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2 https://ojs.unud.ac.id/index.php/soca 15 A Systemic Approach For a Sustainable Coffee Production in Indonesia Muhammad Ibnu Faculty of Agriculture, University of Lampung, Bandar Lampung Correspondence email: muhammad.ibnu@fp.unila.ac.id Submitted : 10th April 2021 ; Accepted: 25th July 2021 Abstract Keywords: building block; coffee; Indonesia; sustainability standard and certification; systemic approach. Standard and certification are related to the sustainable development paradigm that views agriculture as a system. However, studies on standard and certification, especially in Indonesia, rarely evaluate it as a systemic approach to agricultural development. This study aimed to analyze the parallels of the standard and certification with the premise of The Theory of Change–can contextually provide incentives for a systemic approach to sustainable coffee production in Indonesia and to examine the proper systemic approach for a sustainable system of the Indonesian coffee production. We conducted a literature review to address the study aims. Empirical and theoretical approach studies included in the review process. Findings revealed that standard and certification did not provide adequate incentives for systemic and sustainable coffee production in Indonesia. Thus, a combination of five building blocks as a conceptual systemic approach is required to encourage sustainable coffee production. These building blocks are composed of enabling environment, production and market characteristics, the availability of alternative livelihoods, and the level of competition among producers. How to Cite (APA 6th Style): Ibnu, M. (2022). A Systemic Approach For a Sustainable Coffee Production in Indonesia. SOCA: Jurnal Sosial Ekonomi Pertanian, 16(1), 15-27.
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https://doi.org/10.24843/SOCA.2022.v16.i01.p02 16 INTRODUCTION The systemic approach, based on the sustainable development paradigm, views agriculture 24 as a

system consisting of various components or sub-systems (for example, social, economic, and environmental) that were interrelated and interacted with each other (Bastan et al., 2018). However, it seems distrustful that various intervention efforts will be able to shift agriculture towards a more sustainable system. This doubt arises because the evaluation results of various intervention programs showed ambiguous, conflicting, and disputed impacts so that they could not be generalized (Van Rijsbergen et al., 2016). An agriculture related intervention programs introduced is the sustainable standard and certification. Coffee establishes as a pioneer in this intervention application (Bitzer et al., 2008; Kolk, 2013; Pierrot et al., 2010; Reinecke et al., 2012). Sustainable standard and certification is a global intervention program, initiated by businesses and non-governmental organizations/NGOs in the western part of the world, and formed based on the theory of change (Romero et al., 2013). The Theory of Change premised that training on good agricultural practices and managerial issues, including the establishment and management of well-functioning farmer organizations, would beneficial for the farmers (Anderson, 2018; Francesconi & Ruben, 2014). These benefits can be tangible (for example, exchange of goods and services, and income) or intangible (for example, exchange of knowledge and reputation). Several standard and certification schemes in Indonesia are Fair Trade (FT), UTZ, Rainforest Alliance (RA), and the Common Code for the Coffee Community (4C). These certification schemes prioritize the aspects of sustainable coffee production with different focus of work. Fair Trade (FT) concentrates on social aspects improvement of the coffee production. UTZ focuses on agricultural efficiency and the traceability of coffee beans (Ibnu, 2017; Reinecke et al., 2012). Rainforest Alliance (RA) directs their focus on the environmental aspects (KPMG, 2013; Reinecke et al., 2012). In another hand, 4C applies a broader standard – emphasizes all basic criteria of sustainable development pillars (Global Coffee Platform/GCP, 2017). Initially, the participation in these global private standard and certification conducted in voluntary manner, but it gradually developed as a prerequisite for farmers to entry the international markets (Brandi et al., 2013; Giovannucci & Ponte, 2005; Loconto & Dankers, 2014; Pierrot et al., 2010; Ponte, 2004). These

certification schemes have different focuses. Nevertheless, it has similar management system and sustainable criteria. In some points, it triggers significant overlap and competition (Glasbergen, 2018; Ibnu et al., 2015). The evaluation of the feasibility of this standard and certification as the systemic approach to shift the Indonesian coffee sector towards a sustainable industry is urgently required. Thus, this study aimed to (1) analyze the parallels of the standard and certification with the premise of The Theory of Change–can contextually provide incentives for a systemic approach to sustainable coffee production in Indonesia and (2) examine the proper systemic approach for a sustainable system of the Indonesian coffee production. This study would fill the knowledge gap of literatures on the sustainable standard and certification. Previous studies have focused on the impact of standard and certification, but the contextual incentives for standard and certification for a systemic approach to sustainable coffee production. We also

https://doi.org/10.24843/SOCA.2022.v16.i01.p02 17 combined the evaluation of various empirical with theoretical studies to produce an appropriate conceptual model in describing systemic approach for promoting a sustainable coffee production system. RESEARCH METHOD This study addressed the first objective by reviewing studies of the impact of sustainable standard and certification in Indonesia and other coffee-producing countries (Asia, Latin America, and Africa). This literature classified into two major groups: (1) empirical studies with quantitative approaches (survey, economic profitability analysis, and statistical analysis) and qualitative methodologies (observation, interviews, focus group discussion, and case studies) and (2) reports or documentation from international or national established organizations (government and non-government). We evaluated studies that had highlighted diverse theoretical perspectives to answer the second objective. We reviewed perspectives from various disciplines of science, including politics, management, and agribusiness (agricultural socioeconomics) to contrive a group of factors (building blocks) for sustainable coffee production. All the studies reviewed had been

published in international or national journal publishers. RESULTS AND DISCUSSION Farmers did not fully understand the concept of sustainability in agricultural production. They had tendency to obey the enforced rules by the standard and certification without complete discernment of the policies. This similar finding also reported by participation in certification schemes studies. Among explanatory factors analyzed, economic motivation had documented as the strongest stimulus for farmers in standards and certification participation (Astuti et al., 2015; Ibnu, 2019; Ibnu et al., 2016). Shreds of evidence signified that certification would lead to the adoption of more environmentally-friendly agricultural practices. These practices were highly claimed of its capability in improving the quality of the ecosystems and its biodiversity. However, the scientific evidence of this claim was relatively insufficient. Further, its environmentally-friendly agricultural practices served unclear contribution to the sustainable agricultural development (Molenaar et al., 2013). These findings referred as the 'disincentive context' in the implementation of sustainable certification and its transformation role towards a more sustainable coffee production system. Context of Disincentives for the Standards and Certification Implementation as the Systemic Approach Findings in empirical studies had indicated that standard and certification provided no incentives for the systemic approach of sustainable coffee production in Indonesia. The first finding signified that the production of certified coffee commodities was higher than the demand. This situation implied that the market demand (domestic and international-scale demand) for the certified coffee was lower than the coffee production (Liu, 2020; Snider et al., 2017). High production of the certified coffee had initiated its distribution to the conventional market (and vice versa), which in turn also influenced the farmer’s interest in participating on the

https://doi.org/10.24843/SOCA.2022.v16.i01.p02 18 certification programs (Glasbergen, 2018). Consumer awareness about product certification (including 22 the willingness to pay more for certified products) was poor. It tends to varied, according to the country and

system (Steering Committee of the State-of-Knowledge Assessment of Standards and Certification, 2012). Labels have been introduced with different claims, delivering contradictory messages, created uncertainty and confusion among the consumers. The future implication was the consumer demand alone did not adequately support a large-scale (to a more sustainable) shift of the certification (and labeling) systems (Steering Committee of the State-of-Knowledge Assessment of Standards and Certification, 2012). The second finding suggested that the prospect of premium level of price had been widely disseminated as an essential point to participate in the programs. Oddly, the premium price did not consistently apply for the certified coffee (A. Wahyudi et al., 2020). Further, no significant difference of price reported between the certified and non-certified coffee (Van Rijsbergen et al., 2016). In other words, the certification has very limited economic values and benefits (Ruben & Fort, 2012). This situation might discourage the participation of non-certified farmers (conventional farmers) and demotivate the certified farmers to maintain their participation in the program (Ibnu, 2019). Standard and certification claims in empowering and assuring smallholder rights had been widely known, but with limited scientific evidence. Their claim related to the development investment, conflict resolution, gender equality, and improvement of community participation was also mixed (positive, limited, and insignificant) (Steering Committee of the State-of-Knowledge Assessment of Standards and Certification, 2012). The next finding highlighted the 'careless' trend of certification in new market setting. Many coffee-producing countries, including Indonesia, had exported their coffee to the north (western countries, the continent of Europe and America) and south side of the world (non-western countries, such as China, India, and middle eastern countries). In the recent years, the number of coffees exported to the southern market had surpassed the number of exported coffees to the northern market as Indonesia's main coffee export destination countries (Sustainable Coffee Program/SCP, 2014; A. Wahyudi et al., 2020). The southern market, is a fast-growing domestic market, did not require certified coffee commodity (Giovannucci et al., 2014). Fourth, we documented the trend of declining interest of farmers in coffee cultivation activity. Studies

reported that other crop commodity, such as oil palm or cocoa, were promising higher profits and investments. This situation contributed to lower investment from the government and private parties in the coffee cultivation sector (Sustainable Coffee Program/SCP, 2014). Participation in the certification program was quite challenging for the most vulnerable farmer population. Owning a small-land size and living far from the cooperation enterprises and farmer groups had been served hard times for them to survive economically (Ibnu et al., 2018). Fifth, limited support from extension services was also reported in the literatures, which in turn produce inadequate understanding of good agricultural practices, weak farmer organization structures, and resistance to change (Glasbergen, 2018; A. Wahyudi et al., 2020). All of these shortcomings led to a weak understanding of the concept of sustainable coffee production. Current certification system was weakly internalized in farmer's agricultural practices. Further, it would

https://doi.org/10.24843/SOCA.2022.v16.i01.p02 19 contribute to the lower level of certification program adoption by the farmers (only 7% of the exported Indonesian coffee was certified in 2014) (Sustainable Coffee Program/SCP, 2014). Sixth, studies revealed no indication of a transformation to a more sustainable production in the short-term period (driven by global private certification). The same thing happened with sustainable standards and certification initiated by developing countries (public version of standards and certification). As top distributors of agricultural commodities, developing countries have responded by establishing national standards and certifications as the counter-initiatives to global standards and certifications organized by the western countries (Ibnu, 2020; Schouten & Bitzer, 2015). For example, the implementation of ISPO (Indonesian Sustainable Palm Oil) for palm oil, ISCoffee (Indonesian Standard Coffee) for coffee, and ISCocoa (Indonesian Standard Cocoa) for cocoa has been organized and discussed. These counter-initiatives emerged due to dissatisfaction of western standards and certifications application (Smith & Fischlein, 2010). However, doubts arose regarding the

ISCoffee's ability as a well-accepted and qualified certification for the international market. Several studies suggested that southern standards and certification might relevant in their domestic market, whereas northern standards and certification would be more required to invade international market (Giovannucci et al., 2014; Ibnu, 2020). Analysis of ISCoffee implementation capacity showed insufficient implementation due its 1 weak administrative structures and management. ISCoffee would not capable to solve issues related to coffee cultivation and industry, such as the limited market access, poor productivity and quality, and poorfunctioned farmer organizations. Thus, studies had assumed ISCoffee as an unqualified 1 northern-based private standards and certifications (Ibnu, 2020; Schouten & Bitzer, 2015). Seventh, standards and certifications that initially designed to be applied in global level should deal with farmers who were working in local setting. For example, the coffee farmers considered as a part of local economy due to their production and consumption process in the local setting. Further, local farmers tended to sell their coffee commodity to the local wholesaler within the first two weeks after the harvesting period (Ibnu, 2017). They had elaborated several reasons. However, their main reason was to earn the income in a faster period. This situation implied that farmers were not connected to decent markets that balanced the quality and price of their commodity (Glasbergen, 2018). Certification program claimed their ability to solve this issues, but still required farmers to organize themselves in farmer organizations (Loconto & Dankers, 2014) Eighth, we noted a diverse manifestations of farmer organizations in Indonesia. It widely varied according to its type and level of maturity. Farmer groups, cooperatives, and Joint Business Groups reported as the most influential organization in the field of coffee cultivation (Ibnu et al., 2018). These organizations supported by different ministries and governed by a different set of rules. An analysis related to 4 the perceived benefits of certification and farmer organization from the farmer's perspectives had highlighted that certification provided market opportunities and training that would enhance skill and knowledge (capacitybuilding) (Ibnu et al., 2018). Most training session conducted in group-based setting to improve the sense of belonging and higher perceptions of the social

benefits of

https://doi.org/10.24843/SOCA.2022.v16.i01.p02 20 participation in an organization. Studies also found that farmer organizations with certified farmer member provided more benefits than organization with non-certified farmer member. Organization activities conducted by certified member served more benefit because arranged by certified member or managers (Ibnu et al., 2018). However, these positive findings have not changed the main picture of the poorfunctioning farmer organizations that eventually hindered their collective activities (A. Wahyudi et al., 2020). Issues related to farmer organization structure were quite complicated. It required decent conflict management, especially to control the leadership issues and lack of motivation in managing the organization (Ibnu et al., 2018). ISCoffee had high potential to improve the role of farmer in an organization. Unluckily, formal organizations (farmer groups and cooperative enterprises) could not perform adequately without gained a certain level of maturity. In fact, many of them did not function well and might not reach organizational maturity 4 in the short term period (Elhakim & Leovita, 2020; Wiguna et al., 2019). The top-down approach initiated by the national government to establish decent formal farmer organizations unfortunately ignore these managerial issues. Moreover, local government parties also seemed reluctant in initiating the development of farmer organizations (Syahyuti et al., 2014). A Systemic Approach Towards a Sustainable Coffee Sector in Indonesia This study identified and grouped essential factors on the coffee production system. This group of factors referred as building block that composed of the enabling/supporting environment, production and market characteristics, availability of alternative livelihoods, and level of competition among producers (Figure 1). Figure 1. Five building blocks to transform the coffee production system 1 toward a more sustainable production Source: processed by the authors from various sources Sustainable coffee production Supporting environment, related to access to finance and inputs, rural facilities and infrastructure, wellfunctioning farmer

organizations, and training through the provision of extension services Production characteristics are increasing the production volume with a high level of concern for the environmental health and increasing the professionalism of farmers Market characteristics, regarding the balance of demand between southern and northern markets and the bargaining position of smallholders in the coffee value chain Alternative livelihoods, on how smallholders can survive economically and improve their living conditions and how the support provided is relevant for smallholders The level of competition between producers, related to the comparative and competitive advantage of the Indonesian coffee sector compared to other producers

https://doi.org/10.24843/SOCA.2022.v16.i01.p02 21 Each of these building blocks had a different focus, and therefore had to be synchronized to promote systemic change 1 in the coffee sector. The enabling environment referred to the combination of institutions, policies, regulations, and infrastructure that support the improvement of the sustainable coffee production (Diaz-Bonilla et al., 2014). In Indonesia, however, the environment did not provide adequate supports for the coffee sector development (Sustainable Coffee Program/SCP, 2014). The government prioritized staple foods (eg. rice and secondary crops) in their agricultural programs. This situation produced fewer proactive policies (eg. for extension services) and low investment for coffee cultivation and industry (eg. rural infrastructure and facility). Another issue encountered was the poor productivity and quality of the coffee cultivated by the farmer. This issue might be triggered by farmer poor professionalism: low knowledge and skills in production, processing, and marketing process (Padmaningrum, 2019). Limited access to the capital, poor input, and remote area may also contributed to this issue and their high dependency to wholesaler. The enabling environment development block required to concentrate on their institutional improvement. Improvements could be conducted in the area of finance and input access, rural facility and infrastructure, well-functioning farmer organizations, access to training or workshop, and

extension services. To overcome the finance and input issue, efforts had to be directed towards administrative issues to gain proper input and capital. Farmers showed reluctant behavior to deal with administrative requirement to lend money in bank or other lender agencies. Further, bank or lender agencies asked to provide collateral (land or building) before lending credits. This situation discouraged the farmers from dealing with financial providers. These issues are interrelated and efforts to overcome them needed to be supported by a strong commitment from the government through policies and/or regulations. Since the national budget for the coffee sector was limited, the government should have expanded partnerships with the private sectors to address all issues related to farmers and develop proper facilities and infrastructure in rural areas. Production building blocks concentrated on increasing production volume through compliance with sustainability principles and criteria, for example by increasing production volume without increasing chemical inputs and deforestation. It appeared that the strategy for increasing production volume was somewhat different between the Arabica and Robusta. For Arabica, apart from increasing productivity, the challenge was to expand the plantation area. Shifting the production from Robusta to Arabica at certain heights had identified as potential strategy to increase Arabica plantations. Arabica grows at an altitude of 1000–1500 meters and Robusta at an altitude of 500–1100 meters. It appeared that there was an area (altitude between 800–1100 meters) that proper for Arabica but currently applied to cultivate Robusta. Robusta productivity was poor 20 at an altitude of more than 800 meters above sea level (Direktorat Jenderal Perkebunan, 2017). Therefore, the appropriate areas needed to be identified, and efforts were needed to persuade farmers to change their production from Robusta to Arabica in order to maximize production according to the potential of their land. Arabica required a wet processing method, which was more complicated and required more knowledge and skills than Robusta which was generally required dry processing (T. Wahyudi & Jati, 2012). Changes in production of coffee type (from Robusta to Arabica) could help increase

https://doi.org/10.24843/SOCA.2022.v16.i01.p02 22 the professionalism of farmers (regarding processing methods) in producing better quality coffee. On the other hand, for Robusta, the priority might be to increase the productivity of smallholder plantations area through improving production techniques and rejuvenating old coffee trees. Currently, numerous old Robusta coffee trees were spotted in the plantation area. Their productivity was slowly decreased (Plantation Directorate General, 2014; T. Wahyudi & Jati, 2012). Farmers usually done 'cutting', which means joining the top of an old coffee tree trunk with another coffee tree branch to rejuvenate and increase fruit production from the old tree. However, this may not provide optimal crops for farmers 4 in the long run, and older trees will eventually need to be replanted with better seedlings. Farmers preferred using coffee seeds that were kept in their backyards rather than using coffee seeds offered, by the national or local government (Sustainable Coffee Program/SCP, 2014). Farmers were somewhat being skeptical to plant unfamiliar seed that grown well in other areas of plantations. They were very unconvinced about the ability of the seed to adapt with the local conditions (soil, climate, etc.). In this case, it was important to introduce new varieties of coffee to the farmers through demonstration plots or plantation models. Demonstration of higher crops volume may attract the farmer to plant the seed. Another alternative to rejuvenating coffee trees could be conducted by planting locally cultivated seed produced by competent breeders or planting superior seed variant that capable to adapt in different geographical situations, including nutrient-poor soils. Overall, 4 in line with the efforts to improve the productivity, concern related with the environmental situation should not be ignored. Environmental health could be maintained by preserving soil fertility through increasing organic inputs, conserving water through protecting water sources, reducing chemical waste, and increasing the biodiversity. Agroforestry (polyculture) systems provides intensification of the biodiversity through the diversification of the tree species (or genetics) in coffee plantations, which in turn allowed farmers to differentiate their incomes streams. Market building blocks should focus to “balance”. The sustainability demands of

the southern versus northern market considered an important aspect that would determine the coffee cultivation method in Indonesia. Other key determinants were the demand dynamics (increased or decreased coffee demand) and pressure to secure a stable coffee supply. The coffee commodity demand in southern markets (domestic and export) increased sustainably. Low demand of certified coffee from the southern markets produced challenging situation for the sustainable coffee production volume. Low demand served low the incentive for the sustainable coffee production (Glasbergen, 2018). To date, the demand for certified sustainable coffee originated from the northern market, however it faced declining trend (Sustainable Coffee Program/SCP,2014). Therefore, through the market building block, the sustainability of coffee production could be increased by promoting sustainability standards and certification in the southern market and increasing demand for certified coffee from this market. ISCoffee has a potential role to play in dealing with the issue. Active participation from the market participants and non-governmental organizations (Non-Governmental Organizations/NGOs) would help improve 1 the implementation capacity of ISCoffee to achieve high certified coffee demand from the southern markets.

https://doi.org/10.24843/SOCA.2022.v16.i01.p02 ISCoffee has not yet officially launched and widely implemented. Nevertheless, the national government has been taking a further step by engaging with NGOs to formulate and launch a “National Curriculum and Training Manual” for Robusta and Arabica coffee. This curriculum was launched in 2016 and 2017, and intended as a national reference to provide training for farmers in improving their knowledge and skills in good agricultural practice and post-harvest processing (Sustainable Coffee Platform of Indonesia/SCOPI, 2017). This curriculum has great potential to support the establishment of ISCoffee in the future. Extension services also required to be improved to support the knowledge and skill in engaging with the curriculum in the future. In addition, the bargaining position of farmers must be well improved.

Farmers might perceive a better bargaining position when dealing with local traders and/or wholesaler than with multinational market actors. This perception could explain their tendency to maintain their coffee distribution to the conventional coffee market, even after the certification. The bargaining position of farmers could be improved through strengthening the capacity of farmer organizations to obtain standard certificates and sustainability certification. The standard certificates and sustainability certifications commonly conducted by multinational companies as partners of certification committees and managers (Ibnu et al., 2015). Alternative livelihood building blocks concentrated in providing specific support for farmer's livelihoods. Some farmers might need to establish more commercial farming activities through a combination of farmer groups, cooperatives and Joint Business Groups. Other farmers, especially the poorest of the poor, may need assistance to find alternative livelihoods through decent work opportunities or through non-agricultural business activities. This situation further implied that the definition of farmer as farmer who spend all their time producing coffee and entirely depended on coffee as the only source of income might no longer be relevant these days, as it ignored truths in their life. Supports delivered for the farmers should depended on the classification of the farmer: support for farmers that entirely spent and depended on their income as a farmer (full-time coffee farmers), support for farmer who earned their income by on-farm and off-farm activities (part-time coffee farmers), and support for farmers who earned income by relying more on off-farm activities (farmers who provide services to the coffee sector). The similar characteristics of these types of farmers noticed was their place of activity (rural area) that related to coffee production, although with different degrees of involvement. In addition, investment in rural public facilities, especially education, have to be carefully designed 18 to change the image of farmers (poor, limited technology and market options) and attract young generation to cultivate coffee commodity. To demonstrate the opportunities offers by the coffee sector, education should include introduction of better technological approach for coffee cultivation and processing, also discussion of potential markets for coffee distribution. In recent decades there has been a geographical expansion

of coffee cultivation. This expansion of coffee production affects the level of competition between producers, both regionally and globally (Neilson & Pritchard, 2011). Indonesia had contributed to this expansion by increasing the production and exporting coffee to various countries of destination. Indonesia has been established as a significant global coffee producing country in 1885 (second place, after Brazil). However, Indonesia position was replaced by Vietnam in 1990s due to their massive Robusta

https://doi.org/10.24843/SOCA.2022.v16.i01.p02 24 production volume. 4 At the same time, new Robusta producers also emerged, Guyana (in Africa) and the Lao People's Democratic Republic (in Asia) (Neilson & Pritchard, 2011; Sustainable Coffee Program/SCP, 2014). On the other hand, these production trend had indicated the structural changes of method applied by the developing countries to deal with invasion of the global markets. It also signified that coffee commodity had gained popularity in global level with numerous producer and tense level of competitiveness. The competition building block was concerned with scheme of the Indonesian coffee sector to gain a strong level of comparative and competitive advantage. Indonesian coffee sector has not reached its full production capacity (only about 60% of the realized production potential (Sustainable Coffee Program/SCP, 2014; T. Wahyudi & Jati, 2012). This data implied that investment in the Indonesian coffee sector could produce a significant increase in production of coffee, in comparison with same amount of investment in other coffee-producing countries that were close to reaching their full production potential (for example Vietnam and Brazil). This could be considered as a comparative advantage of the Indonesian coffee sector. Therefore, it was necessary to increase the production capacity of farmers by implementing better production methods to increase the productivity and efficiency. In addition, due to certain geographical climate conditions, almost all regions in Indonesia produce various special coffee types. Arabica and Robusta's unique characteristics could be grouped as specialty coffees, valued for their high quality. Indonesian Robusta coffee is qualitatively

distinguishable from Robusta from other producers. Hence, Robusta coffee from Indonesia usually valued with quite high price. This competitive advantage should have explored further. There is an opportunity to develop a niche market for the Arabica and Robusta coffees. Potential opportunities include the application of geographic indications (GI) that attach to specific attributes (taste, aroma and production methods) to the coffee. GI served assurance to the consumers of a specialty coffee variant. Robusta lags far behind Arabica in terms of GI, so solid collaboration between coffee stakeholders, especially mediators, would be needed to identify the potential markets for the Robusta coffee. CONCLUSION This study aimed to analyze the parallels of the standard and certification with the premise of The Theory of Change–can contextually provide incentives for a systemic approach to sustainable coffee production in Indonesia and to examine the proper systemic approach for a sustainable system of the Indonesian coffee production. Based on the literature review on the empirical studies, standard and certification did not appear to be contextually capable of being an incentive for a systemic approach for sustainable coffee production. It could not provide a better living situation (primarily, on the economic/income aspect) for the farmers. Thus, economic sustainability had to be the foundation of sustainable coffee production. However, there was a close association 25 between economic, social, and environmental sustainability. A systematic approach presents a better interpretation and integration of factors for 1 sustainable coffee production The systemic approach was conceptually described in a building block combination to promote a more sustainable coffee production system. Concentration

https://doi.org/10.24843/SOCA.2022.v16.i01.p02 25 on the improvements of five development blocks, namely the enabling environment, production and market characteristics, availability of alternative livelihoods, and competition level would serve sustainable growth for Indonesia's coffee production system that majorly had directed by smallholders. Development blocks would not perform adequately by involving a single tool.

A combination of instruments, such as policies, public and private investment, and stakeholder participation, would meet the requirements of each building block and provide sustainability of a system. RECOMMENDATION Future studies require to evaluate the interaction between sustainability standards and certification and instruments in the development block and the impact on the sustainability of coffee production. Further evaluation would provide additional insight into the synergies between standard, certification, and other instruments, especially between standard, certification, and government policy. Thus, a more grounded operational framework or model could be developed as a roadmap towards a more sustainable coffee production system. REFERENCES Anderson, M. (2018). Fair trade and consumer social responsibility: exploring consumer citizenship as a driver of social and environmental change. Management Decision, 56(3), 634–651. Astuti, E. S., Offermans, A., Kemp, R., & Cörvers, R. (2015). The impact of coffee certification on the economic performance of Indonesian actors. Asian Journal of Agriculture and Development, 12(1362-2017–749), 1–16. Bastan, M., Khorshid-Doust, R. R., Sisi, S. D., & Ahmadvand, A. (2018). Sustainable development of agriculture: a system dynamics model. Kybernetes, 47(1), 142– 162. https://doi.org/10.1108/K-01-2017-0003 Bitzer, V., Francken, M., & Glasbergen, P. (2008). Intersectoral partnerships for a sustainable coffee chain: Really addressing sustainability or just picking (coffee) cherries? Global Environmental Change, 18(2), 271–284. Brandi, C., Cabani, T., Hosang, C., Schirmbeck, S., Westermann, L., & Wiese, H. (2013). Sustainability certification in the Indonesian palm oil sector: benefits and challenges for smallholders. Deutsches Institut für Entwicklungspolitik (DIE). Bonn, Germany. Accessed on May 18, 2020 at http://hdl.handle.net/10419/199199. Diaz-Bonilla, E., Orden, D., & Kwieciński, A. (2014). Enabling environment for agricultural growth and competitiveness: evaluation, indicators and indices. OECD Food, Agriculture and Fisheries Papers, No. 67, OECD Publishing. http://dx.doi.org/10.1787/5jz48305h4vd-en Direktorat Jenderal Perkebunan. (2014). Perkebunan Kopi. In statistika perkebunan kopi Indoenesia. Kementerian Pertanian, Republik Indonesia. Accessed on May 18, 2020 at

http://ditjenbun.pertanian.go.id/tinymcpuk/gambar/file/statistik/2015/KOP I 2013 -2015.pd. f. Direktorat Jenderal Perkebunan. (2017). Pengembangan Kopi Arabika Terus Ditingkatkan. Kementerian Pertanian, Republik Indonesia. Accessed on May 18, 2020 at http://ditjenbun.pertanian.go.id/berita361pengembangankopiarabikaterusdit i%0Angkatkan.htm. Elhakim, S. K., & Leovita, A. (2020). 5 Model Penguatan Kelembagaan Asosiasi Kopi Minang Sumatera Barat Menuju Manajemen Inovasi Dalam Memperkuat Kearifan Lokal. Jurnal Agrimanex: Agribusiness, Rural Management, and

SOCA: Jurnal Sosial Ekonomi Pertanian https://doi.org/10.24843/SOCA.2022.v16.i01.p02 26 Development Extension, 1(1). Francesconi, G. N., & Ruben, R. (2014). FairTrade's theory of change: an evaluation based on the cooperative life cycle framework and mixed methods. Journal of Development Effectiveness, 6(3), 268–283. Giovannucci, D., & Ponte, S. (2005). Standards as a new form of social contract? Sustainability initiatives 18 in the coffee industry. Food Policy, 30(3), 284–301. Giovannucci, D., von Hagen, O., & Wozniak, J. (2014). Corporate social responsibility and the role of voluntary sustainability standards. In Voluntary Standard Systems (pp. 359–384). Springer. Glasbergen, P. (2018). Smallholders do not eat certificates. Ecological Economics, 147, 243–252. Global Coffee Platform/GCP. (2017). 4C Baseline common code v.2.1. Accessed on May 18, 2020 at http://www.globalcoffeeplatform.org/assets/files/GCP_Doc_01_BaselineCommon-Code_v2.1_en.pdf. Ibnu, M. (2017). Gatekeepers of Sustainability: On coffee smallholders, standards and certifications in Indonesia. Maastricht University, the Netherlands. Ibnu, M. (2019). Determinan Partisipasi Petani Kopi Dalam Standar dan Sertifikasi Berkelanjutan Common Code for Coffee Community (4C). 6(November), 135– 144. Ibnu, M. (2020). 1 Toward a More Sustainable Coffee Production: the Implementation Capacity of Indonesian Standard Coffee. Pelita Perkebunan, 35(3), 212–229. Ibnu, M., Glasbergen, P., Offermans, A., & Arifin, B. (2015). Farmer preferences for coffee certification: A conjoint analysis of the Indonesian smallholders. Journal of Agricultural Science, 7(6), 20. Ibnu, M., Offermans, A.,

& Glasbergen, P. (2018). Certification and farmer organisation: Indonesian smallholder perceptions of benefits. Bulletin of Indonesian Economic Studies, 54(3), 387–415. Ibnu, M., Offermans, A., Glasbergen, P., & Ismono, H. (2016). Competing explanations for Indonesian smallholder participations in sustainability coffee certifications. Journal of Economics and Sustainable Development, 7(24). Kolk, A. (2013). Mainstreaming sustainable coffee. Sustainable Development, 21(5), 324–337. KPMG. (2013). Improving smallholder livelihoods: 21 Effectiveness of certification in coffee, cocoa and cotton. Accessed on May 18, 2020 at http://sustaineo. org/wpcontent/uploads/2018/01/Improving-smallholderlivelihoodsEffectiveness-of-certification-incoffeecocoa-and-cotton_study-commissionedby-SUSTAINEO. pdf. Liu, E. (2020). The Coffee in Your Cup: Reviewing Fair Trade's Impact on Development. In 17 Oswald Research and Creativity Competition (Vol. 28). Accessed on May 18, 2020 at https://uknowledge.uky.edu/oswald/28/. Loconto, A., & Dankers, C. (2014). Impact of international voluntary standards on smallholder market participation in developing countries: a review of the literature. 4 Food and Agriculture Organization of the United Nations (FAO). Rome, Italy. Molenaar, J. W., Kessler, J. J., Blackmore, E., Vorley, B., Gorter, J., & Simons, L. (2013). Building a roadmap to sustainability in agro-commodity production. Aidenvironment, NewForesight, IIED. Accessed on May 18, 2020 at http://www.newforesight.com/wp-content/uploads/2014/06/IFCReport_here.pdf. Neilson, J., & Pritchard, B. (2011). 15 Value chain struggles: Institutions and governance in the plantation districts of South India (Vol. 93). John Wiley & Sons. Padmaningrum, D. (2019). Penguatan Kapasitas Sumberdaya Manusia Dan Manajemen Kelembagaan Petani Kopi Robusta Temanggung Sebagai Upaya

 26 Adi Widya: Jurnal Pengabdian Masyarakat, 3(2), 8–13. Pierrot, J., Giovannucci, D., & Kasterine, A. (2010). Trends in the trade of certified coffees. In

International Trade Centre Technical Paper. International Trade Centre Technical Paper. Accessed on May 18, 2020 at https://ssrn.com/abstract=1736842. Ponte, S. (2004). Standards and sustainability in the coffee sector. International Institute for Sustainable Development. Accessed on May 18, 2020 at http://www. iisd. org. Reinecke, J., Manning, S., & Von Hagen, O. (2012). The emergence of a standards market: Multiplicity of sustainability standards in the global coffee industry. Organization Studies, 33(5–6), 791–814. Romero, C., Putz, F. E., Guariguata, M. R., Sills, E. O., Cerutti, P. O., & Lescuyer, G. (2013). An overview of current knowledge about the impacts of forest management certification: A proposed framework for its evaluation. CIFOR Occasional Paper, (91). Accessed on May 18, 2020 at https://www.cabdirect.org/cabdirect/abstract/20143006948. Ruben, R., & Fort, R. (2012). The impact of fair trade certification for coffee farmers in Peru. World Development, 40(3), 570–582. Schouten, G., & Bitzer, V. (2015). The emergence of Southern standards in agricultural value chains: A new trend in sustainability governance? Ecological Economics, 120, 175–184. Smith, T. M., & Fischlein, M. (2010). Rival private governance networks: Competing to define the rules of sustainability performance. Global Environmental Change, 20(3), 511–522. Snider, A., Gutiérrez, I., Sibelet, N., & Faure, G. (2017). Small farmer cooperatives and voluntary coffee certifications: Rewarding progressive farmers of engendering widespread change in Costa Rica? Food Policy, 69, 231–242. Steering Committee of the State-of-Knowledge Assessment of Standards and Certification. (2012). Toward sustainability: The roles and limitations of certification. Washington, DC: RESOLVE, Inc. Sustainable Coffee Platform of Indonesia/SCOPI. (2017). Berkelanjutan, Perjalanan Kurikulum Nasional dan Manual Pelatihan Kopi Robusta dan Arabika. SCOPI Indonesia. Accessed on May 18, 2020 at https://scopi.or.id/id/national. Sustainable Coffee Program/SCP. (2014). Indonesia a business case for sustainable coffee production. Accessed on May 18, 2020 at http://www.sustainablecoffeeprogram.com/en/resources. Syahyuti, S. W., Suhaeti, R. N., Zakaria, A. K., & Nurasa, T. (2014). Kajian Peran Organisasi Petani dalam Mendukung

Pembangunan Pertanian. Laporan Hasil Penelitian. Pusat Sosial Ekonomi Dan Kebijakan Pertanian. Bogor. Van Rijsbergen, B., Elbers, W., Ruben, R., & Njuguna, S. N. (2016). The ambivalent impact of coffee certification on farmers' welfare: a matched panel approach for cooperatives in Central Kenya. World Development, 77, 277–292. Wahyudi, A., Wulandari, S., Aunillah, A., & Alouw, J. 10 C. (2020). Sustainability certification as a pillar to promote Indonesian coffee competitiveness. IOP Conference Series: Earth and Environmental Science, 418(1), 12009. Wahyudi, T., & Jati, M. (2012). Challenges of sustainable coffee certification in Indonesia. International Coffee Council 109th Session,(September), 1–14. Wiguna, S., Karimi, S., & Ridwan, E. (2019). Dampak Skema Relasi Kopi Sebagai Pengembangan Perekonomian Petani Kopi di Pedesaan. Agriekonomika, 8(1), 93–103.

Sources

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