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RESEARCH PAPER

Regulating Sustainable Coffee: An Analysis of Smallholder Farmers' Participation in Certifications

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ABSTRACT

PURPOSE: This paper presents the findings of a study conducted to identify the preference of smallholders to join coffee certifications for the purpose of sustainability performance. Our focus is on the examination of the smallholder coffee farmers' participation in sustainability goals through voluntary certification. The study includes insights from different smallholder farmers in Indonesia with a special focus on the coffee sector.

DESIGN/METHODOLOGY/APPROACH: In order to gain more clarity on the farmers' preference on certification schemes, this paper comprises a qualitative method aimed to draw out certification in the coffee sector.

FINDINGS: This study finds that certification programmes are still in a vulnerable position to regulate sustainability, to protect the environment, and protect human rights beyond the state's regulations.

RESEARCH LIMITATIONS/IMPLICATIONS: This research does not aim to identify the benefits of certification schemes, but the conditions that have hindered the uptake of certification by smallholders. and what might encourage them to participate in certification for sustainability purposes.

ORIGINALITY/VALUE: This paper presents new information on smallholders' preferences on certification participation in the coffee sector, and proposes significant factors that might encourage certification of the coffee sector in Indonesia.

KEYWORDS: *Sustainable; Coffee Certification; Farmers' Participation*

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INTRODUCTION

The logic behind certification is its association with sustainability that is responsible for verifying products in accordance with agreed upon environmental and social requirements (Maguire-Rajpaul *et al.*, 2020). Certification is an important initiative aimed at achieving sustainability in the coffee sector, creating a new set of product standards by evaluating the coffee based on the production or trading process (Raynolds *et al.*, 2007). The process standard aims for clear environmental, social, and economic missions through certification.

However, there are growing issues regarding safeguards for consumption; this is difficult for government to protect through legislation. Human rights and workers' rights, protection of the environment, and sustainable development are particularly in jeopardy in developing countries. In the end, the incapability of government to provide public regulations has led to certification as an alternative mechanism to enhance the protection of human rights (Nunes, 2012), environmental issues (Blackman and Naranjo, 2012), and sustainable development (Rich *et al.*, 2018). The NGO-based voluntary initiatives addressing environmental, quality, health, and ethical dimensions of coffee chain production and trade aim to fill the gap in this regulatory vacuum (Raynolds *et al.*, 2007). The voluntary certifications are self-regulatory arrangements of protection by governing their own standards and norms where the participants are obliged to comply with the scheme's rules (Misiūnė, 2014).

Indonesian smallholders' participation in global certification is mainly the result of increasing requirements for products entering competitive and rapidly growing niche markets due to the demand from consumers rather than farmers' concern regarding the importance of certification for sustainability (Raynolds *et al.*, 2007; Muhammad *et al.*, 2015). Although there is a promising sustainability through certification schemes offered by the private sector, such as UTZ, Fairtrade, and Organic, to promote environmentally friendly production practices aimed to improve the livelihoods of coffee farmers in developing countries (Meemken *et al.*, 2016), the farmers have a different point of view in understanding whether certification is beneficial for them (Astuti *et al*., 2015b).

A number of studies on coffee certification suggest that understanding farmers' preferences is crucially essential to set the certification programme effectively, to design more acceptable programmes, and to improve the pertinence of the programmes for improving coffee farmers' productivity and income (Muhammad *et al.*, 2015).

However, existing studies diverge in their analysis. While some have suggested that certification benefited farmers, others contended that these efforts have less significant impact socially, economically, and environmentally. A series of studies show that the advantages gained from certification have empirically benefited farmers to improve their livelihood and income (Bray and Neilson, 2017; Neilson *et al.*, 2019; Jena *et al.*, 2017; Kirana and Karyani, 2017). Beyond the economic advantages, certification offers protection for farmers' rights, particularly smallholders,

to have equal bargaining power to set price determination and to gain market access (Prihandono and Relig, 2019).

In Indonesia, about four million smallholder farmers produce coffee, and about 7% of the coffee is certified under different standards (Muhammad *et al.*, 2016). Previous studies analysed and compared impacts of different certification standards on the livelihoods of smallholder coffee farmers in Indonesia; they concluded that certification increases household living standards and reduces the prevalence and depth of poverty (Astuti *et al.*, 2015b; Muhammad *et al.*, 2015; Karami *et al.*, 2021). However, none of these studies consider all main aspects of why 93% of Indonesian coffee farmers are beyond the reach of certification.

Apart from the mixed results from participation, the fact is that certification may not always be rational for farmers (Micheletti and Follesdal, 2007). It signifies that although there are growing numbers of sustainability standards and certification schemes (Glasbergen and Schouten, 2015), only a small percentage of small-scale farmers have participated in such schemes (Muhammad *et al.*, 2016). This means that the function of certification as self-regulation to protect the relevant issues cannot be achieved as expected.

Therefore, given the importance of the coffee sector to Indonesia and the global market, this study raises the question of why certification has not been taken up significantly by smallholders in Indonesia and what factors are behind this situation. Given the lack of certification in the coffee sector in Indonesia, this research is not meant to evaluate the benefits of certification schemes, but rather assesses the conditions that hinder the uptake of certification by smallholders and what might encourage them to regulate sustainability in the coffee sector.

DATA AND METHOD

The research is qualitative in nature and reviews the relevant literature on smallholders' participation in coffee certification. To identify the originality of our study, we screened the titles and abstracts of all identified papers and the potential research. We selected the lists of all papers included, the list of papers identified by the Connected Papers, and the list of papers cited by using Google Scholar, and Web of Science database as well to reduce the likelihood of missing potentially relevant studies. Papers for inclusion in the analysis were then selected based on a set of clear criteria: published papers and working papers in the English and Indonesian languages that used survey data collected in Indonesia to analyse the participation of certified and non-certified smallholder farmers in Indonesia.

Coffee and Certification in Indonesia

Currently, the development of the coffee industry in Indonesia is formed from the increase in Indonesia's domestic coffee consumption. Although the level of domestic coffee consumption during the period 2010 to 2014 looks stagnant, there is a tendency to increase. In 2010, it was

recorded at 0.80kg/capita/year, while in 2019, domestic coffee consumption increased to 1.13kg/capita/year.

The increase in coffee consumption has had a positive impact on the coffee industry in Indonesia in recent years. This can be seen from the increasing production of processed coffee produced by the coffee processing industry, and the growing number of cafes and coffee shops in big cities (Sri Astuti Soeryaningrum Agustin, 2018). This is in line with findings gathered by Toffin's independent research. In 2019, the number of coffee shops in Indonesia reached more than 2,950 outlets, an increase of almost three times that of 2016. The market value generated has reached IDR 4.8 trillion (US$314,182,387) (Dahwilani, 2019).

The coffee industry market in Indonesia structurally consists of the people's coffee industry, the middle class, and the large class of processed coffee industry. Coffee commodity business actors in Indonesia consist of various levels, ranging from coffee farmers, small and large traders (villages and sub-districts), exporters, coffee processing industries, and cafes/shops that sell coffee. In April 2018, BBC Indonesia reported in their online article that Indonesia is one of the largest coffee exporters; however, in producing a little over 10 million bags of coffee, premium coffee production remained lagged behind Brazil, Vietnam and Colombia (BBC, 2018).

With coffee as the most popular drink in the European Union, it is placed as the largest market destination for Indonesian coffee. According to the International Coffee Organization, Finns drink 12.5kg of coffee every year, followed by Sweden with 11kg each year, Iceland, Norway, and Denmark, sequentially (BBC, 2018).

Demand for coffee commodities from the European Union to Indonesia is quite high. Unfortunately, Indonesia has not been able to fulfil this demand as the level of coffee productivity in Indonesia is still relatively low. There is no plant regeneration, affecting coffee productivity, and there is a lack of added value. Another issue raised is the high chlorpyrifos and chlorpyrifos-methyl in the coffee beans. EU regulation demands high standards of the coffee beans that must contain below 0.01mg/kg chlorpyrifos and chlorpyrifos-methyl, a requirement that cannot be fulfilled by Indonesian farmers due to a lack of proper equipment to comply with EU standards of certification.

Theoretically, certification is seen as a complex of institutional policies with specified standards and practices aimed to govern and transform the activities of the organisations. Put in other words, certification is a mechanism on how to direct, control, and hold to account organisations that claim to perform sustainable production (Overdevest and Rickenbach, 2006). Coffee certification emerged from several starting points and with support from various public and private organisations. Like other sectors, the appeal of certification stems from the power of individual consumers with information about the ethical aspects of the products they consume (Auld, 2010).

Coffee certification was initially begun in Indonesia a year after Agenda 21 of the 1992 Rio Conference. The Rainforest Alliance was the first to implement certification in Aceh province in 1993 (Ibnu *et al.*, 2018a). In 1997, Fair Trade (FT) followed the pathway taken by the Rainforest

Alliance in the same province. The UTZ[1] also involved the certification movements in Indonesia's coffee sector in 2002 and the Common Code for the Coffee Community (4C) in 2006.

Indonesia, as the fourth largest coffee producing country in the world, caused the average level of coffee demand in Indonesia to increase between 2015 and 2019, with coffee production of 398,432 tonnes and average growth rate of 5.09% (Directorate General of Estate Crops, 2016). The massive growth of coffee production encourages Indonesia to be able to increase coffee production and productivity in the future. The demand by worldwide coffee consumers requires coffee producers to develop coffee farming in a sustainable manner, with the hope that the quality and productivity of the coffee harvest will always increase every year. The demand is caused by changes in the pattern or lifestyle of global coffee consumers that prioritise human health and environmental sustainability. Therefore, one of the efforts to increase coffee productivity is to include coffee commodities in the coffee certification programme (Pratiwi *et al.*, 2021).

Regulating Sustainability

With the unreliable state regulations, certification fills a void where the government is unwilling or unable to regulate (Lytton, 2014). Certification aims to promote social justice, fair wages, safe working conditions, community development, and other tenets of sustainable development and human rights (Bennett, 2021), to comply with a specific set of social, environmental, economic, quality or ethical conditions (Vermeyen, June 2017). They do so by creating standards that are more rigorous than state regulations, verifying that farms and factories comply, and communicating those achievements to brands, retailers, and consumers with an ethical logo or label (Bennett, 2021).

Undeniable circumstances are that corporations use certification to improve their image and to gain profit margins without altering their practices (Sleiman, 2015; Benites-Lazaro *et al.*, 2018); states using private governance in order to avoid taking responsibility to protect environment and human rights (Grabs, 2020; Bennett, 2021); consumers look for certification to avoid the work of ethical consumerism; and NGOs choose certification because it generates proven results, such as the number of certified farmers (Raynolds and Bennett, 2015). Certification indeed makes progressive efforts to protect the environment, protect human rights and improve the livelihood of small farmers where the state cannot achieve this. Currently, certification shapes the incomes and working conditions of thousands of workers located in major countries and across a wide variety of sectors (Bennett, 2021). Certification does what states should not endeavour to achieve: regulate sustainability through private interests.

In fact, certification has a positive impact on smallholders' livelihood (Ibnu *et al.*, 2018b), but the overall impact of these certification standards on the total household income is found to be statistically less significant (Jena *et al.*, 2017). In Indonesia, if referred to economic impact, there is no difference between certified and non-certified coffee (Astuti *et al.*, 2015a). The certification may

[1] Former UTZ Certified, a label used to signify sustainable farming.

lead to higher production and better coffee quality, but the financial gains are debatable. By joining certification, farmers get a higher price per kilogram; this compensates the higher production cost and time-consuming hard work. Overall, however, there were no significant differences in unit costs between certified and non-certified coffee farmers (Astuti *et al.*, 2015a). Furthermore, the positive effects of certification are influenced by various local factors, such as the level of education and skill of the farmers, market structure, local infrastructures, the role of cooperatives, and the support from the government (Bray and Neilson, 2017).

Referring to the government's support, Indonesia is experiencing a series of difficulties in selling the coffee. These problems include the lack of regulations on sustainability in the coffee sector, human rights violations, as well as environment problems (Prihandono and Relig, 2019). These issues could be solved if the stakeholders applied a sustainable standard in multiple fields, such as employment, environmental, social, and economic (Prihandono and Relig, 2019). In achieving such goals, certification schemes offer incentives that guarantee that smallholders not only receive reasonable prices paid at purchase, but also ensure an additional fair-trade premium for capacity building and related community projects (Ssebunya *et al.*, 2019), human rights protection, and reduced environment destruction (Prihandono and Relig, 2019).

The Rainforest Alliance provides standards to support farmers in creating more sustainable livelihoods, improving farm productivity and becoming more responsive to climate change issues (Ibnu *et al.*, 2018a). Rainforest Alliance certification consequently focuses on how farms are managed, with certification being awarded to farms that meet the standards of the Sustainable Agriculture Network (SAN) (Ibnu *et al.*, 2018a).

The focus of the FT programme is mainly to forge a better life for farming families in developing countries; this is done through direct trade, community development, environmental stewardship, and guaranteed prices for the coffee products (Sri Astuti Soeryaningrum Agustin, 2018). To support the programmes, FT requires the first coffee buyers to provide pre-financing for long-term contracts with farmers (Ibnu *et al.*, 2018a). Meanwhile, the UTZ aims to create transparency along the supply chain and to reward responsible coffee producers.

The schemes offered by Organic and Fair Trade certification have more small-scale farmer involvement than the UTZ Certified and Rainforest Alliance systems (Bray and Neilson, 2017). The latter initially focused their efforts on larger landholdings, whereas 4C purposes to achieve economic development, social, and environmental production, processing, and trading conditions for all stakeholders who earn a living within the coffee industry. Among the schemes offered, 4C is often considered as the one requiring fewer private certificates (Sri Astuti Soeryaningrum Agustin, 2018).

Farmers' Participation

Based on the literature studies that thoroughly compared between certified and non-certified smallholders, we conclude that certification programmes in the coffee sector lead to some positive

impacts on farmers, but show no difference between certified and non-certified coffee products (Bray and Neilson, 2017; Astuti *et al.*, 2015b; Wahyudi *et al.*, 2020; Ibnu *et al.*, 2018a; Vicol *et al.*, 2018; Karami *et al.*, 2021). However, on the other hand, the resonance of the positive impacts is not in line with the smallholders willingness to be involved in certification (Muhammad *et al.*, 2015; Muhammad *et al.*, 2016).

Identification of Factors

After identifying the coffee certification and farmers' involvement, five factors of participation, for each certified farmer as shown in Table 1 and uncertified farmers as shown in Table 2, were selected to be analysed and investigated. Selected factors are expected to have a high influence on the logic behind farmers' participation in certification. The justification of the selection is then further rationalised.

Table 1: Certified Farmers' Perspective of Participation

Factors
Consumers' interest
Economic benefits
Environmental focus
Market expansion
Sustainability

Source: Various sources gathered by the authors

Table 2: Uncertified Farmers' Involvement

Factors
High cost of certification programme
Economic reason
Strict requirements
Low skill of farmers
Low farmer output

Source: Various sources gathered by the authors

The high cost of certification standards advised smallholders to be accounted of sustainable programmes (Kilian *et al.*, 2004; Lyngbaek *et al.*, 2001). It is difficult for smallholders to enter new fair trade markets, and they are discouraged from certifying their coffee products mainly because of the high cost of certification and low coffee production. The high-cost standards and strict requirements are preventing farmers from achieving economic advantages, so that they cannot cover the total costs incurred.

As a result, production costs on certified farms are much higher than those on conventional uncertified farms, creating unequal economic benefits. Uncertified farmers choose conventional farms but produce lower quality coffee for customers. Therefore, the net income received by certified organic farmers is lower than the income received by conventional producers.

Local certified farmers and uncertified farmers prefer certification schemes that are primarily economically driven (Kirana and Karyani, 2017). This means that certifications are only needed as the instrument to maximise profits for the farmers rather than to protect the environment and maintain sustainability (Ibnu and Prayitno, 2018). The coffee farmers show opportunistic performance and put aside the main core of standards of certification: sustainability development. This preference is in line with the findings of several previous studies in various countries (DeFries *et al.*, 2017; Ruben and Zuniga, 2011; Bennett, 2021).

The coffee industry market today is filled with certified coffee production where supply exceeds demand. This has resulted in certified coffee being sold in the conventional market. Therefore, the premium price can no longer be guaranteed, and this can cause farmers to decide to leave the certification scheme.

It is also found that farmers' knowledge about the certification scheme is still at a low level (Ibnu *et al.*, 2018a; Muhammad *et al.*, 2016; Neilson *et al.*, 2019). It generally covers activities that are recommended (such as harvesting ripe cherries) and unacceptable practices that should be prevented in their own schemes, such as avoiding the use of prohibited pesticides. This may explain why smallholders are completely unaware of the differences between certification schemes and, therefore, cannot see an attribute level that goes beyond their own schemes.

The five factors clearly explain the hinder factors of smallholder participation in that coffee certification does not offer enough advantages to encourage small farmers to transition to deeply sustainable practices (Bacon *et al.*, 2008; Jaffee, 2014). This was worsened by certain conditions as farms shrank, farmers earned less than expected, and the smallholders found themselves trapped in an endless cycle of poverty. With less income, coffee farmers were unable to reinvest in and rejuvenate their farms, such as replacing old, unproductive trees and planting new. Most farmers are disorganised, and co-ops have little capacity to manage their farms and gain technical and financial assistances; this has led to reductions in production and sales (Sarirahayu and Aprianingsih, 2018).

Other facts showed that the lived experience of coffee farming is very challenging, and sustainability certification less effective. Furthermore, it is expected that future generations of coffee farmers will abandon their land and crops in search of better opportunities (Grabs, 2020). Given coffee's similarities to other industries, certification is unlikely to facilitate significant sustainable change (MSI Integrity, 2020).

Essentially, farmers recognise the importance of protecting the environment and nature conservation. Their awareness of the protection of forests, soils, and biodiversity are explained by their relationship to nature. Nevertheless, even if an environmental focus is considered important,

smallholders will not choose a different certification scheme simply because of better environmental protection criteria (Muhammad *et al.*, 2015).

This trend is exacerbated by the Indonesian domestic market that does not require certified coffee. This means that the current certification system is still in a precarious position in Indonesia. The vulnerable position of certification implies that regulating sustainability to protect the environment, protect human rights, and increase the livelihood of smallholder farmers are far from attainable. By failing to address these issues, fair trade and regulating sustainability in Indonesia are collapsing.

CONCLUSIONS

In conclusion, to encourage farmers' participation in certification it is important to provide technical assistance and financial aid to cover sustainable farm production. In addition, certification schemes are encouraged to provide clear standards of behaviour, offer continuous capacity building, low-cost certification, including providers in high-level decision-making, and less demanding rules, with the help of multi-stakeholders such as private actors and government to help maximise the benefits of certification for smallholders. Each of these is necessary and implies that neither can work alone to facilitate regulating certification to a highly sustainable practice in Indonesia.

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