

## The Determinants of Financial Inclusion in Tanjungpinang City

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### Abstract

As we know, in many developing countries like Indonesia, the financial sector includes the banking sector, then the post office, and also non-banking financial intermediaries. Though, a huge amount of payments of finance through a diversified manner occurred by the network of banking institutions in the extension event of banking services to rural areas. This research was on purpose to help find out the way factors creating Financial Inclusion, specifically in archipelagic areas that are known as the most people own certain characteristics of demographic. This research applied the method of multinomial logistic regression process of analysis. The sample is the 200 people of Tanjungpinang city aged 18 years and over who are already working and have a bank account along with M-Banking. It was concluded that groups with older age, male, higher education, a long distance toward the financial institution, easily arrange the document regarding the financial products, have trust in the institution, have higher income, and have proper internet access have a higher probability of embracing the inclusion than the other group who doesn't.

**Keywords:** *Financial Inclusion; M-Banking; Tanjungpinang*



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### INTRODUCTION

Financial inclusion is known to become the way of person, and also businesses are able to make access to affordable financial instruments which answer the needs including the service of transactions, the payments, the products of savings, credit, and also insurance given in a sustainable and also responsible kind of way. Many countries that have about 80% or more of the population that already get their account, for example, China, Kenya, India, Thailand, and Indonesia, tend to move from account access to account usage. Those kinds of countries then count on reforms, innovation in the private sector, and also gain open low-cost accounts. Though, almost a third of adults, which is approximately 1.7 billion, claims to have never opened a bank account before, including Tanjungpinang, Kepulauan Riau, according to the latest Findex data. In many developing countries like Indonesia, the financial sector includes the banking sector, post office, and also non-banking sector. Tough, a huge amount of financial transaction of payments n diversified manner are happened by the banking institutions network when there held any extension event of banking facilities to areas or regions of rural (Datta & Singh, 2019).

The financial inclusion index in Indonesia continues to increase both account ownership and account use. The account ownership index increased from 31.3% in 2014 to 61.7% in 2020. While the account usage index increased from 59.74% in 2013 to 81.4% in 2020, their survey showed that the relationship between literacy financial and financial inclusion in one province in Indonesia becomes only 0.271, which indicates the fact that people are financially excluded although they already know the basic financial knowledge. The index of financial literacy and inclusion is also still

not evenly distributed in the community. Levels of financial literacy and inclusion are very high in certain areas but minimal in others. Inclusion in several cities such as DKI Jakarta and East Kalimantan reached above 90%, exceeding Thailand and Malaysia. On the other hand, inclusion in some regions is actually below the regional average, such as NTT, which is only 60%.

(Gwalani & Parkhi, 2014) stated too that technological support can be applied in order to help increase the financial inclusion level. It is supported by (Barik & Pradhan, 2021), that stated that information and also communication technology (ICT) infrastructure plays a great part in development finance. The Indonesian government has already tried to accelerate the financial inclusion level. Most of Indonesia's population has become illiterate in finance that also has no access to the formal financial system. Looking at the 2012 Bank Indonesia survey, only 35.31% of the public has benefited from banking services.

At the level of aggregate, (Astuti & Trinugroho, 2016) documented that financial literacy is related in a positive way to the involvement of the poor in formal financial institutions. In addition, (Amidjono et al., 2016) revealed that because poor people become not really confident in approaching institutions of formal finance, they tend to go to illegal lenders to lend money. To expand financial services kind of access, particularly for the unbanked and also the underbanked, Bank Indonesia has already carried out several innovations through of digital financial services (DFS) introduction, previously called the program of branchless banking.

This activity started in 2013, and five banks conducted pilot projects in cooperation with several corporations of telecommunication in some provinces. Subsequently, BI tends to issue rule no. 16/8/PBI/2014 in replacing regulation No. 11/12/PBI/2009 focusing on electronic money and also supported by the circular letter of BI No. 16/12/DPAU focusing on the application of Digital Financial Services in the Context of Financial Inclusion through Individual Agents.

Tanjung Pinang is known as the capital city of the Indonesian province of the Riau Islands and uses Rupiah (Rp) as its currency. It occupies a region of 144.56 km<sup>2</sup>, specifically to the south of Bintan Island, as well as other smaller islands, for example, Dompok Island and also Penyengat Island. It has many financial institutions in the form of banks and several other kinds of financial services. Therefore, this research has the purpose of helping find out the factors creating Financial Inclusion in archipelagic regions in which many people are in certain characteristics of demographic. Also, with the consideration that the financial inclusion level does not get evenly distributed, **it is necessary to study the Determinants of Financial Inclusion in the Archipelago Community, especially in Tanjungpinang City, Riau Islands**, as a novelty of this research.

Table 1. Data of Tanjungpinang City

Name	Area in km <sup>2</sup>	Population Census 2010	Population Census 2020	No. of Villages	Post Code
Bukit Bestari	45.64	54,157	54,410	5	29122-124
Tanjungpinang Timur (East Tanjungpinang)	58.95	70,867	109,780	5	29122-125
Tanjungpinang Kota	35.42	17,026	19,226	4	29111-115

(Downtown Tanjungpinang)					
Tanjungpinang Barat (West Tanjungpinang)	4.55	45,309	44,247	4	29111-113

Source : (Statistik, 2020)

## LITERATURE REVIEW

### Financial Inclusion

Increasing access to financial services is a complex activity that aims to remove the entire way of price and also non-price barriers to the use or access of the population to get to use financial services. In addition, the national financial inclusion strategy of Indonesian banks (Badriatul, 2012), financial inclusion is claimed to be people's right to get entire access or kind of similar services from the institutions of finance in terms of its time, convenience, information, and also in an affordable manner, serving good and also full respect for the worth and also dignity. Financial services become available to people through a particular focus on the poor, the product of poor people, and also those living in far regions (Badriatul, 2012). Financial inclusion indicators, namely (Singh, 2021):

- a. Access dimensions  
That is the factor used to help measure the ability to use financial services in order to be able to see the potential things that become obstacles in opening and using a bank account, such as the physical form of financial services (bank offices, ATMs, etc.).
- b. Usage dimension  
Namely, the factors used to help to measure the financial product's usage, such as frequency, time/length of use, and regularity.
- c. Quality dimension  
That is the factor applied on purpose to help determine the financial product's ability which could answer customer needs.
- d. Dimensions of well-being  
That is the factor used to help measure the impact of financial services on the life scale of service users.

Yen (2018) stated that financial inclusion is known as a process that helps facilitate access, benefits, and also the availability from the way of a formal financial system for the entire economic parties. (Badriatul, 2012) define financial inclusion as the effort done on purpose to help remove the entire price and also non-price barriers forms to help access people into financial services. Metrics that can be applied to help measure the financial inclusion of the country include availability or access on purpose to help measure the ability to use the formal financial services both of physical accessibility and also price, and also applied in order to help measure the ability in using the financial instruments. (Sanistasya et al., 2019) said that the access concepts into financial services are known as the different concepts. Economic actors are receiving access to financial services but do not necessarily use them as well.

Several financial inclusion programs with fintech integration such as ATM, e-money, Telkomsel-cash, and credit procurement (Ozili, 2020b). The financial inclusion role and also fintech is nearly determined by the transaction of any business activity by 43% and also the loans 17%, the rest are known as the aggregators, the crowdfunding, the individual finance planning, landing and etc. (Fungáčová & Weill, 2015).

The financial integration development supported by technical events is especially for business activities and especially for financial markets. The financial sector revolution affects the financial system stability through a role to improve the financial services, which has an effect on financial sectors such as financial and loans, and financial welfare improvements through financial integration. The role of financial inclusion through financial technology was not observed in the impact of the financial system stability and the dominant contribution of financial integration (Abriyoso et al., 2021). The role of the financial system stability is due to the performance of financial variables, including financial ratios, bank assets, and direct investment per capita. The synergy effect between the financial integration through the variables of the bank sector and the integration of the gain level will result in financial stability form in the country.

Technological developments indicate the result in the emergence of new fresh concepts of thinking for the economic role, specifically talking about the banking sector that already contributes enormously to the economy. In the explanation of accelerating the growth of banking and also the financial sector development process can be delivered to the public by the access and also the services, the banking sector has made various efforts; one of them is the adoption of technology. The appearance of technological support should be able to help contribute to the access acceleration and also financial services as well as to help increase the access for every society. According to the background, this study was done on purpose to help identify the role of various financial sector variables supporting the effect of financial inclusion through Fintech intervention on Indonesia's financial stability.

#### The Determinants

Qamruzzaman & Jianguo (2017), determining the financial inclusion determinants in Bangladesh during the year 2005-2014. This research uses the general moment method and approach of quantile regression. This study distinguishes the supply and also demand sides of financial inclusion determinants. This study establishes bank size, efficiency, and also interest rate as becoming supply-side determinants, while literacy rate and basic ratio are demand factors. (Zins & Weill, 2016) determining financial inclusion in Africa through the World Bank's Global Findex database in 37 African countries. This study used the method of probit estimation and also stated that inclusion was influenced most by gender, age, and also education, with great influence on education and also income factors. (Soumaré et al., 2016) studied the determinants of financial inclusion in Central and West Africa. This study uses the Global Findex database. The authors said that financial inclusion was known to be based on income based on gender, education, income, residence place, status of employment, status of marital, the size of household, and also the trust level applied in financial institutions. It means that financial inclusion is highly dependent on the personal characteristics of Central and also West African countries.

This study tended to identify the differences between Central Africa and also West Africa. Gender is a significantly positive financial inclusion determinant in Central Africa, while income is claimed to be significant in West Africa. (Gwalani & Parkhi, 2014) also studied the factors affecting financial inclusion in Africa for years 2005–2014. This study uses the approach of dynamic panel data in order to help determine the financial inclusion determinants. This study finds that financial inclusion is reported by per capita income, the money area that becomes a percentage of GDP, the literacy rate, the internet support, and also the activities of Islamic banking.

## RESEARCH METHOD

The data analysis method applied for this research is techniques of quantitative analysis. This study applied the method of multinomial logistic regression analysis. According to (Desiyanti, n.d.), multinomial logistic regression is a logistic regression applied if the dependent variable gives a polychotomous or even multinomial scale. A multinomial scale is claimed as a measurement that is categorized into more than two categories. The method applied is logistic regression with the dependent variable on a nominal scale with three categories. Referring to the trichotomous logistic regression for the regression model with the dependent variable on a nominal scale of three categories, the result variable category Y coded 0, 1, and 2. Y variable was parameterized into two logit functions. Previously it was necessary to determine which category of results was used for comparison. In general, Y = 0 is used as a comparison. To form the logit function, we will compare Y = 1 and Y = 2, against Y = 0.

The reason to choose the method due to the orientation of this study, knowingly to test the influence of dependent data (Y) becomes categorical data (e.g., code 1 = have using M-Banking access, code 2 = have not used M-Banking access, code 3 = Indecisive), then the independent data (X1-X8) becomes quantitative data and also becoming not categorized. Logistic regression led to testing if the probability of dependent variable occurrence is able to be predicted with the independent variable. The technique for data analysis was applied by the SPSS version 25 application.

The logistic regression method needs no assumption of normality in the independent variables. It means the data does not have to be distributed normally. The research location is focused in Tanjungpinang City of Kepulauan Riau Province, and the time of the research starts in September until December 2021. The research sample is the 200 people of Tanjungpinang city aged 18 years and over who are already working and have a bank account along with M-Banking (only 179 samples are usable). The type of data applied is primary data. The data needed to be gained by the distribution of electronic questionnaires, literature studies, and field studies.

Table 2. Operational Variables

Dependent Variable (Abel, 2018)	Independent Variable (Abel, 2018)
Financial Inclusion (Y)	Age (X1)
Financial inclusion is an effort to eliminate all forms of price and non-price barriers to public access in utilizing financial services. Meanwhile, based on the publication of the Financial Services Authority (2017), "Financial inclusion is the availability of access to various financial institutions, products, and services in accordance with the needs and abilities of the community in order to improve the welfare of the community".	Gender (X2)
	Education (X3)
	Distance (X4)
	Documents (X5)
	Trust (X6)
	Income (X7)
	Internet Connection (X8)

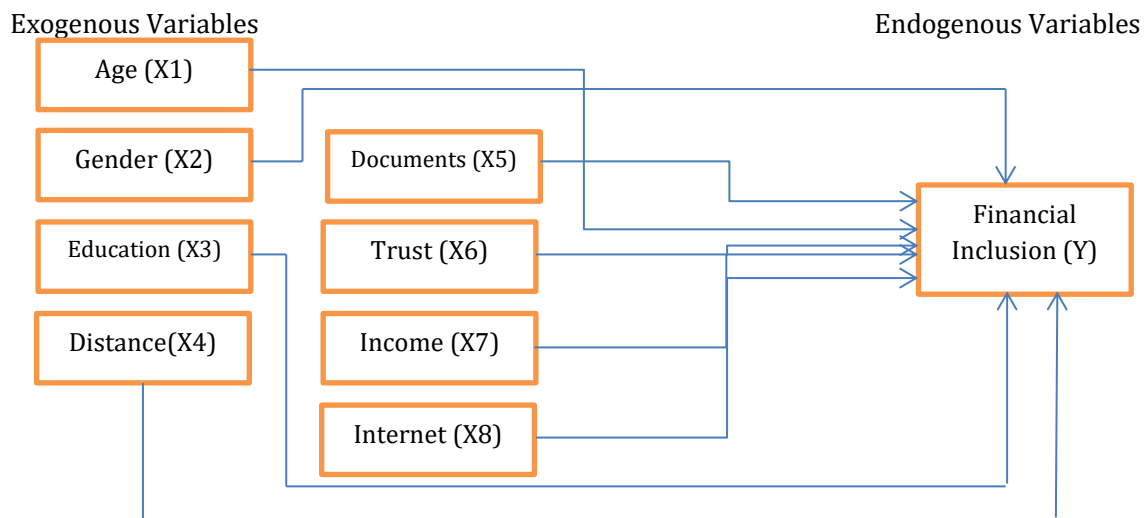


Figure 1. Financial Inclusion Model

## FINDINGS AND DISCUSSION

### Descriptive Data

Table 3. Descriptive Data

Case Processing Summary			
		N	Marginal Percentage
Inclusion (Y)	Using	144	80.4%
	Not Using	34	19.0%
	Indecisive	1	0.6%
Age (X1)	17 to 22	43	24.0%
	23 to 28	54	30.2%
	29 to 34	49	27.4%
	35 to 40	15	8.4%
	41 to 46	9	5.0%
	47 to 52	5	2.8%
	53 to 58	4	2.2%
Gender (X2)	Female	99	55.3%
	Male	80	44.7%
Education (X3)	High School	76	42.5%
	Diploma	12	6.7%
	Bachelor	56	31.3%
	Master	32	17.9%

	Doctor	3	1.7%
Distance (X4)	< 1,0 Km	36	20.1%
	1,1 - 2,0 Km	54	30.2%
	2.1 - 3,0 Km	41	22.9%
	3,1 - 4,0 Km	23	12.8%
	4,1 - 5,0 Km	6	3.4%
	> 5,1 Km	19	10.6%
Documents (X5)	No	3	1.7%
	Yes	176	98.3%
Trust (X6)	No	2	1.1%
	Yes	177	98.9%
Income (X7)	< Rp. 1.000.000	35	19.6%
	Rp. 1.000.000 to 3.000.000	52	29.1%
	Rp. 3.000.100 to 5.000.000	42	23.5%
	Rp. 5.000.100 to 8.000.000	19	10.6%
	Rp. 8.000.100 to 10.000.000	9	5.0%
	> Rp. 10.000.100	22	12.3%
Internet Connection (X8)	No	4	2.2%
	Yes	175	97.8%
Valid		179	100.0%
Missing		0	
Total		179	
Subpopulation		141 <sup>a</sup>	
a. The dependent variable has only one value observed in 130 (92.2%) subpopulations.			

Based on the table above, it can be seen that the variable Y, which is financial inclusion gets answers as follows. The first point is those who use m-banking, or in other words, they are the ones who are more accepting of financial inclusion, as many as 144 respondents. In comparison, those who do not use m-banking or who are not affected by financial inclusion are 34 respondents. The third option is hesitant to answer as much as 1 person out of a total of 179 respondents.

Then for the X1 variable, namely age, 43 respondents were aged between 17 and 22. Then 54 respondents were aged between 23 and 28. Then from the age of 29 to 34, there were 49 respondents. Then there were 15 respondents aged 35 to 40. Then there were 9 respondents aged between 41 to 46. For the age of 47 to 52 successfully obtained 5 respondents. Then age 53 to 58, there are as many as 4 respondents. Then for the last point, those aged 59 years and over, we get 0 respondents.

Furthermore, for the X2 variable, namely gender, we divided the sex into two, namely male and female. Of the 179 respondents, there were 99 people were female, while 80 were male. For

the X3 variable, namely education, from 179 respondents, we found 76 people had a high school education level and below. Then for the diploma level of education, we got 12 respondents. For the undergraduate education level, we got 56 respondents. Next, for the Master's education level, we got 32 respondents, then finally, for doctoral education, we got 3 respondents. Most of the respondents are at the education level, from high school to below, and at the undergraduate level.

Then, for the X4 variable, namely, distance, which means the distance from the respondent's house to the nearest banking or financial service. And we divide it into 6 categories, i.e., up to 1km of getting 36 respondents. Then we get 54 respondents at a distance of 1.1 to 2 km. We also get 41 respondents at distances of 2.1 km to 3 km. Then we get 23 respondents at a distance of 3.1 to 4 km. Then we get 6 respondents at a distance of 4.1 to 5 km. The latter is more than 5.1 km. 19 respondents were received. According to the data we collected, the majority of respondents were within 1.1 to 2 kilometers of their home to the nearest bank or financial institution. 2nd place is within 2.1 to 3 km. This means that the majority of respondents can conclude that they are at an average or medium distance from the nearest bank or financial institution, that is, not too far away.

The next variable is the X5 variable, namely the ease of preparing documents to take care of m-banking needs. This variable is divided into two answers, namely difficult as the first answer and easy as the second answer. Respondents answered difficult there were as many as 3 respondents. While the remaining 176 respondents answered, it can be prepared easily. This means that the majority of respondents think that the documents prepared for m-banking tend to be easy to prepare. Then for the variable X6, namely trust, or the level of trust of the respondent in the banking or financial services he uses. We also divided it into 2 answers, namely, do not trust in the first answer and have trust in the second answer. The result is as many as 2 respondents answered do not trust, then the remaining 177 respondents answered believe. It means that the majority of respondents get their confidence or trust in the banking or financial services that they have been using.

Then, the X7 variable or income variable is translated into six categories, namely the first respondents with incomes below Rp. 1,000,000, a total of 35 respondents, then the second, respondents who have incomes of Rp. 1,000,100 to Rp. 3,000,000, as many as 52 respondents, Then the third choice is respondents with an income of Rp. 3,000,100 to Rp. 5,000,000, a total of 42 respondents, then the fourth option is an income level of Rp. 5,000.100 to Rp. 8,000,000, as many as 19 respondents. Then the last options 5th and 6th were Rp. 8,000,100 to Rp. 10,000,000, 9 respondents, and 22 respondents with income above Rp. 10,000,000. Judging from the majority of respondents, they are those who have an income of 1,000,000 to Rp. 3,000,000 m-banking users in Tanjungpinang, namely 52 respondents. Below it is respondents who have an income of Rp 3,000,100 to Rp 5,000,000, as many as 42 respondents. Then the last independent variable, namely the variable x 8 or internet connection, we divide the answer into two; namely, the answer is the network is not good, and the network is good. Each of the answers for the two categories was those who answered not good as many as 4 respondents, and those who answered good were 175 respondents. It can be concluded that the majority of respondents answered that the internet connection that supports them to access m-banking is good.



## Chi-Square Test

Table 4. Chi-Square Test

Model Fitting Information				
Model	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	153.737			
<b>Final</b>	<b>112.175</b>	<b>41.561</b>	<b>24</b>	<b>.014</b>

Next will be a chi-square test to determine the way the effect of the independent variables on the dependent variable in a simultaneous way or together. For this test, a hypothesis is formulated, namely:

H0: There is no joint effect between all independent variables and the dependent variable.

H1: There is a joint influence between all independent variables and the dependent variable. (Yanti, 2019)

How to do this Chi-square test can take into account the significant value where the provisions are to reject H0 if the value of sig < 0.05 and accept H0 if the value of sig > 0.05. It can be seen in the sig value in the table, which is 0.014 or less than 0.05, then H0 is getting rejected, and H1 is getting accepted. So the conclusion is that there is a joint influence between variables X1 to X8 on variable Y or Financial Inclusion.

## Coefficient Determination Test (R-Square)

Table 5. Coefficient Determination (R-Square)

Pseudo R-Square	
Cox and Snell	.208
<b>Nagelkerke</b>	<b>.334</b>
McFadden	.239

Next is the coefficient of determination test or also known as R Square. This test is carried out to see how big the portion of the independent variable is found in forming the dependent variable. The larger the portion indicates that the model under study is good and can predict the value of the dependent variable (Dienillah & Anggraeni, 2016). As can be seen in the Nagelkerke test, the coefficient of determination of this study is 0.334 or, in other words, 33.4%. This means that variables from x 1 to X8 can form the Y variable or dependent variable, that is, financial capacity up to 33.4%, and the remaining 66.6% is formed by variables other than the research variable.

## Likelihood Ratio Tests

Table 6. Likelihood Ratio Tests

Likelihood Ratio Tests				
Effect	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.

Intercept	112.175 <sup>a</sup>	.000	0	.
<b>Age (X1)</b>	<b>127.413</b>	<b>15.238</b>	<b>6</b>	<b>.018</b>
Gender (X2)	112.377	.201	1	.654
Education (X3)	113.024	.848	4	.932
<b>Distance (X4)</b>	<b>126.336</b>	<b>14.160</b>	<b>5</b>	<b>.015</b>
Documents (X5)	114.153	1.977	1	.160
Trust (X6)	112.427	.251	1	.616
Income (X7)	120.810	8.635	5	.125
Internet Connection (X8)	115.878	3.703	1	.054
The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is created by omitting the influence from the final model. The null hypothesis is that the entire parameters of that influence are 0.				
a. This reduced model becomes equivalent to the final model; omitting the influence has no increase in the freedom degrees.				

Next will be a Likelihood Ratio Test in order to help determine how the influence of the independent variables on the dependent variable in a partial way. For this test, a hypothesis is getting formulated, namely (Ozil, 2020a):

H0: There is no found influence between one independent variable and the dependent variable.

H1: There is an influence between one independent variable and the dependent variable.

How to do this Likelihood Ratio Tests can take into account the significant value where the provisions are to reject H0 if the result of the value of sig < 0.05 and tend to accept H0 if the value result of sig > 0.05 (Rusdianasari, 2018). It is claimed in the sig value in the table, that only variable Age (X1) and Distance (X4) which is 0.018 and 0.015 or less than 0.05, then H0 becomes rejected, and H1 becomes accepted. So the conclusion is that there is only Age and Distance that partially influence the Financial Inclusion or dependent variable (Y).

### Wald Test and Analysis

Table 7. Wald Test

		Parameter Estimates						95% Confidence Interval for Exp(B)	
Inklusi (Y) <sup>a</sup>		B	Std. Error	Wald	df	Sig.	Exp(B)	Lower Bound	Upper Bound
Using	Intercept	36.334	8887.013	.000	1	.997			
	[Age (X1)=1,00]	-13.867	8887.012	.000	1	.999	9.502E-7	.000	. <sup>b</sup>
	[Age (X1)=2,00]	-14.624	8887.012	.000	1	.999	4.457E-7	.000	. <sup>b</sup>

[Age (X1)=3,00]	-14.951	8887.01 2	.000	1	.999	3.214E-7	.000	.b
[Age (X1)=4,00]	-15.213	8887.01 2	.000	1	.999	2.473E-7	.000	.b
[Age (X1)=5,00]	-17.713	8887.01 2	.000	1	.998	2.029E-8	.000	.b
[Age (X1)=6,00]	-19.861	8887.01 3	.000	1	.998	2.369E-9	.000	.b
[Age (X1)=7,00]	0 <sup>c</sup>	.	.	0	.	.	.	.
[Gender (X2)=1,00]	-.219	.489	.200	1	.655	.804	.308	2.097
[Gender (X2)=2,00]	0 <sup>c</sup>	.	.	0	.	.	.	.
<b>[Education (X3)=1,00]</b>	-17.646	1.020	299.30 5	1	<b>.000</b>	2.171E-8	2.941E-9	1.602E-7
<b>[Education (X3)=2,00]</b>	-17.415	1.423	149.75 0	1	<b>.000</b>	2.733E-8	1.680E-9	4.447E-7
<b>[Education (X3)=3,00]</b>	-17.700	1.013	305.18 7	1	<b>.000</b>	2.055E-8	2.821E-9	1.497E-7
[Education (X3)=4,00]	-17.317	.000	.	1	.	3.016E-8	3.016E-8	3.016E-8
[Education (X3)=5,00]	0 <sup>c</sup>	.	.	0	.	.	.	.
[Distance (X4)=1,00]	1.614	.824	3.835	1	.050	5.023	.999	25.265
[Distance (X4)=2,00]	.534	.680	.618	1	.432	1.706	.450	6.466
<b>[Distance (X4)=3,00]</b>	1.691	.784	<b>4.649</b>	1	<b>.031</b>	5.425	1.166	25.237
<b>[Distance (X4)=4,00]</b>	2.857	1.321	<b>4.681</b>	1	<b>.030</b>	17.409	1.308	231.641
[Distance (X4)=5,00]	19.330	6848.95 8	.000	1	.998	24833607 8.110	.000	.b
[Distance (X4)=6,00]	0 <sup>c</sup>	.	.	0	.	.	.	.
[Documents (X5)=1,00]	-2.506	1.934	1.679	1	.195	.082	.002	3.615
[Documents (X5)=2,00]	0 <sup>c</sup>	.	.	0	.	.	.	.
[Trust (X6)=1,00]	-1.178	2.264	.271	1	.603	.308	.004	26.022

	[Trust (X6)=2,00]	0 <sup>c</sup>	.	.	0	.	.	.	.
	<b>[Income (X7)=1,00]</b>	-4.496	2.100	4.584	1	<b>.032</b>	.011	.000	.684
	[Income (X7)=2,00]	-3.763	2.070	3.307	1	.069	.023	.000	1.340
	[Income (X7)=3,00]	-3.336	2.043	2.667	1	.102	.036	.001	1.950
	[Income (X7)=4,00]	-2.497	2.050	1.483	1	.223	.082	.001	4.580
	[Income (X7)=5,00]	-1.243	1.883	.436	1	.509	.288	.007	11.558
	[Income (X7)=6,00]	0 <sup>c</sup>	.	.	0	.	.	.	.
	[Internet Connection (X8)=1,00]	19.387	9613.486	.000	1	.998	262858480.745	.000	. <sup>b</sup>
	[Internet Connection (X8)=2,00]	0 <sup>c</sup>	.	.	0	.	.	.	.
Not Using	Intercept	-14.3148	4874.468	.000	1	.998			
	[Age (X1)=1,00]	20.5905	4583.615	.000	1	.996	875546950.078	.000	.b
	[Age (X1)=2,00]	23.5456	4989.596	.000	1	.996	16809565001.972	.000	.b
	[Age (X1)=3,00]	21.9108	4057.088	.000	1	.996	3276287920.247	.000	.b
	[Age (X1)=4,00]	22.3182	4690.792	.000	1	.996	4927864470.455	.000	.b
	[Age (X1)=5,00]	24.6898	4695.398	.000	1	.996	52759909382.779	.000	.b
	[Age (X1)=6,00]	19.3663	6679.933	.000	1	.998	257472244.580	.000	.b
	[Age (X1)=7,00]	0 <sup>c</sup>	.	.	0	.	.	.	.
	[Gender (X2)=1,00]	-11.575	617.252	.000	1	.985	9.400E-6	.000	.b
	[Gender (X2)=2,00]	0 <sup>c</sup>	.	.	0	.	.	.	.

[Education (X3)=1,00]	18.902	2404.84 3	.000	1	.994	16178817 9.001	.000	.b
[Education (X3)=2,00]	20.565	5001.10 0	.000	1	.997	85404164 5.024	.000	.b
[Education (X3)=3,00]	30.853	2371.98 7	.000	1	.990	25079002 990613.72 3	.000	.b
[Education (X3)=4,00]	17.043	.000	.	1	.	25212263. 497	25212263.49 7	25212263.49 7
[Education (X3)=5,00]	0c	.	.	0	.	.	.	.
[Distance (X4)=1,00]	-1.187	2684.37 4	.000	1	1.000	.305	.000	.b
[Distance (X4)=2,00]	-.499	2534.11 2	.000	1	1.000	.607	.000	.b
[Distance (X4)=3,00]	-1.354	2509.33 2	.000	1	1.000	.258	.000	.b
[Distance (X4)=4,00]	-16.646	2384.33 5	.000	1	.994	5.901E-8	.000	.b
[Distance (X4)=5,00]	-13.779	4453.03 7	.000	1	.998	1.037E-6	.000	.b
[Distance (X4)=6,00]	0c	.	.	0	.	.	.	.
[Documents (X5)=1,00]	3.236	6320.81 2	.000	1	1.000	25.425	.000	.b
[Documents (X5)=2,00]	0c	.	.	0	.	.	.	.
[Trust (X6)=1,00]	-22.794	9255.59 2	.000	1	.998	1.261E-10	.000	.b
[Trust (X6)=2,00]	0c	.	.	0	.	.	.	.
[Income (X7)=1,00]	1.126	3310.46 3	.000	1	1.000	3.083	.000	.b
[Income (X7)=2,00]	1.836	3223.03 5	.000	1	1.000	6.272	.000	.b
[Income (X7)=3,00]	10.811	4027.38 2	.000	1	.998	49567.022	.000	.b
[Income (X7)=4,00]	2.556	2730.79 7	.000	1	.999	12.887	.000	.b
[Income (X7)=5,00]	10.063	5061.69 8	.000	1	.998	23457.610	.000	.b

[Income (X7)=6,00]	0c	.	.	0	.	.	.	.
[Internet Connection (X8)=1,00]	-13.168	4392.35 2	.000	1	.998	1.911E-6	.000	.b
[Internet Connection (X8)=2,00]	0c	.	.	0	.	.	.	.

- a. The reference category is: Indecisive.
- b. Floating point overflow happened while computing this statistic. Its value is therefore set to system missing.
- c. This parameter is set to zero because it is redundant.

Based on the table above, equation 1 of the multinomial model obtained is as follows:

$\ln(p_1/p_0) =$

$$\begin{aligned}
 &36.334(\text{Constant}) - 13.867(\text{Age1}) - 14.624(\text{Age2}) - 14.951(\text{Age3}) - 15.213(\text{Age4}) - 17.713(\text{Age5}) - \\
 &19.861(\text{Age6}) \dots \dots \dots (X1) \\
 &- .219(\text{Gender1}) \dots \dots \dots (X2) \\
 &- 17.646(\text{Education1}) - 17.415(\text{Pendikan2}) - 17.700(\text{Education3}) - 17.317(\text{Education4}) \dots \dots \dots (X3) \\
 &+ 1.614(\text{Distance1}) + 0.534(\text{Distance2}) + 1.691(\text{Distance3}) + 2.857(\text{Distance4}) + 19.330(\text{Distance5}) \dots \\
 &\dots \dots \dots (X4) \\
 &- 2.506(\text{Document1}) \dots \dots \dots (X5) \\
 &- 1.178(\text{Trust1}) \dots \dots \dots (X6) \\
 &- 4.496(\text{Income1}) - 3.763(\text{Income2}) - 3.336(\text{Income3}) - 2.497(\text{Income4}) - 1.243(\text{Income5}) \dots \dots \dots (X7) \\
 &+ 19.387(\text{Internet Connection1}) \dots \dots \dots (X8)
 \end{aligned}$$

And based on the table above, the equation 2 of the multinomial model obtained is as follows:

$$\begin{aligned}
 \ln(p_2/p_0) = & \dots \dots \dots \\
 &14.314(\text{Constant}) + 20.590(\text{Age1}) + 23.545(\text{Age2}) + 21.910(\text{Age3}) + 22.318(\text{Age4}) + 24.689(\text{Age5}) + 19. \\
 &366(\text{Age6}) \dots \dots \dots (X1) \\
 &- 11.575(\text{Gender1}) \dots \dots \dots (X2) \\
 &+ 18.902(\text{Education1}) + 20.565(\text{Education2}) + 30.853(\text{Education3}) + 17.043(\text{Education4}) \dots \dots \dots (X3) \\
 &- 1.187(\text{Distance1}) - .499(\text{Distance2}) - 1.354(\text{Distance3}) - 16.646(\text{Distance4}) - 13.779(\text{Distance5}) \\
 &\dots \dots \dots (X4) \\
 &+ 3.236(\text{Document1}) \dots \dots \dots (X5) \\
 &- 22.794(\text{Trust1}) \dots \dots \dots (X6) \\
 &+ 1.126(\text{Income1}) + 1.836(\text{Income2}) + 10.811(\text{Income3}) + 2.556(\text{Income4}) + 10.063(\text{Income5}) \dots \dots \dots (X7) \\
 &- 13.168(\text{Internet Connection1}) \dots \dots \dots (X8)
 \end{aligned}$$

If the above two equations are worth 0, it means to keep the long distance in the direction of old age, person, higher education, and financial institutions. Confidence in the institutions for financial products has a higher income, and the correct Internet access can be obtained by the following equation:

$$\begin{aligned} \ln(p1/p0) &= 36.334 \\ (p1/p0) &= \text{Exp}(36.334) \\ p1 &= 6.020821 p0 \end{aligned}$$

and

$$\begin{aligned} \ln(p2/p0) &= -14.314 \\ (p2/p0) &= \text{Exp}(-14.314) \\ p2 &= 6.074476e - 7 p0 \end{aligned}$$

This is the possibility that seniors in their old age, men, higher education, and groups with long distances to financial institutions can easily organize documents related to financial products, confidence in financial institutions, high income, and proper internet. It means that it is accessible. Included is 6.020821 times more likely to contain undecided groups.

Unlike the first equation, the intercept in the second model has a negative sign. This means that the opportunity for groups with older age, male, higher education, the longer distance towards financial institution, easily arrange the document regarding the financial products, have trust in the institution, have higher income, and have proper internet access to not embrace the financial inclusion is lower than the opportunity to the indecisive group toward the inclusion, which is 6.074476 times.

Thus, it can be concluded that those with high education have a higher chance of embracing financial inclusion. Whilst, those with middle or lower education have a great opportunity to be indecisive in embracing financial inclusion. Meanwhile, according to distance and income, those who have a fair distance and good income have a great opportunity to embrace financial inclusion compared to groups who are not embracing it.

## CONCLUSION

It can be concluded that in this study, together the variables of age, gender, education, distance, documents prepared, trust, income, and also the connection to the internet, all together or one of them, have an influence on financial inclusion. This can be proven by the acceptance of hypothesis one in the Chi-square test. For partial effect, only age and distance variables have an influence on financial inclusion. This can be proven by the acceptance of hypothesis 1 on the Likelihood ratio test for the two variables. This model can only predict the financial inclusion variable of 33.4%, while the rest is influenced by other variables outside this study.

Based on the results of the Wald test, it was concluded that groups with older age, male, higher education, a longer distance towards financial institutions, easily arrange the document regarding financial products, have trust in the institution, have higher income, and have proper internet access to embrace the inclusion is 6.020821 times higher than the opportunity to the

indecisive group toward the inclusion. The intercept in the second model has a negative sign. The opportunity for groups with older age, male, higher education, the longer distance towards financial institution, easily arrange the document regarding the financial products, have trust in the institution, have higher income, and have proper internet access to not embrace the financial inclusion is 6.074476 times lower than the opportunity to the indecisive group, slightly different but still on the same track with research carried by (Abel et al., 2018).

#### **LIMITATION & FURTHER RESEARCH**

The research is still found in the scope of 1 city only. Better if applied in several cities at once, for example, in Kepulauan Riau province. Likewise, through the factors or determinants done, it must be better and more comprehensive to be added. Method of the research, also limitations of statistical, specifically the methods of logit that are just able to help predict the probability than the actual value. In addition, it would also be better if further research is carried out with better and more comprehensive methods so that they will be able to capture the phenomena that occur.

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