

# Labor Social Capital and Human Resource Management for Eucalyptus Oil Supply Chain

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## ABSTRACT

The social capital of the Waplau Village community in Buru Regency, Indonesia, grows and develops to meet the needs of life. The eucalyptus leaf oil refining cooperative in the village is built on the relationship between landowners, tenants, tenants, and intermediaries, all of which become the supply chain for eucalyptus oil to industries and household businesses. These relationships ensure that social capital is built on participation, trust, cooperation, reciprocity, and norms. This research focused on the eucalyptus oil refining process in Waplau Village as an activity generating profits and fulfilling household needs. The research location was focused on Waplau Village as it had higher numbers of eucalyptus oil workers than other villages in Buru Regency. The research samples were eucalyptus landowners, land tenants, day workers, and brokers. The research used primary data obtained from observations and direct interviews and was analyzed using qualitative data analysis methods. The results showed that social capital was an indicator of success for eucalyptus oil workers in achieving their goals. Social capital involved strong relationships between landowners, tenants and day workers, as well as headmen, harvesters, cooks, and labourers in the oil refining workgroup. The social capital was an instrument that increased eucalyptus oil productivity in the Waplau Village.

## Keywords

social capital; eucalyptus oil; trust; cooperation

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## Introduction

The eucalyptus plant (*Melaleuca cajuputi* subsp. *cajuputi*) occurs naturally in Indonesia, especially on the islands of Java and Maluku. Its leaves are traditionally refined into essential oils which have high economic value. Eucalyptus plants are very suitable for dry regions as they can produce higher quality oil in larger quantities compared with wet soil regions (Kanto, Wisadirana, Chawa, & Umanailo, 2020). However, eucalyptus trees are very adaptable and can also grow in wet and swampy areas, such as Buru Island, one of the big islands in Maluku Province. Maluku Province is an archipelago consisting of the Banda Islands, the Kei Islands, and the Aru Islands. Buru Island is about 9,505 km<sup>2</sup> in area and larger than Bali Island which is only 5,636 km<sup>2</sup>. The island consists of two regencies, Buru and Buru Selatan. Social capital is crucial for the survival of both groups and individuals in rural areas of Buru Regency as it is part of the community's social dynamic (Hoang, Gautret, Memish, & Al-Tawfiq, 2020; Yulisvestra, Oki, Mulyasari, & Ridwan, 2019; Zhao & Hannum, 2019). The sustainability of the group of workers has a big influence on the supply of eucalyptus oil to industry and household businesses. difficulties in doing their job certainly have a negative impact on the amount of eucalyptus oil production in Buru Regency. Social capital plays a role in binding interactions between landowners, tenants, and eucalyptus oil workers, bridging social groups among eucalyptus oil workers, suppliers, and landowners (Harerp, 2014). Social capital

helps to establish extensive collaborations with existing stakeholders (Umanailo, 2018). Every community possesses existing sources of social capital that can be accessed and utilized by its members, but the community is also a potential source of social capital. Community members are aware of the communities social boundaries and the community encourages activities that fulfil the needs of the community and contribute to the common interests of community members (Shofi'unnafi, 2020; Tahir, 2019).

Another problem faced by the community or groups of eucalyptus oil workers in terms of marketing which is often a limiting factor for the development of eucalyptus oil is the large number of intermediaries involved in the distribution chain, while the position of workers in marketing tends to be on the weak side with the price share. received is too low in comparison to the share price the retailer receives. The position of workers as suppliers of staple goods often creates misunderstandings between them, this condition greatly disturbs productivity in the context of supply of raw materials in the form of eucalyptus oil.

Understanding social capital, the authors assume that social capital is a way or method for each individual or group in interacting to maintain their existence and sustainability. The author considers social capital is part of the culture of a group and has the nature of coercion to each individual. Social capital is only an elaborated part of the local culture so that the forms of action that make up social capital are a small part of the local culture carried out by individuals or groups. social capital in daily practice signifies kinship and

interests. kinship is reflected by voluntary attitudes and sharing while interests are manifested in cooperative relationships in meeting the needs of life.

The strength of social capital can be determined through the elements embedded in the community social structure (Chen et al., 2011; Novitasari et al., 2019; Sumitro, Yuliadi, Kurniawansyah, Najamudin, 2020). Examples of these elements are trust, reciprocal values, norms, institutions, associations, mutual relationships, and networks. The implementation of social capital power is in the form of three typologies, namely social capital as a community adhesive, a connector, and a point of access. Refer from expert opinion that social capital is in its essence is a set of values and norms which are the real manifestations of dynamic institutions. but in reality, Social capital for eucalyptus oil workers in Waplau village is a way for them to maintain a source of income. interestingly without them being realized, social capital that is created creates a classification of the structure of employment in the agricultural sector so that social capital is based on attachment indirectly maintains economic domination for the capital owner.

Fukuyama stated that social capital plays a very important role in strengthening modern social life. Social capital is not merely a company's assets, it also serves to help develop the company's business (Romlah, Pratiwi, Indah, 2020; Zhong, Huang, Zhang, & Wang, 2011). Many companies have indirectly used social capital, both within and outside the company. It is necessary to determine how to maintain and increase social capital, to ensure a company's development. According to Lawang, the network inherent in social capital comprises relationships between people or groups that allows problems to be overcome efficiently and effectively. It uses the social principle of cooperation to overcome problems rather than working alone. Social capital, as the basic capital of a community, improves capital and another potential, but the inherent elements of social capital provide benefits for all community members and do not conflict with universally applicable value standards (Mu'adi, Maksum, Hakim, 2020; Zumla, Azhar, Alqahtani, Shafi, & Memish, 2020). Khoirini's study on the influence of human capital and social capital on performance stated that knowledge and structural dimensions influence human capital and social capital. Human capital and social capital was found to have a positive and significant effect on performance (Shofwan et al., 2019). Also, Imam Malik studied the effect of the social capital of clove farmers in supporting the clove farming business in Banyumas District. He suggested that farmers used the social capital they had in several ways: utilizing networks to improve farmers' clove farming capabilities, distributing crops, utilizing social values and norms as controls in the clove farming business, and establishing trust as the basis for developing clove farming (Jannah, Widohardhono, Fatimah, Dewi, 2019; Zumla et al., 2020).

Studying eucalyptus oil workers is important because the number of workers available is increasingly limited and 'the difficulties in maintaining sustainable businesses in weak economic areas. So, this research is an entry point for developing a strategy for a sustainable eucalyptus oil refining business on Buru Island.

## Method

The research was carried out in Waplau Village, Waplau District, Buru Regency. Waplau village was chosen as the research location because the proportion of eucalyptus oil workers was higher than other villages in Buru Regency. We interviewed 25 informants who were chosen for their relevance to the research objectives in a deliberate manner (Umanailo, 2020c). The informants included landowners, land tenants, day workers, and brokers or refined oil buyers in Waplau Village.

It is not easy for a researcher to understand the notions of Participation, trust, mutual relations, Cooperation from ordinary people such as those living in remote areas. The people of Waplau Village usually do it, but to interpret what they are doing is very difficult. Researchers need their way to get them to talk and express opinions and experiences about actions that have to do with social capital

We conducted an in-depth interview with relevant individuals in Waplau Village and also provided a questionnaire to investigate the factors supporting the implementation of eucalyptus oil refining (R. S. Marasabessy, Tunny, 2020). The use of the interview method is a data collection strategy that the writer undertakes to be accepted by the informant. the character of the Waplau villagers who felt more appreciated while talking face to face chose direct interviews an appropriate action to explore the informants. We also searched for supplementary information related to social capital among eucalyptus oil workers on the internet and in the literature, using government documents/archives related to eucalyptus oil production activities in Waplau Village.

This research investigated the implementation of eucalyptus oil refining in Waplau Village as an effort to fulfil household needs and develop a profitable business. Also, this study aimed to obtain a picture of the work processes and patterns of social relations among landowners, tenants, day workers, and brokers in the context of Waplau Village social capital.

## Result and Discussions

The existence of eucalyptus trees in Waplau Village was beneficial for most of the surrounding population. Leaves were collected and refined, and the oil produced was the main source of income for families. The results of supplying eucalyptus leaves to industries and household businesses are an economic source that is very useful for the sustainability of daily life. The supply chain starts with the workers on the land who are passed on to the landowners and then sold to the industry and household business groups. Waplau Village area expansion encouraged population growth. Waplau Village was established as the District Capital, and the development of education and health infrastructure has attracted most of the surrounding population to settle around the village.

The population growth in Waplau Village has continued to increase. However, it has not led to an increase in the number of eucalyptus workers, see Table 1

Table 1. The ratio of Eucalyptus Oil Workers

Year	Worker	Settlers	Percentage
2015	218	1850	11.78
2016	197	1906	10.33
2017	164	1969	8.32
2018	129	2014	6.40

Source: Compilation of Field Research Results January-March 2020

Table 1 shows the percentage of eucalyptus oil workers in the population. In 2015, eucalyptus oil workers made up 11.78% of the population, but by 2018 this had declined to only 6.40% of the total population. A senior IJ worker stated "Many of our friends left work because of deteriorating health conditions" also, they had to bear a lot of debt for household needs, HM also admitted in an open interview session. Earnings are increasingly reduced, refining machinery continues to increase HK shows an increase in labour income decreases. This decline contrasts with the plantations in Dusun Krai, Desa Bandungharjo. In 1987, the people in Dusun Krai succeeded in building a refining plant. This plant empowered workers and communities around Dusun Krai so that the number of eucalyptus oil workers was maintained (S. Marasabessy, Abdulmudy, 2020; Zhong et al., 2011). This is an example of the demands of industrialization within the context of a persistent conservative pattern of natural resource management.

Reduced numbers of workers influence the amount of eucalyptus oil produced annually. In producing eucalyptus oil, there are several interrelated elements of society, including landowners, land tenants, day workers and brokers (buyers of eucalyptus oil). This series is the eucalyptus oil production supply chain that has a very strong relationship with one another. If there is a disruption in other parts, it will be a problem in the eucalyptus oil supply chain as a whole. A statement from one of the KG landowners regarding the working group working on his land is a close relative and still has family relations. Each of these elements has different functions and authority, but they are closely related to one another. For instance, the tenant depends on the owner to get a refining permit on the owner's land, and the refining process tends to use day workers.

Table 2. Work Network Pattern

Landowner	Tenant	Day Worker	Broker
Rents out with a 25-75 percent profit-sharing agreement	Looks for workers to refine eucalyptus oil with a division of 50-50 percent agreement	Receives work according to agreements with the land tenants	Receives refined oil from tenants at a general price
Does not cover work cost	Bears workers needs or costs during distillation activities	Obtains debt facilities, work costs and severance pay for	Can help workers financially and will receive

Buyers oil from the work from land tenants	Buyers oil from workers or reduces expenses with refined oil sale	Deposits oil with the tenants to reduce the work debts	compensation in the form of refined oil
Not responsible for meeting the needs of the workers' families	Responsible for meeting the needs of workers' families	Obtains profit after the work period is finished by calculating the amount of oil deposited minus working capital and debts	Receives refined oil from day workers at prices below standard and hidden from landowners and tenants
			Not responsible for meeting the needs of the workers' families except under certain agreements

Source: Compilation of Field Research Results January-March 2019

Table 2 shows the working network and relationships between landowners, tenants, day workers, and brokers. Trust between landlords and tenants arose from agreements and work contracts. According to HJ who works as a worker, we accept being asked by tenants to prepare talks, we pay a large amount of eucalyptus oil that we must deposit without making a production agreement, the community here has a standard to expand the land with the amount of production that must be deposited. For tenants and workers, the basis of cooperative relations was based solely on the belief that most tenants did not participate in fieldwork. They assigned the distillation process to groups of day workers, usually consisting of 5–10 people. The broker is part of the network in Waplau Village but does not have a direct relationship in the refining process but has a strong influence on the eucalyptus oil supply chain. Instead, they are involved in the distribution and marketing process of refined oil. one part of the supply chain that is affected is the marketing distribution of eucalyptus oil among traders. Brokers were part of the work network in Waplau Village but did not have a direct relationship in the distillation process. Instead, they were involved in the refined oil distribution process and marketing. In the eucalyptus oil refinement process, day workers were the most important. Leaf collection and distillation were conducted in groups. Each group member had duties and responsibilities. The tasks and responsibilities were distributed according to work experience, see Table 3.

Table 3. Work Distribution



Headman	Cook	Harvester	Day Laborer
Responsible for all workers at the worksite	Responsible for fuel (wood) and distillation equipment	Responsible for stocking eucalyptus leaves during the distillation process	Doing work provided by a headman
Recruits labour to act as cooks, harvesters and other day workers	Fills the kettle with leaves and changes them	Provides firewood, looks for additional food and maintains refined oil	Helps the cook to add firewood and removes the remaining leaves
Controls leaf quality and refined oil quality	Maintains the quality of combustion and controls the water temperature	Cleans all equipment and maintains security at night	Takes leaves and helps provide food
Responsible for all production results	Provides food for all workers		Responsible for supplies and all refining equipment

Source: Compilation of Field Research Results January-March 2019

Task distribution in the distillation process was the basis of the trust between the tenant and workers. The distribution of tasks by the headman was expected to achieve the best results. MS revealed the experience in the process of eucalyptus oil processing "We work by risking family dignity as collateral, all workers and tenants are aware of the condition. A headman is a person who is valued for his experience in carrying out the distillation process. In Table 3 it can be seen that work assignments prioritized cooperation and trust. Cooperation was born out of a mutual need which was carried out consciously, JK's expression about cooperation in the eucalyptus leaf processing group "eucalyptus oil worker like a machine that each part has meaning and function" if the officer preparing lunch does not work then all group members will be weak and impact on subsequent work.

The division of work assignments encouraged interrelated activities. Should one worker neglect his obligations, it would become a burden on others in the group. The reciprocal elements of trust, social value, norms, and tolerance were social capital indicators, see Table 4.

Table 4. Activities of Eucalyptus Oil Workers

Time	Description
04.00-05.00	All workers get up and start activities. The headman will control the combustion and the stock of leaves, some workers prepare coffee and breakfast, the cook reports the amount of leaf stock needed, while the harvester starts activities.
05.30-07.00	The harvester departs to the field, the cook changes the firewood. The harvester on duty in the afternoon will replace the leaves assisted by labourers, and the headman will check the oil produced.
07.00-12.00	The harvester returns to duty and stacks the leaves, while the cook begins to cook a meal for all workers, the headman will check the quality of the leaves collected by the harvester and the workers will move the leaves from the basket into the sack for the next stock inventory.
12.30-13.30	All workers take a break and have lunch. The morning harvester gets ready to resume previous shift worker's work. Morning harvesters and workers prepare to search for firewood to add to the existing stock.
13.30-17.30	The afternoon harvester conducts activities at a predetermined location, the cook performs the burning and addition of firewood, the morning harvester, and the worker continues to collect firewood.
17.30-20.30	Morning and afternoon harvesters returns from the field. The wood they have collected will be used as fuel. Harvesters and workers proceed to rest, take a bath, and washcloths. The cook starts to prepare dinner, the headman checks the quality and stock of eucalyptus leaves and fuel.
20.30-04.00	All workers eat dinner, the afternoon harvester will continue with the night watch, labourers and cooks maintain the water, the quality of combustion and stock of fuel for a cooking stove of eucalyptus leaves.

Source: Compilation of Field Research Results January-March 2019

Table 4 shows the eucalyptus oil workers' activities in the distillation facility. The timetable worked without being formally established. Nevertheless, it was understood by each individual in the eucalyptus oil workgroup. The author attempted to demonstrate that the social capital possessed by eucalyptus oil workers was a force that can be used to stimulate collective action. Collective actions are used to respond to situations in a group, which are then developed

into the adaptability of each individual to the habits or traditions existing within the workgroup.

Understanding social capital leads to aspects of social organization, such as beliefs, norms, and social networks, that can facilitate collective action (Ely, Henaulu, & 2020; Zhao & Hannum, 2019). Social capital emphasizes community cooperation to improve the quality of life, make better changes and continuous adjustments. In 1992, Burt defined social capital as the ability of the community to associate with each other. Therefore it became a very important force, not only for economic aspects but also for every other aspect of social existence {Formatting Citation}. The author assumed that the social capital possessed by eucalyptus oil workers was a force that could be used to stimulate collective action (Salampessy, Tuhelelu, Wahyudi, 2020). Collective actions are utilized to respond to situations outside the community, which are then developed into adaptive abilities as described in Table 5.

Table 5. Description of the Social Capital of Eucalyptus Oil Workers in Waplaw Village

Description	Orientation	Action
Participation	Engagement in work involves emotion and willingness.	Work in the distillation process according to the agreement.
Trust	Openness to the conditions that occur for each individual. Feeling safe to trust the other party and respective agreements.	Receive the work given and maintain the trust given by the landowner and belief in the results of the distillation obtained.
Cooperation	Willingness and ability to work together in achieving goals.	Complete the tasks and responsibilities given. Help other workers to ease the workload. Understand the role of the group.
Mutual relationship	Help each other and ease the burden of fellow eucalyptus oil workers.	There is communication between cooks, harvesters, and labourers with the headman or land tenants to overcome household economic problems.

Source: Compilation of Field Research Results January-March 2019

Table 5 shows the orientation and actions of eucalyptus oil workers in the areas of participation, trust, cooperation, and reciprocal relationships. These are indicators of the social capital existing in the group. The orientation shown by eucalyptus oil workers revealed their awareness of temporary collective actions, which is a manifestation of belief, values, norms, and tolerance.

Eucalyptus oil processing is a type of work that requires 5-10 workers. Cooperation and mutual understanding are the main things in every processing activity. Management activities led by an anaconda (the term for group leader) with certain requirements and abilities. An anaconda is required to have the ability to predict the results of processing and see the location for the selection of leaves and weather. Anaconda has the right to the approval and trust of the owner of the landowner of the capital to determine the needs that must be provided. Anaconda's responsibility lies in the amount of production associated with its ability to predict, then the compilation of the amount of production does not meet, then the anaconda will be responsible. Related research data, there have been several factors responsible for the reduction in the number of eucalyptus oil workers: the availability of new fields of work outside eucalyptus oil refining, the types of work available due to increased education levels, and the use of

machinery in the distillation process. The new machinery means that landowners and tenants no longer distil the oil. Instead, they tend to collect leaves to sell to modern refineries. These conditions make the space for anaconda more narrow due to shifting the production process.

In the worker structure, in addition to the anaconda, the cook has considerable influence. The ability to manage combustion and process the production process causes the cook to be considered a person who has authority other than anaconda. In addition to cooks, leaf pickers and labourers are two workers' structures that are in one working group together with anacondas and cooks. The existence of leaf sorters and labourers is considered low because the work charged is only helping, even though the action taken is difficult and time-consuming. Hanifan explained that social capital is not capital in the usual sense, such as wealth or money, but rather has a figurative meaning, in the form of real assets or capital crucial to society. Social capital consists of trust, reciprocal exchange, social norms, and ethical values. It is the foundation that determines business activities, development, and sustainability in various sectors of life (Kimin, Rahman, Conang, & 2020; Zhao & Hannum, 2019).

Leaf sorters are added to their obligation to prepare dishes and clean equipment while workers are required to guard the kilns. The social capital found in society grows and develops together with human development (Nawawi et al., 2020). The social capital found among eucalyptus oil workers was found to be a pattern of cooperation that prioritizes trust between workers, landowners, and tenants and excludes suspicion of fraud. In this context, social capital has an important role. The social capital of eucalyptus oil workers was an asset as the business was based on a common interest and similarities in environmental conditions (social, economic, resource) that determined the development of workers' and tenants' activities (Apriyanto, 2019; Jannah et al., 2019; Umanailo, 2020a, 2020b; Zhao & Hannum, 2019; Zhong et al., 2011).

Job structure is very influential on the income of each person who is in his part. The anaconda receives the biggest payment and share as a responsibility to the landowner and capital owner while the cook is given half the wages of the anaconda. Leaf sorters and labourers are given wages from the number of hours worked during the production process. The social capital built in the work distribution between headman, cook, harvester, and day worker was constantly changing. Thus the dynamism of eucalyptus oil workers in refining activities was inseparable from the social capital built into the lives of eucalyptus oil workers. Social capital, in essence, is a set of values and norms which are tangible manifestations of a dynamic institution (Djibu, Shofwan, 2019; Muhasidah et al., 2019a). The real manifestation of social capital in eucalyptus oil workers was shown in the form of trust, social networks, responsibility, and cooperation (Rosyadi, 2016; Zhong et al., 2011).

In principle, the social capital that is built up in the eucalyptus oil worker community will become the eucalyptus oil supply chain which consists of binders, connectors and networks. Binding is built from trust between fellow workers and workers with the owners of capital. Trust is a guarantee of the sustainability of socio-

economic relationships that are maintained to obtain economic resources. A sense of mutual need in meeting daily needs becomes a connector for fellow workers and landowners and owners of capital, the connector makes everyone aware of their position and abilities, so that in calculating energy, time and capital is not a calculation of profit and loss but based on the role given or obtained from a job. Bonding social capital is inward-looking in its ideas, relations, and attention (Castles, 2018; Novitasari et al., 2019; Rumaolat, Lihi, Hamka, 2019). This form of social capital generally appears in a homogeneous society. Putnam described a society possessing bonding social capital as a sacred society characteristic, namely a dominated community enduring as a totalitarian, hierarchical, and closed society under certain dogmas. The eucalyptus oil workers in Waplau Village had a form of a society dominated by the existence of land tenure and working capital. However, they were not totalitarian or believing in certain dogmas. The hierarchy division and daily social interaction encouraged eucalyptus oil workers in Waplau Village to be guided by values and norms considered beneficial to all parties (Alavijeh, Habibpour, Moharrampour, & Rasekh, 2014). However, these mostly benefitted the landlords and tenants.

Network as an important part of the social capital of eucalyptus oil workers is a condition that is built on a family basis. The network forces workers, capital owners and landowners to put relatives first in the interests of minimizing economic conflict. The network is protected by the culture of the local community because the tradition of helping one another and giving priority to relatives has been a part that has been maintained long ago (Umanailo & Ali, 2019). The orientation and actions of eucalyptus oil workers were consistent with the social capital containing a set of values and norms as well as patterns of social interaction in regulating distillation activities. The main dimension of social capital lay in the ability of eucalyptus oil workers to cooperate in building a social network to achieve a common goal (Muhasidah et al., 2019b). The workers' ability to establish cooperative relationships depended on willingness to adhere to values and norms. It encouraged each worker to become subject to collective interests.

## Conclusion

The existence of a collaborative system for eucalyptus oil refining is beneficial for the community and fulfils household needs, this activity is the most important part of the eucalyptus oil supply chain between industry and household businesses. The day work system and recruitment of distillation workers established connections between landowners, tenants, day workers, and brokers. Therefore, trust and mutual relationships strengthen cooperative relations. Trust among landowners, tenants, and workers created the opportunity to meet household needs. Social capital formed in the eucalyptus oil workers environment grew from active participation, trust, cooperation, and mutual relations.

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