



Justice and Inclusiveness: The Reconfiguration of Global–Local Relationships in Sustainability Initiatives in Ghana’s Cocoa Sector

Faustina Obeng Adomaa¹ · Sietze Vellema¹ · Maja Slingerland²

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Abstract

Pressure from the public and non-governmental organisations is pushing lead companies in the cocoa and chocolate sectors towards becoming more environmentally sustainable and socially just. Because of this, several sustainability programmes, certification schemes and delivery initiatives have been introduced. These have changed the relationship between chocolate companies, cocoa exporters, and small-scale farmers. This paper observes how large companies in the cocoa export and consumer markets are shifting away from their traditionally remote position in the cocoa sector. The pressure to ensure sustainability and justice has provoked more mutually dependent relationships with cocoa producers. Our analysis outlines the implications this emerging reconfiguration of global-local relationships has for procedural justice principles of interdependence and refutability, and the distributive justice principles of need and equity. These principles are important because they enable the different dimensions of inclusion: ownership, voice, risk, and reward. This paper highlights and qualifies arrangements surrounding these justice principles that manifest in the way five service delivery initiatives - associated with sustainability programmes and led by major buying companies in Ghana’s cocoa sector – are implemented. We show inclusiveness as an outcome of dynamic global-local relationships that are constantly reworked in response to smallholder farmers’ agency and state regulations. Portraying inclusiveness as an outcome of interactions changes its conceptualisation from a predefined ethical standpoint included in the design of standards to a result of unfolding mutual dependencies, which refashion how inclusive agriculture value chains work.

Keywords Global food chains · Sustainability goals · Farmer agency · Inclusive development

✉ Faustina Obeng Adomaa
faustina.obengadomaa@wur.nl

Extended author information available on the last page of the article

Introduction

Public pressures to make the cocoa sector sustainable and the anticipated uncertainty of the consistent supply of cocoa beans are driving leading chocolate manufacturers and cocoa buying companies to invest in service delivery to farmers. Concerns for the environmental, economic and social challenges of food production, processing and trade have resulted in increased calls for global commodity chains to take direct actions towards sustainability (Odijie, 2018; Vogel et al., 2020). These calls have arisen from a rise in ethical consumerism and businesses' waning public legitimacy (Kroger & Schafer, 2014). This, coupled with calls for transparency in global supply chains, necessitates companies demonstrate their contributions to sustainability and social justice for small-scale farmers. Leading companies in the cocoa chain have responded to these calls through multi-stakeholder actions and third-party certification schemes that target environmental, economic and social aspects of sustainability. The growing amount of attention leading companies are paying to connecting with local farmers producing cocoa beans more closely is also motivated by concerns about the diminishing supply of raw materials (Gereffi, 2014), which signifies the strategic vulnerability of these leading companies.

This vulnerability has encouraged companies to change the arrangements with smallholder farmers (farmers who produce cocoa on less than four hectares of land and largely use family or temporary labour) supplying them with cocoa beans. Tying bean sourcing to service delivery has become a method companies use to address sustainability questions. Conversely, for farmers, climate variability, increasing incidences of pest and diseases (Okoffo et al., 2016; McKinley et al., 2014) and persistent poverty have created a vital need for support services from companies. Many recent value chain initiatives integrate farmers as allies, who then derive greater benefits from chain participation and companies' business operations (Thorpe, 2018). Such initiatives refashion previously remote relationships in global commodity chains and cultivate mutual dependencies in company-farmer relationships. Inclusiveness in value chains is considered an instrument for achieving sustainable businesses goals (Ros-Tonen et al., 2019). Therefore, this paper aims to discover the implications these initiatives have for the terms on which farmers are included in global value chains and service delivery initiatives specifically.

The further integration of smallholders into value chains has stimulated a renewed scholarly interest in unpacking just value chain partnerships and inclusive businesses (Helmsing & Vellema, 2011; Ogutu et al., 2014; Shepherd, 2016; Naziri et al., 2017; Thorpe, 2018; Chamberlain & Anseeuw, 2018; Manda et al., 2020). Research on global value chains takes a critical stance on governance structures in value chains and focuses on institutional factors that mediate and reproduce power relationships (Gupta et al., 2015). The discourse highlights the structural dependency and power asymmetries inherent to value chains (Hendrickson & James, 2016). However, in the case of the cocoa chain, concerns for sustainability and strategic vulnerability of companies may alter the global-local

relationships between companies and farmers. Therefore, the space for farmers' agency may alter, which, following Vellema (2016), is related to the reliance of lead companies on farmers' performance to consistently produce beans, the geographical proximity of large numbers of smallholder farmers to organise trade logistics and service provision, and the politics of partnering processes between companies, farmers' associations, local governments, and other value chains actors. Therefore, the terms of inclusion of smallholder farmers in global commodity chains are not purely a consequence of hierarchically imposed governance processes. Accordingly, we shift attention to how terms of inclusion are created and enacted in locally embedded service delivery practices where companies navigate farmers' decisions and choices.

To deepen our understanding of the processes of inclusion, this paper takes the mutual dependency between companies and farmers as its entry point. It focuses on interactions in and identifies implications for inclusiveness of service delivery initiatives (hereafter: SDIs). Service delivery and training related to sustainability programmes are often considered inclusive (Haggblade et al., 2012). Inclusiveness, in a narrow sense, is seen as an outcome; it refers to vulnerable groups taking part in business processes and being offered the opportunity to share in outcomes and benefits (Baud, 2016; Pfeffer & Verrest, 2016). However, for analysing the ability of SDIs to be inclusive, it is necessary to unpack the practices and processes that shape mutual dependencies and, consequently, the terms of inclusion.

We use an integrative framework of procedural and distributive justice to analyse whether and how company-farmer interactions contribute to the inclusiveness of value chain initiatives. We see inclusiveness as being intertwined with the fairness of processes and the distribution of outcomes, which relates to the principles of procedural and distributive justice (Kroger & Schafer, 2014; Thorpe, 2018). Our approach to examining evolving terms of inclusion of farmers in SDIs integrates these justice principles with the four dimensions of inclusion proposed by Vermeulen and Cotula (2010): ownership, voice, risk and reward. The main question this paper answers is: what interactions between companies and farmers configure procedural and distributive justice and foster the inclusiveness of value chain initiatives?

The research unpacks how terms of inclusion are configured in everyday practices of service delivery. Inclusion is not solely based on design. It is enacted in the dynamic and uncertain realities of everyday implementation practices, with context-specific enablers and constraints (Chamberlain & Anseeuw, 2018). Terms of inclusion are not given, static or self-evident. To understand these procedural and distributive principles, we examine the implementation modalities of five company-led SDIs in Ghana's cocoa sector. Our focus on the practice of implementation, following Jones and Murphy (2010), creates conceptual and methodological space to unravel the interactions between situated farmers' agency and the governance and power structures ordering dynamic global value chains.

In the following sections of this paper, Section "[Service Delivery Initiatives Embedded in the Publicly Regulated Cocoa Sector in Ghana](#)" examines procedural and distributive justice arrangements in service delivery, and how they function in the space created by Ghana Cocoa Board's regulation. We then present our integrative analytical framework combining justice principles and dimensions of inclusion

(Section “[Analytical Framework](#)”) and the methods used (Section “[Methods](#)”). Section “[Analysis: Company-Farmer Interactions Configuring Terms of Inclusion](#)” discusses our findings on the arrangements that shape terms of inclusion. Section “[Discussion and Conclusion](#)” concludes with the implications for imagining inclusiveness in global value chains.

Service Delivery Initiatives Embedded in the Publicly Regulated Cocoa Sector in Ghana

Organising and integrating farmers as partners is core to the SDIs analysed in this paper. These SDIs were designed with the notion of shared value businesses (Porter & Kramer, 2011) that generate benefits for companies, farmers and the environment and depart from conventional business practices. Generating benefits through SDIs, however, occurs in national contexts of cocoa producing countries (Vellema et al., 2016). Ghana’s cocoa sector, which has seen a strong state presence for many decades, has become a testing ground where different SDIs are piloted or implemented.

The sector is partially liberalised, and Ghana’s Cocoa Board (Cocobod) plays a regulatory role, including in the production, extension delivery, internal marketing and quality assurance measures. Companies in Ghana’s cocoa sector operate through licenced buying companies (LBCs). LBCs source cocoa from farmers on behalf of Cocobod at a fixed, farmgate price and play a central role in integrating farmers into SDIs. Farmers in these SDIs produce certified or verified beans, and companies make sustainability claims about these beans, which attract premiums in the end market. Although the SDIs have reconstructed the company-farmer relationship into an integrative one that exposes their mutual dependency, Cocobod’s regulations set the context for their interactions and, by extension, how terms of inclusion are enacted. In this regulatory landscape, companies respond to public pressures to ensure justice and sustainability, and they implement SDIs.

In Ghana, three SDIs led by international companies and two by farmer-based buying companies were selected for our empirical study. These five SDIs are briefly described below.

Cocoa Life: Cocoa Life is Mondelez International’s sustainability programme. It was launched in Ghana in 2012 to build on the Cadbury Cocoa Partnership, which started in 2008. It aims to ensure a sustainable future for cocoa by safeguarding cocoa farming as a prosperous business, ensuring that communities are empowered and inclusive, and forests are conserved and restored. It is implemented at the level of farmers by multiple partners who interact directly with them. It has been implemented in four batches of communities called ‘cohorts’. At the time of data collection, the programme had approximately 40,000 farmers organised into groups. Farmer groups in programme communities constitute a cooperative society run by five to seven locally elected executives. A cluster of these societies in an implementing district constitutes a cooperative union, with ten elected executives selected from the societies’ executives and one manager.

Cocoa for Good: The Cocoa for Good programme, launched in April 2018, is a continuation of Hershey's Learn to Grow programme, which began in 2013. It states a commitment to source 100% sustainable beans for Hershey's operations worldwide. In Ghana, it is implemented by Unicom Commodities Ghana Limited (UCGL), a buying wing of ECOM Agroindustrial Corp. Ltd., which supplies cocoa beans to Hershey. At the time of data collection, there were approximately 15,800 farmers integrated into it. The farmer groups are organised around purchasing clerks, who aggregate and buy beans on behalf of Unicom. Unicom integrates the clerks and the farmers they buy beans from into the programme. These groups are called 'societies' and are run by selected executives. However, the purchasing clerks are key actors, in charge of mobilising and organising farmers for training and leading their relationship with Unicom.

Cocoa Horizon: The Cocoa Horizon programme is the Barry Callebaut sustainability programme. It aims to improve the livelihoods of farmers and their communities by promoting sustainable, entrepreneurial farming and improving productivity and community development, and protecting nature and children. In Ghana, the programme is implemented by Barry Callebaut's licensed buying company, Yonkopa, which acquired it in 2015. There are an estimated 60,000 farmers integrated in the programme. Yonkopa delivers services to farmers who sell beans to purchasing clerks who aggregate cocoa beans for it. Farmer groups are organised and maintained around these clerks, who serve as bridges between the company and farmers.

Kuapa Kokoo Limited (KKL) Sustainability Programme: Kaupa Kokoo Ltd. (KKL) is a licensed buying company, set up in 1993. In 1996, it organised farmers to buy beans from into farmer groups and began to provide them with services. In 2015, Kuapa Kokoo Farmers Union (KKFU) formally registered as a national cooperative union with around 96,000 members. Currently, KKFU fully owns KKL. KKFU comprises 57 primary cooperative societies and farmer groups in 2006 communities. These groups are labelled as cooperative zones countrywide. A five-member executive council manages each zone. The zonal executives elect a seven-member executive council from among them to become the society executive council. Executive members then vie for elected positions in the 13-member national executive council.

Cocoa Abrabropa Association (CAA): Cocoa Abrabropa Association (CAA) is a farmer-based organisation begun in 2008 by Wienco to organise farmers for credit input-delivery to improve cocoa productivity. There are approximately 8000 farmers in CAA. CAA recruits technical officers and gives them operational areas to create farmer groups for service delivery. Farmers interested in joining organise into groups of five to 12, with three acting as executives. These executives manage the group with a technical officer. All CAA groups in an operational district constitute a CAA sector, with executives drawn from the groups. The sectors are organised into regional CAA associations, with one person elected to represent the region at the national council. The regional representatives, together with four founders and two cooperate appointees, comprise the national council, which meets every quarter.

Organising the farmer base is core to both sustainability efforts and securing consistent access to cocoa beans. The above SDIs include farmers into their sourcing strategies and sustainability initiatives and refashion company-farmer relationships.

After introducing our analytical framework and methods, Section “[Analysis: Company-Farmer Interactions Configuring Terms of Inclusion](#)” presents our analytical insights on how SDIs reconfigure the terms of inclusion in the context of evolving company-farmer interactions.

Analytical Framework

To examine the (re)configuring of the terms of inclusion in SDIs, we anchor our analytical framework in principles of procedural and distributive justice. Inclusiveness, in relational terms, underscores the notion of justice encompassing Fraser’s (1998) triad of (re)distribution, participation and recognition. Justice perspectives encompass the fairness of resource allocation and distributive outcomes, as well as the fairness of the processes underlying distribution of resources, thereby establishing procedural and distributive aspects of justice as vital (Noll & Murdock, 2020; Okhrimenko, 2021). For our analytical framework, we selected the procedural justice principles of interdependency and refutability, and the distributive justice principles of need and equity. These principles resonate with the conception of inclusiveness as sharing in the processes and outcomes of development (Baud, 2016) and provide a reflective framework for examining inclusiveness.

Procedural justice is the fairness of the behaviour of a more powerful actor and of their decision-making processes in dealing with a less powerful actor (Thorpe, 2018:164). It is underpinned by principles like impartiality, refutability, knowledgeability and interdependency which, together, ensure fair processes for the weaker party. It fosters the active participation of vulnerable groups in processes underlying distributive outcomes. Distributive justice, comparatively, encompasses the fairness of distributive or allocative decisions and their outcomes (Kroger & Schafer, 2014:49). It is underpinned by principles like equity, need and equality (Deutsch, 1975). These ensure the fairness of distributive outcomes and foster maximising the welfare of vulnerable groups. In value chains, procedural justice fosters fair participation in chain integration, while distributive justice fosters fair sharing in outcomes and benefits.

The principles of procedural and distributive justice materialise in dynamic practices of interaction, where the precise terms of inclusion are configured. To operationalise and analyse these principles, we connect them to the four dimensions of inclusiveness central to the framework developed by Vermeulen and Cotula (2010): ownership, voice, risk and reward. Our analytical framework systematically integrates the principles of interdependency, refutability, need and equity, and the dimensions of ownership, voice, risk and reward respectively (Table 1).

Interdependence highlights the dependence of the stronger party on the relationship with the weaker party to achieve goals and vice versa (Bloom & Hinrichs, 2010). It highlights the processes that grant countervailing power to the weaker party in their interactions with the stronger, including joint ownership arrangements. We therefore anchor this principle in Vermeulen and Cotula’s inclusiveness dimension of ownership, which is defined as ownership of business (equity shares) and of key

Table 1 Dimensions, analytical questions, and operationalisation

Justice principle	Inclusive-ness dimension	Research question	Operationalisation in empirical analysis
Procedural			
Interdependency	Ownership	How do ownership arrangements create interdependency between companies and farmers?	Arrangements that foster and strengthen joint ownership between companies and farmers in the SDIs
Refutability	Voice	How do voice arrangements ensure refutability between companies and farmers?	Arrangements that strengthen farmers' ability to voice complaints and complaints acted on and ensure the integration of their interests and outlooks in the SDIs
Distributive			
Need	Risk	How do risks sharing arrangements provide required needs of companies and farmers?	Arrangements that provide the required resources/avenues to counter the operational risks of companies and farmers in the SDIs
Equity	Reward	How do reward sharing arrangements create equity between companies and farmers?	Arrangements for deriving and distributing benefits between companies and farmers in the SDIs

project assets. Joint ownership arrangements strengthen interdependency between the weaker and stronger party in value chain initiatives and foster interdependency.

Refutability emphasises the ability of the weaker party to take part in decision-making, including their ability to voice complaints and these complaints being considered and seriously acted on (Kumar et al., 1995; Tyler & Blader, 2000). Refutability is core to the interactional dynamics among chain actors and resonates with decision-making processes in value chain initiatives. We therefore anchor refutability in the dimension of voice. This is the ability to influence key business decisions, including having weight in decision-making, arrangements for review and grievance, and mechanisms for dealing with asymmetries in information access (Vermeulen & Cotula, 2010). Voice epitomises refutability and contributes to the countervailing power of the weaker party in value chain initiatives.

Need espouses the importance of outcomes to meet recipients' requirements (Kroger & Shafer, 2014). Value chain outcomes that meet the needs of actors integrated into initiatives are vital to ensure that actors can counter their strategic vulnerability, which is crucial in mutually dependent relationships. This principal echoes Vermeulen and Cotula's dimension of risks, which underscores the sharing of commercial (i.e. production, supply and market), political and reputational risks. We therefore anchor the principle of need in the dimension of risk to examine arrangements in value chain initiatives that provide avenues for parties to meet their needs and counter their operational risks.

Equity emphasises each participating partner receiving outcomes commensurate with their contributions (Kroger & Shafer, 2014) and maximising their welfare. This principle encompasses fairness in distributive outcomes and fosters the potential for farmers to share in the outcomes pursuant to value chain initiatives. This principle resonates with the inclusiveness dimension of reward. Vermeulen and Cotula (2010) explain reward as encompassing the sharing of economic costs and benefits, including price setting and finance arrangements. We anchor the principle of equity in the dimension of reward to examine arrangements that ensure parties receive outcomes commensurate with their contributions.

Anchoring these principles in dimensions of inclusiveness creates space for detecting unfolding practices around the precise dimensions of inclusion. It provides the capacity to unearth and appreciate the multidimensionality of company-farmer interactions while simultaneously highlighting the centrality of just processes and outcomes in configuring terms of inclusion, interwoven in everyday practices.

Methods

This research is part of the interdisciplinary project Cocoa Crop Improvement, Farms and Market (CoCIFAM) at Wageningen University and Research, which collaborates with companies sourcing cocoa in Ghana and Ivory Coast and has an interest in understanding the traits and uses of agricultural practices, such as pruning, associated with sustainability (Obeng Adomaa et al., 2022; Tosto et al., 2022). The project and research comply with the ethical guidelines of the university. As part of the transdisciplinary orientation of the project, this paper analyses

the implementation modalities of company-led SDIs. These SDIs constitute routes through which the companies' sustainability intentions are translated into practices and, subsequently, arrangements with cocoa farmers. For analysing how the implementation modalities configure and refashion company-farmer relationships, the research focuses on everyday activities and regular interactions that constitute the setting within which terms of inclusion are configured.

We collected data from documents, interviews, focus group discussions and observations from June 2018 to August 2019. We examined SDI programme documents, annual and monthly reports (n=23), and conducted interviews (n=10) with national programmes and project managers on the set-up and implementation modalities of the SDIs. We selected one operational district for each SDI and conducted interviews with district field officers (n=9). We traced how the initiatives were implemented in the districts and communities and the day-to-day interactions they facilitated with farmers. We selected three random communities in each district and interviewed farmers (n=122) about their interactions with companies in the SDIs. All research participants gave free and informed consent to data collection and use.

The interviews were recorded, and summaries were transcribed from the audio recordings. The summaries, together with summaries from document analysis, were triangulated to build detailed cases for each SDI. We identified emerging properties of company-farmer interactions in the SDIs. We categorised the properties under the principles of procedural and distributive justice, anchored in the dimensions of ownership, voice, risk and reward (Table 1). We then examined emerging arrangements further in a second phase of interviews with national programme managers (n=9), district field officers (n=7) and farmers (n=24). We complemented these interviews with focus group discussions (n=21) and observations (n=5) for validation. We analysed the arrangements, typified and categorised them into clusters (see Table 3 in Section "[Analysis: Company-Farmer Interactions Configuring Terms of Inclusion](#)"), and assessed how they configure terms of inclusion in the SDIs.

Data collection and analysis was done iteratively. The iteration cycle (Pawson & Tilly, 1997) enabled us to unravel the interactional dynamics of the company-farmer relationship and ground it in our analytical framework. The SDIs are dynamic, as are the practices that configure terms of inclusion. Thus, this paper neither offers conclusions about the SDIs nor compares them. Our goal was to use insights into company-farmer interactions and arrangements configuring terms of inclusion in the SDIs to explain the inclusiveness of value chain initiatives.

Analysis: Company-Farmer Interactions Configuring Terms of Inclusion

The dependence of companies on farmers for both ensuring stable access to cocoa beans and making sustainability claims was the bonding ingredient of the integrative company-farmer relationship in SDIs. For farmers, it was their dependence on companies to access support services, especially agricultural inputs on credit. In Ghana's cocoa sector, the government body Cocobod prohibits the signing and enforcing

Table 2 Summary of service delivery modalities in 2018/2019 season

SDI	Channels of communication	Decision making	Farm specific services	Sourcing and premiums
Cocoa Life	From farmers to society executives, to the 11-member union executive committee, national bi-monthly and annual meetings of Mondelez and vice versa	Bi-monthly and annual implementing national partners meetings. Annual general assembly and quarterly meetings at the cooperative level	Training on GAPs and GEPs, free tree seedlings. Input shops with subsidised inputs	Farmers sell to any licensed buying company and record their sales with the society executives. Farmers receive cash premium on sold beans
Cocoa for Good	From farmers to technical officers to Unicom national and vice versa, or from farmers to PCs to district managers to Unicom national and vice versa	At the national office of Unicom, PCs association meets to discuss the challenge of group maintenance and buying of beans	Training on GAPs, GEPs and GSPs and RA certification. Distribution of free cocoa and economic tree seedlings. Cash-and-carry input delivery upon farmers' request	Farmers produce RA certified beans and expected to sell to Unicom through their PC. Unicom then supplies to Hershey through ECOM. Farmers received cash premiums
Cocoa Horizons	From farmers to technical officers to Yonkopa national and vice versa, or from farmers to PCs to district sourcing managers to Yonkopa national and vice versa	At the national office of Yonkopa, PCs meet biweekly to discuss concerns and challenges of sourcing and the groups	Training on GAPs, GEPs and health and safety. Distribution of free cocoa and tree seedlings. Credit input delivery with company as broker between input dealer, financial institution and PCs on behalf of farmers	Farmers produce COH beans and expected to sell to Yonkopa through their PC. Barry Callebaut sells the beans in the end market. Farmers receive cash premiums
KKL	From farmers to zonal executives, to society executives, to national executives and vice versa. Occasionally through internal control officers in the district	National Annual General Meeting (AGM), fed by decisions from Society AGM, which is fed by decisions from Zonal AGM	Training on GAPs, GEPs and GSPs, and RA, Fairtrade, and Ferrero certification. Distribution of free cocoa and economic tree seedlings. Satellite input shops with cash-and-carry payment	Farmers produce certified beans and expect to sell to KKL through a zonal recorder. KKL sells the beans in the end market. Farmers receive cash premiums
CAA	From farmers to group executives, to sector executives, to regional representatives to national council and vice versa, or through technical officers in the district	CAA Council meeting, which is fed by decisions from regional general meetings attended by section representatives of CAA groups in each region	Training on GAPs, GEPs and GSPs, and RA certification. Support training as part of input delivery package. Partial credit input delivery scheme	Farmers produce certified beans and expect to sell to selected CAA partner LBCs through their group collector. Farmers receive cash premiums

Source: Field work June 2018 to August 2019

GAP: Good agricultural practices; GEP: Good environmental practices; GSP: Good social practices; PC: Purchasing Clerk; RA: Rainforest Alliance

of supply contracts between companies and farmers. Thus, mutual dependency between companies and farmers was founded on implicit expectations rather than binding contracts, and it was mediated by Cocobod's regulatory regime. In this section, we first characterise the SDIs' implementation modalities in the 2018/2019 season (Table 2) and present insights about company-farmer interactions that define interdependency, refutability, need and equity. Next, we further qualify and compare the arrangements between company and farmers configuring terms of inclusion (Table 3).

Interdependency

We analysed interdependency by examining the arrangements that fostered and strengthened joint ownership. Ownership was defined by ownership of the SDI and associated services and of cocoa beans. However, due to Cocobod's prohibition of binding contracts, farmers remained the sole owners of cocoa beans in all SDIs. Hence, their ownership of the SDIs became the defining ingredient for interdependency.

KKL and CAA were farmer-owned initiatives. The farmers union fully owned the SDI in KKL, while in CAA, the farmers partially owned the SDI. The farmers that owned the SDI and farmers integrated into the SDI were the same entity. Thus, co-ownership arrangements existed, and farmers' cocoa beans were implicitly defined as a group asset, jointly owned by the company and farmers. Interdependency was therefore explicitly enacted in these SDIs. In Cocoa Life, farmers played a visible role in defining services, and an apparent co-ownership arrangement existed. However, sourcing was not connected to service delivery (Table 2) so interdependency was enacted less, neither explicitly nor implicitly. In Cocoa for Good and Cocoa Horizon, the companies owned their SDIs. Farmers had no explicit ownership rights, creating separate ownership arrangements. With sourcing being attached to these SDIs, interdependency, bonded by companies' need for beans and farmers' need for services, was still implicitly defined rather than explicitly enacted.

Table 3 Emerged arrangements in SDIs configuring the terms of inclusion

Principle	Clusters of emerging arrangements
Interdependency	<ol style="list-style-type: none"> 1. Separate ownership of SDIs and cocoa beans, less explicit enactment 2. Co-ownership of SDIs and cocoa beans, more explicit enactment
Refutability	<ol style="list-style-type: none"> 1. Ad hoc groups with less mutual decision making 2. Cooperative with patron-client decision-making 3. Cooperative with mutual decision making
Need	Diffuse and diverse set of arrangements, ranging from satellite and subsidised input shops, cash and carry delivery, company brokered full credit inputs and partial credit inputs. Farmers hunt for effective credit schemes and buying incentives
Equity	<ol style="list-style-type: none"> 1. Shared financing of service delivery cost and less premium and supply benefits 2. Non-shared financing of service delivery cost and high premium and supply benefits

Refutability

In analysing refutability, we examined arrangements that ensured and strengthened farmers' abilities to voice complaints and have these complaints seriously acted on. Three variables emerged as important for defining refutability and how farmers' interests were integrated into the SDIs. These were: collective action at the farmer base, communication channels and representation of farmers in the decision-making space of the SDIs. The SDIs had diverse arrangements on these variables (Table 2).

In Cocoa for Good and Cocoa Horizons, farmer groups were organised around purchasing clerks. These fostered little to no collective action and provided little representation of farmers in SDI decision-making processes. They had few solid rules governing their functioning. Mutual decision-making was thus minimal, impacting the integration of farmers' interests in the SDIs. For instance, mutual decision-making regarding farmers' interests in a re-introduction of a credit input scheme in Cocoa for Good, and their interests in a reduction of input costs, change in package and payment modalities in Cocoa Horizon were absent. In Cocoa Life, the farmers' cooperative fostered collective action and mutual decision-making amongst farmers. However, this did not automatically translate to mutual decision-making between farmers and the company, although the cooperative was represented at the SDI's national partners meeting. The company received information about farmers' interests during partners meetings and, as the 'de-facto patron' of the cooperative, sometimes acted on them. However, a patron-client relationship existed between company and farmers.

In KKL and CAA, the organisation of farmers – into a cooperative and an association respectively, both with channels of communication – fostered collective action. This, coupled with representation of farmers in decision-making processes, fostered mutual decision-making between companies and farmers with direct consequences for the integration of farmers' interests. SDIs' dynamics and functioning were closely tied to farmers' interests. In KKL, farmers wanted a re-introduction of a credit input scheme. While the company had not done this, they had agreed with farmers to set up satellite inputs shops with subsidised inputs. In CAA, input delivery had evolved from the delivery of pre-packaged input on credit to farmer-requested-packaged input on credit to changes in payment methods, primarily owing to farmers' interests. In these SDIs, there was cooperative, mutual decision-making amongst farmers and between farmers and companies.

Need

In our analysis of need, we examined arrangements in the SDIs that provided required resources and avenues to counter companies' and farmers' risks. We found that inconsistent supply was the main risk faced by companies, due to both production risks confronting farmers and side selling. For farmers, climate variability, pests and diseases, and low prices constituted major production risks. Cocobod, however, set the farm gate price of cocoa and ensured price stability for farmers. Price risks at the farm level were therefore less relevant, while risks in the future market were

indirectly so. Although there were multi-stakeholder actions focusing on deforestation (e.g. Ghana Cocoa REDD+ initiative) and weather induced risks (e.g. Ghana Climate Smart Cocoa Working Group), climate variability and pest and disease incidences remained major risks. Farmers needed access to the right knowledge for management and agrochemicals for control.

All the SDIs responded to farmers' production risks by providing training on GAPs and climate smart practices, but they differed in their responses to farmers' needs for agrochemical for pests and diseases control (Table 2). Overall, they provided fewer avenues for credit-inputs, and preferred packages/or favourable payment modalities. Credit-input schemes were considered risky as farmer defaults were high. Cocobod's occasional free input delivery was a reference point for farmers' expectations of what was affordable, while the prohibition of binding contracts and the presence of other intermediaries between companies and farmers influenced the degree of integration feasible for recouping payments. KKL and the cooperative of Cocoa Life had input shops for cash sales of subsidised agrochemicals, while Cocoa for Good provided agrochemicals on 'cash-and-carry' upon request. In Cocoa Horizon and CAA where there were credit-input schemes, Cocoa Horizon farmers indicated that they did not like the packages, costs were higher compared to the market and payment modalities were not favourable. In CAA, farmer defaults were increasing, so, in the 2017/18 and 2018/19 seasons, the company only acquired fertilisers through Cocobod's fertiliser subsidy programme and supplied these to farmers on partial credit.

With regard to companies' supply risks, the SDIs did not have explicit arrangements that guaranteed companies' access to cocoa beans. Prohibition of binding supply contracts and competition among buying companies heightened supply risks. There was ample evidence of farmers selling to other companies with competitive buying packages. Companies had to compete to get beans from farmers integrated into their SDIs. However, in KKL and CAA, where interdependency was explicitly enacted through co-ownership, companies relied on farmers' goodwill for their bean supply.

Equity

In analysing equity, we examined arrangements for deriving and distributing benefits from the SDIs between companies and farmers. The direct benefit for companies was a stable, consistent supply of cocoa beans and subsequent sustainability claims, while farmers benefitted from the premiums they received from the sale of certified or accredited beans and added buying incentives. The absence of effective credit-input schemes meant that premiums became an important reward system and mediated the supply benefits for companies. Thus, processes of distributing premiums between cash and non-cash incentives to farmers and financing the costs of service delivery were critical in mediating the percentages of premiums paid to farmers and, in turn, farmers' responses.

The companies had different arrangements for financing service delivery costs. In Cocoa Life and Cocoa for Good, Mondelez and Hershey respectively funded

delivery services fully. Consequently, the full premiums went to farmers and their communities as incentives. In Cocoa Life, Mondelez paid the premium to the cooperative union, and the union decided what went into non-cash incentives and community projects and what was paid to farmers as cash incentive. In Cocoa for Good, Hershey paid the premium to farmers as cash incentives through ECOM. In communities where there were Women and Child Welfare Committees (WCWC), farmers transferred 12.5% of their premium into a WCWC fund.

In Cocoa Horizon, KKL and CAA, the cost of running the SDIs was financed with part of the premiums received from the sale of certified or verified beans. In Cocoa Horizon, 13% of the premium was used for administrative expenses, 37% for productivity training, 10% for environmental expenses, 20% for community projects and the remaining 20% went to farmers as incentives. In KKL, 75% of the premium was distributed for union operational costs, certification training and health insurance for farmers and others, while 25% was paid to farmers as cash incentives. In CAA, 30% was used for administrative expenses, 10% for productivity training, 15% for traceability, 5% for community projects and the remaining 40% was left for farmers as cash incentives.

Farmers integrated into the SDIs produced certified/verified beans and were expected to sell to the companies to get premiums (Table 2). However, companies' supply benefits were influenced by the percentages of premiums they paid to farmers as incentives. Farmers usually compared premiums in the larger landscape and sold to companies with higher premiums. Companies therefore had to pay higher premiums or provide more buying incentives to reap higher supply benefits. However, in KKL and CAA, where interdependency was explicitly enacted through co-ownership, the companies were slightly cushioned from the adverse effects of financing service delivery with part of the premiums.

Emerging Arrangements Configuring Terms of Inclusion

Insights from the SDIs show clusters of emerging arrangements mediating the company-farmer interactions that configure the terms of inclusion (Table 3). While interdependency in company-farmer interactions was largely implicit, there were two clusters of arrangements: separate ownership arrangements that enacted less explicit interdependency and co-ownerships that enacted more explicit interdependency. On the principle of refutability, three clusters of arrangements surrounding voice were evident in the SDIs. These were: Relatively ad hoc groups with little to no mutual decision-making; a cooperative with patron-client relationship between farmers and company, and cooperatives with mutual decision-making between farmers and companies. Arrangements based on need were varied and fluid. Companies sought for ways to respond to farmers' agrochemical needs, while farmers hunted around to supply companies that effectively met their input needs or gave competitive buying incentives. Two clusters of arrangements existed on equity. One cluster was financing service delivery with part of premium, which led to lower cash premiums for farmers and lower supply benefits for companies. The second was the originator of

the SDI fully financing service delivery, which led to higher cash premium for farmers and higher supply benefits for companies.

Key to the company-farmer interactions was the combination of companies' need for both a stable supply and interventions supporting their sustainability claims, and the farmers' need for services, especially agro-input on credit. Interactions in the SDIs were strongly centred around the presence of avenues and resources that met their respective needs and countered their respective operational risks. Companies sought effective and efficient ways to respond to farmers' agrochemical needs. In return, farmers sought to supply companies that responded effectively to their input needs. However, due to challenges with credit input schemes, companies employed reward arrangements to secure their supply benefits while farmers looked for companies with higher cash premiums and additional buying packages. Thus, while the principle of need was decisive, equity was prioritised both consciously and unconsciously. Companies with co-ownership arrangements relied on the explicit enactment of interdependency to cushion their supply risks. Farmers, however, increasingly strove to have a voice in deciding the distribution of premiums. They also reiterated the importance of integrating workable credit-inputs schemes in the SDIs as avenues to counter their production risks. These underscored the importance of refutability in the company-farmer interactional dynamics. The company-farmer interactions therefore manifested in interdependency, refutability, need and equity. The dynamics of arrangements surrounding these principles had direct consequences for companies' and farmers' choices, and their interactions that configure of the terms of inclusion.

Discussion and Conclusion

Sustainability concerns combined with the strategic vulnerability of cocoa and chocolate companies foster growing mutual dependencies between companies and farmers. However, research has paid little attention to unpacking the interactional dynamics of such mutually dependent relationships and how these configure terms of inclusion. In this paper, we have sought to answer the question: what interactions between companies and farmers configure procedural and distributive justice and foster inclusiveness in value chain initiatives? Our analysis examined how, despite power asymmetries in company-farmer relationships in value chains, the mutual dependency between companies and farmers and their interactional dynamics configure procedural and distributive justice arrangements, which successively configure terms of inclusion. Therefore, we have approached inclusiveness as an emergent outcome of situated interactions between companies and farmers.

Our contextualised understanding of inclusiveness highlights how farmer agency, in both individual and collective forms, refashions terms of inclusion, and we have shown how this is mediated in a sector governed by state regulations. Importantly, the centrality of credit input schemes to farmers' motivations drives their choices and actions, creating arrangements that configure terms of inclusion related to needs. Individually, farmers hunt around for companies that deliver input on credit to supply their beans to and, in return, companies seek workable approaches that meet

farmers' credit-input needs. In this relationship, companies deliver agrochemicals to farmers on credit, and farmers sell to companies, the proceeds of which go toward the payment of credited inputs and the payment of premiums to farmers producing 'sustainable beans'. Higher rates of farmer defaults with payments for credit inputs, however, have led to the collapse of such schemes, pointing to longstanding discussions about challenges of credit-input delivery to smallholders (Gordon, 2000). Amidst the risks and uncertainties surrounding credit-input schemes and recouping payments, this mutual dependency is foundational to company-farmer interactions, which configure terms of inclusion. In the absence of workable credit-input schemes, farmers seek companies that pay higher premiums. Companies respond by offering diverse premiums and buying packages, which farmers respond to and supply their beans, thereby fashioning equity arrangements in the SDIs.

This evolving process shaping mutual dependency configures both procedural and distributive justice arrangements and thus the terms of inclusion evident in the fluidity of SDI input schemes. Companies with explicit enactments of interdependency through co-ownership evoke and rely on farmers' willingness and ability to consistently meet their supply needs. However, collectively, farmers increasingly strive to partake in decision-making processes about how premiums are distributed. The prominence of need in the interactions between companies and farmers reiterates the essence of integrating workable credit-inputs schemes in the SDIs, which seems commensurate with refutability as being vital for enabling farmers to have a say in distributive outcomes (Tyler & Blader, 2000). Farmers and companies searches define need and equity, but these searches are also shaped by interdependency and refutability, signalling the importance of procedural justice as a vehicle for distributive justice (Kroger & Schafer, 2014). These interactional dynamics configure the terms of inclusion in global commodity chains and reflect farmers exerting their agency through everyday decisions and choices, either individually or collectively. Interdependent performance drives sustainability efforts, which conjoins service delivery with the need to source beans and make sustainability claims to them. Thus, interdependent performance appears to be crucial for how the chain performs (Vellema, 2016) and to counter companies' strategic vulnerability (Gereffi, 2014). This creates an opening for farmers to negotiate terms of inclusion as companies navigate farmers' individual and collective agency and respond to their search for credit-inputs, higher premiums and associated choice of supply outlets.

The configuration of terms of inclusion, however, is not independent of the larger context within which company-farmer interactions occur. Value chains do not exist in a vacuum (Mohan, 2016). Within the space of SDIs in Ghana, Cocobod's regulations are the terrain in which companies and farmers make choices and interact. Cocobod's regulation prohibiting binding sourcing contracts grants farmers sole ownership of their beans, giving them power to assert their agency. Cocobod's role as a major player mediating sourcing practices, pricing and payment modalities, and their occasional free input delivery also influences the degree of integration feasible for managing workable credit-input schemes. Cocobod's policy regime, therefore, mediates company-farmer interactions (Manteaw et al., 2018) and defines the larger context that companies and farmers negotiate and enact arrangements configuring terms of inclusion in.

This paper demonstrates that inclusiveness is dynamic and contextual. It evolves as interactional dynamics and regulatory regimes evolve. As farmers assert their agency, the justice arrangements that configure terms of inclusion also change. Therefore, inclusiveness can be considered as an emergent outcome of contextualised practices, which configure and reconfigure procedural and distributive justice arrangements. It emerges from interactional dynamics where farmer agency is crucial in negotiating the precise terms of inclusion and is highly dependent on companies navigating both farmer agency and state regulations. Thus, rather than being conceived of as a predefined ethical standpoint included in standards with prescribed arrangements, inclusiveness is best conceptualised as a dynamic and contextual outcome. We consider inclusiveness not as an arrangement that can be designed but analyse it as an emergent and multi-dimensional outcome of company-farmer interactions in specific spaces and institutional contexts. This conceptualisation shifts attention away from organisational fixes linked to the structural-focus literature and the standard setting world and creates space to examine how to navigate and configure terms of inclusion as they are negotiated and enacted.

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Declarations

Conflict of interest All authors read and approved the final manuscript.

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Authors and Affiliations

Faustina Obeng Adomaa¹  · Sietze Vellema¹ · Maja Slingerland²

¹ Knowledge, Technology and Innovation Group, Wageningen University and Research, Wageningen, The Netherlands

² Plant Production Systems Group, Wageningen University and Research, Wageningen, The Netherlands