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The Livelihood Strategy of Rubber Tapper Households

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Abstrak

Livelihood strategy is a method or tactic that used by a person or group to survive by using assets condition that they have, such as human capital, physical, nature resource, financial, and social capital. The aims of the research were to analyze the impacts of temporary suspension of one of rubber operational factory to the rubber tapper households, to find out the conditions of rubber tapper household assets, and to analyze the livelihood strategy that being used by the rubber tapper households in order to fulfill their family living. This research conducted in March 2020 at PT Perkebunan Nusantara IX Kebun Batujamus, Kuto Village, Kerjo Sub-district, Karanganyar Regency. The data of the research collected by using methods such as observation, documentation, indepth interview, and literature study. The informants of the research consisted of 12 key informants and 3 supporting key informants. The data of the research was analyzed using descriptive qualitative method and analysis method of Miles and Huberman interactive data model. The research also used source and methodological triangulation. The research results showed that the temporary suspension of one of the company's factories had an impact to the rubber tapper promotion. Rubber tapper households used multiple livelihood strategy, which was combining the on-farm income and off-farm income.

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INTRODUCTION

PT Perkebunan Nusantara IX (PTPN IX) Kebun Batujamus is one of the government-owned companies which engaged in rubber plantations field. *PTPN IX Kebun Batujamus* has 2 factories that process 2 different products, which are Ribbed Smoke Sheet (RSS) and Brown Crepe (BRCR). In order to support production activities, *PTPN IX Kebun Batujamus* has 3 types of rubber tappers who work on the plantation, which are Daily Permanent (HT), Daily Freelance Regular (HLT), and Daily Freelance Incident (HLI). HT is a group with the status as a permanent employee of a company who has the highest salary and gets a bonus from the company, while HLT is a group of workers with the status as a company's permanent employee candidate whose salary was under HT and still gets a bonus from the company. HLI is a group of tappers with daily freelance status with the lowest salary. HLI also does not receive bonuses and pension benefits as received by other groups.

HLI tappers earned a salary of 1,500,000 Rupiah/month. In HLI tapper households, almost all of the men who work as tappers were the sole breadwinners so that household income depended on rubber plantations. On the other hand, the operational activities of the BRCR factory were stopped due to the low selling price of BRCR. This was potential to be the threat to the tappers' household income. The status as HLI tapper made tapper households vulnerable to the effects that caused by the stop of the BRCR factory operation. Tapper households need a strategy in order to be able to meet their family's living needs by utilizing their assets.

The innovation of this research was that the research subject was a daily freelance employee in a rubber plantation company and there was a condition where one of the rubber processing companies stopped operating, while so far the research subject of livelihood strategy was usually seen from the farmer's side such as the research of Fridayanti & Dharmawan (2015) or fishermen as in Widodo (2009) research.

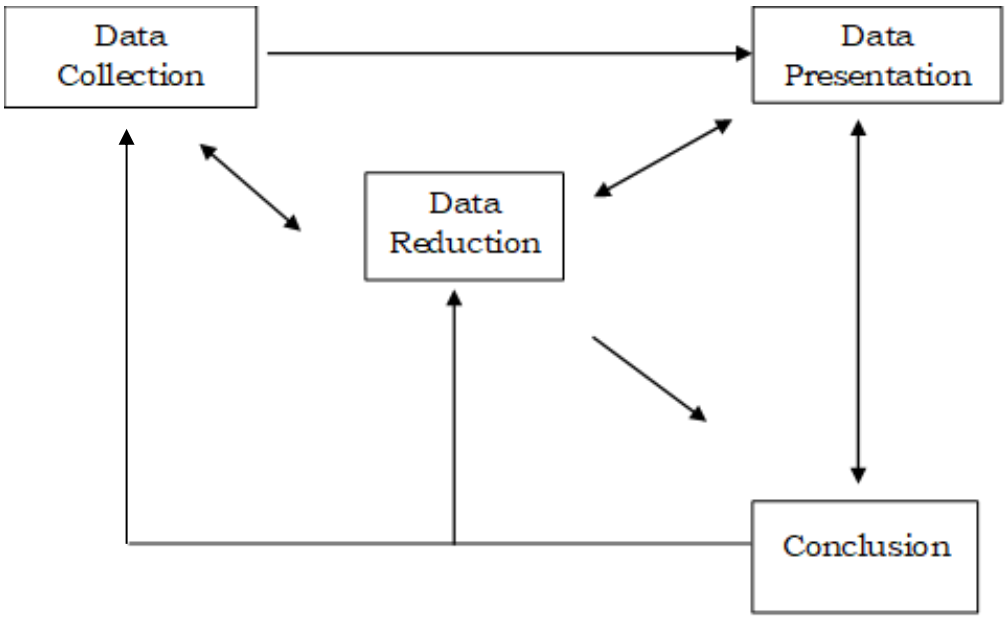
The aims of this research were 1) to analyze the impact of the temporary suspension of BRCR factory operations on the income of HLI workers, 2) to analyze the condition of assets owned by HLI workers' households before and after the temporary suspension of BRCR factory operations, and 3) to analyze livelihood strategies that performed by HLI workers' households by utilizing their assets condition.

RESEARCH METHOD

This research was conducted in March 2020 at *PT Perkebunan Nusantara IX Kebun Batujamus*, Kuto Village, Kerjo Sub-district, Karanganyar Regency. The location selection was cdone purposively because PTPN IX Kebun Batujamus has a low-paid tappers group and the condition of one of the factories being stopped. The primary data in the research such as family profiles, capital, income, expenses,

daily activities, and informants' livelihood strategies were obtained through in-depth interviews, observation, and documentation. The informants were obtained using the snowball technique, which was found out one informant's name and from that informant it was then found other informants (Sugiyono, 2015). Secondary data in the form of company profiles and references to livelihood strategies were obtained by reading books, journals, and data from companies.

There were 15 informants in the research consisted of key informants and supporters. There were 12 key informants consisted of HLI tappers and 3 additional key informants consisted of the foreman, big foreman, and cinder. The saturation of the informants' answers in qualitative research appeared on the 12th informant (Guest et al., 2006). This research used a qualitative descriptive analysis, which described according to the events in the field. Qualitative research provided findings not through a counting process (statistics), but focused on processes and meanings that were not calculated (Strauss & Corbin, 2003). From the data obtained, then the validity and credibility were tested using triangulation of sources and methods. Source triangulation was done by adding key informants with the aim of getting the actual position (Sarmanu, 2017). Valid and credible data were analyzed using Miles and Huberman's interactive analysis model.



Picture 1. Interactive Analysis Model of Miles dan Huberman (Miles, 1994)

RESULT AND DISCUSSION

The Impact BRCR Factory Discontinuation to the Tapper Household

The discontinuation of the BRCR factory was started by the instability of world rubber prices, which caused BRCR's sales to be lower than its production costs. The company chose to stop BRCR production to prevent losses. The discontinuation of the BRCR factory had no effect on the salary received by the tappers. Tappers still receive the same salary every month accompanied by a reward and punishment system. Rewards were given to tappers if the harvest exceeds the target given by the foreman, which was 7 kg of dry rubber.

The reward given was 6,000 Rupiah/kg of excess sheet harvest. Meanwhile there was no target given for the lump, but tappers will be given a salary of 3,500 Rupiah for every kg of lump obtained. Punishment was given to tappers if the harvest was less than the target given by the foreman, which was 3,000 Rupiah for every kg of lack sheet harvest. Meanwhile, there was no punishment given for the lump harvest, because it was not the main product. A punishment exception was applied if it rains before or during the tapping's process, because rainwater will affect the quality of the rubber so that it affected its dry weight.

The impact of the BRCR factory discontinuation on the assets owned by the tappers was also invisible. The termination of the BRCR factory only had an impact on the promotion of the tapper group. When the company's conditions were normal, promotion of the group for entire tapping personnel usually occurred every 1 year, but at the time the research was conducted there was no promotion of the entire group. There was only 1 person from each group who gets a promotion every year. This was certainly harmful to the HLI tappers group, because there was no certainty how long it will take to get promoted to the HT group (company permanent employees).

One of the tappers said that another possibility could be the impact of the rubber trees maintenance. The tappers said that the company's decreasing revenue can lead to reduced budgets for plant maintenance, such as fertilizer and weed control budgets.

The Ownership of Tapper Households' Asset

A. Human Capital

The human capital labor resources which found in the households such as education, skill, and health in order to be able to fulfill their living needs (Ellis, 2000).

1. Education

Table 2. Tapper Education Level

No.	Education Level	Total	Percentage
1.	Elementary	6	50%
2.	Junior High School	3	25%
3.	Senior High School	3	25%
	Total	**12**	**100%**

Source: Processed from primary data, 2020.

Almost all tappers were not affected by the level of formal education in their work, both main and side jobs. There was only one tapper who used his formal education in a side job. The tapper had a vocational education background in the Department of Electronics and his side job was as a repair service for household electronic equipment and parabola. Education can be used as human capital to seek additional household income. Research by Brown et al. (2006) also stated jobs that generate higher incomes can only be obtained by people who have the relevant education and skills.

2. Skill

The skills that must have by tappers who work at PTPN IX Kebun Batujamus were found in Vademecum PTPN IX, which was a guide book in the rubber plantations world. These skills consisted of the use and completeness of tapping equipment and how to tap. Tappers must have complete equipment in their work and must know how to use each of these tools. The equipment consisted of at least 2 tapping knives, fine whetstones for sharpening tapping knives, buckets as latex containers, tapping bowls, aluminum bowls for latex K3 samples, tapping gutters, spare nails, tapping lamps for lighting when tapping.

The method of tapping included the height of the open leads, the slope of the leads, the skin slices, and the depth of the leads. The tapping height was the distance measured from the lowest point of the tapping groove to the highest grafting linkage. The lead slope for the bottom tapping was 40° and 45° for the top tapping measured against the horizontal line. Skin slices when tapping was 1.59 mm so as not to be too wasteful. The maximum lead depth was 1 mm from the cambium.

PTPN IX Kebun Batujamus conducted trainings as an effort to improve the skills of the rubber tappers. The training consisted of internal and external. Internal training was training performed within the company environment. Internal training was performed on the tapper's first day of work. The training, called the Tapping School, consisted of training on tapping equipment, tapping criteria, tapping rules, and how to tap, and how to harvest the correct tapping results (according to Vademecum PTPN IX 2015).

The other internal trainings can be occurred at an unspecified time, for example the adaptation of new technologies in rubber plantations. External training was training performed outside the company environment, in which sending several tappers to attend training outside the company. All informants felt that training was a necessary activity to become a good tapper. The same results were also shown on the research from Mahama & Maharjan (2017) which stated that training will improve human skills in facing job challenges in their main source of livelihood.

3. Labor Allocation Level

The level of labor allocation was seen from how many family members work to help earn the livelihood. Eight out of 12 informants were the sole breadwinner in their household. There were 4 informants who were not the sole breadwinner. The four informants were supported by their wives in earning, starting from farming, looking for animal feed, shop keeper, and working in a salon. Almost all of the tapper household's income, who being the informants, were not assisted by the role of children. This was caused by children who were still in school or were married and live separately. Only one tapper was supported in earning by a married child, which was sent some money if needed.

The labor allocation was also a factor that can increase household income and affect livelihood strategies. The labor allocation on tapper households that produced direct income was included in non-farm income, such as shop keeper and working in salons. Research conducted by Jiao et al. (2017) produced the same

finding, which was that the labor allocation in the non-agricultural sector had increased so that it became a very important livelihood strategy for households.

B. Physical Capital

Physical capital was all non-living objects in the form of buildings, equipment, and machines that supported production activities in an effort to fulfill household livelihoods (Ellis, 2000). On average, tappers have the same household assets, such as tapping equipment, agricultural equipment such as hoes, crowbars and sickles, houses, motorcycles, and cell phones. The difference was only shown by 3 tappers who have a stall as an additional business to fulfill livelihood and 1 person who has the capital tools used to repair electrical equipment such as screwdrivers, pliers, test pens, soldering irons, and knife cutters.

The tapper households did not have a prominent physical capital. The houses condition of each tapper household also looked normal. The different things were shown on the research results conducted by Xu et al. (2015) which stated that there was a peasant culture in China that made houses as investments, so that farming households will save or borrow to build a nice house.

The physical capital such as roads, lighting, bridges, shops, health centers also existed in Kerjo Sub-district, where the tappers live. According to one informant, road access and lighting have an important role in their work, because the tappers leave before the sun has risen.

C. Natural Capital

Natural capital was capital that came from the living or non-living environment that was owned or accessible to humans to be used as a production factor in fulfilling their livelihood activities (Ellis, 2000). Natural capital can be in the form of sunlight, access to water, agricultural land, and livestock. Tapping at dawn still required a flashlight. The sun's light was used when harvest time in the morning, so it did not need a flashlight anymore. Water access was used by tappers as a source of drinking water, bathing, and washing. Some tappers were seen utilize their water access to take them to the garden as a supply of drinking water.

The other natural capital used by the informants was agriculture and animal husbandry. Based on interviews, it was known that the ownership of agricultural land and the number of informants' livestock as follows.

Table 3. The Ownership of Agriculture Land and Total of Tappers' Livestock

No.	Natural Capital	Category	Total	Percentage
1.	Agriculture Land	Do Not Have	4 person (I3, I5, I7, I8)	34%
		0,10-0,25	6 person (I1, I2, I4, I6, I10, I12)	50%
		0,26-0,50	1 person (I11)	8%
		0,51-0,75	0	0%
		0,76-1	1 person (I9)	8%
		Total	12 person	100%

Livestock	Do Not Have	4 person (I1, I3, I4, I8)	33%
	Chicken	1 person (I7)	8%
	Goat	2 person (I6, I10)	17%
	Cow	2 person (I2, I12)	17%
	More than 1 type of Livestock	3 person (I5, I9, I11)	25%
	Total	12 person	100%

Source: Processed from primary data, 2020.

The commodities that were generally planted by the informants were rice, corn, cassava, peanuts. The tappers chose to plant this commodity because it was easy to cultivate and the harvest time was quite short, the sales were still sufficient for the tappers, and because these plants were the basic needs of the people in the village and it had become a tradition to cultivate these commodities. The extensive agricultural land in rural areas was well utilized by tappers. Li et al. (2020) in his research found that agricultural land was the most important natural capital for villagers, so that extensive land ownership will increase household income significantly.

Livestock was also one of the natural capital that used by tappers. There were 3 types of livestock that maintained by the informants, such as chickens, goats, and cows. Goats and cows were generally sold on major holidays such as Eid al-Adha or certain ceremonies, while chickens were only kept for own consumption or sold if necessary. A research conducted by Martin & Lorenzen (2016) stated that ownership of large numbers of livestock was one measurement for household wealth in rural areas.

D. Financial Capital

Financial capital was capital in the form of money that can be used by humans in managing production activities as an effort to fulfill a living for their household (Ellis, 2000). This capital can be in the form of cash, savings, or access to loans.

Based on the interview, the results of the informant's financial capital ownership were obtained as follows:

Table 4. The Tappers' Saving Ownership

No.	Saving	Total	Percentage
1	Do not have	4	33%
2	Money	6	50%
3	Gold	0	0%
4	Money and Gold	2	17%

Source: Processed from primary data, 2020.

The numbers of tappers who have savings were 8 people and those who don't have were 4 people. The most preferred form of savings by tappers was money. The main reason for tappers who chose to save money was because it was easier to do, while gold had several obstacles such as the need to sacrifice a large amount of money to save gold. Research of Peng et al. (2017) stated that in addition

to having savings and access to loans from friends or banks, households also received financial assistance from the government in the form of a manageable ecological compensation fund.

Another way that tappers did in managing their finances was *arisan*, which was a social association that collected money from its members and drew the winner in turn. The social gathering fee that generally paid was 50,000 Rupiah per month. The informants also participated in the cooperative provided by PTPN IX Kebun Batujamus. The cooperative provided various types of commodities, such as savings and loans, grocery, and vehicle rental by paying a fee of 15,000 Rupiah per month.

E. Social Capital

Social capital consisted of 3 components, which were norms, belief, and networks. Social capital had an important role in building social integration and became the glue of relationships in society (Ardiansyah et al., 2019). The social capital owned by tappers was applied to 2 environments, which were the work environment in the plantation and the living environment. The norms contained in the work environment were all kinds of regulations set by the company in accordance with the PTPN IX SOP. The norms that were most commonly known by tappers were the *Tri Tertib Sadap (3 tapping obedient)*, which were obedient starting, obedient rules, and obedient toughness. The obedient starting was a rule that stated the start time of tapping was no later than 04.00. The obedient rules contained the correct rules for tapping rubber. Obedient toughness was a rule that contained how to harvest and collect the leads.

The next social capital owned was belief. According to one of the tappers, mutual belief between the tapper and the foreman was formed because of the mutual need for each other. Mutual belief was also formed due to the experience of working together over the years that were formed between the tapper and the foreman.

The norms that existed in the environment where the tapper lives were general norms such as legal norms, religious norms, norms of politeness, and norms of morality. There were no specific norms that organized social life in the environment where the tappers live. The different things were shown by the study results of Lawless et al. (2019) which stated that women in Malaita Province were prohibited from traveling to sell their business products to market centers. In the household, women were more advised to stay at home with children.

The belief that existed in the environment where the tappers live was a participatory trait possessed by the community in the village. The community will invite each other if there are holding events in the village and will attend each other's invitations to the event. Tapper households who cultivated agricultural land also have confidence to the wholesaler that bought their crops, that they were getting a fair price. Groenewald & Bulte (2013) stated in the results of their research that people who did not believe in the 'market' will tend to avoid risk and choose to produce their own food rather than looking for other opportunities in their livelihood strategies.

Social networks were also formed between the tappers and their neighbors as well as friends and family outside the village. Some tappers also followed

communities in the village, such as football lovers, youth organizations, and spiritual colleges. The tapper who attended the spiritual college stated that he could get patients from the college and there were visits to other spiritual schools outside the village. His decision to join a spiritual college was based on his experience when he first worked.

The utilization of the network owned was also performed by the tappers. One of the tappers said that sometimes he was given information by the foreman of a construction in the area where he lived to join side work as a sand porter. Another tapper also used the network to borrow money from his neighbors when there was a sudden need that required a large amount of money.

Some tappers also take advantage of a structured network that they followed, such as Farmers Groups, Livestock Groups, as well as Farmers and Livestock Groups in their villages. The tappers used the network to obtain information regarding land, plants, and livestock that were cultivated through the counseling happened in the network. Tappers also received some subsidies from the network, such as fertilizer and animal feed. The same thing was also found by Khatiwada et al. (2017) in his research where households that were members of organizations tended to have more profitable agricultural and non-agricultural livelihood strategies.

The Application of the Tapper Household Livelihood Strategy

The Classification of Livelihood Source

Ellis (2000) stated that the classification of livelihood sources used by humans to meet their daily needs consisted of 3 sectors, which were on-farm income, off-farm income, and non-farm income. The on-farm income sector was the most chosen sector by tappers to help make a living for their households besides working as tappers, which was part of the off-farm sector. This can be seen from the number of tappers who have side jobs as farmers and/or cattleman. The on-farm income sector was chosen because it was the most suitable job to do in a rural environment, where water sources were abundant and agricultural land was still widely available and plants that were used as animal feed also grow wild.

This was also supported by the habit of the village community to bequeath agricultural land and livestock to their offspring. Widiyanti et al. (2019) stated that villagers who interact with relations who have the same profession tended to continue their work as farmers and cattleman. The largest proportion of income was also owned by the on-farm income sector. Different results were shown in a research conducted by Ruiz Pérez et al. (2004) in a rural area in China stated that rural residents preferred to work in the off-farm income sector. This was due to the industrialization of bamboo in the area.

The rubber tappers as an effort to meet the needs of their household also performed business combinations from several sectors. This aimed to increase the income earned by the tapper in fulfilling his household income and minimize the risk if one of the sectors that being cultivated experienced problems, so that the income-earning activities can continue and the tapper household needs can still be fulfilled. A total of 9 out of 12 informants combined on-farm and off-farm income sources, while the other 3 informants combined off-farm and non-farm income sources. Khatiwada et al. (2017) in his research found that strategies with a

combination of off-farm and non-farm income were common among rural residents in Central Nepal.

The Classification of Livelihood Strategy

There were 3 classifications of livelihood strategies that can be applied to meet household needs according to Scoones (1998), which were manipulation agricultural livelihoods, multiple livelihood patterns, and spatial manipulation (migration). Manipulation agricultural resource was a livelihood strategy that was done by utilizing and exploiting agricultural land optimally through intensification (adding inputs) and extensification (expanding planting land).

The tappers of PTPN IX Kebun Batujamus who performed this livelihood strategy consisted of two people, both did the expansion of the planting area. One of the tappers said that the income he earned during his work was used to expand agricultural land. The tapper said that initially he owned 0.5 ha of agricultural land which he inherited from his parents, then bought another 0.5 ha of land to make it 1 ha. Research from Bhandari & Grant (2007) found that rural communities in Kali-Khola were unable to manipulate livelihoods due to several factors, such as insufficient land, declining land quality, insufficient labor, and lack of access to agricultural services.

The multiple income patterns was a livelihood strategy that performed by looking for other jobs that can be used as sources of income. This strategy was the most widely applied strategy by tapper households. This strategy performed by combining sources of income. The most common combination sources of income were on-farm income and off-farm income. The main reason tappers did this, was because it was an easy source of livelihood in rural areas. Research conducted by Nurmanaf (2004) stated that people who have narrow agricultural land diversify their livelihoods that focused on the non-farm income sector, such as being traders, non-agricultural workers, and shipping.

Spatial livelihood strategies were only used by one tapper household. The tapper received some money from his son who lived outside the village, when he needed extra money. The wife of the tapper worked as a housewife, because of their old age. Their daily life was simple by relying on income as tappers. The results of the research conducted. The communities in rural area in Laos according to research results by Martin & Lorenzen (2016) used a spatial strategy as a factor in the combination of their household livelihood strategies, which were the existence of remittances by family members who work outside the village.

CONCLUSION

The impact resulting from the temporary suspension of BRCR factory operational activities was only on the status promotion of the tapper group, from which should increase to one group every 1 year to indefinite now. All the capital owned by the tapper household was used to earn a living. The tapper households of PTPN IX Kebun Batujamus almost entirely applied a multiple income strategy pattern, which was increasing their income source by doing additional work outside their main job as tappers. The most widely applied livelihood pattern was to combine sources of income from the on-farm and off-farm income sectors.

RECOMMENDATION

The tapper households should note to the sustainability of livestock business by not selling all livestock at the same time and breeding livestock intensively, so that livestock can become one of the businesses that provide a significant and consistent increase in household income. In addition, tapper households can also increase the allocation of labor, so that the head of the family is not the only breadwinner. This research only took informants from 1 group of tappers, so that further researchers could take informants from other groups, therefore they could compare the livelihood strategies used by each group.

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