Masyarakat, Kebudayaan dan Politik
ISSN: (Print 2086-7050) / (Online 2528-6013)
https://doi.org/10.20473/mkp.V38I22025.122-138

The creativity of farmers participating in contract farming to drive the economic activities of rural area

Kreativitas petani yang terlibat dalam pertanian kontrak untuk menggerakkan kegiatan ekonomi pedesaan

Rustinsyah Rustinsyah[1*], Djoko Adi Prasetyo[1], & Pinto Rukmi Handayani[3]
[1]Department of Anthropology, Faculty of Social and Political Sciences, Universitas Airlangga
[2]Management Study Program, Faculty of Economy and Business, Universitas Kutai Kartanegara
Address: [1]Jalan Dharmawangsa Dalam Selatan, Surabaya - 60286, East Java, Indonesia
[2]Jalan Gunung Kombeng 27, Kutai Kartanegara - 75512, Kalimantan Timur, Indonesia
E-mail: rustinsyah@fisip.unair.ac.id

Article History: Received 1 August 2023; Accepted 10 June 2025; Published Online 29 Juni 2025

Abstract

This study elaborates on the creativity of melon farmers to overcome problems and gain benefits in this inherently high-risk farming. The research was conducted in the villages of Plumpang District, an area in East Java known for its quality melon produce. Data were collected from 100 respondents from these villages. Respondents were selected purposively by considering demographic and farming characteristics. The relationship between contract farming and farmer creativity was examined using Spearman Rank analysis. Statistical test confirms the relationship between contract farming practices and melon farmers' creativity. The low correlation is due to the determining factor, namely, extreme climatic conditions, which have a damaging impact on crops. Furthermore, an increase in investment ranks first among the nine indicators of farmer creativity. This implies that contract farming practice is highly correlated with increased investment. Moreover, the majority (75%) of farmers' profit from contract farming increases investment. This study concludes that these creative farmers empowered by contract farming promote economic activity in rural areas. These findings will be useful as a starting point for future research on the effects of contract farming as a driver of economic activity and its subsequent contribution to the sustainability of rural development.

Keywords: creativity of farmers; melon farmers; contract farming; sustainable development

Abstrak

Penelitian ini menguraikan kreativitas petani melon untuk mengatasi masalah dan memperoleh keuntungan dalam pertanian yang berisiko tinggi ini. Penelitian dilakukan di desa-desa Kecamatan Plumpang, sebuah daerah di Jawa Timur yang terkenal dengan hasil melonnya yang berkualitas. Data dikumpulkan dari 100 responden dari desa-desa tersebut. Responden dipilih secara sengaja dengan mempertimbangkan karakteristik demografi dan pertanian. Hubungan antara pertanian kontrak dan kreativitas petani diperiksa menggunakan analisis Spearman Rank. Uji statistik mengonfirmasi hubungan antara praktik pertanian kontrak dan kreativitas petani melon. Korelasi yang rendah disebabkan oleh faktor penentu, yaitu kondisi iklim ekstrem, yang berdampak merusak pada tanaman. Lebih lanjut, peningkatan investasi menempati urutan pertama di antara sembilan indikator kreativitas petani. Ini menyiratkan bahwa praktik pertanian kontrak sangat berkorelasi dengan peningkatan investasi. Selain itu, sebagian besar (75%) keuntungan petani dari pertanian kontrak meningkatkan investasi. Penelitian ini menyimpulkan bahwa petani kreatif yang diberdayakan oleh pertanian kontrak ini meningkatkan kegiatan ekonomi di daerah pedesaan. Temuan ini akan berguna sebagai titik awal untuk penelitian di masa mendatang tentang dampak pertanian kontrak sebagai penggerak aktivitas ekonomi dan kontribusinya terhadap keberlanjutan pembangunan pedesaan.

Kata kunci: *kreativitas petani; petani melon; pertanian kontrak; pembangunan berkelanjutan*

Introduction

Most of the world's poor depend directly or indirectly on agricultural activities to survive (Fischer & Qaim 2012). They are small-scale farmers who live in remote areas with limited infrastructure, making it difficult for them to access market opportunities (Ha et al. 2015). For this reason, they sell their produce to intermediaries in the area they live in. The intermediaries, then, take a commission for their

service. The amount of the commission depends on the agreement between the two parties. Moreover, the commission rate depends on the commodity's selling price. A decrease in such prices might push the commission rate above 20% of the price (Rustinsyah & Prasetyo 2019). A problem faced by small-scale farmers is poverty: the lack of cash to start commercial farming. They need money to buy seeds, pay workers' wages, and buy chemical fertilizers and pesticides. Moreover, the problem of funding scarcity can become more complicated due to harvest failures and crop changes, which occur when farmers change the crops they grow, for example, from grains (rice or corn) to horticultural crops (vegetable or fruit). Such changes require large working capital.

A strategy of these farmers to alleviate poverty is to gain market access to agricultural products (Ha et al. 2015). Johanson & Saint (2007) and Ayinke (2011) indicated that most small-scale farmers in sub-Saharan Africa who produce commercial agricultural products face the problem of accessing favorable markets. Farmers in South Africa face a challenge to integrate with the market. In developing countries, a positive strategy for agricultural innovation and increasing farmer participation in the market is by practicing a contract farming model (Minot 1986, Eaton & Shepherd 2001). Some scientists also advocate contract farming as a strategy for small-scale farmers to integrate into profitable markets (Louw et al. 2007, Baloyi 2010, Ayinke 2011). This is supported by Johanson & Saint (2007) and Minot (2012), who suggested that, in the age of biotechnology, contract farming provides access to broader markets, thereby increasing farmers' earnings. According to Rustinsyah & Prasetyo (2019), in the context of Indonesia, rice farmers form social relationships with village traders to facilitate the speedy sale of crops at a favorable price.

However, the issue of how small-scale farmers enter the modern market chain is still a subject of debate (Ortmann & King 2010, Groenewald et al. 2012, Shiimi et al. 2012). According to Berdegué et al. (2008), the keys to success in contract farming are collaboration between trained and organized small-scale farmers with agribusiness companies and the availability of supporting and conducive policies. Hence, Schalkwyk (2011) pointed out that agribusiness companies in southern Africa operate commercially in a sustainable location. The companies are well-positioned and have experience and knowledge in providing appropriate services to support the development of successful commercial smallholders. They can even guarantee market access opportunities so that small-scale farmers can sell their agricultural products.

Despite the benefits of contract farming, some concerns have emerged about sharing such benefits between the farmers and the investors. Some believe that farmers will benefit less from this arrangement because investors have relatively higher power, enabling them to influence regulatory requirements (Sivaramakrishnan & Jyotishi 2008, Von Hagen & Alvarez 2011). Other literature emphasizes a significant issue involving farmers and sponsors as buyers (Glover & Kunsterer 1990). Other issues in the contract farming system include the intensive farming system, which necessitates a large amount of capital, and the nature-related risks associated with open farming. This is the case with contract farming between the small-scale farmers in Plumpang district villages and their sponsors. These farmers must be creative to reap the benefit from contract farming and overcome its challenges. Therefore, this paper addresses the following question: how can melon farmers use their creativity to overcome problems inherent in contract farming and gain the most benefit out of it?

Contract farming is a commercial relationship between a sponsor and an individual or group of farmers. This is a business model in which the sponsor buys agricultural products in exchange for services and other benefits. Such services are sometimes provided not only by private companies but also as a model of multi-actor partnerships between companies, governments, and NGOs (Prowse 2012). Albeit contract farming is a commercial initiative, in principle, it is considered an answer to problems faced by small farmers such as market access, capital financing, and technology (Eaton & Shepherd 2001, Da Silva & Rankin 2013).

Contract farming in developing countries varies according to the actor. Companies that perform out contract farming include processors, exporters, and supermarket chains. Only a few small-scale and wholesale traders offer such contracts. This is due to the significant fixed costs associated with the system (Minot & Ronchi 2015). According to Hueth et al. (1999), contract farming has three functions. The first is as a means of coordination that allows individual actors' decisions (e.g., regarding the allocation of resources) to remain in harmony with the interest of other partners, such as coordination

to ensure the quantity and quality of production, and when and where to supply the products. Each partner knows the conditions and obligations so that every action is taken in favor of the contract's objectives. The second is to provide incentives to motivate better performance. The contract includes various compensations available for the farmers, including price agreements and price determination mechanisms. The third is the allocation of financial risk. One example is an agreement on how farmers can reduce the risk of low yields. However, Bogetoft and Olesen (2004) explain two functions: coordination and motivation. Incentives are associated with the motivation function, and risk sharing is associated with the compensation function.

Several companies have chosen to enter contract farming and the development of the modern market. Such a market generates demand for agricultural products that rely on obtaining them from suppliers (Reardon & Berdegue 2002, Da Silva & Rankin 2013). As a result, demand in modern markets is higher than in traditional markets. Hence, coordination is required to ensure that the products remain available. Contract farming, according to Bijman (2008), is an institution that regulates, coordinates, and controls the agricultural product chain. This is especially noticeable in countries where access to agricultural land is difficult.

The following are some requirements for contract farming. First, the company offers contracts to farmers who meet specific requirements (e.g., land ownership, irrigation system, and land size). Contracts are not distributed to random farmers but only to those chosen through strict screening (Minot & Ronchi 2015). Second, the company demands a certain quality and quantity of agricultural products. Such levels are adjusted to geographical, political-economic, and business environments (Jia & Bijman 2014), for example, whether the business environment is supported by geographical conditions and infrastructure (roads, land type, water availability, climate, etc.).

Third, contract farming transactions are influenced by public policies and institutions. Moreover, political–economic policies affect land ownership rights, market regulations, trade policies, risks related to economic upheaval, financial services, conflict resolution, investment subsidies, business development services, farmer organizations, etc. Examples for such policies include governmental involvement in the provision of services and administration and support for small farmers, such as providing loan and production inputs. These policies also include decisions in placing agribusiness companies as leaders and farmers as suppliers of agricultural products (Patrick 2004).

Contract farming is comparable to a farming business partnership. According to Article 3 of the Decree of the Minister of Agriculture No. 940/KPTS/OT.210/10/1997 concerning guidelines for agricultural business partnerships, agricultural business partnerships are based on the principles of equality, harmony, and improvement of farmer groups' skills with the help of partner companies through the realization of partnership synergies: (a) mutual needs; (b) need to collect results; (c) mutual reinforcement; and (d) mutual benefit. In mutual needs, partner companies require a supply of raw materials and farmer groups. Meanwhile, in mutual reinforcement, both farmer groups and partner companies pay attention to moral responsibilities and business ethics so that it will strengthen each other's position in increasing their business competitiveness. Lastly, in mutual benefit, both farmer groups and partner companies experience increased income and business continuity.

Furthermore, according to Article 4 of Chapter II on Partnership Patterns, agricultural business partnerships can take the form of (a) plasma core, (b) sub-contracts, (c) general trade, (d) agency, or other forms, such as agribusiness operational cooperation. Contract farming has an impact on the development of agricultural activities in rural areas—a contract farming study conducted by PT. Gudang Garam and tobacco farmers in Bojonegoro compared the income of participating farmers and non-participants. The findings show that the average tobacco production of participants was higher than that of non-participants. However, the impact on improving farmer welfare has not been studied. Another case in point is the agricultural agreement between PT Moena Farm and mangosteen growers. PT Moena Farm helped small farmers who were involved in the contracts. The company assisted in the planting and maintenance of trees, agreed to purchase the fruit, and provided sorting, standardization, and packing services. Despite the fact that the partnership was successful, it was put on hold due to the Asian economic crisis (Patrick 2004).

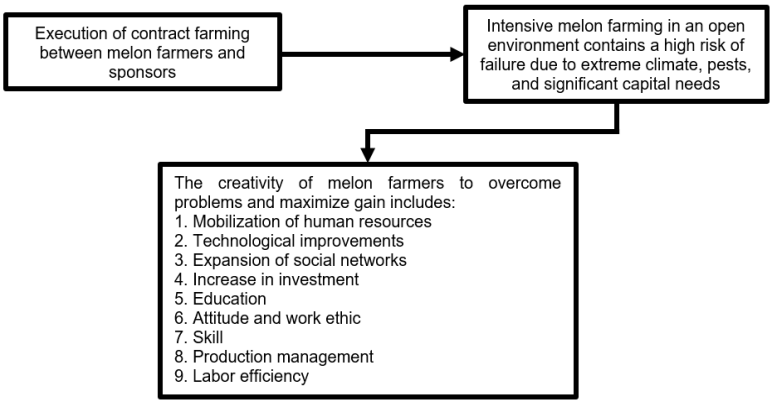

Figure 1.
Conceptual framework of melon farmer creativity
Source: Created by the author

Intensive melon farming requires much cash to pay for laborers, procure production inputs (seeds, fertilizers, pesticides, etc.), prepare for risks (natural, price, and other risks), and manage production. Therefore, these farmers must be creative so that their endeavors will be successful and profitable. Farmer creativity is implemented and measured in the following areas: mobilizing human resources, improving technology, expanding social networks, increasing investment; education; attitude and work ethic; skills; production management, and labor efficiency. Figure 1 presents the conceptual framework of melon farmers' creativity in terms of contract farming.

Research Method

Melon farmers from the Plumpang district were involved in this study (Figure 2). In East Java, these villages are known for producing high-quality melons. In May 2019, the melon farmers organized a melon festival in the villages, and it was attended by the Governor of East Java. Melon farming has the potential to stimulate economic activity in the countryside and rural areas. The success of melon farming generates large profits, which drive the economy, improve welfare, and accelerate rural development.

The farming pattern in the Plumpang district changes with the seasons. During the rainy season, farmers plant melons in higher elevation areas from December to the end of May Because of the high elevation, the agricultural land would not be submerged in heavy rain and high water, making it unsuitable for rice cultivation. However, melon farming still necessitates the use of water. As a result, farmers rely on rainwater to meet their water needs. Farmers tend to focus more on rice planting during the dry season in June, using water from the Bengawan Solo River managed by *HIPPA* (*Himpunan Petani Pemakai Air* – Association of Water-Using Farmers).

The Bengawan Solo River runs through the Plumpang district (see Figure 2). Agricultural activities in the villages are quite active. Rice is planted twice a year, whereas horticultural plants like melons are planted only once. Despite being planted only once a year; melon farming yields a high profit. According to several melon farmers, planting melon is currently more profitable. A successful melon harvest would result in a 100% rate of return. The initial investment required to grow melon is substantial. To illustrate, the capital needed for one hectare of a melon farm can reach 100 million rupiahs. This large sum of money is used to pay for labor and buy production inputs (fertilizers, plant supplements, equipment, mulch, etc.). One hectare of the well-maintained melon farm can produce up to 30 tons—equivalent to 150 million rupiahs. Therefore, within just three months, the farmer could make a profit of approximately 50 million rupiahs.

This is mixed-methods research, combining qualitative and quantitative methods. The qualitative approach brings meaningful and beneficial results (Pope et al. 2000) for supporting the quantitative data. Data collection is conducted in several stages. The first stage is qualitative methods. The population used in this study was melon farmers in Plumpang district, whereas the sample used was melon farmers who established a partnership with sponsors. The second stage was to analyze the contract farming model and its correlation with the creativity of melon farmers in rural areas.

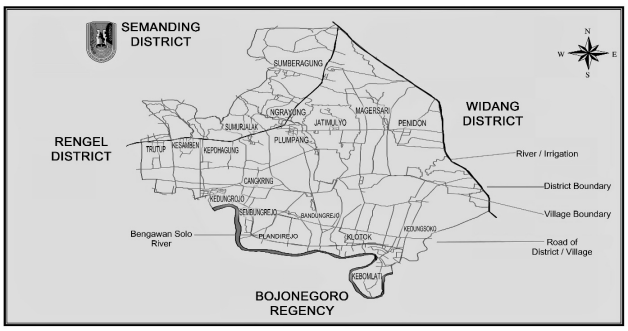

Figure 2.
Map of Plumpang District
Source: Author's elaboration based on Google Maps 2019

A survey was conducted among melon farmers who had formed partnerships with sponsors. According to the *"Sumber Buah"* Association of Melon Farmers, approximately 300 melon farmers formed partnerships with village and corporate sponsors in 2019-2020. The survey was conducted on 100 respondents as sponsor partners.

The validity test for the questionnaires is the moment product correlation (Pearson correlation) between the scores of each item and the total score; it is often referred to as inter item-total correlation. The test criteria are carried out by comparing the r count with the *r* table at the level of α = 5% and α = 1%, with the following formula:

$$r_{x,y} = \frac{n(\sum_{i=1}^{n} x_i y_i) - (\sum_{i=1}^{n} x_i \sum_{i=1}^{n} y_i)}{\sqrt{\left(n\sum_{i=1}^{n} x_i^2 - (\sum_{i=1}^{n} x_i)^2\right)\left(n\sum_{i=1}^{n} y_i^2 - (\sum_{i=1}^{n} y_i)^2\right)}}$$

Notes:
$r_{x,y}$: product–moment correlation
x_i : score of the question item-i
y_i : score of the question item-i
n : number of research respondents

Based on the validity test results, seven items out of 40 question items are invalid, which were proven from a non-significant *p-value* (higher than the 0.05 significance level). Apart from validity, the reliability of the instrument was measured using the Cronbach's alpha formula:

$$r_{11} = \left(\frac{k}{k-1}\right)\left(1 - \frac{\sum \sigma_b^2}{\sigma_t^2}\right)$$

Notes:
r_{11} : Instrument reliability
k : Number of questions
$\sum \sigma_b^2$: Number of item variances
σ_t^2 : Total variance

The results were then interpreted with the level of reliability coefficients, as follows Table 1:

Table 1.
Interpretation of correlation coefficients

Coefficients	Level of significance
0.800–1.000	Very high
0.600–0.799	High
0.400–0.599	Medium
0.200–0.399	Low
0.000–0.199	Very low

Source: Created by the author

The instrument testing criteria are reliable if the *r* count is greater than the table at a significant level of 5% (Arikunto 2006). Based on the reliability test, Cronbach's statistical value is 0.728. This value is greater than the limit value to meet the reliability of 0.6; thus, the questionnaire is reliable. Table 2 presents the results of the reliability test.

Table 2.
Results of reliability test

Cronbach's Alpha	N of Items
.728	100

Source: Created by the author

Furthermore, this study explains the correlation between the practice of farming contracts and the creativity of melon farmers. The variables of contract farming in this study are presented in Table 3.

Table 3.
Variable used in the study

Variable	Indicators
Practice Contract –farming	1. Intensive farming system
	2. Many risks
	3. Cash capital
The creativity of melon farmers	1. Mobilization of human resources
	2. Technological improvements
	3. Expansion of social relations networks
	4. Increase in investment
	5. Education
	6. Attitude and ethic of work
	7. Skill
	8. Production management
	9. Labor efficiency

Source: Created by the author

Spearman rank correlation analysis was used to analyze the correlation between contract farming and the creativity of melon farmers to overcome problems and obtain benefits. This analysis was chosen to determine the relationship between the two variables based on the Likert scale. Spearman rank correlation coefficient was calculated using the formula listed in Sugiyono (2009). If no equal rankings exist, the following formula is used:

$$\rho = 1 - \frac{6\sum_{i=1}^{n} b_i^2}{n(n^2-1)}$$

where ρ is the Spearman Rank correlation value; b_i^2 is the square of the difference between each pair of Rank; *n* is the number of rank pairs for Spearman. If similar ranks exist, the following formula is used:

$$\rho = \frac{\sum_{i=1}^{n}(x_i-\bar{x})(y_i-\bar{y})}{\sqrt{\sum_{i=1}^{n}(x_i-\bar{x})^2(y_i-\bar{y})}}$$

Then, the critical value was determined. This study uses an error rate of 5%, denoting a *p-value* less than α (5%) shows a significant relationship (i.e., H_0 is rejected and H_1 is accepted). Furthermore, a simple interpretation was made by comparing with table ρ. If the amount of ρ is more significant than the ρ table by 5%, it indicates a significant relationship.

Table 4.
Guidelines for interpreting correlation coefficients

Interval coefficient	Level of correlation
0.00–0.199	Very low
0.20–0.399	Low
0.40–0.599	Medium
0.60–0.799	Strong
0.80–1.000	Very strong

Source: Created by the author

Table 4 presents the guidelines for interpretation. The guideline criteria for correlation coefficients (Sugiyono 2009) identified the high and low correlation coefficients or provided interpretations of correlation coefficients. Spearman rank correlation analysis was performed using SPSS 17.

Results and Discussion

This chapter discusses and analyzes several things in more detail, including: (1) Contract farming between the sponsors and melon farmers; (2) Characteristics of respondents in this study; (3) Contract farming and the creativity of melon farmers, and; (4) Weight and rank of melon farmers' creativity.

Contract farming between the sponsors and melon farmers

Melon farmers establish contract farming with sponsors from their villages. These sponsors are fruit trading company and national agricultural materials company. Moreover, these companies send teams of experts to coach and guide the farmers.

The first sponsor is a fruit trading company based in Klotok village that specializes in wholesale produce buying. This company also provides loans to farmers for agricultural needs, such as chemical fertilizers, plant supplements, and agricultural equipment. The company's owner is a 35-year-old wealthy farmer with a high school diploma from the Klotok village. He carries on his parents' legacy as farmers, who pioneered melon farming in this village in 2005. As a farmer, he owns and manages 10 hectares of farmland spread across several locations that he purchased patch by patch. Of the 10 hectares of agricultural land, five hectares are always planted with rice. Other farmers in the village use a production sharing system to till these rice paddies. The remaining five hectares are planted with melon in January and harvested in May. The land is then planted with rice from June to November, with two harvest periods.

Although the owner is a successful melon farmer whose farming activities have become examples for other farmers, his principal economic activity is wholesale fruit trading. All trading processes, including sorting, packing, and transporting, are coordinated by the owner from his home. He trades melon, watermelon, cantaloupe, orange, mango, stink bean, and other fruits and vegetables. Fruits are also purchased from farmers outside the district, in the vicinity of Tuban and Lamongan. The fruits are then sold in Jakarta and trucked there. He has three pickup trucks and one minitruck.

Additionally, he employs ten full-time employees to run his business. Workers pick up the fruits, sort them, pack them, and load them into the truck during the fruit season. From December to February, the workers tend to the melon plants on the farmland. Every day, the sponsor sends the three trucks to Jakarta. Each truck carried seven tons of melons. The profit earned by the sponsor is approximately 10% of the price of the fruit. His daily income reaches approximately 12.5 million rupiahs. Selling fruit produce to Jakarta is not difficult because of the traders that will accommodate them. The sponsor also trades mangoes. To maintain a stable supply of mangoes, he established a partnership with residents by renting their mango trees. The rental price is 170,000 rupiahs per tree per year. His company would then take care of the tree and harvest the fruit. The time of the study was during the mango season. The selling price of mango in Tuban is 8,000 rupiahs per kilogram. The company is currently expanding its marketing network to other significant areas like Surabaya, Bali, and Lombok.

Melon farmers in these villages are already acquainted with the owners of money lenders because they come from the same villages. As a result, the loan application process and approval are relatively straightforward. These farmers typically come to the owner's houses to apply for loans. First, they propose lists of materials and equipment they need. The money lenders then calculate the total price according to market price. If the price is agreed upon, the money lenders procure the farmers' materials and equipment. Once all the materials and equipment are ready, the farmers are contacted to get the items. This loan (the total price of the items) will later be paid with the produce harvested with no interest payable.

This pattern of contract farming does not have any written agreement. Instead, it is based on trust between the farmers and the sponsors. If a farmer fails to pay the loan on the due date, the sponsor will wait until the farmer can finally pay. Although a non-formality exists in such contract farming, the sponsors record all the loans they give. The farmers, then, are morally obliged to sell their harvest to the sponsors as payment for the loans.

Usually, the sponsors only buy high-quality produce. The low-quality produce is sold to intermediaries who come to these villages during the harvesting season. The sponsors buy these products at market price, so bargaining is not needed. The sponsors benefit from such contract farming because they: (1) obtain supplies of quality produce (melon), and (2) maintain good relations with the farmers. A good relationship between these parties will be beneficial for agricultural activities and the overall economic activities of the villages, for example, looking for labor and discussing farming issues.

The second sponsor is an agricultural supply store. Agricultural supply stores sell inputs needed for agricultural production, such as seeds, fertilizers, plant supplements, pesticides, and insecticides. These supply stores are typically large, national companies with local branches. These companies form relationships with farmers by sending experts to market their products and assist farmers in their use. Once the farmers agree to purchase the products (either in cash or on credit), this team of experts will assist them throughout the farming process, from seed preparation to harvesting. They also advise on how to use the company's agricultural chemicals. If the initial transaction was made on credit, the farmers must pay back their debt at the end of the harvest season.

Approximately 25% of farmers lost income during the 2019 planting season. Some of these melon farmers have suffered losses of up to 50 million rupiahs. The loss was caused by severe weather, which resulted in heavy rain that soaked the plantation. Melon plants that are submerged are susceptible to disease, pests, and rotting. Some companies provide compensation to farmers, but the compensation has no provision.

The companies sponsoring the event also participated in a melon festival attended by the Governor of East Java Province. In addition, they also set up booths showcasing agricultural products (seeds, chemical fertilizers, agrochemicals, etc.). This participation increases farmers' trust in companies in the farm sector. Contract farming allows local farmers to produce agricultural products on their land, ensuring that the benefits of land-based agricultural investments remain in their hands (Adam & Agegnehu 2023). Contract farming is an effective strategy to improve the market competitiveness of farmers' products and a tool to improve farmers' crop cultivation, income sustainability, and input security (Machimu 2024). Contract farmers earn greater profits than non-contract farmers, mainly due to better price realization, despite having lower yields and higher production costs than non-contract farmers (Kaur & Singla 2024).

The contract farming environment in the surveyed regions is highly polarized and characterized by fundamental conflicts of interest between agribusinesses and farmers. The main factors hindering contract farming engagement include a lack of quality seeds, trust, entrepreneurial skills, and formal contractual agreements (Musa et al. 2018). Specialized suppliers to supermarkets in rural Java show that smallholders can engage in contract farming with the advent of retail modernization (Ikeda & Natawidjaja 2022). Therefore, some argue that, in many cases, contract farming has increased income inequality in rural areas (Meemken & Bellemare 2020). Cost-cutting efforts by buyers and their impact on farmer participation characterize the influence of contract farming on the supply of agricultural products and all stakeholders (Chen & Chen 2021).

Farmers with marketing contracts allocate more household labor to off-farm activities, resulting in higher off-farm income. Conversely, farmers with contracts have a larger supply of oil palm plantation resources, which translates into higher incomes. Both types of contracts are associated with different livelihood strategies, and disaggregated analyses of different income sources are essential for a deeper understanding of the underlying mechanisms (Ruml et al. 2021). Interaction and reciprocity have a significant positive impact on trust; (2) trust has a significant positive impact on farmers' willingness to renew their contracts. In addition, reciprocity and interaction have an indirect impact on willingness to renew contracts through trust, and (3) perceived economic value can significantly increase farmers' willingness to renew contracts, acting as a mediator between trust and this willingness (Gao et al. 2024). The more rice farmers join contract farming, the lower their farm income (Olounlade et al. 2020).

Characteristics of respondents

Table 5 shows that most (75%) respondents who take part in contract farming are aged between 20 and 50 years. Those who form partnerships with sponsors tend to enjoy greater benefits. Of the farmers with contract farming, 13% graduated with either a diploma degree or bachelor's degree. They are single youth of the villages, some of whom work as religion teachers and are active in village organizations.

The agricultural land used to grow melons is either owned by the farmers (56%) or rented (25%). Those who own land acquired it as an inheritance from their parents or land purchases. The rest rent the land they work on for either one period of melon planting or the whole year. Those who rent for 3–4 months to plant melons must pay a rental fee equal to the cost of preparing the land for rice cultivation. For example, for an area of 3000 square meters, the rental fee for three months is 1–2 million. Landowners do not set a fixed fee because the agricultural land cannot be planted with rice during the rainy season anyway.

Melon cultivation has an ideal productivity of melon cultivation of around 30 tons per hectare. However, this year's harvest season has seen varied yields due to heavy rainfall in some areas resulting in floods, rat infestation, and diseases that ruin the harvest. Consequently, some farmers reap a bountiful harvest, whereas others suffer from loss. Table 5 shows the characteristics of farmers as respondents who are involved in contract farming with the sponsors.

Most farmers (75%) who establish contract farming gain various amounts of profit. The most significant loan amount given to an individual farmer is 50 million. The loan was obtained from sponsors residing in the same village. Most sponsors' loans (60%) amount to less than 20 million rupiahs. Apart from getting loans from sponsors, farmers also use their savings or apply for other loans from Bank Rakyat Indonesia (a state-owned bank). This money is used to buy agricultural supplies from companies that send teams of experts.

Respondents who enter contract farming come from various villages in the district, namely, Klotok, Lingit, Dolok, Kawis, Landean, Karang Anyar, and Magersari. Again, these farmers are already familiar with the company owners who act as sponsors because they come from the same area. Other farmers who enter contract farming with agricultural supply companies from outside the villages also have good relations with the companies' experts who are sent to accompany and assist them. They frequently get in touch with each other to discuss issues in melon farming. Such discussion would occur at the farmers' houses, in the fields, or by phone.

The quantitative analysis empirically proved that household head, company consulting activities, company scale, cooperative membership, quality certification, and location with good road access can significantly and positively influence farmers' participation in contract farming. Cooperative membership and quality certification are the most important factors. Contrary to expectations, village head education and access to good land do not increase farmers' participation in contract farming. Additionally, poor land quality may deter farmers from participating in contract farming (Hoang & Nguyen 2023). At the same time, according to the resource characteristics of smallholders, they are encouraged to cooperate with companies in depth and develop targeted contracts (Liang et al. 2023). Smallholders: do not engage in contract farming mainly due to unfavorable contract terms; quit contract farming mainly because they view contract farming as an exploitative practice that lacks fairness; and participate in contract farming mainly to obtain essential agricultural inputs and to access key markets (Vamuloh et al. 2020).

Table 5.
Characteristics of respondents (N = 100)

Characteristics	Categories	Frequency	Percentage (%)
Age	20–35 years' old	31	31
	36–50 years' old	54	54
	>50 years old	15	15
Educational background	Out of School	1	1
	Primary School	21	21
	Junior Secondary School	36	36
	Senior Secondary School	29	29
	Diploma/Bachelor's Degree	13	13
Status of agricultural land for melon plants	Owner-farmer	56	28
	Renter-Farmer	25	10
	Cultivator-Farmer	19	12
Area of acquired agricultural land	< 0.3 (in hectare)	59	59
	0.3 - <0.5 (in hectare)	15	15
	1.5 - <1 (in hectare)	15	15
	1 - <3 (in hectare)	11	11
Total Production	1000–5000 (in kilogram)	57	57
	6000–10000 (in kilogram)	28	28
	>10000 (in kilogram)	15	15
Advantages and disadvantages	**Advantages**		
	< 10 (in million rupiah)	15	15
	10-<20 (in million rupiah)	24	24
	20-<30 (in million rupiah)	19	19
	30-<40 (in million rupiah)	8	8
	>40 (in million rupiah)	9	9
	Disadvantage		
	<10 (in million rupiah)	16	16
	10-<15 (in million rupiah)	9	9
Amount of Credit	< 10(in million rupiah)	31	31
	10-< 20 (in million rupiah)	29	29
	20-<30 (in million rupiah)	22	22
	>30	18	18
Domicile	Klotok	24	24
	Lingit	15	15
	Dolok	12	12
	Kawis	12	12
	Landean	10	10
	Karang Anyar	15	15
	Magersari	13	13

Source: Research data

Previous studies have shown that the relevant factors are farmer and household factors (i.e., gender, off-farm income, and education level); psycho-behavioral and psychosocial factors (i.e., positive attitudes, normative and moral obligations); farm factors (i.e., organic farming experience, production costs, and farmland ownership); enabling factors (i.e. training, technology support, organic farmer neighbors, information acquisition, association membership, and extension contacts) (Sapbamrer & Thammachai 2021). This article argues that contract farming enables companies to control farms through intermediaries, ensuring a steady supply of quality raw materials from a class of smallholders who rely heavily on companies and need their support (Barik & Bedamatta 2025). Asymmetric information related to the role of contract companies, lack of adequate understanding of contracts, poor pricing, and input market imperfections is some of the critical constraints and sources of dissatisfaction in the commercialization of millet farming in Western Kenya (Ndiritu 2024).

Current contract farming, influenced by the commodification of food, nature, and land, as well as neoliberal ideologies, must be restructured into a more sustainable model. In a sustainable vision, a redesigned contract farming model can be a catalyst for change, particularly in the development of the agricultural sector, and therefore have a positive impact on farmers' welfare in general (Van & Freddy 2024). A previous study showed that in addition to gender, education level, and the amount of land of the household head, other characteristics of the household head and family, village, and market characteristics are important factors affecting smallholders' access to credit guarantees; after obtaining credit guarantees, smallholders' participation in outsourcing agricultural production through organizational means increased significantly; the pathways through which credit guarantees promote smallholders' organizational participation in outsourcing agricultural production, in order of contribution level, are increasing farm income, reducing operational risks, and increasing organizational trust (Qiao et al. 2025). Farmer education, female head of household occupation, family size, land type, land area under control, labor use, type of fertilizer used, training or technical knowledge, and average monthly income of respondents have a positive influence on farmers' decisions (Taslim et al. 2021).

Contract farming and the creativity of melon farmers

Statistical tests were used to determine the correlation between contract farming and farmers' creativity to overcome problems and gain the most benefit. The three variables in contract farming are as follows: equality, transparency, and mutual benefit. Meanwhile, the variables in farmer creativity are (a) mobilization of human resources; (b) technological improvement; (c) expansion of social networks; (d) increase in investment; (e) education; (f) attitude and work ethic; (g) skill; (h) production management, and; (i) labor efficiency. Table 6 highlights the correlation between contract farming and the creativity of the melon farmers.

Table 6.
Practice of contract farming and the creativity of melon farmers

Correlations

			Practice Contract-farming	The creativity of melon farmers
Spearman's rho	Practice Contract-farming	Correlation Coefficient	1.000	.297*
		Sig. (2-tailed)	.	.036
		N	100	100
	The creativity of melon farmers	Correlation Coefficient	.297*	1.000
		Sig. (2-tailed)	.036	.
		N	100	100

*. The correlation is significant at the 0.05 level (2-tailed).

Source: Research data are processed

Based on Table 6, the *p-value* in the *Sig. (2-tailed*) is 0.036. This value is smaller than the significance level of 0.05, which means a correlation between participating in contract farming and the farmers' creativity to overcome problems and obtain benefits. The practice of contract farming has a significant influence on inducing the creativity of these farmers in overcoming problems and gaining benefits. The strength of the relationship between the two variables is equal to 0.297, which is quite strong. However, this number represents a low correlation. This is because farming melons in open fields is highly susceptible to geographical parameters, such as weather, climate, rainfall, and wind, that affect the success rate of the cultivation.

Farmers' skill levels must be strengthened throughout the entire process. Additionally, farmers should actively participate in training to acquire new knowledge and enhance their cognitive abilities (Liang et al. 2023). Although the results do not show explicit benefits for women farmers, this study supports the use of contract farming in rural development programs to reduce gender inequality (Ndiritu 2024). Participation in the integrated model showed a significant improvement in the efficiency of green technologies, whereas participation in the quasi-integrated model did not. Integrated contract farming can enhance green technology efficiency by expanding land consolidation and increasing productive services, whereas quasi-integrated contract farming can improve green technology efficiency solely by intensifying production (Li & Wang 2024).

Weight and rank of melon farmers' creativity

The nine creativity indicators were selected because they represent variables present in activities carried out by these melon farmers. Table 7 explains the weights and ranks of the correlation between contract farming and each creativity indicator.

As shown in Table 7, increased investment is the creativity indicator that strongly correlates with contract farming, with a correlation value of 0.664. Furthermore, it is supported by the data that most of the profit that these farmers obtain (75%) is used to increase investment, such as renting land, buying vehicles as a means of transportation, adding cash capital to non-agricultural economic activities, saving money in banks, and purchasing agricultural equipment (e.g., diesel engines, small tractors).

The expansion of social networks with a correlation value of -0.476 is ranked second. Farmers sell their produce to their sponsors. However, these sponsors only wanted to buy first-grade melons. Thus, the farmers must find other buyers for the second-, third-, and fourth-grade melons. These buyers are usually intermediaries from either the same village or even other cities, such as Malang and Ngawi. These trades create and expand the farmers' networks and relationships. Selling the products to buyers from other areas helps the villages and districts known for their melon farming.

Work attitude and work ethic are third in this order, with a correlation value of 0.443. Melon farmers put in a high work ethic to ensure that their plants grow well. Planting melons in the open during the rainy season, as previously stated, has a high risk of failure due to weather. These melon farmers could not even leave the village for more than two days, particularly during frequent rainfall. Therefore, farmers should stay alert, even at night. Whenever it rains, they must go to the field and monitor the water level, ensuring that the plants are not submerged in water. Otherwise, the plants will rot.

The fourth indicator is production management, with a correlation value of -0.363. Melon farming is both capital and labor intensive. Therefore, the farmers must have good management skills in organizing all the factors of production, including labor, land acquisition and use, and agricultural supplies procurement. Good management of production will bring in maximum yield, which will enable these farmers to get the most benefit. In comparison to these four strongest correlation indicators, education ranks last, with a correlation value of only 0.010. This demonstrates that formal education has little influence on melon farmers' creativity. Some of these villagers' farmers do not have a high level of formal education, but they are successful melon farmers. The aforementioned indicators direct the farmer's creativity to overcome problems and gain maximum benefits, driving economic activity in rural areas in the process. Ever-increasing and sustainable economic activities in rural areas will ultimately create independent villages and accelerate SDG achievement.

Table 7.
Weight and rank of the creativity of farmer to overcome the problem and obtain benefit

Rank	The indicators of creativity of farmers to overcome the problem and get the benefits	Value Correlation	Items
7	Mobilization of human resources	0.208	Contract farming can open up employment opportunities for the villagers during the rainy season. However, most areas are flooded by the overflowing river in the rainy season.
8	Technological improvement	0.195	Contract farming with sponsors provides technology in melon farming to improve results both in terms of quality and quantity.
2	Expansion of social relations networks	-0.476	Not all melon yields are high quality, so melon farmers should find markets. Contract farming can expand the marketing network in the village and outside the village.
1	Increase in investment	0.664	Most (75%) melon farmers get profits so they can increase future investment (additional capital for cultivation, rent land, buying vehicles, and saving money at the bank)
9	Education	0.010	Formal education of the farmers does not directly affect the success of planting melons. Even some farmers with low education are successful in melon farming.
3	Attitude and work ethic	0.443	Cultivating melons can improve work ethic from having long working hours. For example, when it rains at night, farmers must wake up and pump out the excess water so that the plants are not submerged in the water.
6	Skill	-0.253	In planting melons, the farmers need the skills to grow plants well to prepare good plant seeds to get quality results.
4	Production management	-0.363	Melon farming requires good management to organize enough workforce to care for the plants and large sums of capital to buy agricultural supplies.
5	Labor efficiency	0.254	Melon farming introduces technology to increase labor efficiency, for example, spraying equipment, hand tractors, etc.

Source: Data of research

Contract farming mechanisms have impacts on income, sustainability, and welfare, which are theoretically described as follows: Contract farming initially affects intermediary factors such as cooperation, market access, knowledge and skills, product quality, technology, and support. These factors then influence capacity, linkages, quality, and certification, which can improve farmers' competitiveness (Hoang 2021). This study found that contract farming is a potential mechanism to support many, though not all, farmers in adopting sustainable intensification practices (Weituschat et al. 2023). Participation in Community Forestry (CF) is associated with increased farm productivity and farmer income (Taslim et al. 2021).

Conclusion

The findings of this study show the contract farming model between the melon farmers and the sponsors is informal because the contract is solely based on trust. The high-risk nature of open-field melon farming, particularly during the rainy season, contributes to the development of such an informal model. Melon plants are vulnerable to weather conditions, such as strong winds and heavy rainfall. Due to the high risk, farmers must be creative in order to overcome problems and maximize benefit, even though data shows that the majority (75%) of respondents benefit from contract farming.

Meanwhile, contract farming and farmer creativity have a low correlation with a coefficient value of 0.297. The increase in investment indicator ranks first in terms of creativity indicators and their correlation with contract farming, with a coefficient of 0.664. This value reflects a strong link between contract farming and additional investments. Profits from the sale of yields are used to increase investment in non-agricultural economic activities, such as acquiring land (buying or renting), purchasing vehicles, saving money in banks, and adding cash capital. Contract farming and its impact on farmers' creativity have driven and will continue to drive economic activity in rural areas. This has the potential to accelerate rural development and, ultimately, the achievement of the Sustainable Development Goals.

Acknowledgement

The authors would like to thanks Ms Wahyuning who is committed as a data collection and transcription process. The head village and staff in Klotok village, Plumpang District. Mr. Jafar Shodiq. Mr. Saiful helps in field data collection.

Funding

This research was supported by the Rector of Universitas Airlangga. Under the grant number. Nomor 428/UN3/2020.

Disclosure Statement

No potential conflict interest was reported by the author.

References

Adam AG & Agegnehu AW (2023) Contract farming as an alternative to large-scale land acquisition and promoting inclusive and responsible agricultural investment: Evidences from Ethiopia. Corporate Social Responsibility and Environmental Management 30 (6):2840-2851. https://doi.org/10.1002/csr.2519.

Arikunto S (2006) Prosedur Penelitian Suatu Pendekatan Praktik. Jakarta: Rineka Cipta.

Ayinke O (2011) Contract-farming in developing emerging farmers in South Africa: Exploring the Gled how Mansomini sugarcane scheme. Thesis, Stellenbosch University, Stellenbosch.

Baloyi JK (2010) An analysis of constraints facing smallholder farmers in the Agribusiness value chain: A case study of farmers in the Limpopo Province. Dissertation, University of Pretoria, Pretoria. https://repository.up.ac.za/handle/2263/29038.

Barik P & Bedamatta R (2025) Is contract farming fair for smallholder farmers? A case study from India. Journal of Contemporary Asia 1-23. https://doi.org/10.1080/00472336.2025.2470871.

Berdegué JA, Biénabe E, & Peppelenbos L (2008) Keys to the Inclusion of small-scale producers in dynamic markets–Innovative practice in connecting small-scale producers with dynamic markets. Recovering Markets Innovative.

Bijman J (2008) Contract Farming in Developing Countries an Overview. Wageningen: Wageningen University, Department of Business Administration.

Bogetoft P & Olesen HB (2004) Design of Production Contracts: Lessons from theory and agriculture. Copenhagen: Copenhagen Business School Press.

Chen J & Chen Y (2021) The impact of contract farming on agricultural product supply in developing economies. Production and Operations Management 30 (8). https://doi.org/10.1111/poms.13382.

Da Silva CA & Rankin M (ed) (2013) Contract Farming for Inclusive Market Access. Rome: FAO. http://tinyurl.com/peak29m.

Eaton C & Shepherd AW (2001) Contract Farming: Partnerships for Growth. FAO Agricultural Services. Bulletin 145, Food and Agricultural Organisation of the United Nations, Rome.

Fischer E & Qaim M (2012) Linking smallholders to markets: determinants and Impacts of farmer collective action in Kenya. World Development 40 (6):1255-1268. https://doi.org/10.1016/j.worlddev.2011.11.018.

Gao Z, Liu X, & Zhang X (2024) The impact of tie strength on the sustainable participation of farmers in contract farming: An empirical study in inner mongolia, China. Sustainability 16 (4):1538-1538. https://doi.org/10.3390/su16041538.

Glover DJ & Kunsterer K (1990) Small Farmer, Big Business: Contract Farming and Rural Development. London: Springer.

Groenewald JA, Gundidza MB, Maiwashe AN, Mmbengwa VM, Ramukumba T, & Van Schalkwyk HD (2012) Analysis of the socio-economic factors that contribute to land and agrarian reform which initiated and supported small, micro, medium farming enterprises (SMMES) in South Africa. African Journal of Business Management 6 (24):7158-7169. https://doi.org/10.5897/AJBM11.1769.

Ha TM, Bosch OJ, & Nguyen NC (2015) Systemic interventions addressing market access challenges of smallholder vegetable farmers in Northern Vietnam. International Journal of Markets and Business Systems 1 (2):136-158. https://doi.org/10.1504/IJMABS.2015.072262.

Hoang V & Nguyen V (2023) Determinants of small farmers' participation in contract farming in developing countries: A study in Vietnam. Agribusiness 39 (3). https://doi.org/10.1002/agr.21795.

Hoang V (2021) Impact of contract farming on farmers' income in the food value chain: A theoretical analysis and empirical study in Vietnam. Agriculture 11 (8):797. https://doi.org/10.3390/agriculture11080797.

Hueth B, Ligon E, Wolf S, & Wu S (1999) Incentive instruments in fruit and vegetable contracts: Input, control, monitoring, measuring, and price risk. Applied Economic Perspective and Policy 21 (2):374-389. https://doi.org/10.2307/1349886.

Ikeda S & Natawidjaja RS (2022) The Sustainability of Contract Farming with Specialized Suppliers to Modern Retailers: Insights from Vegetable Marketing in Indonesia. Agriculture 12 (3):380. https://doi.org/10.3390/agriculture12030380.

Jia X & Bijman J (2013) Contract farming: Synthetic themes for linking farmers to demanding markets. In: da Silva CA & Ranking M. Contract Farming for Inclusive Market Access. Institute of Geographic Sciences and Natural Resources Research, Beijing, China. 21-38.

Johanson RK & Saint W (2007) Cultivating knowledge and skill to grow African agriculture: A Synthesis of institutional, regional and international review. Washington DC: WorldBank. http://documents.worldbank.org/curated/en/629031468340199694/Cultivating-.

Kaur P & Singla N (2024) Empirical gains from growing potato under contract farming in Punjab, India. Potato Research 68 (1). https://doi.org/10.1007/s11540-024-09762-9.

Li Q & Wang Z (2024) Impact of contract farming on green technological efficiency of farmers: A comparative study of two contract organizational models. Frontiers in Sustainable Food Systems 8. https://doi.org/10.3389/fsufs.2024.1368997.

Liang Y, Bi W, & Zhang Y (2023) Can contract farming improve farmers' technical efficiency and income? Evidence from beef cattle farmers in China. Frontiers in Sustainable Food Systems 7. https://doi.org/10.3389/fsufs.2023.117942.

Louw A, Vermeulen H, Kirsten J, & Madevu1 H (2007) Securing small farmer participation in supermarket supply chains in South Africa. Development Southern Africa 24 (4):539-551. https://doi.org/10.1080/03768350701577657.

Machimu GM (2024) Next steps for smallholder sugarcane contract farmers in developing countries: A review. Social Sciences & Humanities Open 9 (2024):100865. https://doi.org/10.1016/j.ssaho.2024.100865.

Meemken E-M & Bellemare MF (2020) Smallholder farmers and contract farming in developing countries. Proceedings of the National Academy of Sciences 117 (1):259-264. https://doi.org/10.1073/pnas.1909501116.

Minot N & Ronchi L (2015) Contract farming: Risks and benefits of partnership between farmers and firms. Viewpoint: Public Policy for the Private Sector No. 344. Washington, DC: World Bank.
Minot N (2012) Food price volatility in Africa: Has it really increased? IFPRI Discussion Paper 01239. http://dx.doi.org/10.2139/ssrn.2197406.
Minot NW (1986) Contract farming and its effects on small farmers in less-developed countries. Working Paper. Michigan State University, Department of Agriculture Economic.
Musa K, Van Niekerk P, & Retief CP (2018) Challenges of contract farming among small-scale commercial vegetable farmers in Eastern Cape South Africa. Journal of Agricultural Extension 22 (3):195. https://doi.org/10.4314/jae.v22i3.19.
Ndiritu SW (2024) Smallholder farmers' dissatisfaction with contract farming: A gendered perspective. Development in Practice 34 (6):708-719. https://doi.org/10.1080/09614524.2024.2344526.
Olounlade OA, Li G-C, Kokoye SEH, Dossouhoui FV, Akpa KAA, Anshiso D, & Biaou G (2020) Impact of participation in contract farming on smallholder farmers' income and food security in rural Benin: PSM and LATE parameter combined. Sustainability 12 (3):901. https://doi.org/10.3390/su12030901.
Ortmann GF & King RP (2010) Research on agri-food supply chains in Southern Africainvolving small-scale farmers: Current status and future possibilities. Agrecon 49 (4):397-417. https://hdl.handle.net/10520/EJC18455.
Patrick I (2004) Contract-farming in Indonesia: Smallholders and agribusiness working together. Australian Centre for International Agricultural Research Canberra, University of New England.
Pope C, Ziebland S & Mays N (2000) Qualitative research in health care. Analysing Qualitative Data. British Medical Journal 320 (7227): 114-116. https://doi.org/10.1136/bmj.320.7227.114.
Prowse M (2012) Contract Farming in Developing Countries: A Review (A savoir, vol 12). Paris: AFD-Agence.
Qiao M, Wang J, & Wang B (2025) How does credit guarantee promote the organized participation of smallholder farmers in agricultural production outsourcing? Frontiers in Sustainable Food Systems 9 (2025). https://doi.org/10.3389/fsufs.2025.1496902.
Reardon T & Berdegue JA (2002) the rapid rise of supermarkets in Latin America: Challenges and opportunities for development. Development Policy Review 20 (4):317-334.
Ruml A, Ragasa C, & Qaim M (2021) Contract farming, contract design and smallholder livelihoods. Australian Journal of Agricultural and Resource Economics 66 (1):24-43. https://doi.org/10.1111/1467-8489.12462.
Rustinsyah & Prasetyo RA (2019) Stakeholder engagement in a water user association for agricultural irrigation management in the villages in Indonesia. Journal of Water and Land Development 40 (I-III):181-191. https://doi.org/10.2478/JWLD-2019-0020.
Sapbamrer R & Thammachai A (2021) A systematic review of factors influencing farmers' adoption of organic farming. Sustainability 13 (7):3842. https://doi.org/10.3390/su13073842.
Schalkwyk HDV, Obi A, Tilburg AV, & Fraser G (2011) Unlocking Markets to Smallholders: Lessons from South Africa. The Netherlands: Mansholt Publication series.
Shiimi T, Taljaard PR & Jordaan H (2012) Transaction costs and cattle farmers' choice of marketing channel in North-Central Namibia. Agrecon 51 (1):42-58. https://doi.org/10.1080/03031853.2012.649543
Sivaramakrishnan S & Jyotishi A (2008) Monopsonistic exploitation in contract farming: Articulating strategies for farmer cooperation. Journal of International Development 20 (2):280-296. https://doi.org/10.1002/jid.1411.
Sugiyono (2009) Metode Penelitian Kuantitatif dan Kualitatif. Bandung: Alfabeta.
Taslim A, Karim MR, & Rahman MS (2021) Factors influencing participation of farmer in contract farming in Narsingdi District of Bangladesh. Asian Journal of Agricultural Extension, Economics & Sociology 39 (11):569-576. https://doi.org/10.9734/ajaees/2021/v39i1130785.
Vamuloh VV, Kozak RA, & Panwar R (2020) Voices unheard: Barriers to and opportunities for small farmers' participation in oil palm contract farming. Journal of Cleaner Production 275 (2020):121955. https://doi.org/10.1016/j.jclepro.2020.121955.
Van K & Freddy J (2024) Public and common interest in sustainable contract farming. World Development Perspectives 33 (2024):100564. https://doi.org/10.1016/j.wdp.2024.100564.

Von Hagen O & Alvarez G (2011) The impacts of private standards on global value chains. Literature Review Series on the Impacts of Private Standards, Part I, ITC-International Trade Centre, Geneva Karen Meijer. http://dx.doi.org/10.2139/ssrn.2184282.
Weituschat CS, Pascucci S, Materia VC, & Caracciolo F (2023) Can contract farming support sustainable intensification in agri-food value chains? Ecological Economics 211 (2023):107876. https://doi.org/10.1016/j.ecolecon.2023.107876.

Author Biographies

Rustinsyah is a professor and teaching lecturer at the Department of Anthropology, Faculty of Social and Political Sciences, Universitas Airlangga, Surabaya. Undergraduate education at Udayana, continued Masters education at Universitas Airlangga, and took a doctorate at Gadjah Mada University. The area of expertise covered is Village Development Issues. Several of his scientific works have been published in national and international journals.

Djoko Adi Prasetyo is a lecturer at Anthropology of Architecture, Javanese Society, and Indonesian Classic Culture. His areas of expertise are Cultural Heritage, Multiculturalism, Cultural Studies, Culture, Arts and Humanities, Ancient History, Social and Cultural Anthropology, Ethnography, Participant Observation, Qualitative Analysis. His publications have been published in many national journals and several in international journals.

Pinto Rukmi Handayani is a lecturer at Management Study Program, Faculty of Economy and Business, Universitas Kutai Kartanegara. He has several scientific publications on topics related to entrepreneurship, agricultural management, and rural areas.