- The FAIR partnership approach is piloted over a 5-year period. The scalability and sustainability of the approach has not been proven as of yet; the governance structure has been working thanks to a neutral party (NGO) acting as convener and facilitator.

Photo: Caravela Coffee

Despite well-known examples of large farmer (co-) owned companies that have been in operation for a long time (e.g. AgroFair, Divine Chocolate, Arla foods), globally the number of such companies appears to be relatively small. Farmer-owned enterprises are typically initiated by well-functioning producer organisations with visionary leaders or by social entrepreneurs and enterprises that have farmer ownership as part of their business model. Sometimes, also governmental and public-private programs support the creation of farmer-owned enterprises.

Conditions for the approach to enable social change:

- Degree to which farmers are represented in ownership and governance structures;
- Extent to which democratic governance and decision-making is upheld (equal votes);
- The extent to which the enterprise profit and benefits are equally shared; and
- The company's mission includes a specific social objective that is embedded in the company's legal articles, organisational culture, and practice.

Box 2. The case of AgroFair[2]

AgroFair Benelux BV is a Dutch limited company that trades tropical fruits. More than 6,000 individual producers, mainly in Central and South America, are represented in AgroFair's ownership structure. Shares are divided between the Cooperative of Producers of AgroFair, which holds 42% of the company's shares, and ethical investors. All have a voice and vote over company policy at the annual General Assembly of Shareholders. Producers also have 33% of the seats on the Supervisory Board.

Potential for transformative change

- Dividends are paid annually based on the overall value of the fruit delivered to AgroFair.
- So far, producers have made use of their decision-making power by voting for the use of company profits towards gender equity training, home improvements, investments in storage capacity and payment of living wages to workers.

2. AgroFair's sustainability reports can be found here: https://www.agrofair.nl/reports/

Value chain contracting

Value chain contracting involves (formalised) contractual purchasing agreements between value chain actors. Contract farming is the simplest form, where the farmer agrees to produce a specific agricultural product and the buyer agrees to purchase this product under certain conditions or in a certain price range. More sophisticated contracts can specify the obligation for the farmer to comply with product standards (e.g. regarding variety, quality or food safety) and/or the obligation for the buyer to assist the farmer with pre-financed inputs, use of farm equipment, training or other services. These purchasing agreements can be on an individual producer basis, but buyers also draw up such contracts with producer organisations that can supply them with larger volumes in one go. While some buyers are solely traders, others are large-scale farmers (anchor farms) that need to top up their production with produce from farmers around them to fill their output contracts or export containers (usually referred to as "outgrowing systems"). Besides buyers, input suppliers provide contracts to farmers, for example, by offering credit schemes or leasing arrangements so that liquidity-constrained farmers can use their inputs.

Value chain contracting is often initiated by enterprises in the chain (so-called "off-takers" or input providers) and involves farmers or producer organisations in a mutually binding agreement. For larger or more long-term technological investments, more complex contract structures may involve multiple value chain actors (e.g. setting up shared-ownership companies or establishing guarantee schemes) (Swinnen and Kuijpers, 2019).

Literature suggests that contract farming can contribute to positive outcomes such as increased income (Ton et al., 2018), reduced farming risk (Michler et al., 2020), improved food security (Bellemare & Novak, 2017) and nutrition (Chege et al., 2015). On the other hand, there are concerns that contract farming might increase farmers' dependency on (single) buyers and exclude resource-poor households. Contract farming's potential to improve farmers' living standards is considerable, but not automatic and depends on specific contract conditions.

Conditions for the approach to enable social change:

- Degree of reciprocal dependency between farmer and buyer;
- Degree to which production and sales risks are shared between farmer and buyer;
- The contract involves guaranteed prices (or price range);
- The contract includes a resource provision to overcome farmers' constraints in accessing information, credit, farm inputs, and high-value market outlets;
- Degree to which efficiency gains in the chain accrue to the farmer; and
- Degree to which smallholder farmers are enabled to be part of and live up to the contracts.

Box 3. The case of Raintree Farms and the Secured Income Program

Raintree Farms is a large moringa tree plantation in Uganda with processing facilities that make moringa powder. The Secured Income Program (SIP) is a contract farming scheme that makes fixed monthly payments to all contracted farmers based on the calculation of how much a well-managed hectare of moringa trees produces on an annual basis, divided into twelve equal monthly payments. Farmers receive this payment regardless of actual yields or short-term fluctuations in the market price for moringa. Raintree Farms provides seeds and training to the contracted farmers and also employs agricultural extension workers to monitor the quality of crops, assist farmers in the maintenance of the moringa, and harvest the moringa leaves five times per year.

Potential for transformative change

- Today about 125 farmers participate in the SIP scheme, and each of them provides employment to at least one labourer.
- This scheme enhances income stability to farmers and shares farm risks collectively, thus resulting in more livelihood security.
- According to Raintree Farms, SIP farmers earn approximately EUR 110 per month, while the average farmer income in the area is around EUR 25 per month.

Social enterprise models

Social enterprises have purpose-driven business models. These businesses have a social (or societal or ecological) mission, while financial profitability is merely a pre-condition for survival (like a minimal profit). They are diverse in their purpose and mission. Examples include social inclusion, employment for the long-term unemployed, livelihood improvements, access to finance, water or medical care, afforestation, environmental regeneration and safety. Some serve a local and/or niche market; others aim to change conventional trade or markets.

In the literature, social enterprise models are perceived as promising for the achievement of social, economic and/or environmental change because they are innovative, cost-effective, often operate in proximity to producers, and serve a social mission. However, to achieve impact at scale under conventional trade or market conditions, they need to bring about widespread change amongst conventional companies, develop coalitions, engage with governments to reform public support and services, and create ownership among all key stakeholders (Milligan et al., 2017).

Box 4. The case of Tony's Chocolonely

Tony's Chocolonely has a mission to produce 100% slave-free chocolate and has been addressing the unfair distribution of value and power in the cocoa supply chain since 2006. Tony's invites chocolate companies to work together in the Open Chain Initiative for a new industry standard to end modern slavery and child labour in cocoa. The Open Chain Initiative provides traceability and also enables direct sourcing from farmer cooperatives on long-term contracts. In addition, it includes supporting activities to cooperatives and farmers; e.g. enhancing farm productivity, income diversification, or organisational efficiency towards a living income for cocoa-producing families.

Potential for transformative change

- Tony's is a market leader for chocolate bars in The Netherlands and competes with the mainstream cocoa market worldwide.
- They inform people about human exploitation while proving that decent cocoa trade is viable. Tony's has publicly pressed well-known conventional companies to change their practices.
- By inviting others to join in the Open Chain Initiative, Tony aims for radical sector-wide changes.

Box 5. The case of Caravela Coffee

Caravela Coffee is a speciality coffee company with Colombian (and UK) roots that is determined 'to make coffee better, for everyone involved'. It sources high-quality green coffee from farmers who follow sustainable production standards. Coffee beans are 100% traceable and categorised according to quality grades with clear buying prices corresponding to each grade. Farmers receive direct feedback to better understand their coffee's value in the international market. Through a farmer education program, growers are trained on how to increase productivity and quality. Caravela works on the basis of long-term relationships with both growers and roasters, thus providing income security for coffee producers and product consistency for roasters. As a B-Corp, Caravela announced in 2020 their intention to be carbon neutral by 2025.

Potential for transformative change

- For the past 5 years, Caravela Coffee has been rated the highest scoring coffee B-Corp in the world.
- Caravela is distinct from other speciality coffee traders because it is transparent in cost and pricing structure, both upstream and downstream, and because it works on direct, long-term business relationships with smallholder farmers and roasters.

Conditions for the approach to enable social change:
- The mission of the social enterprise is to achieve a worthwhile social change;
- This mission and purpose are shared and supported by people in the enterprise and other stakeholders to sustain change (including customers);
- The (in)direct pressure that the enterprise poses onto its competitors and relations;
- Whether the entrepreneur aspires for a niche market and modest change or aims for more radical change in the conventional supply chain;
- Degree of collaboration or alignment with other chain actors to achieve scale; and
- Growth potential, while the enterprise as such is not focused on financial growth.

Value at origin

'Value at origin' is an approach (business model) that aims to enable primary producers and related enterprises at the origin of the supply chain (fully upstream) to benefit from value addition (instead of being merely raw material suppliers). Adding value to food and agricultural produce in the countries of origin implies increased business revenues and/or employment opportunities. Moreover, value addition to perishable produce can diminish the pressure to sell off and possibly wait for a market price to go up. However, companies in many origin countries often face weaknesses that do not allow them to reach economies of scale in distribution or the resources and network for successful branding or market introductions. In other words, companies at the chain origin have limited ability to deploy intangibles (e.g. brands, innovations, technology, new business models and know-how) to capture added value. Multinationals may invest in processing and manufacturing facilities in the countries of origin to reduce costs and assure supply, with supportive policies and regulations by local governments welcoming foreign investments. Yet, companies aiming for more equality in their value chains, especially for marginalized primary producers, tend to be small and medium-sized enterprises (SMEs). They are relatively flexible, which is necessary to adapt to the complex and changing relations between actors in the chain, as relationships between producers, processors, brands and consumers can be shorter, more direct and mutually interdependent (Samper et al., 2017).

Conditions for the approach to enable social change:
- Purpose of the approach: if groups of people at origin drive the value creation, this approach can indeed bring social equality (purpose-driven and not profit-driven); and
- Ownership of the value addition facilities: if groups of people at origin socially and financially benefit from the value creation, this approach can bring social equality. On the contrary, if gains accrue to a few single owners or (far-away) shareholders, it is more likely to be led by financial purposes and not by social motivation.

Box 6. The case of Fairafric[3]

Active since 2016, Fairafric produces and packages chocolate bars in Ghana (in its own factory since 2020) for sale to the European market. The 5,000 small organic farmers, supplying the required cocoa, share in the value distribution after Fairafric's chocolate sales. Fairafric inspires other companies to take up value addition in African countries of origin and develop collaborative marketing and market channels for products 'made in Africa'. This can nudge governments in low-income countries to invest in services and infrastructure that support local value-adding activities.

Potential for transformative change
- Raw dried cocoa beans are exported for around EUR 2,100 per ton (early 2020), while Fairafric adds more than four times this value at origin.
- The extra value added and retained in the country increases employment, allows for fair remuneration and enables a premium of EUR 525 per ton paid to farmers.
- A survey showed that 226 Fairafric cocoa farmers have EUR 80 more in annual income per hectare than the control group as a result of training on organic production and payment of higher farm-gate prices and dividends.

3. More information on the approach and impact of Fairafric can be found here: https://fairafric.com/en/social-impact/

Women's economic empowerment

Women's economic empowerment approaches support the production and commercialisation of commodities and products predominantly grown and made by women. In many countries, women experience a range of gender-based constraints, rooted in unequal gender relations, norms, cultural bias, but also laws and policies (e.g. organisational membership criteria). As a result, women are limited and held back in their economic participation and decision-making, their access to productive resources including fertile land, livestock, farming inputs, finance and information, and their control over resulting income and assets (Pyburn & Kruijssen, 2020). These constraints reinforce the unequal distribution of unpaid reproductive work, gender-based violence and mobility constraints. Therefore, women are unable to participate in value chains in the same way as men and do not reap equal benefits.

Instead, more often than not, they face less access to land and other assets, less access to technical training or services, difficulties in marketing their products, insecure contracts, longer working hours, less profitable crops, lower-income and a lack of social protection. Women's economic empowerment approaches make an explicit effort to overcome gender-based constraints and reach, benefit and empower women and enable their leadership within the value chain (purpose-driven).

Women's economic empowerment in value chains is typically driven by private sector actors in collaboration with NGOs, socially driven cooperative staff or social entrepreneurs. Private sector actors build their business model around supporting women producers or entrepreneurs by working with female intermediaries and sourcing from individual female-owned farms, processing facilities or female-managed producer groups. NGOs drive women empowerment interventions in value chains that strengthen horizontal links, (i.e. women-only organisation or female producer groups), and vertical links, (i.e. female buying agents or intermediaries), to reduce gender-based constraints.

Conditions for the approach to enable social change:
- Degree to which the approach addresses specific gender constraints in its context; and
- Degree to which proper engagement with male household and community members is included, to reduce the risk of backlash when gender norms are challenged.

Box 7. The case of Café Femenino

Café Femenino is a business model that works exclusively with women coffee producers and aims to better tailor support and raise awareness among consumers on gender inequalities in the coffee value chain. The Organic Products Trading Company Café Femenino exports directly to roasters in consuming countries that pay an additional direct premium to the women farmers involved. The cooperatives under Café Femenino provide working capital along with technical skills training, farm management as well as financial literacy, leadership, and marketing. Buying roasters must contribute 2% of their gross sales to the Café Femenino Foundation, which funds selected projects that are presented by women members on various themes, including food security and nutrition, income diversification and domestic abuse.

Potential for transformative change
- Members experience an increase in income, more diversified income sources (side-businesses reducing their dependency on coffee) and increased resilience to economic, climate, health and social shocks (e.g. divorce or abandonment) (Shah and Bjorndal 2016, ICRW 2018, Cueva Alegría 2020).
- Women producers have control over the land that they use for coffee farming as the cooperative requires that they have land in their name (by registering joined land title deeds or splitting the household land) (ICRW 2018 and Cueva Alegría 2020).
- In contrast with other initiatives that challenge male land ownership, Café Femenino did not result in strained relationships or increased competition, as it considered customary tenure, labour rights and the existing gendered division of labour (Cueva Alegría 2020, 4011).
- Women report more recognition by men for their work, meaningful participation in training and decision-making through the women's association, and an increase in self-esteem (Shah and Bjorndal 2016, ICRW 2018).

4. Reproductive work: all of the tasks associated with supporting and servicing the current and future workforce – those who undertake or will undertake productive work (European Institute for Gender Equality). For example care-giving, cooking and cleaning.

Integrated value chain development

This approach simultaneously addresses multiple constraints faced by farmers by intervening at different stages in the value chain. A key precondition is that it is demand-driven, so it starts with the identification of demand downstream the value chain, rather than starting from the challenges faced by farmers.

What makes this an 'integrated' or holistic intervention is that it focuses on assisting all relevant actors at different stages in the chain, and commonly involves technical and financial support to farmers and service providers, buying agreements with traders, processors and retailers, and efforts to reduce the transaction costs between different nodes in the value chain. It is usually implemented by an external party, like an NGO, and is financed by international donors. The involvement of the NGO in the value chain is temporary so as to improve its functioning for specific groups of actors (mostly the marginalized people). This approach has the potential to raise farm productivity of smallholders and improve their living standards, but a key precondition is that the efficiency surplus generated by better value chain functioning —at least partially— accrues to the farmers.

Conditions for the approach to enable social change:

- Extent to which the intervention is truly demand-driven (vs. farmer supply-driven);
- Degree to which the efficiency surplus generated accrues to the farmer;
- Extent to which collective action is facilitated and leads to coherent development outcomes for all involved;
- Extent to which buyers and farmers grow a professional business relationship;
- Degree to which the program invests in farmers' resilience in farming and marketing; and
- Extent to which implementation is flexible to changes in the value chain context.

Photo: Solidaridad

Box 8. The case of SAFAL in Bangladesh

The Sustainable Agriculture, Food Security and Linkages project (SAFAL) is financed by the Dutch Ministry of Foreign Affairs and implemented by the NGO Solidaridad. It directly intervenes in key stages and linkages in the aquaculture, horticulture and dairy value chains in the districts of Khulna and Jessore in South-West Bangladesh. The goal of SAFAL is to improve the welfare and food security of about 58,000 smallholders. The program primarily aims to improve the functioning of the value chain for marginalized actors, such that they can better access inputs, services, and high-value output markets, and improve their income and food security. Activities include the facilitation of collective action, providing financial and technical assistance, and building relationships between farmers, input providers and off-takers.

Potential for transformative change

- A rigorous and independent evaluation of the SAFAL program suggests that it has a transformative impact on the lives of the participating smallholder farmers (Kuijpers 2020). Participating farmers benefit from a EUR 558 increase in the value of their production, and from a EUR 333 increase in their net household income per year.[5]
- It is estimated that participating households have also become more food secure: the length of the yearly hunger season halved from 24 to 12 days for participating farm households.

5. The article refers to 704 USD and 404 USD respectively. For consistency in this paper, we have converted this to Euros at January 2021 exchange rates.

IT for value chain development

Digital and information technologies are increasingly being used in agriculture to address market failures and facilitate smallholder farmers' inclusion in value chains. Applications at farm level include, among others the use of mobile phones by farmers to receive information (by text, voice or video) on prices, soil quality or weather forecasts, to sell products, to provide production data and to perform GPS mapping and farm measurement for efficient agri-input application rates.

At value chain level, physical traceability and e-commerce platforms can connect chain actors and create data-driven, transparent and trustworthy relationships. The recent introduction of public blockchain has provided an additional layer to data management in value chains, thus increasing the level of confidence in and trustworthiness of data. Farmer and supply chain data is also leveraged by digital technologies and finance providers to assess creditworthiness and invest in farmers, producer organisations and other supply chain partners (e.g. with better loan terms).[6]

Digital and IT solutions can be both stand-alone interventions initiated by NGOs, specialised digital enterprises (e.g. FinTech companies) or donors, or initiated and integrated into value chain actors' business models (e.g. social enterprises using IT systems to increase transparency).

IT solutions are often combined with other value chain approaches to improve value chain functioning. Even though IT is not a goal in itself, it is treated as a separate value chain approach in this paper because it provides new and potentially equitable ways of interaction, value distribution and transacting for different actors and a diverse range of potential outcomes (FAO, 2020).

Conditions for the approach to enable social change:

- Connectivity and mobile (internet) access and usage in a given location or for a target group, which depends on mobile broadband coverage, awareness, affordability, access to mobile devices, and levels of literacy and digital skills;
- Supportive data regulations in place; and
- Openness to the use of IT in farming and agri-value chains.

Box 9. The case of Trabocca in Ethiopia

Trabocca is a Dutch speciality coffee trader who deals directly with coffee suppliers (e.g. smallholder farms or farmer cooperatives). The company purchases speciality grade (highest quality) coffee, works and invests with farmers in achieving this quality, and promotes fair prices based on living income benchmarks. Aiming to balance power relations in the coffee chain, Trabocca recently launched a blockchain traceability system using the Trace platform. In contrast to traditional digital traceability systems, Trabocca's claims of paying a higher price to 278 individual Ethiopian farmers can be verified by the public, immutable transaction data stored in the distributed database.

Potential for transformative change

- The missions of the implementing organisation(s) are critical in determining the transformative potential of digital solutions, and blockchain in particular. Transparency and (cost-)efficiencies achieved can be leveraged for the benefit of poor farmers.
- Prices paid by Trabocca to farmer cooperatives and individual farmers are disclosed transparently, which Trabocca uses in its consumer communication and fair pricing policy.

6. Other examples of digital solution providers analysed for this study are MyAgro, Agri-Wallet, Farmforce, CropIn, AgUnity, Digifarm, EZAgric and Farmerline.

Box 10. The case of BlocRice in Cambodia (Blockchain for Livelihoods from Organic Cambodian Rice)[7]

Oxfam Novib tested the use of public blockchain as a social compliance tool in its BlocRice pilot in 2018/19. The contractual arrangements from farm to fork were laid down in a digital contract accessible to all chain actors. An electronic identity was created for cooperative rice farmers who provided relevant crop data through a user-friendly app. Farmer data were verified in order to be trustworthy and robust. For example, data on the disbursement and receipt of payments (from buyer to cooperative and from cooperative to its farmers) were mutually verified, but also triangulated with data from an objective source: financial transaction files provided by the local bank.

It was monitored whether payments were made according to contract. As data were anonymised and accessible at an aggregated level only, this forms a strong and safe social compliance monitoring system that could compete with social certification systems. Primary producers have a voice, while current systems rely merely on third parties and related paperwork.

Potential for transformative change

- Selected verified data can be shared on public blockchain as a decentralised data management system; this is useful for consumer communication, giving background on provenance, production conditions and on the people behind the product.
- BlocRice chain actors soon realised that the data on public blockchain is also highly useful for mutual safeguarding against human rights risks in the supply chain.
- IT has the potential to enable product differentiation in value chains, transforming an anonymous bulk shipment into an identifiable product volume with attached (social) data; such transparency creates pressure amongst actors to provably ensure social compliance at the risk of contractual sanctions.

7. For more information https://www.schuttelaar-partners.com/news/2020/june/blockchain-livestream and https://www.youtube.com/watch?v=JbLsGcr3EvY

Photo: BlocRice

Lessons Learned

From this overview, we can draw a number of lessons for entrepreneurs, policymakers and development practitioners. Recognition of the potential of these value chain approaches may serve as a source of inspiration for their wider application.

It should be taken into account that there tends to be an inherent trade-off between the innovativeness of a value chain approach and the availability of an empirical evidence base to indicate its effectiveness.[8] We therefore mainly draw lessons based on the transformative potential of the studied approaches, while we invite readers to engage with us, to experiment with these approaches, and to share their experiences for learning about the social impact.

Driver 1: potential for redistribution

- Few value chain approaches have high potential to redistribute power: collective action, farmer-owned enterprises and women's economic empowerment approaches, whereby farmer-owned enterprises can be seen as special cases of collective action.
- Farmer-owned enterprises allow farmers to collectively enter different value chain nodes, such as processing, transport and marketing. In doing so, farmers have the potential to reduce the power imbalance caused by the skewed market structure that pits many smallholder farmers against a few large buyers. However, in order to capture a larger share of aggregated value in the chain, they need to have sufficient access to the social and entrepreneurial skills and assets required for such a new endeavour.
- Women's economic empowerment approaches work differently as they - through positive discrimination – intend to shift power from men to women. In these value chains, an explicit effort is made to overcome gender-based constraints. Some of these approaches exclusively target women in conservative male-dominated value chain segments to break down rigid gender norms that dictate what women can and cannot do.

Driver 2: potential for improved value chain functioning

- Key approaches to improve value chain functioning for marginalised actors are collective action models, value chain contracting (with resource provision), and integrated value chain development. The latter is a particularly high-potential approach that could cater to the diverse needs by marginalised actors for effective participation in value chains.
- The IT for value chain development approach offers crucial and innovative tools to reduce value chain risks and transaction and coordination costs, which is worthwhile to be combined with other approaches for inclusivity and value chain participation.

Driver 3: potential for enhanced well-being

- Most value chain approaches function within a profit-driven paradigm. The primary exception is the social enterprise approach, which is, by definition, purpose-driven. Farmer-owned enterprises can be purpose-driven, depending on the entrepreneur's or owner's interests. Also, women's economic empowerment approaches centre on a clear purpose, namely the enhancement of women's well-being through business and value chains. Blockchain and other digital applications can be used as tools to improve value chain transparency and enable the achievement of social and environmental outcomes.
- The approaches with the highest potential to improve marginalised value chain actors' income appear to be collective action, farmer-owned enterprises, women's economic empowerment approaches and integrated value chain development. This potential stems from the fact that these approaches have core objectives on social change and improvement of well-being and/or resilience of marginalised actors.

Lessons on the versatility and integration of approaches

- Four value chain approaches have a holistic nature that contributes to multiple social equality drivers: collective action, farmer-owned enterprises, women's economic empowerment and integrated value chain development. The social enterprise approach is also versatile, but the result depends on the amplitude of the mission and the business principles set by the entrepreneur and/or owners.
- In practice, there is ample potential to combine multiple approaches. For example, collective action models, value chain contracting, and digital solutions are often found to be introduced successfully and effectively (with evidence of socio-economic benefit) by social enterprises and farmer-owned companies.

8. While for each value chain approach above there are examples that provide at least proof of concept, there is little rigorous evidence available on the impact of most of them; the main exceptions are the collective action, farmer-owned enterprises and the value chain contracting approaches.

Lessons on the potential for long-term impact at scale

- If social enterprises, farmer-owned companies, and collective action models have a sound business case, they can also present scalable long-term and self-sustaining solutions. The case of Tony's Chocolonely demonstrates that social enterprises can compete with mainstream companies based on the integrated value that they provide to consumers; moreover, mainstream companies in the same market may adopt similar social principles.
- The potential for long-term change at scale is unclear for value chain contracting and integrated value chain development. Contract farming schemes - even though they are in fact scalable and sometimes serve more than 10,000 farmers - bear the risk of collapse as a result of increased stringency of standards or of changes in the availability of technologies.

Over the past decades, agriculture and global agri-food value chains have brought advanced efficiency, food availability, quality and safety. Numerous farmers and agri-entrepreneurs have not shared equally in these benefits. In fact, social inequality between the rich and poor, the powerful and powerless, and men and women in these chains remains manifest.

It is high time to broaden the focus of agri-food value chain development integrating values other than financial gains. Our future depends on value chain approaches with the potential to foster social equality. This working paper hopefully serves as inspiration to entrepreneurs, practitioners and policymakers to further apply value chain approaches combining business principles with the social goals of redistribution, inclusivity and well-being.

Photo: fairafric

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Contact

KIT Royal Tropical Institute
P.O. Box 95001
1090 HA Amsterdam
The Netherlands

Visiting Address
Mauritskade 64
1092 AD Amsterdam
The Netherlands

www.kit.nl
info@kit.nl
T: +31 (0)20 56 88 711

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