

# **Oil Palm Smallholders' Behaviour towards Applying for Financial Aid From Commercial Banks: A Case Study of Baram Tengah, Sarawak**

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## **Abstract**

Malaysia is the second largest leading of oil palm producer in the world behind Indonesia. Oil palm production in Malaysia comes from smallholder with 40% and the remaining 60% are from big companies and government supported. While 40% of oil palm production comes from smallholders, it still brings big impact on the Malaysian economic. The issue is smallholders confronts a critical challenge in optimizing its potential due to lack of financial support to improve their oil palm production. Majority oil palm smallholders started from personal saving and family help. Smallholders may not be aware of the existence of certain financial loans offered by commercial banks which can help them to optimize their oil palm or they may have overlooked the opportunity. Hence, study was conducted among smallholders in Baram Tengah Sarawak by implementing Theory of Planned Behaviour in form of questionnaire to determine the relationship between smallholder's Attitude, Subjective Norm, and Perceived Behavioural Control towards Intention to apply for financial aid from

commercial banks. The result shown that, there are two factor that significantly influence the intention of smallholder to perform commercial bank loan which is the social pressure from family and friend and the positive evaluation of smallholder toward apply for commercial bank loan. As for the main factor to influence intention of smallholder to perform commercial bank loan is the social pressure from family and friend. The stronger the social pressure from family and friend the more likely the smallholder are to perform for commercial bank loan. From this finding, it can help in improving policy of bank loan application such as offering affiliate program together with bank loan application where all related parties received benefit from the bank loan application. This might help in giving smallholders the opportunity to optimize their oil palm production and increase profitability.

**Keywords:** Financial Aid, Oil Palm Smallholders, Commercial Bank, Theory Of Planned Behaviour

## Introduction

The oil palm industry in Malaysia stands as an important component of the nation's economy, playing a crucial role in both agricultural development and global trade. Malaysia has consistently been one of the world's leading producers and exporters of palm oil, contributing significantly to the country's economic development. According to Kadir, (2020) the total export revenue from oil palm in Malaysia has reaching more than RM 67.12 billion in 2018 and RM 64.84 billion for 2019 where there are slightly 4% decline in revenue which is believed it was caused by lower export prices and weaker demand. In 2018, Malaysia's palm oil industry played an important role in the global market. With vast plantations covering 5.87 million hectares, the country contributed significantly to the worldwide supply. Malaysian palm oil made up 34.3% of the international palm oil trade and accounted for 18.3% of the global oils and fats industry, producing 17.37 million tons (Noor, 2020). Malaysia, along with Indonesia, dominates the global palm oil market, supplying a staggering 85 percent of the world's demand.

According to Rahman (2020) the oil palm production landscape in Malaysia is diverse, with 40% of the output coming from smallholder farmers. The remaining 60% is produced by large companies and government-supported agencies. such as FELDA, FELCRA and RISDA. According to the Roundtable on Sustainable Palm Oil (RSPO, 2021), smallholders are defined as farmers who grow oil palm alongside subsistence crops, with family members providing most of the labor. Their farms are typically the primary source of income, and the oil palm area planted is less than 50 hectares. Smallholders fall into two categories: independent smallholders and organized or scheme smallholders. Independent smallholders are self-managed, self-organized, and self-financed. They operate without contractual obligations to any mill, estate, or agency, allowing them more autonomy in their farming practices. Meanwhile, schemes or organized smallholders are structurally committed by contract or credit agreements to a specific mill, estate, or government agency.

With smallholders controlling a great deal of the oil palm sector in Malaysia, the lack of funding to increase oil palm production is a major challenge to the industry's potential. A few smallholders in Malaysia may lack awareness of certain financial loans provided by the government, while others may be aware of these loans but choose to ignore the possibility. Some people might lack the courage or interest to apply for a bank loan. Therefore, the

purpose of this research study is to comprehend the behaviour of smallholders who grow oil palm towards applying for loans from commercial banks.

It is very important to understand the smallholders' behaviour towards applying for loans because many smallholders remain outside of formal banking system so by understanding their behaviour commercial banks can design better outreach and loan products. It is also will help smallholders to enhance their productivity by investing in equipment and technology that can boost their productivity. Apart from that, better credit access can ensure sustainable growth of agriculture sector. By applying loans from commercial banks, it can decrease exploitation of smallholders by informal lenders who often charge higher interest rates that lead to debt traps. Commercial banks provide more transparency and legal recourse compared to informal loan system. Agriculture is a key sector in many economies. Well financed smallholders contribute to food security, rural employment and GDP growth.

By understanding the behaviour of smallholders, policymakers can come out with a targeted intervention to overcome the barriers that withhold smallholders from accessing financial aid from banks. Understanding the behaviour will help to identify gaps in policy implementation. On the other hand, from the banking institution point of view, understanding these behaviours can help to design effective loan products by having insights on smallholders' preferences, risk perceptions and seasonal cash flow that can lead to a more appropriate loan terms. Overall, understanding smallholders' behaviour is key to unlocking the full potential of agricultural finance. It enables more inclusive, efficient and sustainable agricultural and financial system.

### **Literature Review**

The definition of oil palm smallholders varies across different contexts. In Malaysia, smallholders are defined as individual farmers who own or lease less than 40.46 hectares of an oil palm farm (Rosdin et al. 2023). The oil palm industry in Malaysia is significantly influenced by smallholder farmers, who occupy over 16% of the total oil palm planted area in the country which is around 986,331 out of 5,900,157 of total planted hectares in 2019 (Yap et al., 2021). Malaysian smallholders are categorized into two sub-groups: independent smallholders and managed smallholders. Independent smallholders are individuals who operate 40.46 hectares of oil palm or less. In contrast, managed smallholders are those supervised by government development agencies such as the Federal Land Development Authority (FELDA), Federal Land Consolidation and Rehabilitation Authority (FELCRA), and Rubber Industry Smallholders Development Authority (RISDA), as well as other state agencies (Senawi et al., 2019).

The multiple socio-economic and behavioural aspects that impact smallholders' loan application behaviour in Malaysia are complex and multifaceted. Research has shown how financial trauma affects lending behaviour; investors who have gone through financial trauma are more likely to follow the herd and extend larger loans to borrowers who are seen as highly trustworthy by other lenders (Gonzalez, 2019). Furthermore, research on disparities in small business credit availability shows that borrower application behaviour, firm financial positions, fintech affinity, or pre-existing bank or credit relationship differences are not to blame for the majority of the racial disparities in credit availability (Howell et al., 2021).

Furthermore, it has been discovered that smallholder farmers' agricultural output is significantly affected by their access to formal credit or loans, highlighting the critical role that credit plays in agricultural productivity (Dawuni et al., 2021). The availability of loan facilities for smallholder rice farmers has been found to be significantly influenced by socio-economic factors, including age, the size of the farm, the size of the household, marital status, access to extension services, and membership in cooperative organizations (Alabi & Anekwe, 2022). Additionally, it has been found that smallholders' perceptions of risk affect their choice of informal commercial moneylenders; those who are less risk averse are more likely to choose riskier and more costly informal loans (Possner et al., 2021). Most smallholders prefer to start their business operations using their personal savings. This preference arises from the relatively small amount of capital required to run their small businesses. In the early stages, these smallholders are more comfortable engaging in retailing on a small to medium scale (Ahmad et al., 2023). This approach allows them to manage their finances more independently and maintain control over their operations without the need for external financing.

## **Material and Method**

### *Location of Study*

This study was conducted at Baram Sarawak or more specifically in Baram Tengah. Baram is a region located in the state of Sarawak, Malaysia. Baram is specifically a division in the northern part of Sarawak, known for its diverse indigenous communities, rainforests, and rivers. The main source of income for most of these villages is derived from agriculture, hunting, and fishing. The majority of the communities also own a small farm where they practice various agricultural activities such as cultivating oil palm, rubber, coffee, and paddy.

### *Population of Study*

According to MSPO Certification Summary Report by MPOB (2022), the total population of oil palm independent smallholders in Baram Sarawak is precisely 1063 individual. But in a more specific area of Baram Tengah (Telang Usan), there are about 354 oil palm independent smallholders. This data is the result of MPOB audit on MSPO certification of smallholders in Baram.

### *Sample of Study*

Raosoft calculator was used for obtaining the suitable sample size for this study. With default setting, margin of error (5%), confidence level (95%) and response distribution (50%), the sampling size for 354 oil palm smallholders will be 163 respondents. Out of 163 questionnaire collected, only 116 questionnaires can be used for analysis.

### *Data Collection Method*

Convenience sampling technique was used in this study due to respondent are easy to reach out and as they are leaving in an area which are very familiar. This study utilized questionnaire in collecting data of the respondent. The questionnaires also employed Theory of Planned Behaviour as the question base to study the respondent behaviour. Questionnaires consist of five sections. Section A are demographic question of the respondent; Section B are the first independent variable or question contain the key to the theory applied which is attitude toward behaviour. Section C are the second independent variable which is subjective norm, Section D are the third independent variable with perceived behavioural control theory

applied. Lastly Section E which is the dependent variable of this study, and the question represent the Intention of the theory.

Questionnaire was distributed using Google form with five-point Likert scale answer option format. Survey was conducted through share google form link into oil palm smallholder's community WhatsApp group. This WhatsApp group was formerly created by FELCRA's staff to share information about oil palm among the Baram's smallholder community.

#### *Data Analysis Method*

All data collected was analysed using SPSS software. There are three analysis method used to answer the objective of this study which is descriptive analysis, correlation analysis and multiple regression analysis. Descriptive analytics involves looking at historical and current data to spot trends and relationships. It is often seen as the most basic form of data analysis because it focuses on summarizing trends and connections without digging into the reasons behind them. Correlation analysis is a statistical method used to see if there is a relationship between two variables or data sets and to measure how strong that relationship is while regression analysis involves a set of statistical techniques to estimate how one or more independent variables affect a dependent variable. It is used to understand the strength of these relationships and to predict future outcomes based on them.

### **Results and Discussion**

#### *Reliability Test*

Reliability test refers to a measure of the consistency of test scores from one measurement to another. It's important for all the dependent and independent variables of a study to be reliable for researchers to continue their study. A reliable score indicates that the data can accurately represent its population.

Table 1

*Reliability Statistics*

<b>Questionnaire</b>	<b>No. of items</b>	<b>Cronbach's Alpha</b>
Section B: Attitude Toward the Behaviour (AB) (Independent variable 1)	6	0.891
Section C: Subjective Norm (SN) (Independent variable 2)	6	0.924
Section D: Perceived Behavioural Control (PBC) (Independent variable 3)	7	0.939
Section E: Intention (Dependent variable)	6	0.892

The Cronbach's Alpha shown value for section B is 0.891, section C is 0.924, section D is 0.939 and section E is 0.892. The Cronbach's alpha value for all variables is more than 0.7 which mean the questionnaires asked is good and reliable.

#### **Descriptive Analysis**

Table 2 shows the frequency and percentage for demographic profile of the survey with total of 116 respondent. Demographic profile include gender, age, education level and location of plantation.

Table 2

*Descriptive analysis for demographic profile of 116 respondents*

Demographic Profile	Category	Frequency	Percentage (%)
Gender	Male	94	81
	Female	22	19
Age	60 – 69	8	7
	50 – 59	32	27
	40 - 49	32	28
	30 - 39	30	26
	20 - 29	14	12
Education level	Primary school	19	16
	Secondary school	63	55
	University	28	24
	Diploma	1	1
	Polytechnic	1	1
	Form 6	1	1
	College	1	1
	No education	1	1
Location of plantation	Telang Usan	28	24
	Tutoh Apoh	31	27
	Marudi	12	10
	Long Lama	18	15
	Lapok	15	13
	Tinjar	10	9
	Long Lelang	1	1
	Long Miri	1	1

Survey was conducted at Baram Tengah Sarawak among chosen group of oil palm smallholder through convenient sampling. Among the 116 respondents, 81% are male respondent and the remaining 19% are female. The reason male has the highest percentage is obviously because owning an oil palm farm is a very challenging and considered heavy work. From the data collected, there are five different age range participants in this survey. The highest age range among smallholders who participant in this survey is 40 – 49 years old with 28% respondents followed by 30 – 39 years old with 26% respondent. Lastly, the lowest age range participant in this survey is 60 – 69 years old with only 7% respondent. The respondent who participant in this survey comes from different background of education level. The highest percentage of education level have at least finish secondary school with 55% of respondents. Second highest percentage has attempted further study in university with 24% of respondent. Third highest percentage has at least only finished primary school with only 16% respondent. Lastly, there are another five categories of education level diploma, polytechnic, Form 6, college, and no education where each accounting for only 1% of the respondents. In Baram Tengah Sarawak, area is divided again by many small divisions represent after village name, area and name of the river. The highest percentage is from smallholders who have oil palm plantations are in Tutoh Apoh with 27% of respondents followed by Telang Usan with 24% of respondents. Long Lama came in third with 15% of respondents. Next is Lapok with 13% respondent have oil palm plantation there. Lastly, the lowest percentage of respondent have oil palm plantation in Tinjar and Long Lelang with only 1% of respondents each.

### Multiple Regression Analysis

To answer the first objective of this study which is to determine the relationship between smallholder's Attitude Toward Behaviour (AB), Subjective Norm (SN), and Perceived Behavioural Control (PBC) towards Intention to apply for financial aid from commercial banks, regression analysis was used. Regression analysis can be use as estimator of relationship between dependent variable and one or more than of independent variable. In this case study, there are three independent variables analysed to determine which have a significant factor influence the dependent variable. First independent variable is the Attitude Toward the Behaviour (AB) where the question is to identify the positive or negative evaluation of respondent to perform the behaviour. Second independent variable is the Subjective Norm (SN) where the question is to measure the social pressure, approval/disapproval of family and friend of respondent to perform the behaviour. Third independent variable is the Perceived Behaviour Control (PBC) where the question is to identify the respondent's perception of the ease or difficulty of performing the behaviour.

Table 3

#### *Multiple regression analysis*

		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		B	Std. Error			
1	(Constant)	.281	.292		.960	.339
	Attitude	.272	.108	.241	2.517	.013
	Subjective norm	.549	.105	.530	5.229	.000
	Perceived behavioral control	.097	.056	.113	1.733	.086

From Table 3, there are two independent variable which have a significant value. First is the subjective norm with significant value of 0.001 and second is attitude towards behaviour with significant value of 0.013. This indicates that subjective norm and attitude towards behaviour are significantly influence the intention. In other words, social pressure or approval/disapproval from family and friend and positive evaluation of respondent to perform the behaviours are significantly influence the intention of smallholder to apply for bank loan. The greater the social pressure from family and friend, the higher the intention toward bank loan application. Previous literature by Bagheri et al., (2019) found similar results where subjective norm or social pressure from family and friends significantly influenced the intention of farmers to use pesticides in agriculture.

Subjective norms can be viewed from multiple perspectives. Subjective norms are based on expectations from important groups such as family, relatives, and friends regarding an individual's behaviour. Second, individuals may be more concerned with how others behave rather than just their thoughts. From this study, there is a positive correlation between subjective norms and intention, consistent with prior findings. Individuals under social influence tend to live up to others' expectations.

Same goes with attitude towards behaviour, the more favourable smallholders evaluated the application of bank loan, the greater their intention to apply for bank loan. From prior study by Tama et al., (2021) also found that there are positive and significant direct impacts of attitude on intention prove that the farmers' evaluation of conservation agriculture application influenced their behavioural intentions to engage in conservation agriculture.

Attitude representing a person's favourable or unfavourable assessment of performing a specific action. These evaluations are formed based on beliefs about the outcomes of the behaviour and the value attached to these outcomes. From this case study, the smallholders have a positive evaluation toward applying for bank loan where it led to positive correlation with intention to apply for bank loan and parallel with prior study.

### Correlation Analysis

To answer the second objective of this case study which is to identify the main factors that influence smallholder's Intention to apply for financial aid from commercial banks, correlation analysis was used to identify the main factor of the objective.

Correlation analysis is usually used as a measuring instrument to measure the strength of different variable. In this case study, the variables measured using correlation analysis are intention, attitude towards behaviour, subjective norm, and perceived behavioural control.

Table 4

#### Correlation analysis

		Intention	Attitude	Subjective norm	Perceived behavioral control
Intention	Pearson Correlation	<b>1 .</b>	<b>.674**</b>	<b>.760**</b>	<b>.362**</b>
	Sig. (2-tailed)		<b>.000</b>	<b>.000</b>	<b>.000</b>
	N	<b>116</b>	<b>116</b>	<b>116</b>	<b>116</b>
Attitude	Pearson Correlation	<b>.674**</b>	<b>1</b>	<b>.777**</b>	<b>.196*</b>
	Sig. (2-tailed)	<b>.000</b>		<b>.000</b>	.035
	N	<b>116</b>	<b>116</b>	<b>116</b>	<b>116</b>
Subjective norm	Pearson Correlation	<b>.760**</b>	<b>.777**</b>	<b>1</b>	<b>.380**</b>
	Sig. (2-tailed)	.000	.000		.000
	N	<b>116</b>	<b>116</b>	<b>116</b>	<b>116</b>
Perceived behavioural control	Pearson Correlation	<b>.362**</b>	<b>.196*</b>	<b>.380**</b>	<b>1</b>
	Sig. (2-tailed)	.000	.035	.000	
	N	<b>116</b>	<b>116</b>	<b>116</b>	<b>116</b>

\*\*. Correlation is significant at the 0.01 level (2-tailed).

Table 4 shows the result of correlation analysis of the four variables of this study. To identify which have the strongest relationship between pair variable is by identify the significant value and Pearson correlation value. From the table, all variables have a significant value which mean all variable have a strong relationship between different variables. But to answer the objective of study, only variable paired with dependent variable which is the intention will be observed. The strongest variable paired with the dependent variable is the subjective norm.

Subjective norms have a significant value of 0.001 and Pearson correlation of 0.760. In other words, social pressure or approval/disapproval from family and friend is the main factor influencing the smallholder's intention on applying for bank loan. A strong social pressure from family and friends of smallholders toward them applying for bank loan will have a direct influence on the intention of them applying for bank loan. From previous study conducted by Susanto et al., (2024) with the topic of Investigating factors influencing the intention to revisit Mount Semeru during post 2022 volcanic eruption: Integration theory of planned behaviour and destination image theory, also claim that subjective norm is one of the main factors that has a significant direct effect on the intention to revisit Mount Semeru after the eruption.

Hence this case study is correlated with the prior study. The social pressure from family and friend is the main factor that triggered the intention of smallholder to apply for bank loan with two reasons, either to meet the expectation of the friends and family or they concerned with how others behave rather than just their thoughts.

### **Conclusion and Recommendation**

In conclusion, this study was conducted in Baram Tengah Sarawak to reveal the oil palm smallholder's behaviour towards applying for financial aid from commercial banks by implementing the Theory of Planned Behaviour. The first objective of this study is to determine the relationship between smallholder's attitude, subjective norm, and perceived behavioural control towards intention to apply for financial aid from commercial banks. Hence through regression analysis, it was identified that there are two independent variable which significantly influence the intention. First is subjective norm and second is the attitude towards behaviour. In other words, social pressure from family and friends toward smallholder's intension in applying for commercial bank loan and positive evaluation of smallholders to perform the behaviours are significantly influence the intention of smallholder to apply for bank loan. As for the second objective is to identify the main factors that influence smallholder's Intention to apply for financial aid from commercial banks. Data was analysed using correlation analysis and result shown that the strongest variable paired with the Intention or dependent variable is also the subjective norm. Which mean a strong social pressure from family and friends of smallholders toward them applying for bank loan will have a direct influence on the intention of them applying for bank loan.

As this study was used as reference for future research, there are few recommendations that can be considered as part of the future topics. First is to conduct the same study but in a bigger scale where the data should be representing the whole oil palm smallholder's community in Malaysia. A bigger scale study can result in a more accurate data where the data can be used by government and commercial bank to improve any policy and regulation which may help in providing benefit for both parties. Second is to conduct the study in a longer time period to cover the whole oil palm smallholder's community in Malaysia.

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