



## The Role of Millennial Liberica Coffee Farmers on Sustainability Community in West Tanjung Jabung

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**Abstract.** *This article is result of action research about the Millennial Farmer and Non-state Actor in the Development of Liberica Coffee in West Tanjung Jabung Regency in Jambi Province. The research is aimed at revealing the role of younger generation farmers and the support of non-state actors in developing a coffee industry amid the decreasing number of coffee farmers in the area, where only 8 percent of them are millennials. The data collection was conducted from May to July 2021. The research uses Bourdieu theory (1993,1998) about farmer's practice based on certain motivations and the involvement of other actors. Based on the theory and direct observation, the study reveals that coffee has become a part of millennial's lifestyle. The growing trend on coffee consumption provides a moment for coffee farmers to improve their products. Sungai Terap Village, Betara District, consists of peatland area and used to be main liberica coffee producer. However, liberica coffee has become less favorite commodities compared to palm oil, coconut and betel nut. As the coffee has been back on trend, millennial farmer Muhammad Firdaus is committed to develop the coffee business. Supported by PetroChina International Jabung Ltd., an upstream oil and gas company, Firdaus vows to increase the economic potential behind coffee business in his hometown.*

### Keyword:

Millennial farmers, liberica coffee, millennial motivation

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## 1. Introduction

Jambi Province in Sumatra is known as coffee producer area in Indonesia. It's Kerinci Regency is home to well-known robusta and arabika coffee products. Meanwhile, West Tanjung Jabung is the producer of liberica coffee. Recently, liberica's distinctive flavor gains popularity among coffee lovers in the country. Grown in peatland with high level of acidity, liberica coffee has bigger coffee cherries than arabica or robusta [1].

Sungai Terap Village, which produces liberika coffee, is located in Betara District in West Tanjung Jabung. The coffee farming has been decreasing as many farmers switch to more lucrative palm oil plantation. However, the growing trend in coffee consumption brings a new prospect in liberica coffee business, especially for younger coffee farmers [2].

Muhammad Firdaus, 31, is a coffee farmer from Sungai Terap Village who moved to Bandung, West Java, in 2008 to pursue his learn about art and culture. After graduating, he returned to his hometown to develop the liberica coffee business in 2019. Bandung is the city of arts and culture and offered more opportunities for his creativity and art talents. However, Firdaus decided to go back to his small, quite hometown [3].

Firdaus and other farmers under joint-business group "Haji Bangun" have developed the coffee farming for three years (2019-2021) and seen promising results in the business. The harvest volume increases, the group manages to sell various products including raw beans, processed beans and powdered coffee, they have set the standards to produce good quality products, connect and coordinate with other farmers' groups, and use social media to boost the promotion efforts and strengthen their network.

There are several courses about actor [1], networking [2], partnership [3], and the role of Non-State Actor in the development of coffee business [4]. However, those discourses often undermine the role of younger generation (millennials) farmers as part of the study, especially amid the changing situations when most coffee lands are converted into palm oil plantations. Therefore, the study on how millennial farmers practice the business and how other non-state actors support the development of coffee industry will become the topic of this paper.

## 2. Literature Review

### 2.1. *Decrease in Number of Farmers and Lack of Interest among Millennials*

Central Statistics Agency (BPS) data in 2020 showed that there were around 33.4 million farmers working with various commodities in the agriculture industry. This was smaller than the number of farmers in 2019, which was 34.58 million [1]. Compared to the figure in 2018, which was 35.70 million, the 2020 figure became even smaller. Regeneration of farmers has become a much-discussed issue as this trend, if it continues, may lead to a scarcity of farmers.

This decrease in the number of farmers is worsened by the fact that fewer and fewer millennials enter the agriculture industry. Based on Central Statistics Agency (BPS) data in 2020, there was a decrease of 415,789 in the number of farmers between 2018 and 2019. In 2020, only 2.7 million farmers were in the 20-39 age group. This was only around 8 percent of the total number of farmers in the year, which was 33.4 million. The remaining farmers, or more than 90 percent, are 45 years or older. In 2020, the average age of farmers in Indonesia was 52 years old. This is despite millennials' involvement is an absolute must to develop agriculture in the 4.0 era, as they are technologically savvy and more capable in utilizing the latest technology in agriculture activities [6].

There are various reasons behind the declining interest among the younger workforce to enter the agriculture industry. Among the major reasons are the industry's perceived lack of prestige and ability to bring sustainable income. This is caused by the relatively low agricultural land tenure in Indonesia. Another reason are changing perspectives and way of life among young manpower in today's modern society. Even among youngsters in villages, agriculture industry's attractiveness is declining. [7]

Moreover, it is not merely about the economy. Youths' reluctance in farming is also substantially influenced by the emergence of new subcultures in today's digital era. Crisis of youth farmers and the dominance of older farmers have affected efforts to develop sustainable agriculture, especially in boosting farming productivity, market competitiveness, village economic capacity. All of these will disrupt food security and the sustainability of the agriculture industry. [8]

## **2.2. Theory of Generations X, Y and Z and Character of Generation Y or Millennials**

Millennials of the Generation Y comprise people born between 1981 and 1994. Currently, this is the most productive generation that makes up the workforce in various industries. Today, they are between 26 and 40 years old. There are various theories on generational divisions. Experts often divide generations based on spans of birth years or major historical events with significant influences in the formative years of people in certain age groups. The generation theory expressed by Graeme Codrington & Sue Grant-Marshall, Penguin (2004), divides humans into five generations based on their birth years, which leads to unique characteristics development [9] as follows:

First is **Baby Boomers (Born in 1946-1964)**. The generation born after World War II comprises of people with many siblings, as a result of couples wanting to have many offsprings. This generation is adaptive, receptive and adjustable. Baby boomers are also known for their competitiveness and for being highly appreciative towards life values. Today, they are seen as experienced "old guards".

Second, **Generation X (Born in 1965-1980)**. The years when this generation was born were marked by the rapid mushrooming of mass media, starting from radios and then also television and newspapers in the late 1970s. Personal computers (PC), video games and cable TV were available in certain cities and internet was also available, albeit limited. Generation X-ers grew up surrounded by music in their teenage years, both through MTV and Walkman. Video games' massive popularity began in this generation.

Third, **Generation Y (Born in 1981-1994)**. This generation is also known as the millennials or millennium generation. They are the main users of instant communication platforms such as e-mail, SMS, instant messaging and social media platforms such as Facebook and Twitter. Today, online games that enable interaction between players in the digital world are also highly popular.

Fourth, **Generation Z (Born in 1995-2010)**. Also called the i-Generation and internet or net generation. There are similarities with Generation Y, in terms of adeptness in using internet technologies. However, those belonging in Generation Z were born with computers and the internet around them. They are more capable in using various technologies at the same time, such as tweeting with their cell phone, browsing with their PC and listening to music with their headset. Most of their activities are related to the digital world. They have been familiar with sophisticated technologies and gadgets since they are small and this indirectly shapes their personality.

Fifth, **Generation Alpha (Born in 2011-2025)**. The generation born after Generation Z, with late Generations X-ers and Y-ers as parents. Most of them are well-educated, having begun education earlier and thus spending more time learning than previous generations.

Today, the millennial generation is at their most productive age. Compared to previous generations, millennials have unique personalities based on their socio-economic conditions and the region where they live. Among the major characteristics of millennials is their familiarity with digital communication media and technologies. As they grew up amid technological advancements, millennials are creative, informative, passionate and productive. They involve communication technology in all aspects of life. A concrete and observable proof is that almost all individuals in this generation prefer to use smart phones. By using such gadgets, millennials become more productive and efficient. These gadgets help millennials carry out various tasks, including sending short messages to one another, accessing educational websites, doing online business transactions and ordering transportation, food and other necessities. Therefore, they can create various new opportunities in line with the latest technological developments. [10]

This generation is known for their open communication style. They are fanatic social media users whose life are deeply influenced by technological developments. They are also more open to various political and economic perspectives. Therefore, they can be seen as highly reactive to changes taking place in their surrounding environment.

A 2011 study on millennials in the United States carried out by the Boston Consulting Group (BCG) and the University of Berkeley showed that: (1) Interest in conventional reading through newspapers, magazines or other similar platform is declining as millennials prefer to read on their smart phones; (2) Millennials feel obliged to have social media accounts as sources of information and communication tool; (3) Millennials most certainly prefer cell phones over television. Watching TV shows is no longer seen as an entertainment as they can find anything on their smart phones; (4) Millennials see their family as central to their deliberation and decision-making process. [11]

Quite similar to the Boston Consulting Group's American research, Yoris Sebastian in his book *Generasi Langgas: Millennials Indonesia* cited several superior traits in millennials, namely their preference of a fast-paced lifestyle, ease in switching jobs over a short time, creativity, dynamism, technological savviness, familiarity to social media, et cetera.

Youth Lab, a research agency on Indonesian youth that was involved in creating the book, conducted a research in five major Indonesian cities, namely Jakarta, Bandung, Makassar, Medan and Malang. The research shows that millennials are far more creative and informative. The generation also has a different perspective compared to older generations. The five cities are picked as they are deemed to indicate current major trends.

The research was conducted face-to-face by following millennials through their daily activities and to interview millennial groups deemed as trend-setters. In terms of mindset, millennials are different from older generations. Members of the generation were born and raised at times of economic, political and social upheavals in Indonesia. Roars of Reformasi have deeply affected them. They grow into critical and daring individuals that highly treasure openness and freedom. This is supported by an increasingly open and conducive world.

In workplace, Gallup (2016) stated that millennials adopted a starkly different style of professionalism compared to previous generations, namely that: (1) Millennials work not only for salary but also to chase personal goals or dreams; (2) Millennials do not

necessarily seek job satisfaction and prioritize opportunities of self-development in their work (through learning new things, skills and perspectives, getting to know more people, taking chances to develop, et cetera); (3) Millennials do not want bosses who are too dictating or controlling; (4) Millennials do not tend to improve on their weaknesses and would prefer to develop their strengths; and (5) For millennials, a job is more than just a job; it is part of their life. [12]

These are millennials' unique characteristics that everyone must understand in order to maximize their potentials, including in developing their entrepreneurial spirit that are in line with their character that wishes for freedom and satisfaction more than just a salary. Many Indonesian millennials have produced meaningful change through their creations. Vast opportunities to innovate and the presence of a digital ecosystem have successfully led to the mushrooming of new businesses driven by millennials, including in education, trade or transportation services.

These various examples of innovation are proofs of millennials' capability to achieve economic independence. Education-wise, millennials also have a superior quality. The generation aspires to achieve higher education levels. They realize that education must be top priority. An open, free, critical and daring mindset is a valuable capital. Combine this with mastery of technology and you will create opportunities to innovate.

### **2.3. *Coffee Business Growth and Millennial Generation Market***

In terms of commodity, coffee shop business continues to mushroom into a highly developed market in Indonesia. This can be seen in the significant boom of coffee shops across Indonesia as well as the increase in domestic coffee consumption in the past five years. [13]

A study in Indonesia by TOFFIN, a goods and services business solution provider in the HORECA (Hotel, Restaurant and Café) industry, shows that the number of coffee shops in the country almost tripled from around 1,000 in 2016 to over 2,950 in August 2019.

The real number of coffee shops in the country may actually be much bigger as this study only involved franchise outlets in major cities and not independent coffee shops, both modern and traditional, spread across various regions. Furthermore, domestic coffee consumption in Indonesia also continues to rise. The 2019 Annual Indonesia Coffee Consumption Data released by the Global Agricultural Information Network projected 294,000 tons of domestic coffee consumption in 2019/2020, an increase of around 13.9 percent from the 258,000 tons in 2018/2019.

Business-wise, sales of ready to drink (RTD) coffee products – including those sold in coffee shops – continues to increase. Euromonitor data showed the retail sales volume of Indonesia's RTD coffee was around 50 million liters in 2013 and 120 million liters in 2018.

The TOFFIN research on coffee shop business growth in Indonesia, which included in-depth interviews in industry stakeholders, cited seven factors behind the growth, namely: (1) The habit (culture) of gathering while enjoying coffee; (2) The rise in consumers' purchasing power, middle class growth, and affordability of RTD coffee in modern coffee shops; (3) Dominance of youth (Generations Y and Z) in Indonesia's population, leading to emergence of new coffee-drinking lifestyles; (4) Emergence of social media that facilitates coffee shop business players in marketing and promoting their products; (5) Emergence of app-based delivery services (i.e. Grabfood and Gofood) that facilitate sales; (6) Lack of significant constraints in coffee business due to support from availability and supply of raw

ingredients, equipment (coffee machines) and resources to establish coffee shop businesses; and (7) relatively high profit margin for coffee shop businesses.

Based on growth in these driving factors, coffee shop business in Indonesia is projected to experience positive growth in the next year. This projection is also based on insights from consumers gathered through an online survey on young coffee lovers (of Generations Y and Z) in Indonesia. Among other results, the survey showed that coffee-to-go outlets offering affordable and high-quality RTD coffee are highly attractive among Indonesia's dominant generations. In the past year, 40 percent of these generations buy their coffee from such coffee shops. With a monthly share of wallet of Rp 200,000 for coffee beverages, such types of coffee shops are expected to grow significantly in the coming years.

There is a cultural shift. Previously, youngsters preferred to gather in malls or shopping centers. However, today's youth, dominated by Generations Y and Z as they are, preferred more intimate places such as coffee shops for gatherings. These days, social media applications has become an increasingly influential factor in the growth of coffee business with the applications' features enabling better promotion.

#### **2.4. ERG Motivation Theory by Clayton P Alderfer**

The theory is an improvement of Maslow's hierarchy of needs. According to Alderfer in Robbins (2001:171), there is a hierarchy of three core needs, namely existence, relatedness and growth.

The hierarchy of these needs is as follows: (1) Existence needs. The first type of needs comprises all requirements for basic material existence, covering things Maslow deems as safety-related needs and physiological needs, such as salary, work conditions, work equipments and basic needs to stay alive; (2) Relatedness needs. This second type of needs have to do with our tendency to maintain beneficial interpersonal relationships. Social and status yearnings require satisfying interactions with other people and this is in line with Maslow's love and belonging needs; (3) Growth needs. The third type of needs comprise intrinsic desires for self-development, converging the intrinsic components of Maslow's esteem needs and characteristics included in self-actualization needs.

It may seem that this ERG theory merely replaces five needs with just three needs. However, what differentiates this theory from Maslow's hierarchy of needs is that this ERG theory shows that (1) more than one need can be operational at any given time, and (2) if the fulfillment of a higher-level need is subdued, there is an increase in desire for satisfying a lower-level need. Furthermore, this ERG theory does not assume a rigid hierarchy that necessitates the fulfillment of a lower-level need before moving onto higher-level ones. A person can attempt to fulfill growth needs without the fulfillment of existence and relatedness needs; or the three groups of needs can be operational at the same time.

The ERG theory also involves a dimension of frustration-regression. Unlike Maslow's theory, the ERG theory states that if the fulfillment of a higher-level need is constrained, the desire to satisfy a lower-level need will increase. An inability to satisfy the need for social interaction, for instance, will increase the desire to get more money or better work conditions. Therefore, constraints or frustrations can lead to regression to a lower-level need.

In short, similar to Maslow, the ERG theory states that the satisfaction of lower-level needs leads to desire to satisfy higher-level ones. However, various needs can act as motivator at the same time and frustration in trying to satisfy higher-level needs can lead

to regression towards desire for lower-level ones.

In this case, the ERG theory is more consistent with the knowledge on individual differences between people. Variables such as education, educational background and cultural environment can change the importance or driving force of a needs group for certain individuals. Overall, the ERG theory shows a more valid hierarchy of needs.

### **3. Methods**

This research incorporates action research method by collaborating with research participants to study and develop coffee commodity. After supporting the development of Liberica Coffee for three years, PetroChina teamed-up with Firdaus and members of the community to investigate problems, identify needs and potentials, discuss, evaluate progress and create future plans. Research, observation, and in-depth interview were done from April 3, 2021 to July 19, 2021. Apart from being key players in the development of coffee industry in West Tanjung Jabung, Firdaus and other members of the community also play crucial role in this research. [12]

### **4. Finding and Discussions**

#### **4.1. From Creative Worker to Liberica Coffee**

Muhammad Firdaus (31 years old) is a millennial born in 1990 in Sungai Terap Village, Betara District, West Tanjung Jabung. Firdaus grew up in the regency until he finished his high school education in Kuala Tungkal, the capital of West Tanjung Jabung. After graduating high school in 2008, Firdaus continued his education at the Indonesia Institute of Art and Culture (ISBI) in Bandung, West Java until 2013.

In his university years, Firdaus was involved in various student organisations and art-based group such as theatre. His active roles, especially as show coordinator, landed him an opportunity as a cultural ambassador and sent to Japan for a cultural exchange for three weeks in 2016. During his exchange, Firdaus stayed in Togamura Village, where he learned about local community empowerment.

Located in the Toyama Prefecture, Togamura Village is home to a well-known theatre training troupe called Suzuki Company of Toga (SCOT), established by Tadashi Suzuki and 20 members in 1965 in Tokyo. The village's reputation as a contemporary training centre has attracted crowds domestically and internationally. Togamura Village, Tadashi Suzuki, and SCOT are three inseparable things when discussing the village's long-standing achievement.

Tadashi Suzuki moved to Togamura Village in 1966, as opposed to most people who chose to move out of the village. More than half of Togamura Village population left for Tokyo due to economic pressure. Many houses and lands were sold at cheaper price, even abandoned. SCOT purchased land and 2 houses that were left by the owners. They renovated a traditional Japanese house called *sanbo* as a theatre and training centre. Another house was transformed into a lodge for all SCOT members. Tadashi Suzuki and SCOT started a continuous creative process of acting and theatre plays involving people in Togamura Village. Tadashi Suzuki initiatives in empowering Togamura Village people has become Firdaus' inspiration to move forward.

Firdaus started to grow interest in coffee during the 2016 National Sports Week (PON) in West Java, where he participated in PON's artistic team. Coffee accompanied every meet-up with his friends. It became more interesting when his friends brought coffee from their place of origins and told him stories behind each origin. Firdaus was intrigued and

thought to himself, “Why does coffee have so many stories behind the process until it becomes a pride for the owners?”. His interest grows bigger when he became friends with a coffee shop owner in Bandung. His friend took him to visit Bandung’s coffee places, deepened Firdaus’ knowledge on coffee cultivation, from post-harvesting to brewing techniques. His mind wandered to his hometown, Sungai Terap Village, home to liberica coffee in Jambi.

#### **4.2. Sungai Terap, a Marginalized Liberica Coffee Village**

Sungai Terap Village is located in Betara District, West Tanjung Jabung Regency, Jambi Province. The village is one of Makmur Jaya expansion village in 2011 based on Regional Regulation Number 16/2011. Based on the participatory mapping of the 2019 Peat Care Village (*Desa Peduli Gambut*), the village is located at 103°28’0” East Longitude and 0°56’0” South Latitude. To the north, Sungai Terap Village is bordering Makmur Jaya Village, and has Teluk Kulbi and Muntialo Villages as the south border. The village is bordering Sungai Gebar Village to the east and Betara River to the west.

Sungai Terap Village is a stretch of lowland-swampland with no hills/mountains. Betara River is located on the west side of the village, connected to ditches and canals around settlements and community gardens. The river is used as the community’s water source for bathing, washing, as well as agricultural irrigation. The river is also used as a transportation route for crops. Settlements is located along the road in the village which is spread over three hamlets: Bangun Rejo, Agung, and Sungai Haji.

Sungai Terap Village consists of peatland which is divided into two categories: shallow and deep peatlands. Shallow peatland is located in the north and a small proportion in the west of the village. The land is utilized for oil palm and other plantations. Meanwhile, the deep peatland stretches from east to west, and to the southern part of the village. This area is used for mixed plantations, half of it is acacia plantations, covering 34.40% of the village.

The majority of Sungai Terap people work as farmers. Main cultivations in the area are oil palm, areca nut, coffee and coconut. The plantations are covering 65.97% of the village. These are the main sources of income for people, with access to the market is readily available. People may sell their products to areca nut processing companies in the neighbouring Muntialo Village and to middlemen in the village.

Coffee plantations have become less popular. People prefer to depend their income on other commodities such as oil palm, betel nut, and coconut since they are more profitable. According to Firdaus, many villagers only process coffee into green bean and sell them to collectors at a low price. Meanwhile, if the coffee is processed into ready-to-drink products, they will have a higher selling price.

#### **4.3. Developing Hometown through Coffee**

In September 2018, a sample of green beans from Firdaus’ family’s coffee plantation was brought to Bandung from his home in Sungai Haji Hamlet. These beans were to be tasted by coffee business owners in Bandung. Then Firdaus produced ready-to-brew ground coffee and named it ‘Kopi Ajib’. He produced 2kg of coffee based on orders by his friends from his alma mater in Bandung. The brand means ‘Sungai Haji Bangun!’ and is named after his hometown, Sungai Haji, a hamlet in Sungai Terap Village. ‘Bangun’ itself means ‘arise’. The brand is a call for the village to revive its coffee plantations which was dying and replaced by other commodities. For the brand to be easily remembered, Sungai



Haji Bangun! is then abbreviated to 'Kopi Ajib'.

In 2019, Firdaus returned to his hometown and determined to start a coffee business. From the very beginning, he has always believed that the best coffee brews can only be produced from the best raw materials. Good raw materials can only be obtained from good coffee seeds, cultivated when the fruits are ripe.

His determination to serve only the best coffee has started since September 2018 when Firdaus started 'Kopi Petik Merah' movement. The movement was intended to educate coffee farmers to cultivate only the ripe coffee fruits. Firdaus started the campaign by educating two coffee farmers who managed 2.5 hectare of land to only cultivate coffee fruits when they are ripe. As a result, the land yielded around 3 tons of fresh coffee during harvesting season. To further develop this artisan coffee industry, in November 2019, a movement called "Planting 10,000 Coffee Seeds" was enacted in Sungai Terap Village. The movement was designed to replace unproductive coffee plants.

In the same year, *Kelompok Usaha Bersama* (KUB) Haji Bangun or Haji Bangun's Farmers Group were established. KUB is a business collective initiative from the Indonesian Ministry of Social Affair for empowering low-income households. KUB Haji Bangun consists of 11 people while Haji Bangun Farmers Group has 26 members. To ensure the legality of his business, Firdaus signed Kopi Ajib with Business Identification Number (NIB) 9120218060785, Small-Business Permit (SIUP) number 503/A.6.1/355/P-MPTSP/2019, License to Operate the Business "Kopi Ajib" 503/B.8.1/1067/P-MPTSP/2019, Environmental Management Statement Letter (SPPL) Number 660.4/358/SPPL/2019 and Home Industry's Production License (P-IRT) Number 503/A.5.3/393/PMPTSP/2019.

#### **4.4. The Role of Corporation in Community Development**

PetroChina International Jabung Ltd. (PCJL) is an oil and gas Production Sharing Contractor with an operation area in West Tanjung Jabung. PCJL has always been committed to empowering communities surrounding the operational area through various development programs, including Liberica Coffee development. KUB Haji Bangun is one of the beneficiaries of Liberica Coffee community development program in 2019. PCJL has been supporting the group since.

PCJL supports started by providing coffee seeds that certified by the Indonesian Coffee and Cocoa Research Institute (Puslitkoka) in Jember, East Java. Puslitkoka is a research centre that was established since the Dutch era. It is now the most prominent coffee research centre in Asia. KUB Haji Bangun planted these seeds during the "Planting 10,000 Coffee Seeds" movement in November 2019.

PCJL also supported the construction of coffee greenhouse, a set of production tools (coffee pulper, coffee huller, coffee grader, roaster, grinder, and packaging). In addition to those, PCJL also supported training and other human resources development activities, including sending Firdaus to an agroforestry training "Architecture of Specialty Coffee Plantation" in Bandung in December 2019. The training was held by Specialty Coffee Association Indonesia (SCAI).

These production machines are used by Firdaus to improve the quantity and quality of the coffee. Not only do high-quality coffee beans have good shape but also distinctive scent and taste when the coffee is brewed. Therefore, there must be comprehensive efforts to improve coffee quality, from ensuring the look of the bean to its taste.

There are ways to improve the physical quality of the coffee beans: (a) Coffee cherry

must be picked when it is ripe. Generally, the ripeness is shown through red-coloured rind, although some liberica coffee variants have dark yellow ripe beans; (b) The cherries must be processed immediately or within maximum of two days. The farmers must improve the plantation management including plantation planning, water circulation arrangement, regular fertilization, periodic pruning and other cultivation aspects. [16, 17, 18]

Meanwhile, to improve tasting quality there are a number of ways that may be done: (a) conduct regular cup tasting; (b) perform a cup tasting before the product is packaged; (c) determine the roasting profile; (d) determine the grind size if sold in powder form; and (e) design the recommended brewing method based on cup tasting, roasting profile, and grind size.

#### **4.5. The Role of Women in the Development of Liberica Coffee Industry**

In a farmer's family, all members, including female family members, have their own roles in the managing farmlands. Firdaus or commonly known as "Mas Ajib" due to his relationship with the brand of KUB Haji Bangun coffee, always involves women in developing the industry. These women are mainly farmers' wives or stay-at-home mothers in the local area. To increase their land productivity, the women grow vegetables among the coffee plants. By growing vegetables in the coffee farm, they reduce the maintenance cost of the coffee plantation, control the growth of weeds, and monitor the pests more carefully. In addition, small canals are also constructed around the plots to allow irrigation during dry season and to act as water reservoirs and fish farms during wet season.

Women are also involved in coffee production process particularly in coffee grading, as they are generally considered to be more careful and observant. After the beans are sorted according to size, the beans will be sorted according to their quality – defective or non-defective.

Furthermore, other than engaging in the farming activities and creating more alternative incomes, women are also included in the decision-making process in the KUB, especially in determining selling prices. On the family level, women play major role in deciding the use of coffee harvests.

#### **4.6. Coffee Shops, A Place for Building Civilization**

The imminent threat of Covid-19 in 2020 has caused a decline in the production of Kopi Ajib. However, Firdaus was still determined to keep going. He expanded his business by creating a coffee shop as part of KUB Haji Bangun. The shop is located in front of his house which is also the production house of KUB Haji Bangun. Arising from his artistic background, Firdaus believed that a coffee shop is a social institution where people gather, share knowledge and experience, as well as represent themselves. Farmers from Haji Bangun Farmers Group will proudly say that the delicious coffee that they drink is one from their land that was brought in to Kopi Ajib the previous day. People also gather at the shop to express their concerns and anxiety regarding poor harvest season and low market price. Some of the biggest concerns faced by the farmers group are flood threat and irrigation infrastructure since the farms are located in tidal areas (4-7 masl). [19, 20, 21]

Firdaus built Kopi Ajib Coffee Shop to provide a healthy hangout place for young people in Sungai Terap Village. Youths living in the village tend to use bridges and roadsides as gathering places. This habit is deemed to be unhealthy and unsafe for them and other people due to the risk of falling and disrupting other road users. Thus, the coffee shop becomes a new place for them to gather and enjoy coffee from local plantation. This

coffee shop also acts as a place for them to discuss opportunities and challenges in managing local resources, for their present as well as their future. [22, 23, 24, 25]

#### **4.7. Make One Step Back to Make Two Steps Forward**

Initially, Firdaus wanted to involve as many elements as possible in the industry development. He said, "I'm an artist, and I like working in ensemble of people because it will create harmony!". When he just returned to his hometown, Firdaus visited senior community members and community figures and groups.

Firdaus' dream is for his coffee to become more famous and be the main product of West Tanjung Jabung Regency. Liberica coffee variant has obtained MPIG (Society of Geographical Indication Protection) certification from the Ministry of Law and Human Rights in 2014. While the dream is high, Firdaus is confident to make it come true by improving the quality of the liberica coffee through collective quality inspections as well as co-production. That way, liberica coffee can be available for Jambi people at affordable price. Currently, demands for Liberica Coffee from West Tanjung Jabung is still low and prices tend to be manipulated by middlemen. [26, 27, 28]

However, following discussions with various groups and community figures, Firdaus realized that turning his dreams into reality was a heavy task. Not to mention his reputation as newcomer in the coffee industry. [29, 30]

Firdaus decided to take a step back, storing his dreams, and starting small through his KUB Haji Bangun. He aimed to better manage his group to prove his credibility in the industry. He hoped that Kopi Ajib would become a success story for other farmers to look up to. [31, 32]

Firdaus' aspirations to develop the liberica coffee industry are reflected in the visions and missions of KUB Haji Bangun. The visions are: a) farmers may prosper from their best liberica coffee production and b) is to become the best liberica coffee producer in Jambi. Meanwhile his missions are: a) to build strong groups through strong management, b) to provide job opportunities for young people through land optimization and coffee cultivation in an environmentally friendly manner, c) maintaining standards for processing crops and managing supplies throughout the year, and d) to market the coffee products, from locally to internationally. [33, 34]

## **5. Conclusion**

Based on the close observation and collaborative research between the researcher and the source, this research concludes as follows:

First, agriculture sector no longer offers promising future, and the number of farmers is decreasing. Most farmers are senior (above 52-year-old), and even when younger farmers are available, only 8 % of them choose to develop coffee farming. At the same time, there is growing trend on coffee industry, which followed by higher demand on good-quality coffee products, and millennial generation is the backbone of the current market trend.

Second, the millennial generation has unique working ethics as they do not only work for good salary, but also think about long-term purpose and life calling. They seek more than career satisfaction but also self-development, such as the opportunities to learn new things, skills, perspectives, empathy, and chances to progress over time. The millennial sources in this research are not aspired to work for dictating bosses but sees the concept of working as part of their life and identity. With his talents, Firdaus can pursue good

opportunities in arts. However, he chooses to develop the coffee business in his hometown because it offers more freedom and various opportunities.

His dream motivates Firdaus to diligently improve his field practices in coffee business, as stated in the ERG (Existence – Relatedness dan Growth) motivational theory, which indicated the desire to fulfill self-existence. For Firdaus, coffee industry is having a great momentum and his coffee business is growing significantly. In term of relatedness, coffee is suitable for the lifestyle of Y and Z, who are much into social media. In terms of growth, Firdaus finds out that coffee business also provides a place for his self-actualization. His self-development from the upstream business (coffee planting and harvesting) to downstream (post-harvest process and marketing) is seen through his coffee shop.

Fourth, in the ERG theory, the fulfillment of existence, relatedness and growth are done simultaneously instead of one by one. The ERG theory states that if one fails to fulfill higher-level need, he would be more focus on achieving his lower-level needs. In Firdaus's case, his unsuccessful attempt to convince older generation farmers to develop liberica coffee industry in his hometown makes him focus to build his own small group (Keluarga Haji Bangun). With that situation, he does chase bigger causes but focuses more on smaller group.

Fifth, the role of corporation in developing local potential through social investment programs is crucial. One of the success of social investment programs is finding best candidates of beneficiaries with good potential. A millennial coffee farmer is a good beneficiary for the program because his generation is the largest productive group of force who dominate the market and quickly adapt to latest technology.

## References

1. Benito, Á., Calderón, F., & Benito, S. (2019). The Influence of non-Saccharomyces species on wine fermentation quality parameters. *Fermentation*, 5(3), <https://doi.org/10.3390/fermentation5030054>.
2. Benito, S., Hofmann, T., Laier, M., Lochbühler, B., Schüttler, A., Ebert, K., ... Rauhut, D. (2015). Effect on quality and composition of Riesling wines fermented by sequential inoculation with non-Saccharomyces and Saccharomyces cerevisiae. *European Food Research and Technology*, 241(5), 707–717. <https://doi.org/10.1007/s00217-015-2497-8>.
3. Benito, S., Ruiz, J., Belda, I., Kiene, F., Beisert, B., Navascués, E., ... Rauhut, D. (2019). Application of non-Saccharomyces yeasts in wine production. In A. Sibirny (Ed.). *Nonconventional yeasts: From basic research to application* (pp. 75–89). Cham: Springer.
4. Bressanello, D., Liberto, E., Cordero, C., Sgorbini, B., Rubiolo, P., Pellegrino, G., ... Bicchi, C. (2018). Chemometric modeling of coffee sensory notes through their chemical signatures: Potential and limits in defining an analytical tool for quality control. *Journal of Agricultural and Food Chemistry*, 66(27), 7096–7109. <https://doi.org/10.1021/acs.jafc.8b01340>.
5. Bressani, A. P. P., Martinez, S. J., Evangelista, S. R., Dias, D. R., & Schwan, R. F. (2018). Characteristics of fermented coffee inoculated with yeast starter cultures using different inoculation methods. *LWT-Food Science and Technology*, 92, 212–219. <https://doi.org/10.1016/j.lwt.2018.02.029>.
6. Bressani, A. P. P., Martinez, S. J., Sarmiento, A. B. I., Borém, F. M., & Schwan, R. F. (2020).

- Organic acids produced during fermentation and sensory perception in specialty coffee using yeast starter culture. *Food Research International*, 128, Article 108773. <https://doi.org/10.1016/j.foodres.2019.108773>.
7. Cantergiani, E., Brevard, H., Krebs, Y., Feria-Morales, A., Amado, R., & Yeretizian, C. (2001). Characterisation of the aroma of green Mexican coffee and identification of mouldy/earthy defect. *European Food Research and Technology*, 212(6), 648–657. <https://doi.org/10.1007/s002170100305>.
  8. Cerny, C. (2010). Thermal generation of aroma-active volatiles in food. In A. Herrmann (Ed.). *The chemistry and biology of volatiles* (pp. 231–252).
  9. -----, 2018. *Statistik Gender Tematik: Profil Generasi Milenial Indonesia*, Badan Pusat Statistik. Cetakan I. Jakarta: Kementerian Pemberdayaan Perempuan dan Perlindungan Anak. Hal 171.
  10. Yoris Sebastian; dan Dilla Amran, *Generasi Langgas: 2016. Millennials Indonesia*. Cetakan ke-22. Yogyakarta: Gagas Media Pers. Halaman 193.
  11. Toffin. 2019. Hasil Riset Jumlah Gerai Kopi yang dilakukan oleh Toffin, sesuai dengan berita dalam media <https://voi.id/berita/925/kedai-kopi-di-indonesia-hampir-mencapai-3-000-gerai> diakses pada 25 Juli 2019.
  12. Bourdieu, Pierre. 1993. *The Field of Cultural Production: Eassys on Art and Literature*. New York: Columbia University Press.
  13. Bourdieu, Pierre. 1998. *Practical on the Theory Reason of Action*. California, Stanford: Stanford University Press.
  14. Geertz, Clifford. 1983. *Abangan, Santri dan Priyayi Dalam Masyarakat Jawa*. Jakarta: Pustaka Jaya.
  15. Geertz, Clifford. 1992a. *Tafsir Kebudayaan*. Yogyakarta: Kanisius Press.
  16. Geertz, Clifford. 1992b. *Kebudayaan dan Agama*. Yogyakarta: Kanisius Press.
  17. Mitchell, J Clyde. (ed). 1991. *Social Network in Urban Situations: Analysis of Personal Relationships in Central African Towns*.
  18. Rogers, Everett M. 1971. *Diffusion of Innovations*, 5th Edition. New York: Sage Publication.
  19. Scot, John. 1991. *Social Network Analysis: a Handbook*. London: Sage Publication
  20. Wellman, Barry, and SD Berkowitz. (ed). 1988. *Social Structures: A Network Approach*. New York: Cambridge University Press.
  21. Bell, S. J., & Henschke, P. A. (2005). Implications of nitrogen nutrition for grapes, fermentation and wine. *Australian Journal of Grape and Wine Research*, 11(3), 242–295. <https://doi.org/10.1111/j.1755-0238.2005.tb00028.x>.
  22. Chichester: John Wiley & Sons. Chua, J. Y., Lua, Y., & Liu, S. Q. (2017). Biotransformation of soy whey into soy alcoholic beverage by four commercial strains of *Saccharomyces cerevisiae*. *International Journal of Food Microbiology*, 262, 14–22. <https://doi.org/10.1016/j.ijfoodmicro.2017.09.007>.
  23. Chua, J. Y., Lu, Y., & Liu, S. Q. (2018). Evaluation of five commercial non-*Saccharomyces* yeasts in fermentation of soy (tofu) whey into an alcoholic beverage. *Food Microbiology*, 76, 533–542. <https://doi.org/10.1016/j.fm.2018.07.016>.
  24. de Bruyn, F., Zhang, S. J., Pothakos, V., Torres, J., Lambot, C., Moroni, A. V., ... de Vuyst, L. (2017). Exploring the impacts of postharvest processing on the microbiota and metabolite profiles during green coffee bean production. *Applied and Environmental Microbiology*, 83(1), e02398–02316. <https://doi.org/10.1128/AEM.02398-16>.
  25. da Silva Vale, A., de Melo Pereira, G. V., de Carvalho Neto, D. P., Rodrigues, C.,

- Pagnoncelli, M. G. B., & Soccol, C. R. (2019). Effect of co-inoculation with *Pichia fermentans* and *Pediococcus acidilactici* on metabolites produced during fermentation and volatile composition of coffee beans. *Fermentation*, 5, 67. <https://doi.org/10.3390/fermentation5030067>.
26. de Melo Pereira, G. V., Neto, E., Soccol, V. T., Medeiros, A. B. P., Woiciechowski, A. L., & Soccol, C. R. (2015). Conducting starter culture-controlled fermentations of coffee beans during on-farm wet processing: Growth, metabolic analyses and sensorial effects. *Food Research International*, 75, 348–356. <https://doi.org/10.1016/j.foodres.2015.06.027>.
  27. Evangelista, S. R., Miguel, M. G. C. P., Silva, C. F., Pinheiro, A. C. M., & Schwan, R. F. (2015). Microbiological diversity associated with the spontaneous wet method of coffee fermentation. *International Journal of Food Microbiology*, 210, 102–112. <https://doi.org/10.1016/j.ijfoodmicro.2015.06.008>.
  28. Fernandez, M., & Zuniga, M. (2006). Amino acid catabolic pathways of lactic acid bacteria. *Critical Reviews in Microbiology*, 32(3), 155–183. <https://doi.org/10.1080/10408410600880643>.
  29. Gonzalez-Rios, O., Suarez-Quiroz, M. L., Boulanger, R., Barel, M., Guyot, B., Guiraud, J. P., & Schorr-Galindo, S. (2007). Impact of “ecological” post-harvest processing on coffee aroma: II. Roasted coffee. *Journal of Food Composition and Analysis*, 20(3), 297–307. <https://doi.org/10.1016/j.jfca.2006.12.004>.
  30. Kroh, L. W. (1994). Caramelisation in food and beverages. *Food Chemistry*, 51(4), 373–379. [https://doi.org/10.1016/0308-8146\(94\)90188-0](https://doi.org/10.1016/0308-8146(94)90188-0).
  31. Kurtzman, C. P. (2011). *Pichia* E.C. Hansen (1904). In C. P. Kurtzman, J. W. Fell & T. Boekhout (Eds.), *The Yeasts* (5 ed., pp. 685-707). London: Elsevier.
  32. Lee, L. W., Cheong, M. W., Curran, P., Yu, B., & Liu, S. Q. (2015). Coffee fermentation and flavor—An intricate and delicate relationship. *Food Chemistry*, 185, 182–191. <https://doi.org/10.1016/j.foodchem.2015.03.124>.
  33. Lee, L. W., Cheong, M. W., Curran, P., Yu, B., & Liu, S. Q. (2016). Modulation of coffee aroma via the fermentation of green coffee beans with *Rhizopus oligosporus*: II. Effects of different roast levels. *Food Chemistry*, 211, 925–936. <https://doi.org/10.1016/j.foodchem.2016.05.076>.