

Digital Transformation of Gayo Coffee and Various Issues

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ABSTRACT

The popularity of Gayo coffee as one of the best quality coffees in the world has contributed a lot to the welfare and survival of its farmers. Recorded as many as 78,624 heads of families whose lives depend on this sector spread across three regions; Central Aceh, Bener Meriah and Gayo Lues. These three regions are gayo coffee shaisl regions with the texture of mountainous regions. The pattern of agriculture and coffee farming so far is still done by conventional means, namely farmers selling their wares to collectors who come to villages, steamers then delivering them to larger collectors to the city, and the next steamer delivering to exporters in Medan City. This long trade process is realized to have harmed coffee farmers. This trading process can basically be simplified by utilizing digital, which is to create a digital platform that can bring together directly between buyers and coffee consumers both local and international markets. But empirically this transformation is difficult because of several factors, namely limited internet infrastructure and political policies that do not accommodate this opportunity. The use of digital platforms so far is still limited to the marketing process by utilizing social media and e-commerce platforms.

Keywords: digital transformations, Gayo coffe, Aceh,

I. INTRODUCTION

To do the innovations becomes an important thing for entrepreneurs and coffee farmers in Central Aceh to deal with various climate change divestment that is moving quite dynamically lately. The ability to innovate is also an important condition in order to be able to follow market tastes, meet the desires of connoisseurs, and no less important is that the existence of Gayo coffee can be maintained in the long term.

The ability to innovate is not only limited to adaptive capabilities in the coffee management sector and agricultural patterns. Changing the pattern of distribution of agricultural products (coffee) is also an inevitable link for now. Distribution issues have long been a problem for various agricultural commodities. In its conventional form the distribution of agricultural products through a fairly long chain. There are many parties involved so that farmers as commodity owners to meet with consumers directly. First the farmer meets with the collectors in the villages, the collector then

collects it to the larger collector in Takengon City, then brought to medan city to be met to the new exporter then the exporter brings it to consumers. The inability of farmers to meet directly with consumers, doing trade deals is a long-standing loss.

The most important innovation that must be taken today is to transform into a digital system after we previously entered the era of machines, where almost all sectors are replaced with motor machines that can replace the important role of humans. The digital presence changes many things for humans, creating a new civilization in almost every aspect of life personally and stately. Media literacy becomes an important condition so that this digital transformation presents good for others, considering the massive use of the internet has touched almost every human activity; from matters of personal interest, to formal meetings of statehood are also connected to the internet. The transformation of the internet is also actually not an easy thing, considering that not all internet users are digital natives some people are digital immigrants who have

difficulty being in a new working pattern and patterns in interacting using the internet.

There are indeed concerns by many parties related to this digitalization process. Awaludin Arifin saw the abundance of information, especially on social media, making everyone a journalist, information easily spread from one individual to another, from one community to a plural community, through one platform to many platforms. But the information is presented fast-paced, instant, and automatic without going through the process of broadcasting news with journalistic standards. As a result, it is not only the information generated causing social uproar, conflict with fellow people, increasing global political temperatures, even to the local political level. A serious consequence of this symptom is the lack of respect for scientific standards, ethical standards, and social propriety.[1].

He further suggested that the process of verification to the source is no longer the main standard for the birth of a news story. The description of this paper sees that at the point where everyone already considers himself an expert what happens seems not limited to deconstruction but nihilism. If on the deconstruction of the setting and framing of news does not intend to make the truth becomes absurd. Nihilism fads authority and standard values that make it unaccountable. [1]

Similar to the use of the internet for the benefit of the state, digital transformation in government services is difficult if there is no good political desire from the government. Conventional service patterns still seem to be the mainstay of the public service sector. Similar to the use of the internet for the benefit of the state, digital transformation in government services is difficult if there is no good political desire from the government. Conventional service patterns still seem to be the mainstay of the public service sector.

In a whole, the digital economy has a pretty good outlook. Recorded in 2021, Indonesia's digital economy valuation grew 49 percent in 2021 by US \$ 70 billion from the previous year of US \$ 47 billion.. [2]

The magnitude of this opportunity does not seem to be seen in the agricultural sector as stated in the previous description. Digital transformation in the agricultural sector brings considerable losses to farmers. Farmers spend a lot of money to meet directly with consumers. The length of the coffee chain can basically be done with the utilization of digital space. Coffee ecosystem development schemes do not lead to development based on digital, especially from the distribution (agroecological) sector.

This study explicitly wants to explain the problem of transformation, as well as see the opportunities in the future.

II. Research Metode

Research uses a qualitative research approach where qualitative research has a characteristic by describing an actual state, but the report is not just a form of reporting an event without a scientific interpretation. Qualitative approaches emphasize meaning, reasoning, definition of a particular situation (in a particular context). Qualitative approach, more concerned with the process compared to the end result; Therefore the sequence of activities may vary depending on the condition and the number of symptoms found

III. RESULT AND DISCUSSION

Gayo's Coffee

Coffee has been a major commodity of the Gayo community, especially since the last decade where this sector has encouraged domestic economic growth. Gayo coffee commodities are not only enjoyed by domestic and national markets, but also have entered the international market. Gayo coffee export destinations include the United States, Egypt, Japan, Malaysia, Italy and Spain. The Central Bureau of Statistics (BPS) noted that Aceh is the 4th largest exporter of coffee in Indonesia with an export value of US \$ 49.89 million from US \$ 476.76 million in January to August 2021. The people involved in this sector reached 78,624 heads of families with an area of 101,473 hectares for arabica coffee type 61,761 hectares for robusta coffee.

Coffee has also encouraged changes in the lifestyle of local people. During this study, there were many changes in the pattern of local people and acehnese people in general in enjoying coffee where various variants of coffee have been born. Similarly, farmers who already have knowledge in sorting coffee variants..

Tourism sector becomes the main pendrong for the growth and development of Gayo coffee, so far the presence of tourists both locally and abroad has contributed to expanding the coffee market. However, when the pandemic continued, tourist visits to Gayo approached its worst numbers, affecting the selling value of coffee to the global market. The United Nations World Tourism Organization (UNWTO) predicts world tourists will decline by 70 percent by 2020, a number 10 times worse than the economic crisis in 2009 and predicted to recover in 2023.

Digital transformation

History shows that technology is the driving force of change. In this regard, the digital revolution is placed in a continuum of the history of technological development that began with the digital revolution. The first priode of industry (1770-1850) gave birth to water-powered mechanization technology and in the keda priode (1850-1900) gave birth to a steam-powered system, the third priode (1900-1940) gave birth to electrification systems in various fields. This electrification became the basis for the development of motorization technology and mobilization of automotasi in the fourth priode of the industrial revolution (1940-1970) while enabling the development of digital technology in the next priode.[3]

It is interesting to see why the transformation of the agricultural sector is running ramps as stated by Fritz who conducted a study on 85 electronic markets in Europe and the United States after two years there are only 25 markets that continue their operations. The rest close or change their business models. Similar conditions also occur in Gayo coffee farmers, so far there has been no study that is expilisit that tells how the transformation of trade was done, but from the reality it is seen that trade patterns and agricultural management patterns are carried out still in traditional ways, far from the touch of electronic technology let alone digital. Such as the use of robots, temperature and humidity sensors, air imagery, and GPS technology. Even though the mechanization of agricultural systems allows businesses to be more profitable, efficient, safer and closed are likely to be environmentally friendly.

Referring to conventional trading patterns that have long been practiced in gayo coffee trading, the following presented market mechanisms that have been maintained until now, a trading pattern that is untouched by both electronic and digital technology:

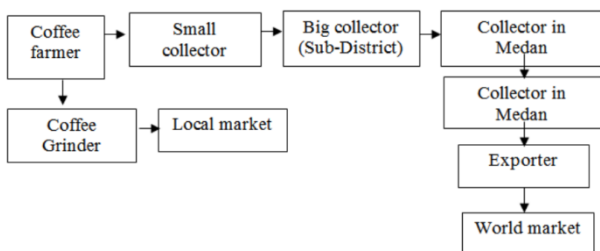


Figure 1. Gayo’s Coffe trading prosses

Source: [4]

After the rapid development of technology, farmers began to find out about the development of the price of coffee as a world commodity day after day, and its relationship to their needs when selling green beans

to collectors in the district centres. Usually, farmers will check prices in the 'terminal' to find out coffee prices for that day. The emergence of movements to add value to the sale of coffee production means that coffee farmers need not take uncertainty in prices. They have begun to have a way to add value to the final product that they previously only sold to large collectors. They are now starting to create their market with all the complexities of a typical coffee flavour.

Processed coffee and supply chains are growing, and heavily influenced by youth's creativity. This creates a desire for entrepreneurs to start their fortune in selling processed coffee directly to consumers (local and regional markets). They are creating new ranges in the coffee commodity chain, because of an orientation towards economic rationality that provides higher profit margins in the local market share. This desire arises because of a global interconnection, one that is directly proportional to the increase in the willingness of local entrepreneurs to expand their business with indicators of coffee shop growth significantly in recent years[4].

The only digital transformation in the agricultural sector is still limited to facilitation of commodity trade operations and coffee variants produced. Unfortunately, these digital platforms are not created and designed by people who are included in the Gayo coffee farming ecosystem. Farmers and coffee farmers take advantage of available platforms such as social media and other e-commerce platforms.

One of the coffee farmers as well as steamers from the younger generation of Angga Dwi said that the community felt comfortable with agricultural patterns and coffee trade patterns that already exist, namely by direct interaction. Farmers provide goods, then distribute them to distributors to be delivered to the market both domestic and foreign markets. As he said in the following interview excerpt:

"We (farmers) feel that what has been done so far has been good, meaning that farmers have benefited. If there is another way that makes farmers profit, they do not. Although the farmers were villagers, but they did not close themselves off from any technology. But the problem doesn't exist. Who did and who offered us that change? So far the agricultural innovations offered have not led to the use of electronic devices (mechanization) let alone digital tools"

The above interview footage that the main problem faced by farmers is their inability to innovate, find new patterns. Empirically farmers do not reject the presence of any technology if it is considered more profitable and not too exploitative to their land. The problem of human resources in the agricultural sector is

still an important issue that always escapes the conversation at the level when it is noted that most farmers are 40 years old and more than 70 percent of them are only elementary school educated even below it. While the regeneration process in the agricultural sector is quite slow where the percentage of youth who become farmers is only 21 percent. The younger generation is more interested in the manufacturing sector by 24 percent and the service sector by 55 percent (BPS, 2020). This condition is contrary to the reality where Indonesia is facing a considerable demographic bonus where the young Indonesian people reach 64.50 million people.

beside that information technology infrastructure has not been evenly distributed throughout the region, especially in rural areas with difficult geographical structures such as in the Central Aceh region with hilly conditions. This is quite clearly seen from the distribution of telecommunication towers centered on java island by 57 percent or 16,150 units and only 11,929 menar are in Java Island. This inequality is very contrary to the conditions of the situation that are almost entirely in rural areas.

Basically, the use of information technology to the village level has been practiced at a wide scale, especially in data management through an e-government. Utilization of information and communication technology in the estuary government sector is the quality of community services and other stakeholders that are primed based on technology or better known as E-Government. Public services should not only follow global trends, but also include strategic steps in an effort to improve access and quality of services to the community. E-Government makes it easier for people to access various information and get various services without having to come directly to the relevant government institutions. The quality of service will increase with the use of technology, because with the creation of good governance it increases transparency and accountability of public institutions including gampong-level government in coastal areas.[5]

Some of the above descriptions show that the slow pace of digital transformation in the agricultural sector does not rest entirely on farmers who have been considered right to the conditions experienced. Digitalization of the agricultural sector must be done from upstream to downstream, from management to marketing. Digitization and mechanization of Gayo coffee can indirectly improve the standard of living of farmers who have been a society with a category of poor people. In addition, coffee can be used as a source of income so that they can live sustainably and become a source of profitable income.

There are four important elements to bringing sustainable life in society, 1). Availability of natural resources, 2) human resources, 3) financial capital, and 4) social capital.[6]. When viewed from the four

elements of coffee is quite a chance to be the main source of income, removing them from poor conditions and prospering for a long time. Especially in social capital. Empirically based on observations in the field showed that gayo community has strong social capital, brotherhood and family networks have been sustaining a harmonious life and mutual respect for each other.

IV. CONCLUSIONS

In many studies farmers are often considered as one part of the slow innovation of agricultural technology, because it is based on the reality of the low level of education of farmers. Such an assessment does not seem to be the main problem for Gayo coffee farmers. Gayo coffee farmers are very open to the various changes and technologies that are present. The slow pace of these changes is generally due to the absence of stakeholders to bring about digital-based change. So far the pattern of agriculture and distribution of agricultural products are still carried out conventionally with traditional equipment because there are no other alternatives offered. Furthermore, it needs to be recognized that the inequality of internet infrastructure becomes an obstacle that cannot be ruled out. Farmers are generally located in rural areas with very limited levels of internet access. The only form of digital transformation is only found in the process of marketing coffee that has been marketed through coffee.

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