

# The Impact of Social Network Towards Oil Palm Independent Smallholders

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## ABSTRACT

*The important indicator in measuring the effectiveness of oil palm plantation was based on the production of fresh fruit bunches (FFB) and crude palm oil (CPO) per hectare. The social network can be defined as a system of social linkages with other members of the community on whom one can rely (family, neighbours, members of same organisations). Social networks can thus be considered as a powerful mean to foster the diffusion of information and knowledge as well as to reduce the uncertainty and transaction costs. Access to information and influence through social networks also confers private benefits for individuals. In some cases, it can be used by individuals or groups to exclude others and reinforce the dominance or privilege of social network for independent smallholders in the study areas. Two study areas with different FFB production achievement were selected, namely Pontian and Simpang Renggam in Johor. This study was undertaken to investigate how social network plays an important role in increasing the FFB production. Qualitative approach was conducted on three categories of informants, including oil palm smallholders, extension agent and a person who is assigned as a leader at the area or authorised person through face-to-face interviews. The convenient sampling technique was used according to preselected criteria associated with particular research questions. The positive social networks among the informants of this study suggests that good FFB production is a feature that facilitates the decision making of problem solving and information distribution platform.*

**Keywords:** social network, oil palm, FFB production, independent smallholders.

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## INTRODUCTION

Compared with previous years (MPOB, 2017), Malaysia's export revenue in 2017 was as high as

RM 77.85 billion. The total export earning increased to 14.6% billion due to higher palm oil prices and improved export demand. The demand and challenges faced by

this sector need to be tackled down by the government in order to maintain profit of Malaysia. There are various factors that influence FFB production, including age, seed quality, soil and climatic conditions, quality of plantation management and the harvesting and processing of FFB. Besides agriculture practices, land and weather factors, social capital also plays an important role in contributing to better production and income. Different levels of human and social capital may interact to produce joint effects on the production. However, the successful form of social capital comes from the achievement of the entire elements such as social network, trust and norms. The transfer of knowledge that creates higher production could be achieved when there is an interaction from both social capital and human capital. So, in the theoretical background of this paper, we try to integrate social networks with the oil palm production, which benefits society and increases the production and how social network plays an important role in promoting higher production and income as well. Social network is a part of social capital elements. The complement of social capital elements, namely network, trust and norm would effect the society and productivity. Numerous studies have mentioned that social capital could influences income and provides technical advice during the diffusion of innovation and transfer of knowledge (Meyerson, 1994) and (Harkola and Greve, 1995). From this statement, it can be said that society or community with the highest level of social capital could deserve better income and productivity compared to a community with lower social capital practices. It will also ensure that managers would gain more rapid promotion rate and careers

as said by Podolny and Baron (1997) and Burt (2017). This shows how important it is for a society to develop better value of life through good social capital practices. Therefore, in order to obtain good social capital in a community, all the elements of social capital should be combined and play a role.

Generally, independent smallholders work independently as compared to organised smallholders. They just get guidance on how to manage farms from the nearest oil palm extension agent in their area. Therefore, this article issues the impact of independent smallholder social networks on oil palm production performance. This paper also concerns on have they established a good relationship or network in the community and how does such network help them increase production.

It was assumed that working independently actually influences the way they think and manage the farm. The natural attitude of independent smallholders will vary among them in terms of their norm, trust and networking in the community that indirectly affects their productivity. Limited relationship or connections will cause shallow experience and skills. As claimed by Azima and Choy, (2015) the smallholders and the land holding issues towards the productivity as well as the gap between the agent and the smallholder social constraints led to the practical and attitudinal problems of the smallholders that finally affected their productivity.

The broad objective of this study is to identify and explore the existence of social network and its impact on oil palm production among independent smallholders in Johor. The idea is based on the Robert Putnam (1993) theory of social capital, where; he defined that the efficiency of a society can

be improved through social capital elements which included trust, norms and networks. It was also defined by Meyerson (1994) who found that social capital influences income, but only strong ties create this effect. However, this research attempts to determine and identify how and what is the social network elements revolve towards the productivity of oil palm among independent smallholders in the study area.

## LITERATURE REVIEW

Productivity is commonly defined as a ratio between the output volume and the volume of inputs. In other words, it measures how the production inputs, (such as labour and capital) are efficiently used in an economy to produce a given level of output. Based on March and Sutton (1997), productivity is not an easy issue for organisations for at least two reasons. 1) Measurement of productivity can be problematic and 2) The cause of productivity is not always clear. Oil palm production increases until it reaches the highest production level of 7 to 18 years. After 18 years of planting, production began to decline slowly. The typical commercial lifecycle of an oil palm is approximately 25 years. Mature oil palms produce 18 to 30 tonnes of fresh fruit bunches (FFB) per hectare.

The structure of social network contributed to the social capital formation, such as obligation, trust, information channels, norms and sanctions. Social capital refers to human relationships and networks in the community. The relationships between individuals in a population is the idea of social networks. Social capital is a sociological concept that is increasingly used by social scientists (Bourdieu, 1986, Coleman, 1988 and Putnam, 1993). The concept of social capital was firstly introduced

by Bourdieu (1986), which defines social capital as a membership of a group that provides backing of the collectively-owned capital for each member. The volume of the social capital depends on the size of the connections that they can effectively organise, and the volume of the capital (economic, cultural, or symbolic) controlled in their own right by each of those to whom they are connected.

It is clear that social capital is talking about membership in a group and a size of connections which represent the function of social network in a society or community. It is important to ensure a good connection and membership in a society or organisation in order to increase the value of the organisation (Chung and Sctecher, 2015). In any organisation, the importance of good connections in the team in contributing to good ideas and profits is always highlighted. However, Putnam's theory of social capital is still criticised, and there are some controversies in the statistical indicators adopted by Putnam, because it was proven that the existence of social capital does not allow the formation of social capital and that could explain the beneficial effects on individuals (Crossley, 2008).

Social networks play a crucial role in people's lives in many ways, including the shaping of beliefs, preferences, and decisions (Jackson *et al.*, 2017). For example, there is evidence on the role of social networks in the diffusion of information, new products, and technologies (Jackson and Yariv, 2011), informal insurance and risk sharing (Ambrus *et al.*, 2014), and labour and credit networks for economic activities (Leigh and Blakely, 2016). Social networks enable interaction, which is a central part of the innovation systems framework that understands the capacity for

continuous innovation as a function of linkages, working practices, and policies that promote knowledge flows and learning among all actors (Hall *et al.*, 2006). In other words, social network gives a positive impact on the development of community or organisation and being an effective medium for technology and information transfer. Good relationship in a community or organisation is important to ensure that this platform functions effectively. In order to maintain the success of social capital in a community, all the elements should be connected and acting properly.

Rogers reflects the consequences of social networks in the two main elements of diffusion: (1) communication channels and (2) social structure. For example, while mass-media such as ICTs and associated channels are considered to be the fastest and most efficient means of generating knowledge about innovations, interpersonal channels are more effective in conversing an individual to adopt innovation (Rogers and Shoemaker, 1983). According to Maertens and Barret (2012), network of information, money, goods, or services flow could be represented in a set of connection.

## METHODOLOGY

The study was conducted at Simpang Renggam and Pontian, Johor and the selected criteria were high and low FFB productions. A qualitative approach with in-depth interview was conducted for the purpose of data collection. A convenient sampling was used according to the preselected criteria related to the particular research question. Three types of informants were interviewed, including independent smallholders with farm area of less than 40.6 hectares irrespective of FFB production, authorised persons in the village

(JKK) and the extension agents. The interview consists of social network and some of social capital elements that seek to answer the set of objectives. The interview was recorded using notes and recorders.

Thematic analysis was used as a means to gain in sight and knowledge from data gathered. The method enables researchers to develop a deeper appreciation for the group or situation they are researching. By using thematic analysis to distill data, researchers determine broad patterns that will allow them to conduct more granular research and analysis. The interview transcript or field note will be properly arranged to enhance the understanding of the interviews about the informant's life, behaviour, experiences, *etc.* The researchers then re-check the transcribed verbatim, read the notes from the participant observation and develop the categories and identify the relationships between the collected data.

## RESULT AND DISCUSSION

The network can be defined as a connection or interaction among the individual in a community. Besides participation and trust, the network is also an important factor in ensuring the success of social capital as stated by Glanville (2016); social capital promotes trust and cooperation among agents, which in turn increases the benefit of the community. The other benefit of social linkage or networking is that it can increase the distribution of information and can reduce some of the transaction cost. The research involved a three-party relationship between smallholders, extension agents and authorised members in the study area, and the impact of social networks on FFB production.

In understanding how social networks could effectively affect

the FFB production, *Table 1* shows a summary of social networks among the informants in the study area. Generally, the result shows that the network or connection among the informants is remarkably good. There are a few things that have been described in order to explain the status of social network which are the relationship between the informants (smallholders, extension agent and authorised person), the distribution of information, how they solve any problems and the communication among the informants in the community. Based on the table, it can be said that good communication and relationship between the smallholders (OPISH), authorised people in the village (JKK) and the extension agent contributed to the achievement of the objectives in distributing information, problem solving and organising programs.

Proper way of communication is imperative for the management to develop clear communication skills, thus enhancing the level of networking. The gap between authorised people in the village or society, extension agent and smallholders may be considered as a failure of social capital level

through the network element that in turns will affect the productivity. Leblebici (2012), stated that communication promotes trust and loyalty, and encourages better teamwork and relationship as shown in the workplace communication system. Poor communication will delay the productivity of the organisation due to delays in receiving information. Awareness of such problems in communication is the first step in solving them.

### IMPACT OF SOCIAL NETWORK IN INFLUENCING FFB PRODUCTIVITY

Effective communication is one of the important things and the key point in social network practices, problem-solving and productivity improvement. This is because it directly influences the individual behaviour and the way they perform. There are various types of methods for effective communication as stated by Obamiro (2008), for example, expressing feelings and emotion, sharing information, encouraging staff participation in decision making and creating a good public image and reputation of

an organisation. Communication is also a network system that connects three hierarchical levels (management, union, and staff) to enhance the productivity as described by Shonubi and Akintaro, (2016). Efficient communication, including clear instructions, fast message delivery and proper explanation are the key factors in solid cooperation between individuals. It plays an eminent role in accomplishing the task and ultimately increases the productivity. Poor communication can affect work production because the staff or an individual may not receive adequate information to complete the task (Garnet *et al.*, 2008).

The means of communication used in the community are very important to ensure the information is well-received by the individual or target group. It had been a normal practice that the organisation will directly obtain approval from the head of villagers if they want to organise any programs such as social programs, seminar, talk, *etc.* The statement below shows how the information received by the target group in the study area. This reflects the flow of information from the source (sender) to the

**TABLE 1. SUMMARY OF SOCIAL NETWORK AMONG THE INFORMANTS**

Informants	OPISH + JKK	OPISH + EA	Distribution of information	Solving problems	Communication	FFB production status	Networking status
OPISH 1	√	√			P/S	Increase	Good
OPISH 2	√	√			P/S	Increase	Good
OPISH 3	√	√			SP	Decrease	Good
OPISH 4	√	√			SP	Decrease	Good
EA1	√		√	√	O/F/SP	-	Good
EA2	√		√	√	O/F/SP	-	Good
JKK1		√	√	√	M/PC	-	Good
JKK2		√	√	√	M/PC	-	Good

\* Note: P/S - Program/seminar. SP - Social program. O/F/SP - Office/farm/social program. M/PC - Mousque/phone call.

destination (receiver) as claimed by Obamiro (2008) and the connection of the hierarchical level through communication (Shonubi and Akintaro, 2016) to ensure the target group or the receiver gets the exact information without failure.

“...Usually, I make an announcement after the prayer time at the mosque. For example, BRIM announcement” (JKK1, March 29, 2016).

“...If there is any emergency, they will call me directly” (JKK1, March 29, 2016).

“...We have Yasinan every Friday night. Yasinan is a group that recites Surah Yasin at home. Normally, the information will be announced after we recite the Yasin. We prefer to deliver the information through Yassinan because the information will be disseminated every week compared to having monthly meeting” (JKK2, March 29, 2016).

The relationship between the smallholders, extension agent and authorised people in the community can clearly explain how to identify social network in the study area. Communication is a part of social networks where it represents how a teamwork can be achieved through appropriate communication skills. Effective communication will certify the greatness of the community on their way to ensuring the success of two way relationship. Receiving and responding to information shows that the communication among the individual or group is perfect. It is important to ensure that all information is distributed to their clients evenly to ensure they are able to make the right decisions and produce effective actions on any critical issue. It also shows that the nature of social capital in that area is well adapted. Generally, the connection among

Oil palm smallholder	Study area	Palm age	SN	ST	SP	FFB Production (t ha <sup>-1</sup> yr <sup>-1</sup> )	
						2014	2016
						OPISH 1	Pontian
OPISH 2	5	↑	↑	↑	20.0	26.0	
OPISH 3	Simpang Renggam	15	↑	↑	↓	28.71	27.99
OPISH 4		11	↑	↑	↓	28.99	22.14

\*Note: SN - Social network. ST - Social trust. SP - Social participation.

the informants was good and in their own scope function. Besides that, efficient communication gives a positive impact to the community in how they gain the information and contact with each other. There is nothing can be achieved without effective communication that requires positive two way relationship.

The FFB production of independent smallholders from Pontian had increased around 30% for OPISH 1 and 42% for OPISH 2 in 2016 while the FFB production for independent smallholders from Simpang Renggam had decreased by 2.57% and 23.6% for OPISH 3 and OPISH 4 respectively. Based on the estimated yield profile shown in Table 2, although the FFB productions of OPISH 1 and OPISH 2 are lower than the FFB productions of OPISH3 and OPISH4, the 11- and 15-year palms have a higher FFB production potential of 31 t ha<sup>-1</sup> yr<sup>-1</sup> and lower FFB production potential of 21 and 19 t ha<sup>-1</sup> yr<sup>-1</sup>, respectively. So, based on the table, the informants from Simpang Renggam have not reached the higher baseline of FFB according to their palm age. While the informants from Pontian achieved a higher baseline of FFB production according to their palm age. A good connection or network among the society actually contributed to good social capital and developed a positive impact

on the FFB productivity. Based on the finding, most of the informants represented a good social network. The FFB production for OPISH1 and OPISH2 increased as they connected socially. However, the decrease in the FFB production of OPISH3 and OPISH4 was observed due to the contribution of other factors on the effectiveness of social capital, such as social trust and social participation as social capital should include social network, trust and participation (Table 2).

In smallholders context, it is very important to develop a positive networking between the extension agent in order to gain all farm information such as farm management problems, latest oil palm technologies, any offered assistance scheme for the oil palm smallholders etc. Most of smallholders might miss the important information about farm issues and will definitely affect the FFB production if they deliver negative relationship in the community especially with the extension agent.

It is good to sustain the decent networking among the individual, especially the extension agent, smallholders and the authorised members. Extension agent is one of the responsible persons who are known to have an understanding of the farm management issues. The agent will always provide

smallholders with guidance and good advice on farm problems to increase their productivity.

In this study, a good network or relationship between smallholders and the extension agent is measured by the frequency of their availability to be contacted. The more they meet with the smallholders, the closer they are to each other and the more information or guidance can be delivered.

“...Usually, I will go out and meet the smallholders around 2 to 3 times a week. Normally in a day, I will meet around 5 to 6 smallholders. I will either go to their home or their farm. Sometimes, there are smallholders come to our branch office to make a report about their farm problems or ask about the agriculture input scheme such as fertilizer, pesticides or seedling” (EA2, Oct 2016).

“... There is a smallholder who came to our office in a bad mood because they still have not received their subsidies yet” (EA1, March 2016).

Describing the context of the network, it concerns the relationship between individuals who will ultimately form a good social system or vice versa. In this study, besides the good relationship between smallholders and extension agent, an authorised person such as the head of the villagers or the other committee members plays an important role in maintaining a good social system in a community and to ensure that all the information from the external agencies will be received by the target group.

“.....Normally, most of the villagers will have a gap connecting them to the external agencies where there would be a kind of barrier for them to meet agency body directly. For example, if the veterinarian

has any allocation to distribute chicken or cow subsidies, the special bureau in the village will notify the smallholders or farmers of these subsidies. This is the best way for the role of committee members. (JKK2, March 29, 2016).

“... Some agencies have promised many things to the villagers. However, the agents only gave all the things like any subsidies and assistance schemes to their cronies, even though they do not deserve it” (JKK2, March 29, 2016).

In another word, an authorised person is responsible to deliver any information they receive from external body to villagers, especially smallholders. Failure to disseminate the information will affect and lead to the weakness in the social networking and relationship among the society. It also reflects the weakness of the society leadership, which affects the social welfare and productivity.

“...Sincerity in pursuance of teaching and guiding them regarding on how to manage the farm can actually change their old-fashioned mentality. Our perseverance will impress them and they will be grateful for our kindness. In other words, I can say that oil palm productivity can be improved by promoting the best guidance of extension agents and the government’s support through MPOB” (EA1, March 2016).

“... I don’t really like the extension agent two years ago. The agent was quite lazy and seldom come to visit me and it seemed that he was not as effective as this new agent (EA1). If I have any problems regarding the oil palm; he would provide no solution. But the situation is different now. The agent is very helpful and I am happy to work and deal with him” (OPISH1, March 2016).

The reason of smallholders tend to argue with agent and reject all the provided guidance is the gap between smallholders and the extension agent. EA1 mentioned that the sincerity of agent will definitely change the minds of smallholders. The agent has to present good attitude in conducting their job routine to ensure that the clients or smallholders are satisfied.

#### CONTRIBUTION OF SOCIAL NETWORK TOWARDS OIL PALM PRODUCTIVITY

The relationship between social capital and community development is generally assumed to be recursive. Social capital facilitates or helps community development activities in order to achieve the mutual benefit of all. The community exists in a broader state, regional, and national context that exerts significant influence on its continuing development. Community development usually refers to efforts directed at addressing problems and needs that exist at the local level.

On the issue of oil palm smallholders’ FFB productivity, social network could facilitate the decision-making concern among the smallholders. Individual with better social network can be described as an individual with good social connection and relationship in the community. The benefits that the smallholders received from the rule of social network would help the smallholders to overcome any problems or issues regarding their farm or how to be an efficient oil palm smallholders. They would build up their positive behavior through positive social network that enable them to earn the profit from their farm and increase organisation outcome in the community. Social network provides resources for individual members or groups or communities

to spread the risk associated with development activities. When community members actively engage in activities that bring them together, and require them to exchange goods and services or information, more opportunities are provided to build expectations of reciprocity.

## CONCLUSION

There are numerous definitions of social capital as being defined in the literatures. This study, however concentrates on the relevant impact of social network towards the productivity. As a conclusion, this study demonstrates that a good social network will contribute to a safe and pleasant community. The great social capital can be explained if these three elements (trust, network and participation) are combined. The network can be defined as a connecting or an interaction between the individual in the community. The great community can be measured by the highest achievement of the community and the individual. The effectiveness of the organisation will ensure the excellence of the community. Generally, the result shows that social network or connection among the informants is remarkably good. There are various studies indicated that the economic impact derives from the level of social capital.

A good connection or network among the society will develop a positive impact on FFB productivity. Social network development can also be described as the efficiency of being rewarded or profitable from the information received by the target group. Based on the finding, most of the informants represented a good connection among them in the community. The FFB production of OPISH1 and OPISH2 increased as they connected socially. However, OPISH3 and OPISH4 showed

a decline in FFB production performance.

As a conclusion, this study intends to prove that social capital is an important factor affecting the smallholder's productivity besides the agriculture factors. This will provide a big impact on individual attitude, knowledge, and skill, which in turn will affect the FFB productivity. Without considering

the development of social network, the individual and the community will have difficulties achieving any target or objective because this element is a basic consideration factor that have to be developed before concentrating on the highest technical factor. This is due to social network has a positive effect on the social improvement, productivity, performance, and income.

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