

Conference Paper

The Effect of Agricultural Technology on Shifts in Cultural Values in Rural Communities

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Abstract

Social life tends to be fickle. Technological development is often one of the factors causing changes that occur in people's lives. The Wiwitan tradition is a form of celebration or a form of gratitude from farmers in the village of Sumberagung, District of Perak, Jombang, East Java for the harvest. Wiwitan is a tradition the origin from Java to start the rice harvest process as a form of gratitude towards Dewi Sri or Dewi Padi. This tradition also aims to establish friendship between the surrounding communities. The existence of technological developments in agriculture that namely the Combine Harvester machine as a modern rice harvesting machine is considered to cause the number of rice harvesters in the village to decrease. Wiwitan is no longer carried out on a large scale of activities but only focused on small group of farmers. This study aims to determine how the effect of technology in shifting the values of mutual cooperation and togetherness in rural communities, especially people who work as farmers in Sumberagung Village, District of Perak, Jombang, East Java. Researchers used a qualitative description study by taking data through in-depth interviews and literature studies. The informants of this research are farmers and community leaders in the village. The results of this study explain how agricultural technology provides changes to the lives of rural communities.

Keywords: cultural values, mutual cooperation, rural, technology

Introduction

Human life can never be separated from social values. According to Soerjono Soekanto defines values as abstract conceptions (thoughts) in humans about what is considered good and bad. Social values are values contained in a group of people (Maryati and Suryawati, 2013). Social values are reflected in the various customs and traditions of the people themselves. In its development, humans always study and make changes to social institutions following the needs and conditions of the existing social environment. This is very reasonable because social institutions in the form of values and social norms that are created and taught from one generation to the next solely to meet the needs of human life itself, both individually and in groups. Based on this, there is not a single community whose existence has not changed (static) (Muin, 2006).

The Change in society in principle is a continuous process which means that every community in fact will experience changes, but changes between groups and other groups are not always the same

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(complex) and many factors that influence it. The change in society can include changes in values, mindsets, and behavior both individually or in groups (Kusuma, 2018).

Social changes are changes that occur due to mismatches between social elements that are different from each other so that conditions occur that are not harmonious for life (Muin, 2006). Many experts define the problem of social change. According to John Lewis Gillin and John Phillip Gillin, social change is an accepted way of life, due to changes in geographical conditions, material culture, population composition, ideology, as well as because of diffusion and new discoveries in society.

The ability of human reason to produce ideas, ideas, and works is always developing. This capability is developed through experiments to produce more up-to-date work, both in the form of science and technology (Muin, 2006). Today many emerging is appeared new technologies are the result of human thought. The emergence of these technologies certainly has an impact on community traditions and the values contained therein.

In Sumberagung Village, Perak Subdistrict, Jombang Regency, the presence of technology in agriculture which is a rice harvester (Combine harvester) is considered to be the cause of the fading tradition of *wiwitan* which is always routinely held in the village. The *wiwitan* tradition is a tradition from Java to start the rice harvest process as a form of gratitude towards *Dewi Sri* or Rice Goddess for the harvest that has been given. This tradition aims to establish a friendly community around and instill the values of mutual cooperation and togetherness in the *wiwitan* tradition.

Previously the *wiwitan* tradition in Sumberagung Village, Perak Subdistrict, Jombang Regency was often carried out every harvest season. This tradition is carried out in the paddy fields owned by farmers, by making food and doing prayers with farmworkers who work as rice harvesters and are led by local religious leaders. However, with the emergence of agricultural technology at this time, namely a rice harvester (Combine harvester) harvesting process now requires only a few farm laborers. If previously it needed more than seven people to harvest rice now, it only needed three people to carry out the process. This also affects the social values of mutual cooperation and togetherness that has begun to be shifted by the process of harvesting rice without the prayer led by religious leaders.

Research Method

The method used in this research is qualitative so that researchers do not only find out the data that appears to be numbered like quantitative methods but also interpret the data and look for things behind the data Accompanied by theories that support the use of data retrieval interviews and literature studies.

Qualitative research methods refer to research procedures that produce words and conduct observations in depth. Qualitative research uses philosophical assumptions, strategies, data collection methods, analysis, and different interpretations. Descriptive research aims to provide a specific description of the situation, social arrangement, or relationship; By using the word – word or number. The study used interview data collection techniques and literature studies. Interviews or often referred to as an interview or oral questionnaire is a dialogue performed by the interviewer to obtain information from the interviewer. Interviews were used by researchers to assess the circumstances of a person (Arikunto, 2013: 98). The study of the literature itself is a method of collecting data by searching for data on matters or variables in the form of records, transcripts, books, newspapers, magazines, inscriptions, meeting notes, Lenger, agenda, and so on (Arikunto, 2013).

The idea of the system is a complex entity, consisting of interrelationships and being separated from the surrounding environment by certain boundaries. This common thought can also be applied to human society with varying degrees of complexity. At the macro level, the whole world community (humanity) can be imagined as a system. At the middle level (mezo) of nation-states and regional political unity or military alliances can also be viewed as a system. On micro-levels, local communities, associations, corporations, family-bonds, or friendship ties can be treated as a small system.

Similarly, certain segments of the public such as economic, political, and cultural aspects are also qualitatively imagined as a system. Such was the reticence of system theorists such as Talcott Parsons (1902 – 1979) Thinking about the social system that found the form common and universally enforceable. Social change can be imagined as a change occurring within or including social systems. More precisely, there is a difference between certain system conditions in different periods.

Speaking of change, we imagine something that happened after a certain period; We deal with the differing circumstances observed between before and after a certain period. To be able to declare the difference, the initial traits of the unit of analysis are carefully known-although constantly changing. So, the basic concept of social change includes three ideas: (1) role; (2) at different times; and (3) Among the circumstances of the same socialistic system.

The sociologists and anthropologists have different opinions on the social change among them. Gillin and Gillin, interpreting social change are a variation of the way life has Received, both due to changes in geographical condition, material culture, population composition, and ideology as well as diffusion or new discoveries in society. 2) Larson and Rogers, expressed understanding of the social change associated with the adoption of technology that is social change is a continuous process in a certain time stretch. The use of certain technology by a citizen will bring a social change that can be observed through the behaviour of the community members concerned. 3) Soerjono Soekanto, defining social change is all changes occurring in public institutions in a community, affecting the social system.

Table 1. Data of Informant

Informant number	Name	Sex	Age	Profession
1	Siti Muarifah	Female	36	Farmer
2	Aliadi	Male	67	Farm laborer
3	Muntianik	Female	56	Housewife
4	M. Ghufron	Male	81	Villager government
5	Abdul Rojaq	Male	65	Religious figure

Types Focus

These factors are the foThe research focuses on what is the incidence rate of brucella disease at the farmer level, what obstacles are faced in controlling brucellosis in cattle and solutions that can be done in solving these obstacles. The purpose of this study was to analyze the application of Brucellosis control management as an effort to increase the productivity of beef cattle carried out by the local government.cus of this research.

Techniques of Data Collection and Data Analysis

Primary data collection was sourced from the results of the FGD of veterinarians and animal health workers as well as direct interviews with beef cattle breeders. Secondary data is data obtained from statistics books, related service reports. This research was conducted at 3 Animal Husbandry Centers in Subang Regency in 2018. The population of this research is 1500 productive female beef cattle spread in Subang Regency, the number of samples taken is 20% of the population, namely 300 productive female beef cattle that have received animal health services.

The type of data analysis used in this study is a descriptive analysis of John A Martila and Joh James in (Santosa, 2015). Descriptive is a method in researching the status of a group of people, an object, a set of conditions, a system of thought or even a class of events in the present. The purpose of this descriptive

study is to create a systematic, factual and accurate description of the factors, traits and relationships or phenomena investigated.

Result and Discussion

Wiwitan and Values-Mutual Cooperation on Rural Communities

Society is a collection of individuals in both small and large groups who have an influence on each other so that they have the habit of tradition, the attitude of the people and Unity in social unity. (Hidayah, 2011) Often we hear the terms of rural communities and urban communities. Rural in "Complete dictionary English-Indonesian, Indonesian-English" edits S. Wojowasito and W. J. S. Poerwodaminto (1927) interpreted "Like a village, like in a village". Rural or commonly translated as "countryside" is not a village. Similarly, urban or a common translates into urban, is also not a town city. Thus, the essence of rural and urban concepts is more pointed towards the characteristics of the community.

If we talk about the community, we will also discuss the culture/traditions. Because basically, society is not separated from culture. One of the cultures/traditions that we will discuss is the tradition of *Wiwitan* in the village Sumberagung. *Wiwitan* tradition is a tradition from Java to begin the process of rice harvesting as a form of gratitude towards *Dewi Sri* or the goddess of rice for the crops that have been given. This tradition aims to establish community relations and instill the values of mutual cooperation and togetherness in the tradition of *Wiwitan*.

Informant 1: *"I think that Wiwitan, Bancaan (Tasyakuran) for the harvest is given. If the old people was established the interest of Turi, kluwih (young jackfruit), and other vegetables. Kluwih it has the meaning of hope in order to get more fortune. If on the long ago Sister, Wiwitan done by surrounding the rice fields when the rice is brownish yellow"*.

But as time goes by, there has been a change in the implementation of *Wiwitan* tradition. If used to do by bringing food to the rice fields and surrounds the rice fields. Now most of the people in the Sumberagung village do so by distributing food to neighboring neighbors or taking it to *Musholla*.

Informant 2: *"Actually Sist the Wiwit is Javanese custom, prayed for rice paddy. Usually when Wiwitan be heldI will bring to MushollaSist. Miwiviti it means to start harvesting"*.

Infomant 1 is a homemaker, as well as a farmer and an informant 2 is a farm worker and a rice field owner. Informant 1 and 2 say that they always hold a *Wiwitan* every harvest, which is every three months. Informant 1 does the *Wiwitan* by sharing the cuisine with his closest neighbor. Occasionally, he makes a *roasted chicken Tumpeng* and takes him to the tomb of the elders in the village of Sumberagung. While the informant 2 performs the *Wiwitan* by bringing food to *Musholla* at the Maghrib Ba'da with a mutual prayer that is led by the local priest.

Prominent traits in rural communities are: (1) religius lives; (2) The division of work is not real, and (3) the way of Village People's thinking is more social than the more economical and rational city people (Hidayah, 2011). The tradition of *Wiwitan* is not merely a tradition to be grateful for the crops gained. But it also contained values in it. Among them are mutual cooperation, togetherness and caring among citizens. These values are reflected in the implementation of the *Wiwitan* itself.

Mutual cooperation is a culture that has grown and developed in the social life of Indonesian people as a cultural heritage that has existed in the generations. Mutual cooperation is a form of cooperation community to achieve a positive outcome of the objectives that are intended to be reached by consensus and mutual deliberation. Thus, every individual who holds the principle and understands the spirit of

mutual assistance is consciously willing to release selfish nature. Mutual cooperation must be based on the spirit of sincerity, willingness, togetherness, tolerance and trust. (Effendi, 2013).

The togetherness found in the *Wiwitan* can be seen from the implementation of the *Wiwitan* itself. Once performed in the rice fields, people encountered during the trip to the rice fields are invited to eat together. Now, the togetherness is felt when eating together at *Musholla*. Despite the changes in the implementation of *Wiwitan*, people still believe that the tradition of *Wiwitan* is a form of gratitude to God Almighty for the fortune that has been given through the harvest. Besides, there is a sense of concern among fellow citizens. Information 1 In addition to bringing food to *Musholla* but also sharing it to nearby neighbors by reason, wants the closest neighbor who is not present to *Musholla* can also feel from the tradition of *Wiwitan*.

Technology Presence in Agriculture in Farmers in Sumberagung Village

In the agricultural sector, technological developments are closely related to agriculture. From time to time, farming began to undergo technological developments. That was originally done manually until it became semi-manual, even using the machine completely. Agricultural technology itself is necessary to facilitate the community in farming, in addition to saving time and costs also produce maximally effective results and efficiency. Following the statement of Kamanto Sunarto, technology is a process that increases the value-added, where the product is used and produced to facilitate the increase of human performance. Technological advances are something that we cannot avoid in this life, as technological advances will run following the advancement of Science (Askina, 2016).

Today, the technology in agriculture is the development of the current technologies. Some agricultural traditions such as *Wiwitan* are still run by rural communities in the village Sumberagung, the silver, the Jombang district such as the informant statement below:

Informant 1: *"I still have continued Wiwitan, each harvest a year three times always Wiwit. Mostly people was different to do or not Sist, Bro. Some are willing to wiwitan, sometimes not at all. The farmer's share of the farmer cleaned the river together, farmers like us are looking for his advantage. Because, it is not our own rice fields. We rent land to be planted, so we pay a rental fee every year. That's why we use combine machines to harvest rice."*

Informant 3: *"I still hold Wiwit. If you need to use the manpower, it takes 10 people, no machine only needs 3-4 people. If you use the machine can be done until midnight, even happy youths if until midnight."*

Informant 4: *"The machine is cheaper indeed, if I use a machine, I will still carry out the Wiwitan because of the form of gratitude to Allah SWT to be kept out of trouble and to be more Barokah"*

The development of technology is as a form of a factor of several cultures, including the values of mutual assistance and togetherness in the tradition of *Wiwitan*, because there is a change, there are also changes both positive and negative. Informants 1, 3, and 5 agreed to say that the technology has a positive impact on agriculture. In accordance with their statements above, the treatment of harvesting the paddy using machines more practical and not takes a lot of costs. That is, which, makes them prefer to use the machine rather than human energy.

Informant 4: *"I am still using manpower to harvest, I have never used a machine, then pity people can not work."*

Informant 5: *"I am sorry for the peasant laborers if I cannot work. But in now the workers are asking for wages that are quite expensive. I am currently still using human power, because I feel that the social soul is very important. "*

In the other side is a negative impact of this agricultural technology, which can minimize job opportunities. But on the other hand, the informant 4, and 5 say the reason they are still harvesting manually is that they feel sorry for the farm worker.

Value Shifting- The Value of Mutual Cooperation Rural Communities

In the agricultural sector, technological developments are closely related to agriculture. From time to time, farming began to undergo technological developments. That was originally done manually until it became semi-manual,

The word *Gotong Royong* (Mutual Cooperation) is derived from the Javanese language, namely *Gotong* and *Royong*. *Gotong* means *Pikul* or lift. *Royong* means *together*. So, *Gotong royong* in the literal sense is to lift the burden together so that the burden becomes light.

The two types of cooperation known to the people of Indonesia; mutual cooperation please help and it devoted work. The activities of mutual assistance please help occur in farming activities, activities around the household, party activities, celebratory activities, and in the event of disaster or death. While activities Mutual Cooperation devoted work is usually done to work on something that is related to the public interest, which is distinguished between mutual assistance on the initiative of citizens with a forced mutual. Further Koentjaraningrat exposes the types of mutual assistance in the countryside namely:

1. Each other in agricultural activities.
2. Each other in activities around the household.
3. Each other in the preparation activities of parties and ceremonies.
4. Each other in the event of accidents, disasters and deaths. (Irfan, 2016)

When researchers inquire about the relation of mutual assistance with agricultural activities such as the tradition of *Wiwitan* and the emergence of technology in agriculture, especially the emergence of Combine Harvester Rice Harvester in village Sumberagung, Perak sub-district, Jombang Regency. The informant explains the result of the Combine Harvester's machine against the values of the mutual cooperation:

According to the informant 1, 2, and 3 they stated that with the machine Combine Harvester of the workers Harvester rice is now more demanding the increase of labor wage. It is not only the cause of the mutual, the economic needs of the workers that must be fulfilled. Unlike the informant 4 and 5, which is more prioritizing farmers as workers in harvesting their rice even with high wages. This is done because the informant 4 and 5 feel that they still need neighbors and they realize that social life is very important.

Wiwitan itself has sublime values such as *Gotong royong* and togetherness. Togetherness is a social value that is a form of family nuance that exists in society.

Informant 3: *"It is not alone, cooperation but still paid, if the mutual cooperation is not paid. All workers are now paid if not paid yes do not want. Because now, society needs more now than ever, first though paid but more now."*

But nowadays the rise of values is shifted due to the change of human thought patterns are more advanced as in terms of religion and economics. The informant 3 mentions that togetherness now exists because of the need of material to meet the needs of life.

Wiwitan was formerly a culture of Buddhism and Hindu culture that embraced animism and dynamism. However, nowadays because the people who have understood their religious values more direct the activities of the prayer to be shared in *Musholla* as a form of gratitude to God for the crops given.

Informant 1: *"Now many people understand the religion of Islam more and refer to such traditions*

Including Musyrik because the tradition is a form of gratitude to other than God "

Informant 2: "Not valid, because according to the law of Islam it is a calamism."

There is even a new fact that not only the technology that shifts the values of cooperation and togetherness in the tradition of *Wiwitan*, but there is also a religious element in the shift of value as mentioned by the informant 1 and 2.

From the above informant answers can be concluded that the current value of the cooperation in rural communities especially in the village Sumberagung, Perak subdistrict, Jombang Regency began to be shifted because the society today is more high wage oriented. Instead of mutual help in it. This is due to the emergence of the rice harvesting machine Combine Harvester which began to shift the way of harvesting the rice and the values of the mutual and togetherness in it, in the community.

Conclusion

The existence of rice harvesting machine technology Combine Harvester is not a major factor in shifting the value of mutual assistance in rural communities, especially in the tradition of *Wiwitan* in Sumberagung Village, Perak Sub-district, Jombang. However, the shift is caused by a change in the community's mindset regarding economic needs. Rice harvester workers tend to work to prioritize wages from cooperation. They demand an increase in wages because it is felt to run a Combine Harvester machine that requires special skills. So not everyone can run the machine.

The presence of technology not only carries a negative impact but also carries a positive impact. It was seen from the efficiency of time, energy, and money needed to harvest rice. Thus, we should in addressing the presence of technology we can see from various sides. So, we can feel the usability of the existing technology to the fullest.

While in terms of togetherness in the tradition of community *Wiwitan* in village Sumberagung, Perak subdistrict, Jombang district also had a shift. The shape of the shift is a *wiwitan* that was once performed in the rice fields and is now simply taken to *Musholla* or distributed to nearby neighbors only.

Despite the shifting values in the *Wiwitan*, which led to the alternating of mutual value, and togetherness. However, the shift raises a value that is equally important as a human being of concern. We should be able to adapt to the change of the values. Even though a value shifts, it will appear another value.

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