Proceeding of 5th International Conference on Research and Development (ICORAD)
Vol. 5 No. 1 (2026)
Page : 242-254
ISSN:2828-4925
DOI: 10.47841/icorad.v5i1.402

The Impact of *Fairtrade* Certification on the Sustainability of Arabica Coffee Production *(Coffee Arabica SP)* Economic Aspects in Central Aceh Regency Aceh Province

Fitri Ilma[1], Lubis Satia Negara[2], Wibowo Rulianda Purnomo[3], Lubis Arlina Nurbaity[4]
[1,2,3,4] Faculty of Agriculture, University of North Sumatra, Indonesia
Corresponding email : araemafitri@gmail.com

Received: January 05, 2026 | Revised: January 10, 2026 | Accepted: January 15, 2026

Abstract. The purpose of this study is to determine and analyze the impact of Fair Trade certification on the sustainability of economic aspects of production in Central Aceh Regency Aceh Province. The hypothesis of this study is that it is suspected that economic aspects influence the sustainability of Arabica coffee production through Fair Trade certification in Central Aceh Regency Aceh Province . The data analysis methods used in this study are Likert scale analysis and sustainability analysis. The research results show that the economic aspect indicator is productivity. Farming coffee is 82.00% in the very sustainable category. Ease in getting market information in the form of the price of the coffee currently. The applicable rate is 100 % with a very sustainable category. The price of coffee production is 79.43 % in the sustainable category. Transparency in evaluation quality coffee which is produced (moisture content, seed defects, etc.) as consideration price sell coffee is 87.14 % with a very sustainable category. Ease in marketing coffee is 100 % in the very sustainable category. The research results show that the Sustainability of Arabica Coffee (*Coffea arabica sp*) Production in the Economic Aspect Through Fair Trade Certification in Central Aceh Regency, Aceh Province, shows a very sustainable sustainability index. This represents a significant opportunity to improve the sustainability of Arabica coffee production at the research location.

Keywords: Impact; Fairtrade; Sustainability; Certification; Arabica

INTRODUCTION

Coffee is Wrong, one of the leading export commodities of Indonesia. Coffee production exceeds consumption, leading to *excess supply* . *This excess supply* forces Indonesia to sell most of its coffee to other countries. Indonesia is a net exporter. Indonesia was the fourth largest coffee producer in the 2006-2010 period, with a market share of 6.84 %, behind Brazil, Vietnam, and Columbia. This low market share makes Indonesia unable to influence global coffee prices, even though Indonesia is a country that receives world coffee prices.

In Indonesia, an area that is quite well-known as a coffee producing area is the Gayo Highlands, located in Nanggroe Aceh Darussalam Province. Aceh Darussalam. As one of the largest coffee-producing regions in Indonesia, the natural environment of the Gayo Highlands is indeed very suitable and appropriate. to produce coffee with good quality like Arabica type. Because of that, coffee has also become the main commodity of the people's economy in the region consisting of these three districts (Central Aceh, Bener Meriah and Gayo Lues). Coffee from Central Aceh Regency is famous for its coffee. Gayo which has received Indication certification Geographical.

Coffee farmers in the Gayo Highlands also indicate the importance of coffee to the Gayo people, not only economically but also socially and environmentally. Coffee production in Indonesia continues to increase annually. Coffee production in Indonesia

Proceeding of 5th International Conference on Research and Development (ICORAD)
Vol. 5 No. 1 (2026)
Page : 242-254
ISSN:2828-4925
DOI: 10.47841/icorad.v5i1.402

increased by 2.7 % from 2011 to 2018 (Wibowo, 2019). This is due to lifestyle changes. urbanization, the global coffee consumption rate is expected to continue to increase by 0.4 % per year (Meiri et al., 2013).

Central Aceh Regency is at an altitude of between 1,250 meters to 2,600 meters above sea level. Topography Aceh Regency The middle is mountainous and hilly and has a tropical climate, where the dry season usually falls in January until in July, the rainy season lasts from August to December. Average rainfall ranges from 1,082 to 2,409 mm/year, with 113 to 160 rainy days per year. The air temperature is 20.10°C; the hottest months are April and May at 20.6°C, and the coldest is September at 19.70°C. The air is not too humid, with an average relative humidity of 80%, making this natural environment very pleasant. support for Coffee plants. (Wachjar, A: 1984). The following describes more clearly the total land area and coffee production in Central Aceh Regency:

Table 1. Area of Coffee Plantations in Central Aceh Regency in 2025

Subdistrict	Arabica Coffee		Robusta Coffee	
	2022 (Ha)	2023 (Ha)	2022 (Ha)	2023 (Ha)
Linge	3,991.00	3,889.00	530.00	537.00
Atu Lintang	4,070.00	4,070.00	0.00	0.00
Jagong Jeget	6,829.00	6,829.00	6.00	6.00
Bintang	2,877.20	2,877.20	54.40	54.40
Lut Tawar	2,012.00	2,020.20	16.20	17.20
Kebayakan	2,421.00	2,421.50	1.00	1.00
Pegasing	8,284.40	8,287.40	4.50	6.50
Bies	985.00	984.70	0.00	0.25
Bebesen	2,133.00	2,119.00	0.00	3.00
Kute Panang	1,820.75	1,828.60	24.00	24.00
Silih Nara	4,146.00	4,146.00	9.51	11.01
Ketol	3,423.00	3,437.50	328.00	328.00
Celala	2,984.00	2,992.50	63.00	63.00
Rusip Antara	4,019.00	4,019.00	63.00	63.00
Amount	**49,996.85**	**50,034.10**	**1,099.61**	**1,114.36**

Source: Primary Data Processed by BPS Central Aceh, 2025

Based on this table, a good understanding of the area planted with coffee helps in planning sustainable agricultural practices and environmental conservation. Therefore, the area of coffee plantations is a crucial parameter in assessing the potential and performance of a region's coffee sector and in making decisions related to agriculture, the economy, and the environment. Furthermore, 73,660 people aged 15 and over work as farmers in Central Aceh Regency. (BPS Central Aceh, 2024:74)

Coffee consumption has become associated with social life due to the trendy lifestyles of Generation Z and millennials, many of whom now consume coffee as a way to show off their finances (Utami & Yuliawati, 2020). Therefore, coffee cooperatives play a crucial role in supporting the sustainability of the coffee industry and improving the welfare of coffee farmers. By collaborating through cooperatives, farmers can overcome challenges in coffee production and marketing and increase their competitiveness in the global market.

One of the coffee companies in Central Aceh that holds fairtrade certification is Kopsen *Gayo Highland*. The Gayo Highland Producers Cooperative was established in

Proceeding of 5th International Conference on Research and Development (ICORAD)
Vol. 5 No. 1 (2026)
Page : 242-254
ISSN:2828-4925
DOI: 10.47841/icorad.v5i1.402

October 2016 and is located in Central Aceh, Aceh. This cooperative has more than 700 coffee farmers as members, with a land area of 1,000 hectares and coffee production reaching 54 lots. Coffee products produced include Arabica Gayo Exclusive, Arabica Gayo Rusia, Arabica Gayo Simpang Bogor, Arabica Gayo Winar, and Gayo Highland. The cooperative has obtained Organic Control Unions Certifications (CUC), Fairtrade (Flocert), and CAFE Practices certifications.

One of the things that must be fulfilled so that farmers In developing countries, farmers can participate in this movement by obtaining FT certification. To obtain FT certification, they must form or join a local organization (such as a cooperative). This organization or cooperative will then register the farmers for FT certification .

One of the main challenges facing the coffee industry in Central Aceh Regency is maintaining and improving the sustainability of Arabica coffee production amidst the dynamics of the global market. One strategy considered effective is Fairtrade certification. Fairtrade is a certification scheme aimed at improving the welfare of farmers by ensuring fair prices, improving working conditions, and promoting sustainable agricultural practices.

Kopsen *Gayo Highland*, a cooperative in Central Aceh Regency, has successfully achieved Fairtrade certification. This certification provides numerous benefits to coffee farmers, including broader market access, better selling prices, and improved sustainable farming practices. However, the economic impact of this certification on the sustainability of Arabica coffee production in the region still requires further research.

Based on the description, the researcher is interested in conducting research with the title "The Impact of *Fairtrade* Certification on the Sustainability of Arabica Coffee Production *(Coffee Arabica SP)* Economic Aspects in Central Aceh Regency, Aceh Province".

1. Formulation of the problem

Based on the background of the problem above, the problem can be formulated as follows: " What are the economic impacts resulting from the implementation of Fairtrade certification on the sustainability of Arabica coffee production in Central Aceh Regency, Aceh Province?"

2. Research purposes

Based on the problem formulation, the aim of this study is to analyze the impact of the economic aspects of Fairtrade certification on the sustainability of Arabica coffee production (*coffee arabica* SP) in Central Aceh Regency , Aceh Province.

3. Hypothesis

Hypotheses are used to guide research and test the truth or falsity of a statement based on collected data. The hypotheses in this study are:

Ha: *Fairtrade* Certification Economic Aspects Impact There is a Sustainable Production of Arabica Coffee (Coffee Arabica SP) in Central Aceh Regency, Aceh Province .

RESEARCH METHODS

1. Place and Time of Research

The research was conducted in Central Aceh Regency, Aceh Province from June to early July 2024 at Kopsen *Gayo Highland* in Central Aceh Regency, Aceh Province.

2. Scope of Research

Proceeding of 5th International Conference on Research and Development (ICORAD)
Vol. 5 No. 1 (2026)
Page : 242-254
ISSN:2828-4925
DOI: 10.47841/icorad.v5i1.402

The scope of this research includes an analysis of the Impact of Fairtrade Certification on Economic Aspects on the Sustainability of Arabica Coffee Production (*Coffea arabica* SP) in Central Aceh Regency, Aceh Province.

3. Method of collecting data

Data collection methods can be conducted in various settings, with various sources, and in various ways . In terms of methods or techniques, data collection can be conducted through interviews, questionnaires, and observation.

The data collection methods used in this study are:

a. Observation

Observation is a technique or method for collecting data by directly observing an ongoing activity. Observation focuses on paying close attention, recording emerging phenomena, and considering the relationships between aspects within those phenomena. Observation provides data about a problem, providing understanding or as a means of re-checking or verifying previously obtained information. (Nana Syaodih, 2013: 220). In this study, observations were conducted by researchers during the study to optimize data regarding the analysis of the sustainability of Arabica coffee production (coffee arabica SP) in economic aspects through *fairtrade certification* in Central Aceh Regency, Aceh Province.

b. Interview

An interview is a conversation with a specific purpose. The conversation is conducted by two parties: the interviewer who asks questions and the interviewee who provides answers or answers to those questions (Moloeng, 2005: 186). The interview technique used in this study was face-to-face interviews. Face-to-face interviews are a method of collecting data or information through face-to-face meetings with informants, with the aim of obtaining a comprehensive overview of the research topic. The interviews in this study were conducted to obtain data and information for an analysis of the economic aspects of sustainable Arabica coffee production (coffee arabica CP) through *Fairtrade certification* in Central Aceh Regency, Aceh Province.

c. Questionnaire

It is a data collection technique carried out by providing a set of written statements/questions from the two variables, namely the impact of economic implementation as (X) sustainability of Arabica coffee production through certification (*fairtrade*) Central Aceh Regency as variable (Y) has questions to respondents. The data requested from respondents are matters related to the analysis of the sustainability of Arabica coffee production (coffee arabica cp) economic aspects through *fairtrade certification* in Central Aceh Regency, Aceh Province.

d. Documentation

Documentation is a data collection technique that involves collecting and analyzing documents, whether written, pictorial, or electronic. Documentary studies complement the use of observation and interview methods in qualitative research. Research results from observations or interviews will be more credible and reliable if supported by documents from sources (Nana Syaodih, 2013: 221). The documents to be collected are documents related to the analysis of the sustainability of Arabica coffee production (coffee arabica cp) from an economic aspect through *fairtrade certification* in Central Aceh Regency, Aceh Province.

Proceeding of 5th International Conference on Research and Development (ICORAD)
Vol. 5 No. 1 (2026)
Page : 242-254
ISSN:2828-4925
DOI: 10.47841/icorad.v5i1.402

4. Population, Sample and Research Instruments

Nur Fadilah Amin (2023) Population is all elements in research including objects and subjects with certain traits and characteristics. So in principle, population is all members of a group of humans, animals, events, or objects that live together in a planned place to become the conclusion of the final results of a study. Population can be divided into three, population based on its number, namely limited population and unlimited population, based on its nature, namely homogeneous population and heterogeneous population, and based on other differences, namely target population and survey population.

The population in this study were members of the Arabica coffee farmer cooperative spread across Central Aceh Regency, Aceh Province, spread across the sub-districts, namely Silih Nara Sub-district, which is part of the Gayo Highlands Cooperative Fair Trade Certificate program .

5. Research Sample

Husein Umar (2008) states that a sample is the smallest part of a population. The sampling technique used in this study is probability sampling, which is a sampling technique that provides an equal opportunity for each element (member) of the population selected to be selected as a sample member. It consists of *simple random sampling, proportional stratified random sampling, disproportionate stratified random,sampling area (cluster)* .

The sample in this study *was simple random sampling,* where the sampling of population members was done randomly by paying attention to the strata in the population, carried out because it was considered a homogeneous population (Husein Umar.,: 2008, Nazir (2011). Considering that the population was considered homogeneous, all populations were used as samples, where the population size was 280, so the sample size was also 280 sample farmers.

6. Data Analysis Method

a. Likert Scale Formula

The Likert scale is a survey-based data collection method. Generally, it's used to measure respondents' attitudes and opinions in questionnaires administered by researchers. It's used for research topics or themes that can be measured in terms of respondents' attitudes, opinions, and perceptions of natural phenomena. The following is a definition of the Likert scale according to experts.

Coffee production with 4 Likert scale options with score format and categories:

- Score 1. Strongly Disagree
- Score 2. Less Agree
- Score 3. Neutral
- Score 4. Agree
- Score 5. Strongly Agree

For the total score of each question asked, use the following formula:

Total Score = T x pn

Where:

T =Number of respondents who chose x number of questions

Pn = Choice of Likert score numbers

b. Sustainability formula

Proceeding of 5th International Conference on Research and Development (ICORAD)
Vol. 5 No. 1 (2026)
Page : 242-254
ISSN:2828-4925
DOI: 10.47841/icorad.v5i1.402

Sustainability in general uses the formula (Pitcher et. al., 2001) sustainability index as follows:

$$Indeks\ Keberlanjutan = \frac{Skor\ yang\ di\ peroleh}{Skor\ Maksimum}\ x\ 100\ \%$$

Sustainability status in this study was classified into five categories: highly unsustainable, moderately sustainable, unsustainable, sustainable, highly sustainable, and extremely sustainable (Pitcher et al., 2001).

- 0-25.00% : Not sustainable (Bad)
- 25.01 - 70.00% : Less sustainable (Less)
- 70.01 - 75.00% : Sufficiently sustainable (Sufficient)
- 75.01 – 85.00% : Sustainable (Good)
- 85.01 – 99.99% : Very Sustainable (Excellent)

c. Operational Limitations

In identifying operational limitations in this study, here are some limitations that can be explained:

- Coffee certification is the process of evaluating and recognizing coffee that meets specific standards set by a certification organization. These standards can cover quality, environmental, social, and economic aspects. Coffee certification aims to ensure that coffee is produced sustainably, respects farmer welfare, and meets internationally recognized quality standards.
- Fairtrade certification is an evaluation and recognition process awarded to products and producers that meet Fair Trade standards. These standards encompass fair trade principles, such as paying fair prices to farmers and workers, environmentally sustainable production practices, and improving the working and living conditions of farmers and workers.
- Farmer certification is the process of evaluating and recognizing farmers or groups of farmers who meet specific standards set by a certification organization. These standards typically cover environmental, social, and economic aspects, such as sustainable agricultural practices, protecting workers' rights, and improving the well-being of farming communities.
- Sustainable coffee farming is a coffee farming practice that considers environmental, social, and economic aspects to ensure that coffee production can continue without harming natural resources or the well-being of communities. Sustainable coffee farming not only helps preserve the environment but also improves the well-being of farmers and ensures the continuity of coffee production for future generations.
- The economic aspects are as follows as a result of a change that occurs in the environment towards economic activities carried out by farmers which bring improvements in life.
- Production is the result of Arabica coffee production in the form of green beans Kg/Ha/year.
- A farmer is someone who carries out Arabica coffee production activities and is a member of a fair trade certified coffee organization.
- Sustainability is being able to meet the needs of the current generation without compromising the ability of future generations.

Proceeding of 5th International Conference on Research and Development (ICORAD)
Vol. 5 No. 1 (2026)
Page : 242-254
ISSN:2828-4925
DOI: 10.47841/icorad.v5i1.402

- Fairtrade is a coffee certification organization that supports improving farmer welfare by directly determining prices, conducting trade without intermediaries, and improving product quality by improving group and environmental performance.

RESULTS AND DISCUSSION

1. Characteristics of Sample Farmers

The characteristics of Gayo Arabica coffee farmers in Central Aceh Regency, Aceh Province are described through descriptive analysis and processed by grouping, tabulating using average frequencies, and then providing narrative explanations to provide an empirical picture of the primary data collected from respondents directly involved in Gayo Arabica coffee management activities . All of the farmers who participated in this study were male.

The farmer characteristics observed in this study were age, education level, experience, and number of dependents. These characteristics consist of four indicators, which are described in more detail in Table 1. Table 1 describes the characteristics of the respondent farmers, namely independent Gayo Arabica coffee farmers, including age, education level, experience farming Gayo Arabica coffee, and number of dependents.

Table 2. Percentage of Farmer Characteristics in 2025

Indicator	Farmer Characteristics Components	Number of Samples	Percentage (%)
Age (years)	15 years	0	-
	16 - 40 Years	100	35.71
	41 - 60 Years	140	50.00
	> 61 Years	40	14.29
	Amount	280	100
Level (years)	Elementary School	50	17.85
	JUNIOR HIGH SCHOOL	80	28.59
	High School	100	35.71
	BACHELOR	50	17.85
	Amount	280	100
Number of Family Dependents (people)	0 – 2	100	35.72
	3 – 4	130	46.42
	> 4	50	17.85
	Amount	280	100
Experience (years)	5	30	10.72
	6 – 10	50	17.85
	11 – 15	80	28.57
	> 20	120	42.85
	Amount	280	100

Source: Primary Data (Processed) 2025

2. Data Analysis Method

Data analysis is the process of studying and processing data to identify patterns, relationships, and important information contained within it. The goal is to gain a deeper understanding of the analyzed data and make informed decisions.

3. Likert Scale

Proceeding of 5th International Conference on Research and Development (ICORAD)
Vol. 5 No. 1 (2026)
Page : 242-254
ISSN:2828-4925
DOI: 10.47841/icorad.v5i1.402

The Likert scale is a scale or measurement used to measure the attitudes, opinions, or perceptions of a person or group of people regarding an event or social phenomenon, based on the operational definition that has been determined by the researcher.

The Likert scale is commonly used as a data collection method to determine or measure quantitative or qualitative data regarding a social phenomenon. In other words, the Likert scale is a research scale used to measure attitudes and opinions.

According to Sugiyono (2016), the Likert scale is used to measure the attitudes, opinions, and perceptions of an individual or group of people regarding social phenomena. With a Likert scale, the variables to be measured are broken down into indicators. These indicators are then used as a starting point for compiling instrument items, which can be statements or questions. The answers to each instrument item using a Likert scale range from very positive to very negative.

Provision category score Which used is as following:

- Score 1 if No in accordance standard
- Score 2 if not enough according to standards
- Score 3 if according to standards

Indicators for assessing farming practices sustainable in a way economics from several previous studies (Meri Fatmalasari : 2018 , Abd Fajar, et al. 2022, Oktami, N. 2016, Incamilla, A, 2015, Nalurita, S, 2014) are as follows:

- Productivity farming coffee.
- Convenience in getting market information in the form of price coffee that currently applies.
- Price sells coffee.
- Transparency in evaluation quality coffee Which results (moisture content , seed defects, etc.) as consideration price sell coffee.
- Convenience in marketing coffee.

Table 3. Assessment Scores of Economic Aspect Indicators on the Sustainability of Arabica Coffee Production in the Research Area in 2025.

No	Indicator	Assessment Score			Number of Samples
		1	2	3	
1	Productivity farming coffee	0	70	210	280
2	Convenience in getting market information in the form of price coffee that currently applies.	0	0	280	280
3	Price sell coffee	0	80	200	280
4	Transparency in evaluation quality coffee Which produced (moisture content, seed defects, etc.) as consideration price sell coffee.	0	50	230	280
5	Convenience in marketing coffee	0	0	280	280
Amount			0	200	1200

Source : Primary Data Source Processed in 2025

Based on table 4.5, it shows that the assessment score values are as follows:

Proceeding of 5th International Conference on Research and Development (ICORAD)
Vol. 5 No. 1 (2026)
Page : 242-254
ISSN:2828-4925
DOI: 10.47841/icorad.v5i1.402

a. Productivity farming coffee category scale 1 is 0, category scale 2 is 70 and category scale 3 is 210.
b. Convenience in getting market information in the form of price coffee that currently applicable scale category 1 is as much as 0, scale category 2 is 0 and scale category 3 is as much as 280.
c. Price sells coffee category scale 1 is 0, category scale 2 is 80 and category scale 3 is 200.
d. Transparency in evaluation of quality coffee produced (moisture content, seed defects, etc.) as consideration price sell coffee category scale 1 is as much as 0, category scale 2 is 50 and category scale 3 is as much as 230.
e. Convenience in marketing coffee category scale 1 is as much as 0, category scale 2 is 0 and category scale 3 is as much as 280.

4. Production Sustainability

In relation to the sustainability of coffee production, according to the Ministry.

According to the Directorate General of Plantations (2014), various trade practices initiated by coffee consumers are currently developing. Certain consumers demand certified coffee such as *Fair Trade, Utz Certified, Organic, Common Code for Coffee Community* (4C), *Rainforest Alliance, Coffee and Farmer Equity* (CAFE) *Practices (Starbucks)*, and *Bird Friendly*. All of these systems essentially emphasize traceability *and* sustainability. The principles of sustainable coffee are: *environmentally friendly. sustainable*; *economically viable*; and *socially acceptable*. The results obtained from the field research are as follows:

Table 4. Economic Aspect Indicators for the Sustainability of Arabica Coffee Production in the Research Area in 2025.

No	Indicator	Sustainability					Total Sustainability Index	Sustainable Index
		Score Obtained			Number of samples	%		
		1	2	3				
1	Coffee farming productivity	0	70	210	280	100	82.00	Sustainable
2	Ease of obtaining market information in the form of current coffee prices.	0	0	280	280	100	100.00	Highly Sustainable
3	Coffee selling price	0	80	200	280	100	79.43	Sustainable
4	Transparency in assessing the quality of coffee produced (water content, bean defects, etc.) as a consideration for the selling price of the coffee.	0	50	230	280	100	87.14	Highly Sustainable
5	Ease of marketing coffee.	0	0	280	280	100	100.00	Highly Sustainable

Source: Primary Data Processed in 2025.

Based on table 4.5, it shows that the social aspect indicators are

Proceeding of 5th International Conference on Research and Development (ICORAD)
Vol. 5 No. 1 (2026)
Page : 242-254
ISSN:2828-4925
DOI: 10.47841/icorad.v5i1.402

1. Productivity farming coffee is 82.00 % with a very sustainable category.
2. Convenience in getting market information in the form of price of the coffee currently The applicable value is 100 % with a very sustainable category.
3. The price of coffee sold is 79.43 % in the sustainable category.
4. Transparency in evaluation quality coffee which is produced (moisture content, seed defects, etc.) as consideration price sell coffee is 87.14 % with a very sustainable category.
5. Convenience in marketing coffee is 100 % in the very sustainable category.

The results of this study are in line with the research of Fahnia Chairawaty (2012). Economic aspects: reducing input costs for chemical purchases, increasing income , Molenaar et al., (2013) Favorable market characteristics (Good Agricultural Practices, Policy/regulatory framework, institutions and infrastructure to improve some service delivery (e.g. access to capacity building, access to inputs and finance, High sustainable demand, Bargaining power, Perishable crops, Ability to mechanize production, Options for intercropping, Knowledge & technology), Optimization of production characteristics (High sustainable demand, Alignment of supply with demand, International vs domestic markets, Efficiency and equity, Bargaining power, Creation of alternative livelihoods (alternative crops, alternative jobs), Fittiara: 2014, Muzdalifah: 2015 , Gita Marindra: 2018, Impact on the economic aspects of labor absorption, Development of economic structure, namely the emergence of other economic activities due to the project such as shops, stalls, transportation and others, Increased community income, Community welfare . Meri Fatmalasari (2018) argues that the economic aspects perceived by farmers are realized in the form of a fair trade process, where farmers determine the price of coffee and the price determination is carried out through a price negotiation process. Sri Astuti (2018) the economic aspects of better prices are only indirect. Fikadu Mitiku (2017) gets a better price. Donovan, J., & Poole, N. (2017).

This study reveals how: (1) economic benefits, especially price guarantees, have enabled farmers coffee has withstood the global price decline but is more profitable for large producers than small ones; (2) Fair Trade Premiums have paid for coffee improvements and social services, but vary depending on on export volumes; (3) some buyers, but not all, have pushed for increased capacity; and (4) Participation in coffee cooperatives is increasing, although unevenly across gender, ethnicity, and class. Angling Agustin Pawiengla et al., (2020) The economic dimension consists of 9 attributes for sustainability analysis. The condition attributes The fields that are estimated to have an impact on the sustainability of the economic dimension are: (1) profits from people's coffee farming, (2) agricultural products other than coffee, (3) how to sell the harvest coffee, (4) places to sell/market coffee, (5) competitiveness of coffee from Silo sub-district, (6) level of availability of marketing access, (7) market access, (8) level of dependence on overseas markets, (9) coffee's contribution to Gross Regional Domestic Product income (GRDP).

CONCLUSION AND SUGGESTIONS

CONCLUSION

The conclusions obtained from the research results are:

1. Productivity farming coffee is 82.00 % with a very sustainable category.
2. Convenience in getting market information in the form of price coffee that currently The applicable value is 100 % with a very sustainable category.

Proceeding of 5th International Conference on Research and Development (ICORAD)
Vol. 5 No. 1 (2026)
Page : 242-254
ISSN:2828-4925
DOI: 10.47841/icorad.v5i1.402

3. The price of coffee is 79.43 % in the sustainable category.
4. Transparency in evaluation quality coffee which is produced (moisture content, seed defects, etc.) as consideration price sell coffee is 87.14 % with a very sustainable category.
5. Convenience in marketing coffee is 100 % in the very sustainable category.
6. The results of this study indicate that the average sustainability of Arabica coffee production at the research sites has a very sustainable sustainability index. Therefore, there is still a significant opportunity to improve the sustainability of Arabica coffee production at the research sites.

SUGGESTION

The researcher's suggestions regarding the Sustainability of Arabica Coffee Production (Coffea arabica sp) Economic Aspects Through Fair Trade Certification in Central Aceh Regency, Aceh Province are as follows:

1. Efforts to increase the level of sustainability can be carried out from an economic perspective.
2. Efforts to improve the economic aspect can involve interventions related to increasing productivity and strengthening the level of farmer independence regarding agricultural inputs.
3. Farmers already have knowledge about this but have not yet implemented it optimally.
4. Further research is expected to expand the scope of the research area and increase the number of respondents in order to provide a bigger picture.
5. In addition, it is necessary to make comparisons between various regions and compare different topographies to be able to find out the level of sustainability of each location.

REFERENCES

Abd Fajar, et al., 2022, *Sustainability Status of CAFE Practices Certified Coffee Plantations, Bogor Agricultural University, Bogor*

Abdullah Thamrin, 2007, *Marketing Management* , Raja Grafindo Persada, Jakarta

Ardiyani F and Erdiansyah NP, 2012, *Sustainable Coffee Certification in Indonesia. News of the Indonesian Coffee and Cocoa Research Center,* Jember. https://anzdoc.com/download/sertifikasi-kopi-berkelanjutan-di-indonesiapusat-penelitian.html .

Bacon, Christopher, 2005, *"Confronting the coffee crisis: Can fair trade, organic and specialty coffees reduce small-scale farmer vulnerability in Northern Nicaragua?"* World Development Vol. 33 No3. p. 497–511

Budiman Haryanto, SP, 2012, *Superior Rubber Cultivation* , Yogyakarta, Pustaka Baru Press

Compilation Team/Team Members of BPS Central Aceh Regency, 2024, *Central Aceh Regency in Figures , BPS* Central Aceh Regency

Cristo, Waralah Rd, 2008, *Understanding Impact,* Alfabeta, Bandung

Department of Tourism and Culture, 2013, *Socio-Economic Impact Analysis of the Tanjung Lesung Special Economic Tourism Zone,* Banten Province

Directorate General of Plantations, 2019, *Indonesian Plantation Statistics ,* Jakarta

Donovan, J., & Poole, N. (2017). Partnerships in Fairtrade coffee: A close-up look at how buyers and NGOs build supply capacity in Nicaragua. In V. Nelson (Ed.), *Fairtrade*

impacts: Lessons from around the world (pp. 45–60). Rugby: Practical Action Publishing.

Dwi P., Rahmat, 2015, *Socio-Economic and Environmental Impacts of Illegal Coal Mining in Tanjung Lalang Village, Tanjung Agung District, Muara Enim Regency,* Faculty of Social and Political Sciences, Sriwijaya University

Fahnia Chairawaty (2012) Impact of Environmental Protection Implementation Through Fair Trade Certification (Case Study: Coffee Farmers Members of Permata Gayo Cooperative, Bener Meriah Regency, Nanggroe Aceh Darussalam) © 2012, Environmental Science Study Program, Postgraduate Program, UNDIP Environmental Science Journal *Volume 10 Issue 2: 76-84 (2012.* (accessed on 15 December 202 3).

Fatmalasari, M., FE Prasmatiwi, and N. Rosanti, 2016, *"Benefit Analysis Indonesian Organic Farm Certification (INOFICE) certification for Sustainability of Organic Coffee Farming in Air Hitam District, West Java Regency West Lampung", Journal of Agribusiness Sciences (JIIA), Vol. 4(1),* Pp: 30-39.

Gita Marindra, 2018, *Analysis of Coffee Farming Sustainability with Common Code for the Coffee Community (4c) Certification in Tanggamus Regency, Lampung Province,* Faculty of Agriculture University of Lampung, Lampung

Hiwot, H. 2011, *Growth and Physiological Response of Two Coffea Arabica L. Populations under High and Low Irradiance* , Thesis, Addis Ababa University

Hudson, Mark, Ian Hudsson, Mara Fridell, 2013, *Fair Trade, Sustainability, and Social Change* . Hampshire: Palgrave Macmillan

Incamilla, A., B. Arifin, and A. Nugraha, 2015, *"Sustainability of Coffee Farming Agroforestry in Pulau Panggung District, Tanggamus Regency", Journal Sciences Agribusiness (JIIA), Vol. 3(3),* Pp: 260-267.

Independent Farmers' Work Team, 2010, *Corn Planting Guide* , CV. Nuansa Aulia, Bandung

Instinct, S., RW Asmarantaka, And S. Jahroh, 2014, *"Analysis Competitiveness And "Indonesian Coffee Agribusiness Development Strategy", Journal of Agribusiness Indonesia, Vol. 2(1),* Pp: 63-74

Kodu, Sarini, 2013, *Price, Product Quality, and Service Quality: Their Influence on the Purchase Decision of a Toyota Avanza* . EMBA Journal, Vol. 1 No. 3

Kurnia Muhadi, 2024, *Regent: Central Aceh Has 19 Coffee Export Cooperatives,* Antaranews.com, Central Aceh, https://aceh.antaranews.com /berita/219862/bupati-aceh-tengah-miliki-19-koperasi-ekspor-kopi

Lyon, Sarah, 2007, *Fair trade coffee and human rights in Guatemala,* Journal of Consumer Policy 30: 241–261.

Meiri, Anggi et al., 2013, *Analysis of Indonesian Coffee Trade in the International Market* , Vol. 4, No. (1)

Ministry of Education and Culture, 2003, *Complete Dictionary of the Indonesian Language,* Balai Pustaka, Jakarta

Mitiku, F., de Mey, Y., Nyssen, J., Maertens, M., 2017. Do private sustainability standards contribute to income growth and poverty alleviation? A comparison of different coffee certification schemes in Ethiopia. Sustainability 9, 246.

Moleong, Lexy J, 2005, *Qualitative Research Methodology,* Rosdakarya Youth, Bandung

Musdalifah, Mintarti S., & Nadir, M., 2015, *Fundamental Investment Management, Technical, Investor Behavior and Stock Returns ,* Deepub , Yogyakarta.

Najiyati, S and Danarti, 2006, *Coffee Cultivation and Post-Harvest Handling,* Penebar Swadaya, Jakarta

Proceeding of 5th International Conference on Research and Development (ICORAD)
Vol. 5 No. 1 (2026)
Page : 242-254
ISSN:2828-4925
DOI: 10.47841/icorad.v5i1.402

Nicholls, Alex, 2000, *Thriving in a Hostile Environment: Fairtrade's Role as a Positive Market Mechanism for Disadvantaged Producers,* Sage Publications, London

Oktami, N., FE Prasmatiwi, and N. Rosanti, 2016, *"Benefits of Certification Rainforest Alliance (RA) in Developing Coffee Farming Businesses Sustainable in Pulau Panggung District, Tanggamus Regency", Journal Sciences Agribusiness (JIIA), Vol. 2(4),* Pp: 337-347

Rahardjo P., 2012, *Combined Arabica and Robusta Coffee Cultivation and Processing* , Penebar Swadaya, Jakarta

Ranjabar, Jacobus, 2006, *Indonesian Socio-Cultural System,* Ghalia Indonesia: Bogor

Ridwansyah, 2003, *Coffee Processing. Department of Agricultural Technology,* Faculty of Agriculture, University of North Sumatra, Medan

Roche, D and Robert, 2007, *A Family Album Getting to the Roots of Coffee's Plants Heritage* . (www.roastmagazine.com).

Rosandi, AW, 2007, *Analysis of Factors Influencing Indonesian Coffee Export Supply* . Thesis. Unpublished. Faculty of Economics and Management, Bogor Agricultural University, Bogor

Sari, Fittiara A, 2014, *Study of the Impact of the Existence of PT. Korindo Ariabima Sari Industry in Mendawi Village, West Kotawaringin Regency* , Jurnal Teknik PWK, Vol. 3, No. 1

Soerjono Soekanto, 2005, *Sociology: An Introduction* , Rajawali Press, Jakarta

Sri Astuti Soeryaningrum Agustin, E. (2018). *The Impact of Coffee Certification on the Economic Performance of Indonesian Actors* . [Doctoral Thesis, Maastricht University]. Datawyse / Universitaire Press Maastricht. https://doi.org/10.26481/dis.20180508es

Stanton, William, J., 2004, *Principles of Marketing* , Erlangga Publisher, Jakarta

Suharno and Ana Retnoningsih, 2004, *Big Indonesian Dictionary* , Widya Karya, Semarang

Suhartana, S., Yuniawati, 2008, *Efficiency of Chainsaw Use in Logging Activities: Case Study at PT Surya Hutan Jaya, East Kalimantan,* Forest Products Research Journal Vol. 24 No. 1. Center for Forest Products Research and Development, Bogor.

Sukmadinata, Nana Syaodih, 2013, *Educational Research Methods,* Rosdakarya Youth, Bandung.

Utami, WT, & Yuliawati, 2020, *Social, Personal, and Psychological Factors Influencing Coffee Purchase Decisions at Kampoeng Kopi Banaran* , *Journal of Archipelago Agribusiness* , 8 (2)

Wachjar, A., 1984, *Introduction to Coffee Cultivation ,* Faculty of Agriculture, Bogor.

Wahyudi, 2012, *Study of the Processing of Several Varieties of Javanese Coffee and Their Effect on Quality,* Pelita Perkebunan 15 (1)

World Trade Organization, *World Trade Statistical Review 2016,* https://wto.org/statistics [accessed 27 June 2024).