



Are Collective Trading Organisations Necessarily Inclusive of Smallholder Farmers?: A Comparative Analysis of Farmer-led Auctions in the Javanese Chilli Market

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Abstract

Organising smallholder farmers into groups or co-operatives is widely promoted as a strategy to connect farmers to markets and turn them into price makers rather than price takers. This pathway usually combines co-operative organisational models, based on collective ownership and representation in internal governance, with measures to shorten the agri-food chain, shifting the ownership of intermediary sourcing, aggregating and trading functions to the group. The underlying assumption is that this improves smallholder farmers' terms of inclusion in markets. To scrutinise this assumption, our study compares two examples of farmer-led auctions facilitating trading in the chilli market in Java, Indonesia. The auctions' ownership, management and performance evolved differently: one was run by a group and the other by a family. The comparison brings nuance to the prevalent emphasis on co-operative ownership structures. By researching practices central to collective trading at the chilli supplier–trader interface, this study unravels four dimensions—ownership, voice, reward and risk—capturing smallholder chilli farmers' terms of inclusion in both the auctions and the market. Our comparative analysis suggests that shared ownership and control of the trading function, a central feature of co-operative models, does not necessarily ensure favourable terms of inclusion for smallholder farmers with little capacity to take risks. The capacity to reconfigure the terms of market inclusion for vulnerable smallholder farmers involves direct payment modalities and risk taking. A collectively owned trading organisation does not necessarily imply an inclusive business concept when the organisation cannot acquire sufficient working capital to pay its suppliers.

Keywords Collective action · Inclusive development · Farmer organisations · Risk

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1 Introduction

Organising farmers into groups has been an important strategy for arranging market access and achieving inclusive development on favourable terms for smallholder farmers (Lyon, 2003; Minah & Carletti, 2019). Collective action anchored in co-operative organisational models is often proposed to effectively link smallholders with markets (Stringfellow et al., 1997; Lyon, 2003; Borda-Rodriguez et al., 2016). Donors and governments expect these organisations to replace and improve public support of service provision (Gramzow et al., 2018), as well as replacing middlemen or intermediary traders and thus shortening the agri-food chain by providing trading services (Gyau et al., 2014). This model is strongly anchored in the notion of a collective ownership of resources managed by farmers' economic organisations (Bijman, 2016). The premise of this argument is that such a shift to a co-operative model may change farmers from price takers — being forced to accept price determined by others —, to price makers — having capacities to determine or influence price-setting —; however, it is not self-evident that induced co-operative models based on collective ownership can effectively enhance smallholder farmers' terms of inclusion in rural markets.

The premise of our research is that reshaping terms of inclusion requires more than a change in ownership structures; it entails actions, skills and capacities from which modified practices and rules of trade emerge. This paper therefore focusses on the practice of farmer-led auctions, which enables them to perform intermediary functions that may modify their relations with more resourceful and powerful downstream players in agri-food chains, namely traders or retailers. This paper unpacks trading practices by comparing how two farmer-led auctions in the Javanese chilli market reshaped the terms of inclusion for small chilli producers. The central question for the comparison, building on (Mwema & Crewett, 2019) who study rules governing access to markets, is: what capacities are mobilised in the trading practices at the auction sites to refashion the rules and conditions of entry for smallholder farmers into markets for fresh, perishable food products?

The paper aims to move beyond organisational models based on collective ownership as a recipe for inclusive development and shifts attention to the *modus operandi* of an auction to unravel how multiple processes reconfigure the terms of inclusion in food markets (Hoffecker, 2021). This intermediary site, where the connection between sellers and buyers is constructed, is the entry point for investigation. The methodological choice to focus on practice shifts attention from measuring effects or benefits to—following Jones and Murphy (2010)—documenting a set of routinised, improvised and situated actions that constitute and reproduce the power of farmer-led auctions to (re)direct trade relations. The everyday reality of the auctions consists of practices of conduction (Legun & Bell, 2016), such as sourcing, transporting, warehousing, retailing, and trading. By taking this as an analytical object, the study offers a grounded understanding of how terms of inclusion, as a higher-order phenomenon in food markets, are reproduced or transformed through the situated actions and interactions in the auctions studied.

Descriptive accounts of the day-to-day running of the auctions provide the basis for understanding inclusion as an evolving process with emergent

(intermediate) outcomes regarding the ways in which access to markets are arranged. Reshaping the terms of inclusion for smallholder farmers is not a matter of installing a fix; the farmers running the auction developed capacities gradually to keep the auction afloat in the markets and learned from their mistakes. The paper applies and expands the framework developed by Vermeulen and Cotula (2010) and elaborated by Chamberlain and Anseeuw (2018) to assess the effects of farmer-led auctions for the terms on which smallholder farmers are included in markets. This framework identifies four distinct dimensions: ownership, voice, reward and risk. In addition, zooming in on the everyday practices of the auctions facilitates the investigation of the ways in which the relationships between upstream actors (chilli farmers) and downstream actors (traders) are enacted and (re)configured in the practice of the auction. For that reason, this research recognises that farmer-led auctions, as an economic organisation (Soboh et al., 2009), have a dual purpose: satisfying their members or clients and being competitive in the market.

The study examines the conditions under which two farmer-led auctions, with distinct ownership structures, are able to transform the terms of inclusion in a favourable manner to smallholders. Both auctions operate in the major chilli-producing area in Yogyakarta, Indonesia. They are linked to the same trading networks. One auction, from which the auction idea originated, sustains a collective ownership structure and is managed by a small operational team. The other auction was, after a couple of years, taken over by a local farmer family and therefore deviated from the notion of collective ownership that is central to the co-operative model. In combination with a multi-dimensional perspective on inclusion, the comparative analysis shifts attention from an exclusive focus on ownership and membership representation, as is reflected in the literature on co-operative models, to an appreciation of the skilful and purposeful endeavours to reconfigure the nature of doing business in the Indonesian chilli market.

2 Analytical Approach

This study combines a multi-dimensional perspective on inclusion with a methodological focus on auction practices where the terms of inclusion are moulded, and where internal and external modes of governance are configured. The analytical approach emphasises the processual nature of inclusion and considers it as outcomes emerging from, and reinforced in, situated actions.

2.1 Focussing on Practices

Our methodological choice focusses on the auction practice to assess the conditions for smallholders' terms of inclusion in food markets. Our approach argues that human action comes from participating in practices (Nicolini, 2011), starting with conduction practices (Legun & Bell, 2016) such as sourcing, aggregating, sorting and storing. The study considers that intermediaries usually have the know-how to

interpret information, improvise, control quality, repair errors, sort and bulk produce, arrange finance, take risks and enable transactions (Schoonhoven-Speijer & Vellema, 2020). Mastering this set of skills for a farmer-led auction is a challenging process and knowing how to engage with trading to alter the terms of inclusion is an achieved skill (Orlikowski, 2002). Our focus on practices will therefore inform our analysis of the capacities of auctions to alter organisational rules and routines in market transactions (Mangnus & Vellema, 2019) and modify smallholders' terms of inclusion in trading.

2.2 Connecting Internal and External Governance

Zooming in on the auction practices exposes the internal and external governance of the everyday reality of auctions. Studies of producer organisations and collective actions show a strong focus on internal modes of governance (Bijman & Bitzer, 2016), which define who has the right to decide, monitor and control the decision-makers and the distribution of residual claims (rights to profits) (Bijman et al., 2014). Accordingly, the auction merges horizontal co-ordination among the suppliers and members with vertical co-ordination with the other value chain actors (Royer et al., 2017). The research investigates how auctions handle the suppliers' and traders' diversity of interests (Iliopoulos & Valentinov, 2017); therefore, researching the practice of running an auction reveals the processes connecting the internal and the external governance of trading (Fig. 1).

2.3 Unravelling Terms of Inclusion

The framework developed by Vermeulen and Cotula (2010) is applied to assess whether and how the auctions reconfigure the four dimensions of inclusion in business: ownership, voice, reward and risk. These dimensions, detailed by Chamberlain

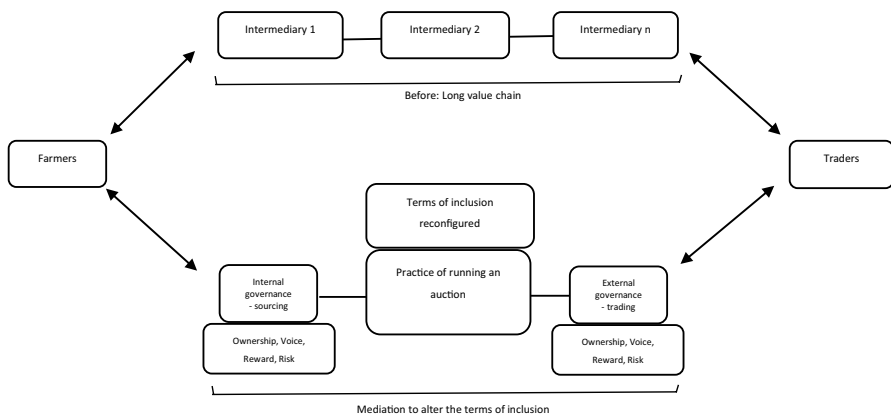


Fig. 1 The focus of analysis of collective trading configuring the terms of inclusion

Table 1 The dimensions and categories of smallholder farmers' terms of inclusion in auctions

Four dimensions of inclusion	Categories	Description
Ownership	Land and fixed assets	Auction location and building
	Moveable assets	Working capital
	Produce	Chillies
Voice	Pre-implementation	Decision on the date to start auction
	Day-to-day operation	Decision-making in, and control of, everyday tasks
	Seasonal	Planning and co-ordination of planting season, price monitoring
Reward	Medium and long term	Wage standardisation, maintaining trading network
	Price setting and payment modalities	Payment collection, price making, ensuring that traders pay
	Profit sharing	Dividend sharing, use and distribution of profit
	Service provisioning	Input loans, credit, traders' payment liquidity
Risk	Employment and skills	Salary and responsibilities in arranging transactions
	Commercial	Delayed or defaulted payments by traders
	Political	Tensions among farmers, tensions with petty traders
	Reputational	Quality assurance, transparency
	Sustainability	Obligation to supply, supply continuity

Source: Vermeulen and Cotula (2010); Chamberlain and Anseeuw (2018); authors

and Anseeuw (2018), are used to analyse smallholder farmers' terms of inclusion in running the auction (Table 1).

Ownership of the physical infrastructure of the auction—the trading facilities, the working capital and the produce—distinguishes the two case studies central to this study. The auctions started in collective ownership but gradually one auction developed a slightly modified co-operative model, whereas the other became privately owned. Both ownership structures perform the same function but with distinct outcomes.

Voice reflects the representation in member-based organisations and concerns the involvement of suppliers in decision-making. In theory, a co-operative distributes decision-making equally (Reynolds, 2000); however, Mwambi et al. (2020) suggest that participation in decision-making addresses inclusion more accurately than does membership. Thorpe (2018) underlines the procedural justice in decision-making and shows that economic benefits cannot compensate for processes that members or clients consider procedurally unjust. Our framework adds aspects of decision-making beyond the immediate transaction, which may also involve collective choices in the wider community.

Evaluative studies on rewards generated by collective trading or co-operatives (Johnson & Berdegue, 2004; Bekkum & Bijman, 2006; Hernández-Espallardo et al., 2013) predominantly use higher prices as a proxy for the economic benefits of inclusion. This study widens the analytical scope to network relations with traders, service provision and employment opportunities. Other possible rewards may also

include the capacity to purchase high volumes, a stronger bargaining position, high upgrading capacity, market information, low transaction costs (Vorley et al., 2009; Wollni & Zeller, 2007) and the reliable purchase of produce (Mujawamariya et al., 2013). This study gives attention to the non-price aspects that lure farmers into the co-operative (Chamberlin & Jayne, 2013), requiring an enriched framework for analysing the rewards that auctions generate.

Risk handling is coupled with the ownership of an auction, whether collective or private. Collective ownership implies shared risk-taking (Chaddad & Cook, 2004) and faces the difficulty of attracting additional equity capital from members (Bijman et al., 2000). Moreover, trading requires maintaining a good reputation with traders while taking action to provide fair prices and keep risks low (Lu et al., 2010); hence, auctions cope with commercial risks in transactions with both farmers and traders.

3 Materials and Methods

This section presents the area of study in a coastal farming area growing chillies and the selection of two farmer-managed auctions as the case studies, followed by qualitative and quantitative data collection and analysis methods.

3.1 Research Area

The two auctions are located in a coastal agricultural area in Java, Indonesia, called Kulon Progo. The Kulon Progo District covers 586 km², consists of 12 subdistricts with 87 villages, and has 425,758 inhabitants. Within this district, chillies are grown in the four subdistricts in the southern coastal area: Temon, Wates, Panjatan and Galur. Until the 1980s, most farmers were landless and marginalised. After the introduction of soil-modification measures and irrigation with chain wells, the farmers shifted from growing cassava and *kleci* (small black potato) to chillies.

3.2 Context and Case Studies of Farmer-led Auctions

We purposely selected two cases from the 12 auctions in the region with a history of more than five years trading chilli. Our first case study, the group-run auction, used to sell their chillies to petty traders before running their auction, but in 2004, a larger trader asked the farmers to bulk the chillies in one spot. Other traders followed, and the larger trader proposed the traders expressing their bids on the spot to determine who could trade. After several such auctions, traders changed to writing down the bids on cigarette paper. This practice became the foundation for establishing farmer-led auctions in the area. The second case study, the family-run auction, started as a group-run auction in 2012. After three years, some members disagreed with the leader's idea to split the chilli sale. Tension built, and the treasurer started another chilli-selling point, followed by the leader's brother. In 2016, the auction ownership was transferred to the leader.

3.3 Data Collection

The group interviews involved the operations team focussing on the traders linked to the auctions (Table 2). The in-depth interviews with 12 operators concerned their life histories and roles in the auctions, and the observations focussed on the everyday business of the auctions. In Village 1, a small group of 16 operators of the group-run auction weighed the chillies; recorded the volume; then bulked, sorted and packed the chillies. They contacted the traders, collected the bids and determined the auction. In Village 2, the family's auction activities were the same, but operated by a husband and wife. Mapping the network of the traders attached to the two auctions was done during interviews with three auction leaders. Next, interviews captured the sourcing mechanisms and trading areas of 18 traders. Four petty traders in the villages were interviewed about how they interacted with the auctions. Similar interviews with three buyers based in the provinces surrounding Jakarta—Bekasi, Tangerang and Purwakarta—were conducted by phone. Lastly, a survey among 66 members of the farmers' groups associated with the auctions collected perspectives on the auctions' roles in their relations with the market.

3.4 Data Analysis

We analysed the data in two steps to produce the comparative analysis. First, the auction practices sourced from the transcriptions of collected data were coded as bulking, weighing, sorting, bidding, payment and organising service provision. Second, the trader-network mapping was converted into a table that clustered traders based on their location, sourcing area, relationships with the auctions and relationships with other.

In the comparative analysis, the data fragments were coded to the categories in Table 3; for example, for the 'land and fixed asset' category, we deduced the data point: 'The farmers paid the land rental cost. The Bank of Indonesia erected the building'. The data fragments were: *'I would ask the other operators, "How much money should we give to the landowner?"'. They would suggest, "X amount is ok"'. (Co-ordinator of the group-run auction, Group interview, 31 July 2018).* *'We used to occupy a villager's house, but then we received an auction building as support from the Bank of Indonesia'. (Farmers' group leader, Group interview, 5 February 2018).* After the coding, the dimensions and categories were matched with a cross table of internal/external governance. Specifically, the auction records and national chilli prices from PIHPS Nasional (2019) completed the reward dimension. Lastly, the data were examined again to ensure the precision of the categories and governance.

Table 2 Data collection methods

Data collection method	Number	Location	Period
Observation	12 events	Villages 1 and 2	Jul 2018, Jun–Sept 2019
In-depth interview	12 operations team members	Villages 1 and 2	Jun–Jul 2019
	Four petty traders	Village 1 and other districts	Oct 2019
	18 traders	Kulon Progo, Bantul, Purworejo	Sept–Nov 2018
Phone interview	Three buyers	Bekasi, Tangerang, Purwakarta	Nov 2018
Group interview	Six group interviews	Villages 1 and 2	Jan–Feb 2018, Jul–Aug, Oct 2019
Trading network mapping	Two maps	Villages 1 and 2	Oct 2019
Survey	66 farmers	Villages 1 and 2	Jul–Sept 2019
Recording price information	Two auction records	Villages 1 and 2	Oct 2019
	One national chilli prices list	PIHPS Nasional (2019)	Nov 2019

Source: Authors

Table 3 Comparative analysis of the four inclusion dimensions of the group-run and the family-run auction

Four dimensions of inclusion	Categories	The group-run auction		The family-run auction	
		Inclusion of farmers in the auction (internal governance)	Inclusion of farmers in the market (external governance)	Inclusion of farmers in the auction (internal governance)	Inclusion of farmers in the market (external governance)
Ownership	Land and fixed assets	The farmers paid the land rental cost. The Bank of Indonesia erected the building	The farmers were free to come and monitor the auction	No farmer investment in the land and auction building	The farmers came to the auction spot only to sell
	Moveable assets	Working capital was sourced from the farmers' fees and government support	The operators used working capital to pay for the first and second auctions	Working capital was sourced from the farmers' fees and bank loans	Working capital was used for daily payments to the farmers
	Produce	The farmers balanced their sales to the auction with their sales to petty traders	The produce was owned collectively. The operations team sold on behalf of the farmers by auction	No obligation to sell at the auction	The produce was owned by the family. They sold it themselves at night auctions and afternoon sales
Voice	Pre-implementation	The farmers were included in deciding the start of the auction	The operations team informed the traders about the start date of the auction	The family decided the date to start the auction without involving the farmers	The family informed the traders about the start date of the auction
	Day-to-day operation	The operations team received supplies, and weighed, bulked and sorted them	The operations team did the bidding and packing	The family received supplies, and weighed, bulked and sorted them	The family did the bidding and packing
	Seasonal	The farmers discussed the decision to grow and the planting date in a group meeting	The operations team monitored the chilli prices and traders within the associative body	The leader initiated a group meeting with the farmers to discuss the decision to grow and the planting date	The leader monitored the chilli prices and traders within the associative body
	Medium and long term	The farmers discussed the pickers' wage standard, service provisioning and payment delivery in group meetings	The operations team maintained the trading network with the traders	The leader initiated a group meeting with the farmers to discuss the pickers' wage standard	The family maintained the trading network with the traders

Table 3 (continued)

Four dimensions of inclusion	Categories	The group-run auction		The family-run auction	
		Inclusion of farmers in the auction (internal governance)	Inclusion of farmers in the market (external governance)	Inclusion of farmers in the auction (internal governance)	Inclusion of farmers in the market (external governance)
Reward	Price setting and payment modality	The farmers were price takers. The farmers received services, including payment deliveries	The operations team was responsible for price making and ensured that the traders would pay the farmers	The farmers were price takers. Selected farmers received services	The family was responsible for setting prices and sustaining cash payments
	Profit sharing	No dividend for the farmers	The profit was invested in the group's working capital and service provisioning	No dividend for the farmers	The profit was invested in private business diversification and service provisioning
	Service provisioning	The farmers received seed loans, limited cash payments and payment deliveries	The operations team negotiated the traders' payment liquidity on behalf of the farmers	The selected farmers received seedling loans. All farmers received cash payments	The family represented themselves when negotiating the traders' payment liquidity
	Employment and skills	The farmers knew how to assess quality, how to bulk and how to sort the chillies	The operations team received a seasonal salary and understood trading complexity	The farmers knew how to assess quality, how to bulk and how to sort the chillies	The family received a seasonal salary and understood trading complexity

Table 3 (continued)

Four dimensions of inclusion	Categories	The group-run auction		The family-run auction	
		Inclusion of farmers in the auction (internal governance)	Inclusion of farmers in the market (external governance)	Inclusion of farmers in the auction (internal governance)	Inclusion of farmers in the market (external governance)
Risk	Commercial	The farmers received fluctuating prices with delayed payment	The farmers took the risks of delayed payment and being cheated by the traders	The farmers received fluctuating prices with cash on delivery	The family took the risks of delayed payment and being cheated by the traders
	Political	Some farmers in conflict with the auction operations team engaged in side-selling	The farmers' group resolved the tensions with the petty traders	The family shared their daily auction price result with the other two trading spots	The family let petty traders access the other two trading spots
Sustainability	Reputational	The farmers' group mobilised the farmers to maintain their chilli quality	The operations team maintained transparent transactions with the traders	The family mobilised the farmers to maintain their chilli quality through group meetings	The family maintained transparent transactions with the traders
	Sustainability	The farmers' group obliged the farmers to supply the auction continuously	The operations team ensured the supply and sustained trading relationships with the traders	The farmers were free to supply the auction or the other two trading spots	The family ensured the supply and sustained trading relationships with the traders

Source: primary data

4 Performance of the Auctions

This section compares the two auctions, which have different ownership structures, to identify how their practices affected the four dimensions of inclusion (Table 3). The terms of inclusion were analysed by looking at the practice of sourcing chillies (internal governance) and selling chillies to buyers in the market (external governance).

4.1 Ownership

The group-run auction started in 2004 on rented land. Later, in 2013, the Bank of Indonesia supported the group by erecting an auction building. The leader of the farmers' group shared that farmers stayed to watch the auction, and between five and 16 operators started the sorting, bidding and packaging at 7:30 pm. Regarding working capital, he mentioned that the auction did not access any bank credit because none of the members wanted to act as guarantors. The auction co-ordinator acknowledged that the group-run auction afforded to pay cash only for the first and second auctions among the 83 times of auction. After that, the farmers received payments with 2–5 days delay. The survey of group members showed that 12% of members' sales went to petty traders offering cash on delivery, usually before the auction opened. According to the auction's record book, 96,008 kg of chillies supplied by 108 farmers were sold in the first season in 2019.

The family-run auction started in 2012 and was located in the middle of the village. A farmers' group formerly owned it before a disagreement, and ownership was taken over by the farmers' group leader and his wife in 2016. The couple sold the chillies through a night auction and an afternoon sale to the smaller traders. At this auction, the farmers were not obliged to supply, and they only came in the afternoon when selling their chillies. At 6:00 pm, the husband determined the highest bid as the winner, then one or two workers packed the chillies. The leader mentioned that he accessed Bank Rakyat Indonesia to provide daily cash payments. The survey of members revealed that the farmers sold 10% of their chillies at the village's two other trading spots. The family's trading book record in the first season in 2019 showed that the combined 101 days of auction and afternoon sales amounted to 173,247 kg supplied by 277 farmers.

4.2 Voice

The leadership of the group-run organisation shared that they opened the auction only when they expected to bulk at least 200 kg of chillies. In the late afternoon, the operations team started to receive supplies, then weighed, bulked and sorted the chillies. After the bidding procedure, they organised the packing. The operators monitored chilli prices through Aspartan, the associative body during the season. The larger farmers' group discussed service provisioning and planting schedules to avoid pests and diseases in their joint endeavour to aggregate sufficient volume.

They also discussed pickers' wage agreements and the expansion of the auction. In 2018, the group standardised the pickers' wage at a maximum of 60,000 rupiahs per day to avoid competition in finding workers. In addressing the issue of a delayed payment, the auction co-ordinator shared that they delivered payments to the farmers' houses to prevent them from asking the operators.

The family's terrace was always full of vegetables, such as cucumber, aubergine, luffa, and chillies. In the daily operation of the auction, the couple was prepared to receive, sort and weigh the chillies at noon. Once the auction winner was determined at 6:00 pm, the workers started to pack the chillies. In this village, the chilli growers met as a group, similar to the group-run auction, and the family-auction leader led the discussion also monitored daily prices through Aspartan. He was also a prominent figure in the village. During the chilli harvest, this area attracted around 300 workers from outside the village. The secretary confirmed that last year some farmers competed to hire these workers. The leader then initiated a farmers' group meeting, resulting in an agreement to set a maximum salary of 80,000 rupiahs per day.

4.3 Reward

From 2004 onwards, the group-run auction ensured that one price was paid throughout the entire area, which contrasted with petty traders who paid uncertain prices for similar quality. The average price in the group-run auction was 42,009 rupiahs per kg of chilli per day. The group interview revealed that the farmers considered the chilli prices at the auctions to be high because they were closer to market prices. Fig. 2 confirms this by showing that auction prices followed the provincial and national chilli prices. Nevertheless, the daily prices depended on the actual traders' bids received from distant markets in Jakarta or Sumatra. The working capital accumulated from the fee per kg of chillies was around 300–500 rupiahs, to which the farmers did not object. Fifty percent of this revenue went towards asset accumulation; the other half was allocated as operators' salaries. Thus, no dividend was paid to the farmers. The operators delivered the payments to the farmers' houses once the group finally received payments from the traders, as well as to offer farmer services, such as seed loans, at the beginning of the season.

In the village of the family-run auction, the farmers also used to sell their chillies to petty traders before 2012. They had to transport their chillies on their bikes and travel over unpaved roads, which were difficult to traverse during the rainy season. The average price received by this private auction was 42,365 rupiahs per kg of chilli per day in the season, similar to the group-run auction. As a result, both auctions were price takers. The family's working capital was sourced from the fee of around 500–1000 rupiahs per kg of chillies, complemented by a bank loan. The farmers considered this number high compared to the other auctions' fees. Even though there were no shares for the farmers, the family provided seedling loans and credits for selected farmers and ensured cash payments. The family also diversified its business into melon growing, which generated additional income. The family's auction did not involve the farmers in running the operation, but did transfer to them

the skill of knowing how to assess quality. They also provided two casual workers' salaries.

4.4 Risks

In the group-run auction, the main risks for farmers were related to fluctuating prices and delayed payments. The auction co-ordinator confirmed that the traders frequently had to wait for payments from their buyers, which resulted in delayed payments to the members of the group supplying the chillies. The leader of the farmers' group shared that the auction experienced political risks that resulted in the farmers selling to petty traders. Often, some farmers were involved in personal conflicts with the operators, usually concerning the payment process. Moreover, the large traders preferred to buy from petty traders, rather than the auctions, because they did not have to compete in bidding. The group always tried to make precise calculations, because their reputation was at a stake if there was a miscalculation in payments. Reciprocally, the group could issue a supplementary bill to any trader whose payments were deficient. The group mitigated sustainability risks by recommending that the farmers always supply high-quality chillies to the auction. In return, the auction compensated the farmers with price certainty and service provisioning.

The family-run auction leader agreed that unpredictable prices were a major commercial risk. One of the traders explained that they only took orders from buyers in Jakarta or Sumatra to find chillies for specific volumes at specified prices. Although rates fluctuated, the family was committed to paying farmers in cash. In addition, the family responded to a request expressed in the community to share the daily auction price with the other two trading spots in the village. The leader shared that the traders who placed bids in his auction also bought from the other two trading spots; however, he said that it did not affect his business because he had enough

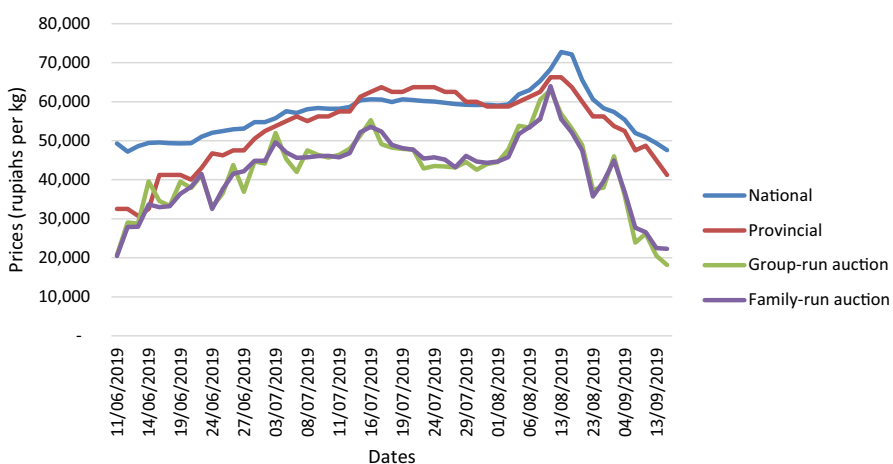


Fig. 2 Comparison of national, provincial, and auction chilli prices in June–September 2019, Source: PIHPS_Nasional (2019) and primary data

sales already. Regarding produce, the leader always asked his suppliers to bear quality in mind, and he rejected chillies that he deemed to be of insufficient quality. He shared his expertise in growing chillies and reinforced the growing season rule to avoid pests and diseases, ensuring quality and productivity.

4.5 Comparing the Farmer-led Auctions

The results describe how both auctions partly replaced the petty traders in the village, although the farmers still sold chillies to these traders when they needed immediate cash. When comparing the practices however, the family-run auction appears to be altering the engagement of the smallholders with competitive markets, which is an insight similar to Hideto Dato et al. (2020), who noted that organisations with smaller boards perform better than those with an extensive formal governance model. In both auctions, a small group of operators handled the day-to-day decision-making affecting complicated transactions (Aoki & Hayami, 2001). Moreover, the group-run auction had to shoulder additional costs for compensating the collective meetings for a similar service offered by the family business (Ton, 2008). Our comparative analysis shows that both auctions consistently acted as intermediaries between poorly resourced farmers and traders (Abebe et al., 2016), but with different qualities of inclusion for the smallholders.

The study reveals the auctions' capacities to refashion the terms of inclusion in their everyday practices (Table 4), although influencing price setting was beyond the span of influence of both auctions, meaning the farmers remained price takers. The family-run auction was however able to ensure direct payment, which appeared to be a favourable condition for smallholder farmers (Latynskiy & Berger, 2016; Sahara et al., 2013). The ownership structure of the family-run auction made it possible for it to access a loan from the bank, which was more difficult for the member-based auction (Bekkum & Bijman, 2006). The comparative analysis suggests that membership of the group-run auction did not imply a willingness for members to supply to the organisation, consistent with what was discussed by Hao et al. (2018). The group-run auction was able to sustain the provision of seed loans, but was not able to continuously arrange cash payments; therefore, small chilli farmers continued to sell part of their chillies to petty traders to ensure cash flow.

This points to two key conditions for making collective trading an attractive option for smallholder farmers: the capacity to secure direct payments and to handle the risk of delayed payments. The group-run auction's limited capacity to provide direct payment signifies the active exclusion of resource-poor farmers who chose to sell to petty traders (Xu, 2019). This was particularly evident when the auction did not manage to pay cash even though the members shared the ownership of the auction. The direct involvement of smallholder farmers in taking business risks appears to be inappropriate for their situations. By contrast, the family-run auction was a predictable and transparent buyer. Our study suggests that the member-based trading organisation is constrained in their capacity to influence smallholder farmers' terms of inclusion. For resource-poor smallholder farmers, the family-run auction may be the best bet under specific circumstances.

5 Discussion and Conclusion

The comparison of two farmer-led auctions brings nuance to the prevalent emphasis on co-operative ownership structures in collective marketing endeavours. In research on collective action by farmers in markets, there is a strong emphasis on the internal governance of collective economic groups (Sacchetti & Tortia, 2016). Our comparative analysis of two farmer-led auctions, with either a collective ownership structure or a family-run business set-up, indicates that marketing intervention models in rural areas anchored in an exclusive preference for member-based co-operatives overlook the practices and precise conditions for reconfiguring smallholder farmers' terms of inclusion in markets. Our study highlights that the auctions, as a form of inclusive business, can be an attractive option for chilli smallholders with less capacity to take risks and who need direct payment. Our analysis reveals that the family-run auction prioritised risk-handling practices by accessing external financial support to address delayed payments from traders or cope with defaulting traders. The family-run auction stayed close to the farmers' motive to sell to petty traders by offering cash on delivery. Therefore, a collectively owned trading organisation does not necessarily imply an inclusive business concept when the organisation cannot acquire sufficient working capital. This insight contrasts with intervention strategies that rely strongly on collective ownership as a condition for providing smallholders with an opportunity to capture value (Markelova et al., 2009). The co-operative model emphasises collective ownership as the distinguishing dimension of inclusion in collective trading, whereas our study shows that private ownership of farmer-led enterprises in trading is not necessarily a threat to terms of inclusion.

Our comparative analysis implies a trade-off between inclusion, decision-making and performance as reliable buyers effectively influencing the terms of entry in competitive markets, as discussed by Bernard and Spielman (2009); Mwambi et al. (2020). It reveals that there was an interplay between the internal members' interests and external negotiation with the traders in the two auctions. Our study shows the importance of the capacity to balance members' or clients' interests and meet demands (Sacchetti & Tortia, 2016). The high inclusion of farmers in decision-making may come at a cost. Our study alludes that even if the family-run auction benefitted the wealthy family, a critique raised by van Westen et al. (2019); Wangu et al. (2020), it is still relevant to acknowledge that more prosperous farmers running a trading hub can sustain direct payments for a longer time in cases where their payment is delayed (Poulton et al., 2010). Consequently, a focus on everyday business practices shifts attention from shared ownership and collective action to practices that influence or refashion different terms of inclusion, which expose how inclusive business mobilises resources and capacities to navigate real markets.

The comparative analysis complements common ways of evaluating farmer-led forms of collective trading. Price setting and income have been the exclusive focus in studies of farmers' inclusion in market access to show the viability of a business (Wach, 2012), for example, in the case studied by Mhembwe and Dube

Table 4 Changes in the inclusion of smallholder farmers enacted in the practices of the farmer-led auctions

Four dimensions of inclusion	Group-run auction		Family-run auction	
	Change	Practice	Change	Practice
Ownership	The trading point ownership was shifted from the petty traders in the village to the members	The farmers' group leader initiated an auction system with a trader, which then developed into an auction, with premises owned by the group	Trading point ownership shifted from petty traders to the group auction, and then shifted to a farmer family embedded in the community	The farmers' group leader took over the auction, then organised its operations within premises owned by the family
Voice	The operators took over the trading decisions from the petty traders in the village	The operators of the auction mastered the trading skills, and members decided collectively how to run the auction	The family took over the trading decisions from the petty traders in the village	The family mastered the trading skills and decided how to run the auction and embed it in the community
Reward	The group took over the provision of seed loans from the petty traders	The group accumulated annual profits as its working capital; however, they were unfortunately insufficient to cover cash payments	The family took over the provision of input loans from the petty traders	The family accumulated working capital, sustained capacity to arrange cash payments, and accessed a bank loan to provide working capital
Risk	The group-run auction took over the risk of delayed payment by traders for a limited period	The group did not access a bank loan to finance the auction because no one was willing to take the risk of providing the collateral	The family took over the risks of providing cash payments from petty traders for the whole season	The family channelled other income sources to the auction and saved money as a capital base for the auction

Source: primary data

(2017). Our study highlights the terms of inclusion other than price that are relevant for smallholder farmers. Accordingly, we shift attention from price taking to risk taking. In the analysis of inclusive business, individual farmers' opportunity to carry business risks is proposed as an indicator of inclusiveness (Chamberlain & Anseeuw, 2018). Smallholder farmers are hampered in accessing markets because they have limited resources, are vulnerable to risk and lack market information (Bijman et al., 2007). Given their resources, economic organisations endowed with assets are relatively more resilient in dealing with risks (Barham & Chitemi, 2009). This is consistent with the observation of Fafchamps and Hill (2005) that wealthier farmers can facilitate sales. In the case of the family-run auction, capital-poor farmers relied on endowed farmers to influence their terms of inclusion in markets. Moreover, the wealthier farmers transferred technical and managerial skills to farmers (Lu et al., 2010). Therefore, we propose, in line with Kusumawati et al. (2013), to first analyse how the poorly understood intermediary practice of trading, and thus running an auction, works and is embedded in the wider social fabric, before suggesting the by-passing or exclusion of a poorly understood element in the agri-food chain.

We conclude that it is important to look beyond established organisational models and find ways to diagnose the inclusiveness effects of everyday business practices (Borda-Rodriguez et al., 2016) used to navigate the real conditions of sourcing and selling in dynamic markets (Johnson & Berdegue, 2004). We consider it unwise to induce organisational models for market access that primarily emphasise the principle of 'one member, one vote'. Development agencies' support for smallholder farmers' market access better focus not only on collectively owned organisations and bypass other ownership structures. Our study has exposed the practices and capacities enacted in auctions, as an expression of collective trading, to shape the terms of inclusion and, most importantly, handle the risks of trading at the aggregate level for smallholder farmers who have little capacity to take risks.

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Declarations

Consent to participate This research acquired the consent of the research participants. The researchers informed each participant about the aim of the study and their anonymity.

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