



PRINCIPAL-AGENT RELATIONSHIP, UNCERTAIN RESULTS AND THE MORAL ECONOMY



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ABSTRACT

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The article is the result of research on the principal-agent relationship in traditional small-scale gold mining and car body repair workshops. The research aims to find out the role of the network in the recruitment of workers in the principal-agent relationship and how the uncertainty of work results gives rise to moral economy. The results showed that the principal-agent relationship in mining produced a moral economy. The moral economy demands the work of miners must be able to meet the everyday demands of miners and their families. The percentage of profit-sharing from the agreement of miners and mining entrepreneurs sometimes cannot meet the everyday demands of miners and their families. In such situations, mining entrepreneurs usually voluntarily reduce the percentage of their share. This consistent with Scoot's research on patron-client relations in peasant societies of Southeast Asia. While the low uncertainty of the work results of the workshop workers does not bring up a moral economy like in a gold mine. This study was carried out at traditional gold mining in Tatelu Village, North Minahasa, North Sulawesi in September and October 2017 and at 'Ketok Magic' car body repair workshops in Manado, North Sulawesi in January and February 2019. This research was conducted using qualitative research methods and using data collection techniques in the form of in-depth interviews and observations.

Contribution/Originality: This study expands the principal-agent theory to hazardous and risky occupations by comparing those occupations with less risky occupations with more stable work outcomes.

1. INTRODUCTION

Principal-agent relations are relationships where the first party (principal) delegates tasks to the second party (agent) for the sake of the interests of the first party. Principal-agent relations not only exist in economic activities but also in fields such as the power relationship between the legislative (principal) and executive (agent), the relationship between parents of students (principals) and teachers (agents), the relationship between patients (principals) with doctors (agents), and so on. This paper will explain the principal-agent relationship in the business field where the uncertainty of the agent's work will give rise to a moral economy, so that both the principal and the agent benefit and as a result the principal-agent relationship can continue.

In the study of the patron-client relationship between landlords and tenant (farmers) in Southeast Asia, the moral economy approach is confronted with the political economy approach. The moral economy approach assumes that the relationship between landlords and farmers colored by mutually beneficial actions and protects the interests of both parties. For example, in times of crisis, farmers expect economic, social and political protection to landlords and landlords expect social and political support to farmers. These acts of mutual assistance or reciprocity become

social norms that bind both farmers and landlords. Conversely, the political economy view assumes that landlords' relations with farmers characterized by the spirit of pursuing their respective interests (Popkin, 1979; Scott, 1977).

This article is the result of research in traditional small-scale gold mining in the village of Tatelu, North Minahasa, North Sulawesi and in "Ketok Magic" car body repair workshops in Manado, North Sulawesi. Although the types are different, the two business fields have similarities, namely small business scale and high informality. However, there are significant differences that give rise to the form of moral economy in the principal-agent relationship, namely the difference in the uncertainty of the results of the agent's work. To direct this paper, the following problems will be formulated: (1) How do social networks play a role in the recruitment and monitoring of agents? (2) How does the uncertainty of the results of the agent's work affect the formation of a moral economy in the principal-agent relationship? This paper aims to: (1) Demonstrate that social networks can reduce transaction costs in employee recruitment. (2) Shows how the uncertainty of work results gives rise to a moral economy that benefits both principal and agent so that the principal-agent relationship continues.

2. LITERATURE REVIEW

The study of principal-agent relationships began in economics (Jenson & Meckling, 1976). In sociology, the concept of principal-agent relationship was first alluded to by Weber when he discussed authority and bureaucracy (Weber, 1964). The principal-agent (P-A) theory then extends in other areas such as health, politics, public policy, state administration, education, and stewardship. There are several critical elements in the P-A relationship. First, agents are different types. There are diligent and lazy agents, there are skilled and unskilled agents, and there are honest and dishonest agents. Second, agent action affects the desired outcome by the principal. Third, there are random factors beyond the agent's ability to control it but change the outcome of the agent's actions. Fourthly, there are some results that are the result of agent action. And fifth, there is information asymmetry (Petersen, 1993). Like the assumption in neoclassical economics, there are two assumptions about human nature in the P-A relationships advanced in economics. Following Williamson's view, P-A theory holds that actors act very rationally. Actors are considered to have a lot of information so that rational decisions be made quickly. Actors in principal-agent theory act in their own interests in ways that harm the interests of other actors. This is also in line with Williamson's view of the economic cost of transactions that actors tend to be opportunistic – self-interest seeking with guile (Williamson, 1985).

The P-A relationship is closely related to the problem of agent selection, monitoring, and rewarding to agents. The P-A theory analysis unit is the contract that governs the P-A relationship. The concern of P-A theory is to determine the most efficient agreement governing the P-A relationship (Eisenhardt, 1989). Specifically, agency theory focuses on ways in which principals choose the types of agents and forms of agency action monitoring, how the types and numbers of positive and negative sanctions on agents (Kiser, 1999). Because of these assumptions about human nature, P-A theory deals with solving two problems that occur in P-A relationships. The first problem arises when the desires or objectives of the principal and the agent are contradictory, and it is difficult for the principal to verify what the agent does. The second is the problem of dividing the risks that arise when the principals and agents have different attitudes toward risk. The problem is when the principal and the agent choose different actions because of different risk options. Based on these five concepts, agency problems, and human nature arises some propositions. For example, when a contract based on the result of an agent's action, the agent will act in the best interest of the principal. A lazy or unskilled agent will choose a contract with a fixed wage, whether daily or monthly. If the principal can monitor agent actions, then the agent will act following the interests of the principal. There are some other propositions that be made on the basis of the concept and human nature.

There is a criticism of P-A relationship theory. P-A relationship theory is considered inclined to ignore the context in which the P-A relationship occurs. Perrow says that P-A theory does not put the P-A relationship in the context of behavior realistically and based on self-assumptions that it considers too narrow (Perrow, 1990). The P-

A relationship theory that emphasizes unlimited personal gain brings agents to opportunistic behavior reflects a tradition in research based on P-A relationship, mainly neoclassical economics research with too simple assumptions. Wiseman advocates disposing of these assumptions in cross-institutional analysis. By eliminating that assumption, Wiseman says that agency theory is an important analytical tool for analyzing any delegation situations that are free from a particular institutional context. The narrow assumptions need to be replaced with more flexible and broad assumptions because the parties in the P-A relationship may always hold conflicting views of desired goals and the involvement of means and objectives, potentially resulting in agency actions contrary to the wishes of the principal. In this way, convergence and divergence of interests are dynamic processes because both parties can agree or disagree on the central issues on different things in their relationships. By loosening the selfish notion of self-interest found in economic models and arguing that both agent and principal have socially sourced interests that can or do not correspond to, and do not necessarily reflect, the maximization of wealth. Therefore, the P-A relationship theory only needs to understand the potential for differentiated interests between agents and principals (Wiseman, Cuevas-Rodríguez, & Gomez-Mejia, 2012).

Based on these considerations, Wiseman proposed a social theory of the P-A relationship by accepting a core understanding in sociology that economic behavior shaped by social mechanisms not only on the peripheral aspects but also in essence. The mechanism affects the conventions that define the various roles we occupy and how we interact with each other. These social mechanisms are institutions, cognitions, power networks. The whole mechanism constitutes an institutional context (Wiseman et al., 2012). Kiser also made the same criticism as Wiseman on agency theory and also proposed that the institutional framework be considered in explaining the P-A relationship (Kiser, 1999).

This paper will apply social network theory. Granovetter suggests that the networking relationships between individuals in economic transactions, such as principal-agents, over the network, will encourage each side to be trusted (Granovetter, 1985). Granovetter said that because all social interactions inevitably transmit information, details about employers, employees and workflow continuously through social networks that are maintained by most people for non-economic reasons. Because individuals use existing social contacts and networks and do not need to invest in building them, the costs are cheaper than finding workers through more formal intermediaries (Granovetter, 2005). Dense network connections involving many people where all parties can monitor the actions of individual network members will encourage reciprocity (Coleman, 1988) between the principal and the agent. In a dense network where people know each other easily spread information, people monitor each other, social norms are more effective, and deviant behavior between principals and agents is reduced.

Thompson (1971) and Scott (1977) have written about moral economics. The moral economy be formulated as an economic relationship between two people or groups that are socially and economically unequal. In this relationship, it expected that the high-status party provides financial protection to the low-status party so that the minimum subsistence needs met. After reviewing the writings of scholars on moral economy, Mauritz concluded that moral economy serves the purpose of justice or fairness, legitimacy, reciprocity, community resilience, and the common good (Mauritz, 2014). In the moral economy, the meaning and form of justice, legitimacy, reciprocity, community resilience, and the common good are contextual. For example, Scott (1977).

‘Since the tenant prefers to minimize the probability of a disaster rather than to maximize his average return, the stability and security of his subsistence income are more critical to his evaluation of the tenure system than either his average return or the amount of the crop taken by landlords.’

This article bases itself on the critique of the P-A theory mentioned above, namely that the P-A theory needs to loosen its assumptions about human nature and the need to pay attention to the context in which agency relations occur. The P-A relationship exists in the mining business and car body repair workshop named *Ketok Magic*. Small-scale traditional gold mining exists in clusters consisting of many mining holes and gold processing workshops whose activities involve many miners and funders. There is social network involved miners and funders in mining

area. There is also social network include workshop owners and workers. Social networks help to overcome problems in the recruitment of miners in the mining and workers in the workshops. Relatively long personal social relationships and the highly uncertainty of mining results allow for commitment and reciprocity between funder and miner. The high uncertainty of the results of work in mining results in the emergence of a moral economy in the principal-agent relationship. The less uncertainty of the result of the work by an employee in the car body repair workshop does not result in the moral economy like in the mining.

3. METHODOLOGY

This research was carried out in a traditional small-scale mining in Tatelu Village, North Minahasa Regency, North Sulawesi Province in September-October 2017 and at the 'ketok magic' car body repair shop in Manado City, North Sulawesi Province in February-March 2019. This research used qualitative research methods with data collection techniques in the form of in-depth interviews and observations. In mining, 20 informants were interviewed, consisting of funders, miners, and Tatelu village heads. In the workshop, the number of informants is 12 people consisting of workers and workshop owners.

4. FINDINGS AND DISCUSSIONS

4.1. Traditional Small-Scale Gold Mining

In the section I will describe the traditional small-scale gold mining (TSG) in Tatelu village, North Minahasa Regency, North Sulawesi Province. In North Sulawesi, there are several modern large-scale gold mines and TSG mining. TNG Mining in Tatelu is the only legal TNG that sits on community-owned land. The TSG began operations in 1998. Initially, mining was carried out illegally without permission by traditional miners who came from outside the village. They came from South Minahasa Regency, Sangihe-Talaud (Satal) Regency, Bolaang Mongondow (Bolmong) region, and lately, the miners came from West Java. The inhabitants of Tatelu and surrounding areas at that time did not yet have the knowledge and skills in mining gold, so they only saw the miners mining. Seeing the results of mining that made a lot of money, the residents of Tatelu and surrounding areas began to join in mining. A funder, Kevin, said that at that time the income in one mining day was equal to one month's salary at a shipping company (interview, 3 October 2017). Conflicts arose between miners and residents of Tatelu because landowners began to question their ownership while newcomers felt that the land was a state-owned forest. Because of the greater conflict, the miners who came from outside Tatelu were ordered to return to their hometowns.

After the conflict was over the village government of Tatelu made a regulation requiring miners to carry a travel permit from the local government in their hometown. In 2000 conditions had begun to normal. At that time, around 3000 people were involved in mining activities. At this time, the number of miners has decreased because the mining holes are getting deeper and mining costs are very expensive. There are several categories of people in gold mining business in Tatelu: (1) Funders; (2) funders and own gold ore processing workshops (FW); and (3) funders, gold processing workshop owners and landowners (FWL). In the beginning, landowners only rented their land to funders or FW who did not own property, but in the end, most of the landowners also became FWL. Funders and FW rented property to make mining holes or set up gold processing workshops (GPW). Miners are workers who work on all the categories of mining entrepreneurs. In 2017 the number of miners was around 900 people. Because the ties between entrepreneurs and miners are informal, the number of miners in Tatelu is always changing. This could also happen because the miners moved to other mines in Bolmong, in South Minahasa, and in southeast Minahasa. It could also be because the miners have changed jobs.

Mining holes and gold processing machines that operate are also not fixed in number. Some mining holes and gold processing machines stopped working for several months and then operated again. Several mining holes and gold processing machines stopped working because their owners ran out of capital. The mining holes will be

operated again by the owners if they already have enough money. Running out of capital can occur because the gold ore it produces does not produce enough gold that allows the owner to operate the holes again. Capital money is required for operational costs, paying miners wages, and daily consumption costs of miners.

4.2. 'Ketok Magic' Car Body Repair Workshop

'Ketok magic' car body repair workshops ('Ketok Magic' Workshop) are found in almost all cities in Indonesia. The word 'ketok' in English means knock. Many people called 'ketok magic' workshop because in repairing the body of the car the workshop owner forbade others to observe it. They kept secret how to fix the car body to prevent others from imitating it. So far, the owner of the 'ketok magic' workshop in Indonesia is dominated by people from Blitar City, Province of East Java, Indonesia. In Manado, initially the 'ketok magic' workshop opened in 2000. At this time in Manado and its surroundings, there were 15 workshops. In general, the owners and workshop workers come from the same residential area in Blitar. Some of them have family relations between employers, fellow workers, and between employers and workers. Just like workers, workshop owners can usually also repair the car body. Workers and owners do not often get their skills in the workshop in Blitar. Both owners and workers in Manado often get their skills through working for workshop owners in other cities in Java, Bali or Sulawesi. Most workshop owners set up their workshops by renting property on Manado's locals. There are only three workshop owners who buy property to set up a workshop.

At the beginning of its presence in Manado, the car owners were hesitant to come to the 'ketok magic' workshop because of the assumption that the workshop uses the power of black magic. Many car owners with conservative religious beliefs hesitate to utilize car repair services at 'knock magic' workshops. To convince car owners like that, workshop owners often invite car owners to see with their own eyes how to fix a car. There is another attempt to replace the term 'ketok magic' with the term 'dodok halus' – It means a punch with a smooth result – to eliminate the impression of the use of magical power in repairing the car body. For example, the *Armada Siaga* Workshop uses the term 'dodok halus' to replace the term 'ketok magic'.

Among the workshop owners, there were also some previously worked for other workshop owners who, because they managed to raise capital, then opened their workshops. Most workshop owners rent land between 500 and 1000 square meters. Workshop workers usually live in the workshop. Of the three workshops, there is a large workshop called *Armada Siaga*. 'Ketok magic' workshops often use nameplate with Javanese connotations such as *Putra Blitar* 'Ketok Magic' Workshop, *Artomoro* 'Ketok Magic' Workshop, and *Timbul Jaya* 'Ketok Magic' Workshop.

4.3. Recruitment of Miners and Workshop Workers

Funders usually have experienced working as miners. They became funders because they had succeeded in raising money as business capital. Funders who do not own land lease land to landowners for mining. Funders provide all equipment and materials used to manufacture mining hole. In the beginning of mining activities in Tatelu in the late 1990s and early 2000s to obtain gold ore enough to dig a hole as deep as one to five meters from the ground. At this time the mining holes have deepened to 200 meters. Therefore the cost of digging a mine hole is getting bigger and bigger. At present, the landowner will not rent out his land if the funders have less than 50 million in the capital because there is a possibility of failure to obtain gold ore. Digging a hole that is considered to be deep enough at this time is not necessarily able to get gold ore. Because it does not use modern technology in identifying the presence or absence of underground gold ore, it is very risky to dig mining holes.

Funders who mine gold need at least four miners. In the mining area, there is a social network between miners, between funders, and between miners and funders. Through this social network a miner can get mining jobs, and a funder can get miners to work in his mining hole. Usually, to get a job at a funder, miners look for information and ask for help from other funders or other miners they know in Tatelu. Through this social network, a funder can get

miners who he thinks are good. Unemployed miners from the Bolmong or South Minahasa region and the Satal Islands are also looking for mining jobs with the help of miners who have worked in Tatelu. A right miner is a miner who works diligently and honestly, and when he returns to his hometown immediately return to Tatelu to work. In North Sulawesi, it is relatively easy to find work in the informal sector or the agricultural sector with relatively good wages. Laziness is the only factor that makes people difficult to get money. Miners, for example, when they return to their hometown, often stay long in the village. Only after running out of money, they returned again to Tatelu to mine. Such poor miner habits cause disrupting the mining activities.

The miners come from various ethnic and religious groups. Bolmong tribe miners are from the Bolmong region, usually Muslim; Minahasa tribe miners come from the South Minahasa, often Christian; and the Satal tribe miners are from the Satal Islands, often Christian. Now, although there are differences in ethnicity and religion, in mining areas conflicts never occur due to these differences. These ethnic and religious differences affect the difference in accent, eating habits and the formation of working groups. Each working group of miners usually consists of one tribe. Working groups like this facilitate communication and cooperation among members of the group. Each group usually consists of 4 to 6 people. In one mining hole can consist of 1 or 2 groups, and even more than two groups of miners. The number of groups in one mine hole depends on the depth of the hole and the number of miners ready to work.

Over time, there was a convention or mutual agreement between the miners and funders that to get the miners funders had to provide travel costs from the miner's hometown and provide money loans for living expenses for the family of miners left in his hometown. Loans for family living expenses will be refunded after miners earn money from the mining proceeds. However, there are FWLs that support a substantial travel expense for miners coming from West Java. Another convention in Tatelu mining is that the funders must bear the living costs of the miners before producing gold. These living costs will also be paid after getting gold. The living costs of the miners and their family are also considered as part of production costs.

Most of the funders, FW and FWL generally come from the Minahasa tribe, and most are Tatelu themselves. Others come from the Satal, Bolmong and Javanese tribes, which are all minority tribes in the Tatelu mining. In general, funders, FW and FWL from Minahasa tribe easily accept miners from all tribes. Whereas funders, FW and FWL from the Satal tribe tended to like miners of the Satal tribe, funders and FW from Bolmong tended to prefer miners from the Bolmong tribe; and funders and FW from Javanese are more likely to use miners from Satal and Bolmong. This tendency is tight to easily deal with disputes. Because of its majority position and living in its area Minahasa business persons more quickly deal with conflicts with miners from various tribes. The miners are reluctant to fight with Minahasa business person. Business persons from ethnic minorities will have difficulty if they disagree with miners from Minahasa. Another problem is the problem of eating habits and appetite. Minahasa miners consume more size and higher quality, so this is burdensome for business persons from Satal, Bolmong and Java. For Minahasa business persons, it is usual to provide consumption in large quantities and is more luxurious to miners from Minahasa because they have similarities in terms of eating habit and taste. Kevin, a Minahasa funder, said:

"Minahasa and Bolmong people are different. The difference is in consumption. Minahasa people spend one million, Bolmong people spend 800 hundred. If they eat, they are strong, healthy. How about eating tempeh and to tofu. Pity. If Minahasa people don't want to eat tempeh, it has to be chicken or meat. Bolmong people are thrifty. If we see, pity. 'How can you be healthy and strong if you eat like that?' Even for the Minahasa people, there must be a lot of chilies." (Interview, October 3, 2017)

The process of recruiting workers at the 'ketok magic' workshop also uses social networks. Social networks consist of networks between workshop workers, social networks between workers and workshop owners, and networks between workshop owners. The 'Ketok magic' workshop exists in almost all cities in Indonesia, and some even in Malaysia. In general, owners and workshop workers return to their hometowns in Blitar once a year on Eid

al-Fitr. While in Blitar, they were able to meet with workshop owners and workers spread throughout Indonesia and Malaysia. In this way, the social network can be enlarged and strengthened. It is not difficult for workers from one city to move to another city to work in a 'ketok magic' workshop. Besides, in the cities they work, both the workshop owner and the workers often hold meetings for social gathering every month. In Manado, social gathering activities are carried out in rotation from one workshop to another. In the monthly meeting also held revolving credit and saving activities. Because of the difference in money they have, the revolving credit and saving activity is divided into two groups, namely the group of the workers and the group of the workshop owners. The social gathering allows workshop owners and workers to get to know each other well. Through this social network, workshop owners can find workers and workers can find workshop owners who are ready to accept workers. The wives of the workshop owners also hold monthly meetings. These social gatherings show that the 'ketok magic' social network becomes a dense social network where members know each other with their very high interactions.

The workers who have just worked in a workshop are already experienced and some are still learning to work. In Manado, there are some workers have experience working in the 'ketok magic' workshops in three or five other cities and eventually work in Manado. The workshop owner gets experienced workers because he has worked in a workshop he left to another town. But it is infrequent for workers to move from one workshop to another in Manado. If a workshop worker in Manado leaves a workshop it is the case because he wants to set up new workshop for himself. Usually, workshop owners in Manado are reluctant to accept transfer workers from other workshops that are also from Manado. There is a kind of agreement among the workshop owners to invite other workshop workers to work in their workshop. The purpose of the agreement is to avoid conflicts among the owner of the workshop. Workers who have no experience will usually be taught to do specific jobs by the workshop owner.

There are similarities in how to pay to miners in mining and workers in workshops, namely wages are given based on the percentage of the results of the work, not based on the length of labor. In gold mines, the share of yields ranges from 75 to 85 per cent for miners and 15 to 25 per cent for funders; in the 'ketok magic' workshop 60 per cent for workers and 40 per cent for workshop owners. At the gold mining, the time for granting wages depends on when the gold ore has been processed, it can be two weeks or three weeks. In the 'ketok magic' workshop distribution of results is done once every month.

From the description above, it appears that both in the mining area as well as in the ketok magic workshops social network has an essential role in the recruitment and monitoring of the behavior of miners and workers. The work of mining and repairing car bodies requires knowledge and skills cannot be taught in words alone. Knowledge and skills in mining can only obtained through practical experience (tacit knowledge and skills). In terms of the recruitment of miners and workshop workers, the social network makes it easy to find miners and workshop workers who have knowledge and skills. In the recruitment process, it does not require a lot of transaction costs because without much need to see how the character of miners and workshop workers, funders and workshop owners can get miners and workers who have knowledge and skills. Social networks also help the process of monitoring the behavior of miners and workers. All network members will quickly recognize deviations by miners and workers. Thus the social network prevents miners and workers from committing deviating actions because social sanctions will make it difficult for them to get a job.

4.4. Uncertain Results and the Moral Economy

Mining is a business that is full of uncertainty or risk. The most significant risk is the loss of the lives of miners caused by landslides of the mine holes. In the Tatelu mining, there have been frequent accidents due to the landslides of the mining holes. Seeing the magnitude of the risk some miners from Minahasa, Bolmong and Satal were not willing to work in a very deep hole. This is why there are several FWLs looking for miners from West Java who has the courage to work in a bottomless hole. Another risk is that the mining hole has been dug very deep, but no gold ore found. This could result in bankruptcy of mining business person. Hormati, a FW, said:

"Trying to work in a gold mine is full of risks. There is uncertainty. Many funders that open businesses have finally stopped. My brother from Sangihe has spent two billion capitals. After digging a hole, apparently, it did not get gold ore. Finally bankrupt. The experience of being a miner is important before people become funders. I used to be a miner at the beginning of mining activities in Tatelu. Now I have a gold processing machine." (Interview, October 10, 2017)

In Tatelu mining, funders who do not have land will lease land to the land owner. Payments for land rent are given in the form of the distribution of gold ore that has been successfully mined, not in the form of money. The distribution of the results is for every 13 sacks that are successfully mined by the funders the land owner gets three sacks. Usually funders pay land rent to the land owner after getting a minimum of 130 gold ore sacks. The proportion of revenue sharing for this land lease has become a convention agreed upon by all landowners and funders in Tatelu. The landowner is the luckiest person in the mining business because the landowners must get three sacks of gold ore without having to work and spend money. That is why many landowners eventually become funders or FWL. In the same period, the landowner can get the same amount of money as the funders. Landowners can also rent out their properties for a funder that will set up a gold processing workshop. At present, the amount of land rent is an average of one million per month.

There are other uncertainties faced by the funders and the miners, namely uncertainty about how much gold is obtained from processing gold ore. This uncertainty is what gave rise to what the authors call moral economy. After the gold ore has been processed and the results of the gold have been sold, then the money from the sale is divided between the funders and the miners. The funders first take out all operational costs plus the miner's consumption costs and the miner's loan money for his family. The rest is divided between the funder and the miners in accordance with the previous agreement. Depending on the previous agreement, the funder can also take part in the percentage of the proceeds from the sale of gold, and then take back all operational costs and consumption costs as well as the miner's loan money, and then the rest is given to the miners.

Uncertainty in the gold yield causes the share of each miner and funder to change. For example, the yield sharing agreement is 20 percent for funder and 80 percent for miners. The fact is that if the gold yield is too little, funder only takes part 15 per cent and miners 85 per cent. Conversely, if the results are huge, funder can take 25 per cent, and miners get 75 per cent. If the results are many, funder will also provide travel costs and pocket money to miners who want to rest in their hometown. Audry said:

"So here goes 200 sacks of gold ore we get 100 grams of gold. We take 25 grams, and the rest is for them. The owner of the hole takes 25 per cent first, and then all the budgets are calculated. If it seems that miners only get a little, take some of the 25 per cent for workers, they are tired of working in hole. Full of risk, two weeks ago there was one person who died in an accident." (Interview, October 9, 2017)

Compared to FW and FWL, most of whom had never been miners, the funders who had been a miner usually understood very well the difficulties and dangers of working in a mine hole. This right makes funders more generous to miners. Miners themselves are more often in direct contact with funders than with FW and FWL.

The business income in the 'ketok magic' workshop is more certain and stable than the business in TSG mining. Decreasing the number of consumers who come to the 'ketok magic' workshop at a time financially does not cause much loss. Until now in Manado, there is no 'ketok magic' workshop that went bankrupt. In general, a workshop with four workers per month can repair 30 cars. *Armada Siaga*, the largest workshop in Manado, with 30 workers able to repair 300 cars every month. Of course, how many cars are successfully repaired in one month determined also by the number of car owners come to the workshop. The workshop workers work from 8:00 AM to 4:00 PM. The working time is extended if there are many cars that need fixing. If additional workers are required, the workshop owner usually asks for the help of workers working on other workshops not much work. The workshop often gets a job to paint and repair the body or chassis of the car from car owners know it through the signboard. There are also many car owners who come to the 'ketok magic' workshop because of information from

friends or relatives who have repaired the magic workshop and are satisfied with the results. A workshop owner, Suminto, who first set up a workshop in Manado, said:

"I got a job from a car owner not because I posted an ad or used the internet. I have a lot of customers. They come from Bitung, North Minahasa, Minahasa, Tomohon. Some are from Talaud. The customer got information from his friends and relatives who had repaired the car here. This car owner has a subscription here. Don't move around." (Interview, February 2, 2019)

Some workshops have received contracts from insurance companies to repair insured cars. But most of the workshops do not continue to cooperate with insurance companies because they eventually experience financial difficulties. The difficulty occurs because the payment is only given after many cars are repaired while to fix many of these cars require a lot of cost. Because of this financial difficulty, the workshop owners eventually end the cooperation with the insurance company. Only *Armada Siaga* workshop can continue to work with several insurers because the capital is quite large.

The automobile workshops set the standard cost of repairing parts of the car. These parts are like the left and right doors, the hood, the roof of the car, and so on. There is agreement on the standard cost of repairs among the workshop owners in Manado. For example, for the one-door painting it costs 600 thousand rupiah. For painting with metallic red or blue, it costs 900 thousand rupiah because the price of the paint is more expensive. For car painting such as Toyota Avanza or Suzuki Ertiga it costs seven million rupiah, and a small car painting such as Daihatsu Ayla or Toyota Agya costs six million rupiah. For chassis damage, the repair costs depend on the damage conditions. One car that was heavily damaged was repaired together with the division of labor. There are workers who specialize in repairing and welding chassis and body, repairing dented body, and painting. The standard repair costs are maintained by the workshop owners to prevent competition that could harm all workshops. However, there are workshop owners who reduce the cost of repairs at a time when car owners who come to the workshop are very few. All workshop owners receive a reason like this.

Workshop workers received wages based on profit-sharing in one month where the owner received a 40 percent share and the worker received 60 percent. Unlike the percentage of profit-sharing in gold mining, the percentage of this profit-sharing does not change even though the number of cars that have been fixed in one month may vary. Many of the cars repaired in one month determine the variation in the total revenue of the workshop owner and the employees with the same percentage. The workers then divide 60 percent of the share according to the number of workers. Experienced workers receive a larger portion than an apprentice worker. The percentage of profit-sharing between the workshop owner and workers is the same in all 'ketok magic' workshops in Manado. As a form of concern for its workers, the workshop owners agreed to provide medical assistance to sick workers and families. For this purpose, the workshop owners collect money every month in monthly social gathering. Then the workshop owners handed the money to the group treasurer. The workshop owner also gives *lebaran* gifts to workers every year on Eid al-Fitr. There is a difference in the form of moral economy on principal-agent relationships in the mining business and the 'ketok magic' workshop business.

5. CONCLUSION

The work of mining and repairing a car body is work that requires knowledge and skills that cannot be transferred to other people in words but must be in direct practice. Social networks help the recruitment process of miners and workers who have the knowledge and skills and efforts to monitor their behavior. In terms of the process of recruitment of miners and workers, social networks make transaction costs lower. Mining work is hazardous, and the uncertainty resulting from its work is higher than the job of repairing the car body. Failure to get enough gold can result in reduced business capital (or even loss of venture capital) and unpaid miners' wages. This uncertainty caused mining business person and miners to agree that payments are paid based on result of work. This condition causes the emergence of a moral economy that benefits both mining business persons and

miners in gold mining in Tatelu. The moral economy is in the form of the willingness of mining business persons and miners to renegotiate the initial agreement on profit-sharing. When the results exceed expectations, the entrepreneur takes a higher share than the initial agreement. When the results are minimal, the miner takes a larger share than the initial agreement. A moral economy like this does not exist in the ketok magic workshop because the uncertainty of the results is very low. A lower than expected work result does not make the workshop owner lose capital, and the worker still gets a salary even though it is lower than the expectation.

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1. Summary of Interview Data with Informants in the Tatelu Mining Area.

No	Theme	Name of the Informant	Main Information
1.	Ownership of plantation land	Village Head, Marcos and Audry Paath	Before there was mining, the existing land was community-owned plantations which were generally planted with coconut, nutmeg, cloves, and fruits. However, the dominant plant is coconut.
2.	Beginning of mining activities	Marcos Dipan and Audry Paath	In the beginning there were garden workers who discovered rocks that allegedly contained gold. And after traditional processing turned out to produce gold. Then in the late 1990s there was a business venture from Australia that would exploit the Tatelu mine. Because the price of compensation for land that was set was considered too low, the community refused it. Because there was resistance from the community and fears of conflict if the company insisted on mining in Tatelu, the North Sulawesi provincial government tried to fight for the central government so that the Tatelu mine remained mined by the local community. Finally it was decided that mining was left to the villagers of Tatelu.
3.	Social conflict	Village Head, Kevin Dipan and Marcos Dipan	In early 2000 there was a conflict between miners who came from outside Tatelu (originating from Bolaang Mongondow and South Minahasa areas). Conflicts occur because of the struggle for mining pits that contain lots of gold. At that time the villagers of Tatelu did not yet have the knowledge and expertise in mining gold. At that time, miners who came from outside assumed that the land in the mining area was state forest protected land. Therefore they do not respect the property rights of Tatelu residents. Because of the widespread conflict, the Tatelu village government cooperated with the police to expel the miners. Then an agreement and village regulation were made that outside miners were allowed to mine in tatelu on condition that they should bring a certificate from the village government in their hometown and report to the village government of Tatelu. After that the order of the people of the village of Tatelu and the mining area was restored. At that time to get gold ore is very easy because the digging must be deep. Depths of 1-5 meters can already get gold ore.
4.	Miners	Kevin Dipan, Kepala Desa, Audry Paath, Sarmin, Arfan Mamonto and Gideon Hormati	The miners consisted of villagers from Tatelu, South Minahasa Regency, Southeast Minahasa Regency, Sangihe-Talaud Islands area and Bolaang-Mongondow area. In recent years many miners have come from West Java. There are different cultural and religious backgrounds of the miners. Miners from Sangihe-Talaud are members of the Sangihe-Talaud tribe group, miners from South Minahasa and from the village of Tatelu are members of Minahasa tribal groups, miners from Bolaang-Mongondow are members of the Bolaang-Mongondow tribal group, and miners from West Java are members of the Sundanese tribal group. . Miners from Minahasa and Sangihe-Talaud are mostly Christian. Miners from Bolaang-Mongondow and West Java are generally Muslim. The miners also have different mother tongues, eating habits and customs. This difference causes mining groups to form based on tribal similarity. Each mining group or mining work team is usually a member of one ethnic group. Usually each group consists of four or six people. In one mine pit can consist of two or four different groups of tribes. For example, in one mine pit one group is from the Sangihe-Talaud tribe and another group is from the Bolaang Mongondow or Minahasa tribe. This grouping based on tribal similarity facilitates coordination and prevents conflicts. And if a conflict occurs, it

			<p>is not a conflict based on suu but rather because of personal problems.</p> <p>Kevin Dipan tells that in terms of eating habits, the Minahasa mining group usually eats more portions and usually eats fish and meat. They also usually eat very spicy food. Whereas Minang-Mongondow miners usually eat smaller portions and with simpler side dishes, also Sangihe-Talaud and Sunda miners. The miners usually live in camps around the mine pits. In general, the miners returned to their hometowns after earning enough money from mining.</p>
5.	Funders	Kevin Dipan dan Audry Paath	<p>Funders are people or entrepreneurs who employ miners. The funders are mostly Tatelu villagers. Other funders come from outside Tatelu. Some are from Bolaang-Mongondow, North Minahasa, South Minahasa, Sangihe-Talaud and from Java Island.</p> <p>The fund suppliers use their capital to buy all mining equipment and mining materials. Funders must also provide loans for the living costs of the miner's family while the miner is working in Tatelu, travel costs from the miner's hometown to Tatelu and provide money loans for the daily living costs of the miners as long as the miners do not produce gold or money.</p>
6.	Recruitment of miners	Audry Paath, Kevin Dipan and Arfan Mamonto	<p>There are several ways in which funders get miners to work in the pit. The method is: First, the miner comes to the person and asks whether or not a miner is needed. If needed and there is agreement on the terms then the miner starts mining. Second, the funders ask for help to miners who are working on their mine pits to find miners. Third, funders ask for help to find miners to funders they know. Both the miners who are looking for funders and the funders who are looking for miners both use existing social networks where they are members.</p> <p>There is a tendency that Minahasa funders used to employ miners from all ethnic groups, while miners from Bolaang-Mongondow and Sangihe-Talaud tended to employ miners from their own tribal groups. This is due to the ease of communication with fellow members of tribal groups and to prevent conflicts. The minority position in Tatelu will make it difficult for funders from Bolaang-Mongondow and Sangihe-Talaud to make it less social support in case of conflict. Whereas Minahasa miners who are a major ethnic group will find it easier to resolve conflicts. Miners from Sangihe-Talaud and Bolaang-Mongondow are more afraid of Minahasa funders.</p> <p>There is a tendency that Minahasa funders used to employ miners from all ethnic groups, while miners from Bolaang-Mongondow and Sangihe-Talaud tended to employ miners from their own tribal groups. This is due to the ease of communication with fellow members of tribal groups and to prevent conflicts. The minority position in Tatelu will make it difficult for funders from Bolaang-Mongondow and Sangihe-Talaud to make it less social support in case of conflict. Whereas Minahasa miners who are a major ethnic group will find it easier to resolve conflicts. Miners from Sangihe-Talaud and Bolaang-Mongondow are more afraid of Minahasa funders.</p>
7.	Land owners	Village head, cooperative leader, Audry Paath, Kevin Dipan and Arfan Mamonto	<p>The property owner is a person who rents out his land to make a mine pit or to set up a gold ore processing workshop. Income from leasing to make a mine pit is received in the form of iron ore sharing, where for every 13 sacks of iron ore the funder gets a share of 10 sacks and the land owner gets a portion of three sacks. This division of yield has become a convention or agreement in force in the Tatelu mining area. From the beginning until now there has been no change in the distribution of results.</p> <p>For land that is rented out to make a mine pit, the land owner earns income in the form of rent. The rent available at the time</p>

			of the research ranged from IDR 750,000 to IDR 1,000,000. This rental price has changed from year to year. The land owner can rent out his land to several funders who set up a gold ore processing workshop.
8.	Wages or payments to miners by funders	Kein Dipan, Audry Paath, Arfan Mamonto and Gideon Mamahit	The miner's wages are given by funders in the form of profit sharing of gold or iron ore. Revenue sharing varies from 20 to 25 percent for miners or 75 to 80 percent for funders. This revenue sharing also applies to all funders and miners in the Tatelu mine. Before miners work, an agreement is usually made to share the results, whether 20 or 25 percent for miners or 75 or 80 percent for funders. Another agreement is that the funder must provide a loan of money for the living costs of the miner's family as long as the mines have not produced results, provide travel costs for miners who come from the miner's hometown to Tatelu, provide money loans for living expenses as long as the mining has not yielded results. After getting the gold and sold the funder takes the money that has been spent on mining operational costs and all money lent to the miners. After that, the results are divided according to the initial agreement.
9.	Uncertainty over mining results, changes in revenue sharing and moral economy	Kepala Desa, Gideon Mamahit, Kevin Dipan, Glenn Wuisang and Audry Paath	Sometimes mining results do not meet expectations because they produce too little. In this situation funders usually volunteer to get a smaller share of the original agreement. If there are too few results, funders volunteer to get no share at all. Funders feel sorry that miners do not get any results at all. The miner's debt can be exempted from repayment if the mining does not produce any results. This is a form of moral economy. Mining business is a business that is full of risks because the traditional tools available do not allow to determine exactly where the land below contains a lot of gold. Funders can go bankrupt if digging a mine pit that is already very deep but does not produce any results. High risks in the mining business have made banks in Tatelu not willing to provide capital loans to mining entrepreneurs.
10.	Payments to gold ore processing workshop owners	Kevin Dipan, Audry Paath	Not all funders have gold ore processing workshops. There are funders who have workshops. The landowners who, because they already have a lot of capital, then become funders and build workshops. Funders who do not have a workshop will process their gold ore at workshops in Tatelu. Payment is per package. The average cost of processing gold ore in Tatelu is the same. There is one workshop that provides discounts, namely workshops owned by Chinese businessmen. This Chinese businessman has a modern workshop. Similar to the mining payment fees given by the funders to miners, the gold ore processing costs can also change according to the gold yield obtained from gold ore. If the results are too small, the processing costs can be reduced, and if not, then the shortfall can be paid the next day when the funders process the iron ore from mining again. This is part of the service provided by the workshop owner to the funders in the hope that the person will process the gold ore in the workshop. Similar to the mining payment costs given by funders to miners, the gold ore processing costs can also change according to the gold yields obtained from gold ore. If the results are too small, the processing costs can be reduced, and if not, then the shortfall can be paid the next day when the funders process the iron ore from mining again. This is part of the service provided by the workshop owner to the funders in the hope that the person will process the gold ore in the workshop.
11.	Upward and downward	Glenn Wuisang, Kevin Dipan and	There are entrepreneurs who experience vertical and upward downward mobility or bankruptcy. For example Gideon

	vertical mobility	Gideon Hormati	Respect and Glenn Wuysang are funders who experience vertical upward mobility. Vertical mobility appears in its ability to build gold ore processing workshops. Kevin Dipan is a funder who experiences upward vertical mobility and then falls again with downward mobility. A Chinese businessman experiences upward vertical mobility, from being a miner then becoming a fund raiser, and eventually becoming a landowner in the Tatelu mine.
12.	Increased inequality among mining entrepreneurs	The observations of researchers, the Village Head, Gideon Honor	The longer the mine pit that is dug the deeper to get gold ore. At the beginning of mining, once a hole as deep as one or ten meters could produce gold ore, at present there are already 150 meters deep in the mine pit. Because the mining pit is getting deeper, the capital to mine that must be spent by the funders is getting bigger. Many funders with small capital end their businesses as funders. Landowners are also reluctant to lease their land to funders whose capital is small for fear of not providing sufficient returns. Finally, only entrepreneurs with large capital can continue their business in the mining of Tatelu.

2. Summary of Interviews with "Ketok Magic" Car Workshop Owner.

No.	Theme	The Name of the informan	Main Information
1.	The development of "ketok magic" workshop in Manado City	Suminto, Nanang and Santoso	<p>The workshop owners all come from Blitar City, East Java Province. In Manado, there was a workshop for the first time in 2000. Then new workshops began to appear in the city of Manado in line with the increasing number of car owners in Manado and surrounding areas. The first workshop was established in Karame Village. Then new workshops emerged that were scattered in several areas of Manado and its surroundings as well as other cities near Manado, such as Bitung, Tomohon, Kotamobagu and Airmandidi.</p> <p>Generally, workshops have business licenses and the management usually asks for help from other people they already know. This can be understood because in general the workshop owner is educated from middle to lower level. Educative education and stats as a minority ethnic group in Manado make it not so easy to deal with bureaucratic officials. At the time of the study, in Manado there were 15 repair workshops for car bodies.</p> <p>Workshop owners generally receive knowledge and skills through an apprenticeship process at other similar workshops in other cities in Sulawesi, Bali and Java.</p> <p>The workshops were given the name "ketok magic" workshop. At first the service users who wanted to paint or repair the damaged car body were reluctant or hesitant to come to the workshop because there was an assumption that the workshop was in repairing the car using magical power. The name of the magic knock is given because when repairing the car body, workers forbid anyone to see it.</p>
2.	Place of business	Suminto and Sudarsono	<p>In general, workshop owners rent land owned by local residents. Land area ranges from 500 to 1000 square meters. In general, workshops are less tidy and dirty. There are only one or two workshops that look clean and have a guest room to welcome the customers who come.</p> <p>The workers usually live and sleep in the workshop together. Married workers live outside the workshop together with their families. Likewise, the workshop owner.</p> <p>When the researchers conducted interviews and observations, all the workshops were in a state full of cars that were in the process of being repaired. There are also one or two cars in workshops that have been parked for a long time and have not</p>

			<p>been repaired because there is no decision from the owner whether the car will be repaired or not. A car that is not managed by its owner makes the workshop look full and makes it difficult for workers to carry out their work.</p>
3.	Recruitment of workers	Nanang and Mahmud	<p>Workers are generally recruited through social networks. There are workers who are skilled at repairing cars because they have experience working in the same workshops in other cities. There are also workers who still have family relations with the workshop owner.</p> <p>For example there are workers who work at Putra Blitar's workshops who have worked in three workshops and eventually work at the Putra Blitar workshop. The worker has expertise in painting the car body.</p> <p>Among the workers there are also those who have dozens of years in a workshop without moving. However, there are also workers who, because they want to be independent, try to save money and set up their own workshop.</p> <p>There is an agreement among workshop owners not to invite workers at other workshops to work in their own workshops. This was done to prevent conflicts between the workshop owners. There is also an agreement that if a workshop requires additional workers, the owner may ask for assistance from other workshop owners so that at night or when a little work is done, workers are allowed to work in the workshop for a while.</p>
4.	Gathering	Suminto and Andi	<p>The workshop owners and workers per month once a month meeting. The meeting place moves from one workshop to another. The meeting was filled with social gathering activities and told stories about issues that were developing in the community as well as stories about his hometown in Blitar. Because of differences in income, social gathering is distinguished between the workshop owner's social gathering and the workers' social gathering. At the time of the social gathering the workshop owners collected healthy funds to donate to workers and family members who were suffering from illness.</p> <p>The monthly meetings aim to strengthen the brotherhood as fellow immigrants who come from the same hometown. From these meetings sometimes the workshop owner can get the workers needed to be employed at his workshop. Information about these workers is obtained through the social network of other workshop owners.</p> <p>The association of workshop owners resembles a community that has a sense of togetherness in work identity and regional origin. The close relationship between the workshops extended to their wives. The workshop wives also hold social gathering meetings once a month. The meeting place also moves from one house to another.</p>
5.	Car repair cost	Suminto, Haryadi and Minjam	<p>There are three types of repairs that can be done by the workshop, namely painting, repairing a dented car body and repairing the chassis.</p> <p>For painting costs are calculated per panel. Each panel costs differently. The panel is the body parts of the car such as doors, hood, roof, etc. For example, for car doors, all workshops charge a fee of 600,000 IDR. For red paint the cost is more expensive because the price of the paint is also expensive. For painting the whole car body like a Toyota Avanza it costs 7,000,000 IDR and for a car like Toyota Agya it costs 6,000,000 IDR. The dismissal fee is also an agreement between the workshop owners. These agreements were made to prevent unfair competition.</p> <p>When a workshop does a little work, the painting costs are still negotiable. By other workshop owners the reduction in costs can be understood.</p> <p>There is no stipulation on how much it costs to repair a car's body or chassis because the damage is so special that it is</p>

			difficult to set a standard cost.
6.	Division of labor	Santoso, Machmud, Hendy and Prayogo	There is a division of work in car repair work. The division of labor is done based on the expertise of each worker. For example for painting, there are workers who have expertise in caulking and there are workers who have expertise in the final painting and finishing.
7.	Wages for workers	Santoso, Suminto, Sudarsono and Hartono	Wages are made using profit sharing. The distribution is done once a month where the owner gets a 40 percent share and 60 percent workers. This distribution of results also applies to all workshops. 60 percent of the workers are then divided into individual workers.

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