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Original Article

The Characteristics of Indonesian Entrepreneurs

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Abstract *- The progress of a business is closely related to the characteristics of entrepreneurs. This research highlights the tendency of entrepreneurs in Indonesia to take advantage of age, education, risk-taking attitude, and loans that are accessible by the members of the family. The data used is IFLS-4, which has not been used much in Indonesia's entrepreneurship and business research. The results of this study show that the higher the age, the more inclined to be an entrepreneur, and the higher formal schools tend not to be an entrepreneur. It also shows that entrepreneurs in Indonesia are mostly risk-averse people, although a risk-taker person is more likely to be an entrepreneur than a risk-averse one. This study shows the positive link between the amount of loans and the tendency to be an entrepreneur. Suggestions for further research and policy implications of this research are discussed further.*

Keywords *- Entrepreneur, Education, Age, Risk-attitude, Loan access, and IFLS.*

1. Introduction

Small and Medium Enterprises (SMEs) dominate the Indonesian economy [1]. It accounts for over 90% of the number of business entities in Indonesia [2]. The majority of it is categorized as a household industry. This industry has great potential contribution including in the Gross Domestic Product (GDP) and the labour force [3]. Generally speaking, SMEs become a major force in contributing to the national's strong economy [4].

The success of business is inseparable from the characteristics of entrepreneurs. Entrepreneurship has an important role in addressing the problem of unemployment and economic growth [5]. The high level of unemployment shows that the economy has not been able to absorb the labour force that needs jobs. One solution for the labour force to obtain income is through independent business. Independent business venture is defined as a person doing as a main occupation, not to be an employee or other paid worker. This independent business can be done with an employee or without employees or with the assistance of employees or family members [6].

To achieve a wealthy nation, Indonesia requires a lot of skilled entrepreneurs so that the product can compete and have a great added value [7][8][9]. An analysis of the characteristics of independent entrepreneurs in Indonesia should be conducted in line with that purpose. Thus, the study is expected to unfold the characteristics that differentiate between entrepreneurs and non-entrepreneurs in Indonesia. From an economic theory perspective, the tools of neo-classical microeconomics have provided a framework for studying self-employment decisions, known as the theory of income choice, which has proved useful in describing some of the factors influencing this decision. This approach views agents as (expected)-utility maximizes taking an occupational choice decision – to become employees or entrepreneurs (self-employed) – on the grounds of the utility associated with the returns accruing from the two types of activity [10][11][12]. However, not all decisions to be an entrepreneur or employee are made with full rationality. The limited capacity to make fully rational decisions in some complex circumstances often happens. This limited rationality is called bounded rationality [13][14].

Zimmerer (2005) defines entrepreneurs as people who create new businesses to take risks and uncertainty in order to achieve profit and growth by identifying opportunities and combining the resources necessary to establish them. Zimmerer further mentioned entrepreneur's profiles such as responsibility, preferring medium risk, confidence in the ability to achieve success, having the desire to get direct feedback, high energy levels, future orientation, organizational skills, valuing achievement than merely a money, committing and a high tolerance for ambiguity, flexibility, and resilience [15].

From the above definitions, common characteristics of an entrepreneur are creativity and innovation, taking advantage of opportunities, daring to bear risk in exploiting the opportunities, enhancing the action-oriented value-added, and being well-organized [16]. Another characteristic that is

often associated with entrepreneurs is autonomy [17][18]. Although these characteristics are relevant in the business sector, they are also commonly studied in the business and corporate sectors.

Nascent entrepreneur characteristics can be used as predictors of early-stage entrepreneurship outcomes [19]. Furthermore, core self-evaluations are an important predictor of entrepreneurial success in nascent-stage entrepreneurs participating in pre-venture assistance programs, positively affecting success and commitment while negatively affecting fear of failure [19].

Some cross-cultural studies have examined the similarities among entrepreneurs in various nations. Entrepreneurs have dominant values in their national culture [20]. Entrepreneurs in different countries might share some universal traits, and they might also have other traits that are specific to their own culture. In less-developed countries, entrepreneurial activity is encouraged to stimulate economic growth and empower marginalized segments of the population [21][22]. Turan and Kara (2007) displayed characteristics similar to those of Turkish and Irish entrepreneurs [23].

A study on Indonesian entrepreneur characteristics and performance in the creative industry conducted by Gunawan (2024) revealed that entrepreneurial characteristics and competencies significantly positively affected business performance [24]. Creativity and innovation are the most influential characteristics, whereas strategy stands out as the most influential competency [25]. The factors that trigger entrepreneurship can be divided into two major types: personal factors and environmental factors [26]. Personal factors consist of locus of control, education, experience, commitment, vision, risk-taking and age. At the same time, environmental factors include sociological factors, organization, family, role models, competitors, investors, and government policy [27]. The determinants of entrepreneurial intentions are divided into three major factors: personality, environmental, and demographic. Demographic factors such as age, gender, educational background, and work experience are considered determinants of one's entrepreneurial intentions [28].

Leibenstein (1966) found that access to information is one of the determinants of a person starting self-employment. At the same time, access to information can be represented by education level. Higher levels of education will provide more open access to information, which is expected to encourage someone to become an entrepreneur further. So, it is generally expected that the higher the educational background, the higher the information access to start a business [29]. Zimmerer and Scarborough (2005) describe the existence of entrepreneurial opportunism (opportunity entrepreneurs) and entrepreneurs as forced (necessity entrepreneurs). Entrepreneurial opportunists are those who utilise the existing opportunities in the market. Entrepreneurs need to start a business because they do not get a job. The United States leads the world in the percentage of self-employment entrepreneurial opportunists rather than forced [15]. These phenomena can be different in developing countries, which are highly informal workers, including self-employed workers. In developing countries, the high number of informal jobs is a more common phenomenon than in developed countries. This informality includes self-employed workers as a signal of high informal jobs. High informal jobs are one characteristic of the high level of the shadow economy [30].

According to the "Small Business Development Center" at the University of Wincostin-Madison in Suryana (2003), small businesses have characteristics: greater potential, higher risk, limited access to capital, one or a few managers, and less ability to survive in the face of difficulties. Then, it is expected that a risk-taking attitude is more relevant with entrepreneurs than employee workers. Entrepreneurs face unstable income than employees. So, they face and are more likely to take a higher risk than employees [31].

However, several studies show contradictory results. A study conducted by Miniesy et al. (2021) stated that self-efficacy significantly negatively affects the birth of digital entrepreneurs in Egypt [32]. Another study by Hussain et al (2023) explained that access to finance significantly affects business networking and financial performance [33]. Nevertheless, in their study, Indarti and Wulandaru (2003) showed no significant difference between the education level of women entrepreneurs and female employees. However, the results of correlation and descriptive tabulation show that there is a correlation between education level and profession choice, between being entrepreneurs and employees. Over half of women employees have the same level or higher than female entrepreneurs [34].

Based on the research problem above, the novelty of this study is that it uses Indonesian Family Life Survey (IFLS) data from 2007, which has not been used as a data source to study entrepreneur characteristics in Indonesia. It highlights some characteristics, such as age, education, risk-taking attitude, and the loans that are accessed. Individuals will use data on age, education, and risk-taking attitude, while loans that are accessed will be used by household-level data. All data on each characteristic used as a variable in the study will be cross-tabulated with the status of distinguished work with entrepreneurs and non-entrepreneurs. This was followed by multiple regression analysis using qualitative-binary regression. Furthermore, this study will use the operational definition of an entrepreneur as a person who has autonomy in work or, in other words, is self-employed. It can be either assisted by another person (family or employee) or work on their own. Finally, external support like loan access is

expected to significantly influence the probability of being an entrepreneur. Having a bigger loan access can be associated with more capital access. So, it is expected that a higher loan will lead to being an entrepreneur than an employee.

Table 1. The review of variables used in the research

No	Variable name (function)	IFLS Component			Operational Definition	Measure
		Section	File	Variable		
1	entrepreneur (dependent variable)	TK	b3a_tk2	TK24a	Job status as an independent worker	Categorical; Dummy variable : 1=entrepreneur 0= other
2	Adult (independent)	AR	bk_ar1	Ar09	Age more than 18 years old	Interval : 1=18-25; 2=26-35; 3=36-45 ; 4=46-60 ; 5 = > 60th
3	Education (independent)	AR	bk_ar1	Ar16	Level of formal education	Interval : not-go-to school/unclear/informal= 0; Elementary= 1; junior high school=2; Senior high school=3; higher education=4
4	Risk-taking attitude (Independent)	SI	b3a_si	Si03	The option between (1/) fixed income IDR 800.000 or (2) income probability IDR 400 or IDR 1600 with equal probability	Categorical: 1=0 (risk averse) 2=1 (risk taker)
5	Loan Access (Independent)	BH	b2_bh	Bh11	The biggest loan value in the last 12 months in the household	Categorical: 1=≤IDR1million; 2=IDR1-Rp10million; 3=IDR.10-50milllion; 4=IDR50-100milllion; 5=IDR100-500milllion; 6=more than IDR 500 million.

2. Materials and Methods

2.1. Data

This study uses the Indonesian Family Life Survey (IFLS) 4th Wafe. IFLS is a household survey carried out in a sustainable manner (panel) to collect extensive information about the individual, household, community, and existing facilities. The first wave of the field survey was first conducted in 1993, representing 83% of the population of Indonesia. After that, there were three waves of the survey, namely IFLS-2 (1997), IFLS-3 (2000), IFLS-4 (2007). 1st, 2nd, 3rd, and 4th IFLS data can be taken free of charge by registering on the website www.rand.org/FLS/IFLS [35]. The survey was conducted by interviewing the respondents at the household level, individual household members, and community leaders.

2.2. Variables

The focus of this study is on the characteristics of entrepreneurship at individual levels. The association between the tendency of individuals to conduct independent business or not is attributed to several factors. These factors are age, education, risk-taking attitude and access to loans. A summary description of the data variables used in this study can be seen in Table 1.

As a dependent variable, employment status is used to describe whether an individual is self-employed or not. This variable is the result of processing variables on the status of existing jobs section "TK" on the book 3a (B3A) with the file name "b3a_tk2", with the variable "TK24a" which is asking the status of the job. If the respondent's answer is (1) on their own, (2) on their own with the help of other household members, (3) seeks their own with regular employees, it will be categorized as an entrepreneur, with a value of one category (dummy variable=1), whereas respondents who answered another employment status, such as (4) labor/government employees; (5) labor / private sector employees; (7) free trade in agriculture; (8) free workers in

non-agriculture; (6) unpaid family workers, will be categorized as non-entrepreneurial with a category value of 0 (zero).

The first independent variable associated with a tendency to self-employment is age. It is used only with the status of adult respondents who are 18 years or older. The age variable is taken from the book k (bk) in the section "AR" on file "bk_ar1" with the variable "ar09", which asks the age of each member of the family. To facilitate the measurement and tabulation, the distribution of the size of the interval with values: 1 if members 18-25 years old; 2 if aged 26-35 years; 3 if aged 36-45 years; 4 if aged 46-60 years; and 5 if aged 60 years or more.

The second independent variable associated with a tendency toward self-employment is the level of education. The educational level of the data obtained from the IFLS section "AR" in the book k with the file "bk_ar1", the variable "ar16" asking the highest educational level of household members. There are 22 answers provided. However, the answers were grouped into five intervals: a value of 0 for which no school/ informal school/ other, those who answer categories (1) no/ not attending school; (14) boarding school; (17) schools for people with disabilities (physical/mental); (90) kindergarten; (98) did not know; (95) sharing; A value of 1 for primary school education (SD) equal which is those who answered the category (2) SD, (11) Kejar Paket A, (72) MI (madrasah); A value of 2 for the junior equivalent which is categorized as (3) public junior high school, (4) vocational junior high school; (12) kejar paket B; (73) MTS (madrasah tsanawiyah); Score 3 for high school equivalent which is categorized as (5) a general high school, (6) SMK, (15) Kejar Paket C, (74) MA (Madrasah Aliyah); The highest value is 4 for those who are highly educated, those who enter the category (13) open university, (60) academy D1, D2, D3, (61) university S1, (62) S2 university, (63) university S3.

The third independent variable is a risk-taking attitude. This variable in the IFLS is contained in the section "SI", book 3a, with the file "b3a_si" and the variable "si03". Respondents were asked to choose whether to select the first option: "get a guaranteed income of Rp 800 thousand per month" or the second option: "guaranteed to get a revenue of Rp. 1.6 million per month or Rp. 400 thousand with equal opportunities ". If respondents choose the first option, they will be categorized as risk-averse with the variable value of 0, whereas if respondents choose the second option, they will be considered risk-takers with the value of dummy variable=1.

The fourth independent variable is access to loans. Access to loans is used here with a nominal scale of respondents' answers to the question: "How many of the largest loans taken by household members in the last 12 months?". This data is taken from the section of data IFLS "BH", in book 2, with the file "b2_bh" and the variable used is "bh11". But to make a simplification, it is shorted by categories of 1 if loans until Rp 1million; 2 if the loan is between IDR 1 million to Rp. 10 million; 3 if the loan is between Rp.10 million to Rp 50 million; 4 if the loan between to IDR.50 million to IDR 100 milllion; 5 if the loan between to IDR100 million to IDR500 milllion; and 6 if the loan more than IDR.500 million.

This study uses the Indonesian Family Life Survey (IFLS) 4th Wafe. IFLS is a household survey carried out in a sustainable manner (panel) to collect extensive information about the individual, household, community, and existing facilities. The first wave of the field survey was first conducted in 1993, representing 83% of the population of Indonesia. After that, there were three waves of the survey, namely IFLS-2 (1997), IFLS-3 (2000), IFLS-4 (2007). 1st, 2nd, 3rd, and 4th IFLS data can be taken free of charge by registering on the website www.rand.org/FLS/IFLS [35]. The survey was conducted by interviewing the respondents at the household level, individual household members, and community leaders.

To achieve data conformity, tabulate each variable with the merger *(merging)* and adjustments *(sorting)*. All data processing from the IFLS is done using STATA statistical *software* version 11.

The estimation model uses a qualitative response regression model, with the regression being a binary or dichotomous variable. It is binary; if the regressand is an entrepreneur (or self-employed), then the value is 1, and the other is 0. So, the estimation will use a logit model, probit model, and Tobit model, and the best among these three alternative models will be chosen. The regression model is:

$$Y_i = \beta_1 + \beta_2 X_{1i} + \beta_3 X_{2i} + \beta_4 X_{3i} + \beta_5 X_{4i} + \mu_i \quad (1)$$

Where Y_i = entrepreneur; Y=1 if entrepreneurs and Y=0 if other (not an entrepreneur)
X_1 = adult age
X_2 = education
X_3 = risk-taking attitude
X_4 = access to loan
B_n = parameters of regression
μ_i = error-term

3. Results and Discussion

The result will be discussed in two parts. Discussion relationship between employment status variables with each explanatory variable based on cross-tabulations will be discussed first and then followed by the results of logistic regression. Summary of cross-tabulation between job status table as entrepreneurs or non-entrepreneurs with each

explanatory variable are presented in Table 2, whereas estimation regression is shown in Table 3.

3.1. Descriptive Statistics and Cross-Tabulation

The cross-tabulation between age and entrepreneur, as shown in Table 2, indicates that the higher the age, the proportion of self-employment/ entrepreneur tends to increase. In the age group 18-25 years, the proportion of self-employed is only 14%, increasing to 32% in the age group 26-35 years, and rose steadily to 70% in the age group above 60 years.

Most of the entrepreneurs of this data tabulation are aged between 46-60 years, with a proportion of 28% of the overall entrepreneurial observed. However, this age group (46-60 years) is only 15.14% of the total respondents. This result can be discussed in two perspectives:

1. Young age tend not to choose to be an entrepreneur. This could be due to the intention to engage in entrepreneurship at a young age, which tends to be lower because they may feel more comfortable not working alone. If this was due to the desire to look for experience, it does not matter. Otherwise, if the young generation shows an indication of low motivation for entrepreneurship, they need to be aware. Moreover, the young generation has a bigger potential to be productive entrepreneurs than the older ones. The other possibility is the more opportunity of employment for young age than the older. If this is true, then this is a good signal that there are more work opportunities for many young people.

2. Getting older, the greater the proportion of the self-employed. The highest proportion is actually there in retirement. The explanation is that they are more likely to become entrepreneurs/self-employed rather than being an employee or working in the formal sector because the formal sector can not accommodate them anymore. These data indicate that the tendency to work by themselves (self-employed) in older age can be Just because of necessity rather than a choice. Quite possibly, they were "forced" to keep working because of the necessities that can not be fulfilled if they are not kept working.

It is seen from Table 2 of cross-tabulation between education level and entrepreneur that the highest proportion of self-employment is in the informal education or no schooling category (53%) and continued to decline to only 19% in higher education. It can be inferred that the higher the education, the smaller the proportion of self-employment. This indicates that the more formal schooling, the more it tends to not work as an entrepreneur.

Some explanation can be delivered. From the education system perspective, it is important to note that the formal education system orientation in Indonesia places more stress on creating a job-seeker graduate than a job-maker graduate. So, it is important to make an educational reformation orientation. Another explanation is that Indonesian entrepreneurs tend to be entrepreneurs who are "forced" and not because of skill-based. Those with low education or no formal education have relatively smaller opportunities to work in the formal sector than those with higher education. This means working alone or entrepreneurship is more due to low employment opportunities in the formal sector rather than a choice.

It is important to note that entrepreneurs with low skills (due to their lower education) are likely to have low productivity and ultimately will provide low income and welfare as well. Low levels of entrepreneurship education are also demonstrated by only 4% of the entrepreneurs who have higher education. The proportion of respondents with higher education is just 8.41%.

Risk-taking attitudes and their relation to employment status (as entrepreneurs or non-entrepreneurs) can be seen in Table 3 in the risk-taking attitude row. It appears that most entrepreneurs in Indonesia are more risk-averse than risk-takers. It is shown that 55% of entrepreneurs are risk-averse, and the rest (45%) are risk-takers. However, the proportion of entrepreneurs who are risk-takers (45%) is slightly more than the proportion of the general public who are risk-takers (40.23%). It also appears that the proportion of self-employment/entrepreneur than that measured respondents is bigger, which is shown by the proportion of risk-takers (39%) higher than the proportion of risk-averse entrepreneurs (35%). This means that entrepreneurs in Indonesia tend to remain risk-averse, though they tend to be more daring to risk (risk-takers) than the general population.

The loan that can be accessed by the family is used as one variable to estimate the probability of being an entrepreneur. It can be argued that the larger the loan, the more inclined an entrepreneur is to be because they have more access to support the bigger capital. In other words, the argument shows that entrepreneurial families tend to have bigger loans than those not regarded as entrepreneurs.

From the cross-tabulation of loan amount and job status, it can be seen that the average proportion of respondents who used self-employment than the average in numbers ranging from 30's%, except for between 100 million loans to Rp500 million, the proportion of entrepreneurs who take a range of the nominal loan with up to 40%.

Seen that almost all loan-related entrepreneurial families generally fall into the category of micro-loans (less than 50 million), and 84% of respondents had loans of more than IDR 10 million. But, unlike most communities where loans between Rp1 million and Rp10 million (90%), the biggest

proportion of most existing entrepreneurs on IDR 0- 1 million (45%), followed by loans between Rp1-10 million (39%). This suggests that the most important lending community, including self-employment, is a microcredit scheme.

Table 2. Cross Tabulation between the dependent variable and each of the independent variables

Independent variables	Grouping	Dependent Variable: Working Status: Entrepreneur	Dependent Variable: Working Status: Non-entrepreneur	Sum	% entrepreneur	% entrepreneur	Sum of Entrepreneur
		1	2	3 (=1+2)	4 (=1/3)	5 (=1/6)	6 ∑column 1
Age (years)	18-25	499	3,082	3581	14%	7%	7481
	26-35	1,912	4,028	5940	32%	26%	
	36-45	1,932	2,668	4600	42%	26%	
	46-60	2,100	1,972	4072	52%	28%	
	>60	1,038	439	1477	70%	14%	
Education (level)	Not-go-to school/ informal	750	666	1416	53%	10%	7332
	Elementary level	3,539	3,930	7469	47%	48%	
	Junior high school	1,236	2,028	3264	38%	17%	
	Senior high school	1,531	3,673	5204	29%	21%	
	Higher education	276	1,208	1484	19%	4%	
Risk-taking attitude	risk-averse	2,411	4,566	6977	35%	55%	4,365
	risk taker	1,954	3,030	4984	39%	45%	
Loan Access (IDR)	0 - 1.000.000	626	1,049	1,675	37%	45%	1396
	1.000.001-10.000.000	541	953	1,494	36%	39%	
	10.000.001-50.000.000	194	385	579	34%	14%	
	50.000.001-100.000.000	23	50	73	32%	2%	
	100.000.001-500.000.000	12	13	25	48%	1%	
	>500.000.000	0	0	0	0%	0%	

Table 3. Estimation Result From Three Alternative Models

VARIABLE	LOGIT	PROBIT	TOBIT
Constanta	-1.64651*** (0.2033859)	-1.009796*** (0.1214178)	-1.152636*** (0.1520029)
Adult Age (X_1)	0.2538529*** (0.0480249)	0.1560234*** (0.0287619)	0.1854449*** (0.0340276)
Education (X_2)	-0.2575198*** (0.0488323)	-0.1554676*** (0.0291245)	-0.1819379*** (0.0343328)
Risk-taking Attitude(X_3)	0.2494659** (0.1006316)	0.1521588** (0.0599412)	0.1801137** (0.0698432)
Loan Access (X_4)	0.2338549*** (0.0641733)	0.140606*** (0.0382563)	0.1641427*** (.0444645)
Log-likelihood	-1213.9844	**-1212.9537**	-1695.3515
Pseudo R2	0.0383	**0.0392**	0.0286
Number of observation	2150	2150	2150

Note: The parameter/Constanta in each independent variable showed in a number Value in parentheses is the standard deviation of estimates

****significance at 5% level; ***significance at 1% level**

3.2. Regression Analysis

The estimation model used in this research consists of three alternative models: logit, probit and tobit model. The parameter, standard deviation, significance level and resume of estimation result can be seen in Table 3. From the estimation results that can be seen in Table 3, it can be inferred that all independent variables as characteristic of respondents show a significant relationship between all characteristic factors estimated with the probability of being an entrepreneur. The adult age has a positive association with the probability of being an entrepreneur. In other words, the higher the age, the higher the probability of being an entrepreneur. Education level has a significant negative relationship with the probability of being an entrepreneur, which means that the higher the educational level, the lower the probability of being an entrepreneur. The risk-taking attitude is positively related to the inclination to be an entrepreneur. This means that the risk-seeker person has a higher probability of being an entrepreneur than the risk-averse person. The amount of loan accessed by the family provides more support for being an entrepreneur than the lower ones. This is shown by a significant positive relationship between loan access and the probability of being an entrepreneur.

In order to choose the best estimation model, we need to choose the biggest log-likelihood and pseudo-R^2 value. Among the three models, the probit model shows the biggest log-likelihood (-1212.9537**)** and pseudo-R^2 (0.0392) value. Therefore, the estimation used is the probit model:

$$Y_i = -1.009796 + 0.1560234X_{1i} + -0.1554676X_{2i} + 0.1521588X_{3i} + 0.140606X_{4i} + \mu_i \quad (2)$$

Practically, the probit model and logit model give similar results, but the probit model uses normal distribution [36]. Therefore, if our orientation is just to look at the directional influence, it is similar to using a probit or logit model that gives a similar result.

The significant positive effect of adult age on entrepreneurial propensity means that the higher the age, the greater the tendency to be an entrepreneur. This result also confirms the earlier discussion of age-entrepreneur cross-tabulations, indicating that young people are less likely to be self-employed and that self-employed tend to be older. It seems that this profession is probably more due to necessity than rational career options. They become an entrepreneur (self-employed) due to the limited opportunity to enter formal occupation.

The relationship between education and entrepreneurial results reinforces this indication. The level of education has a significant negative effect on entrepreneurial propensity. This means that the higher the formal education, the lower the probability of entrepreneurship. It also confirms the discussion in the tabulation of education level with entrepreneurs, indicating that people with higher education tend to be reluctant to be self-employed/entrepreneurs and tend to be non-entrepreneurs. However, entrepreneurs with relatively low education will tend to produce an output whose value is relatively low productivity because they are unskilled entrepreneurs.

The risk-taking attitude has a significant positive effect on the entrepreneur's tendency. This means the characteristic of an entrepreneur is more closely related to the risk-taker person than to employees who tend to be the risk-averse person. This is in line with the theory that an entrepreneur is a person who takes moderate risks in their business. This is confirmed by the cross-tabulation data risk-taking behavior-entrepreneur description that has been discussed in the previous section. However, it is important to note that most entrepreneurs in Indonesia remain risk-averse, as shown by cross-tabulation data. This means that, in general, people tend to be risk-averse than risk-takers.

The loan amount accessed by the member of the family has a significant positive association with the propensity to be an entrepreneur. The bigger the loan, the more probability of being an entrepreneur. It supports the argument that capital access is important to support entrepreneur development. Opening access to capital loans can generate and develop more entrepreneurs. Therefore, it is important to give more loan access to the entrepreneur. Access to the financial institution needs to be improved to develop more entrepreneurs quantitatively and qualitatively.

4. Conclusion

Several conclusions can be drawn from the results of this study: *first*, the higher education level is related negatively to the propensity to be an entrepreneur, whereas age is positively related to the propensity to be an entrepreneur. This phenomenon is not an ideal condition. There is an indication that entrepreneurs in Indonesia are driven over "necessity" rather than an option. It supports the bounded rationality career option rather than income choice theory. *Second*, people who have a risk-taker attitude are more likely to be entrepreneurs than risk-averse ones. Nevertheless, most entrepreneurs in Indonesia still being a risk-averse person. In other words, entrepreneurs in Indonesia are moderately risk-takers. Finally, loan access is important to support and develop entrepreneurs. This is shown by the positive association between family loan access and the propensity to become an entrepreneur.

This study is an initial study of entrepreneur characteristics using IFLS data. However, this study only uses four characteristics of entrepreneurs: age, education, risk-taking attitude, and loan access. The IFLS data have great potential to reveal more characteristics of entrepreneurs, such as gender, race, and much more. This study also uses 2007 data only. It is interesting to reveal the continuity of entrepreneurs using the panel data that are available in IFLS.

The other limitation of this study is that it does not differentiate self-employment in the formal sector to the informal sector and self-employment in agriculture and non-agriculture. It is likely that the result will be different if it makes the distinction between self-employment in the formal and informal sectors and the distinction between self-employment in agriculture and non-agriculture. These differences may occur because businesses in the informal sector and agriculture are generally self-employed, which is categorized as entrepreneurs in this study. Therefore, the result shows the indication that this profession (entrepreneur/self-employed) is more of a "necessity" than a voluntary optional career. The other differentiation that can reveal better results is distinguishing an entrepreneur with employees and without employees. Entrepreneurship with employees can be considered better than entrepreneurs without employees. Entrepreneurs with employees have more job opportunities and a greater capacity than entrepreneurs without employees. Future studies can also provide a deeper analysis of the phenomenon of old age, which tends to keep on working and become entrepreneurs/ self-employed. All at once, to reveal that higher education tends to be reluctant to be an entrepreneur. So, it can be revealed that this profession is a necessity or voluntary profession to achieve more actualization.

Some suggestions as the implications result of the research are as follows: firts, The government should facilitate micro, small and medium enterprises and increase employment opportunities. Given this, it is expected that a person's decision is not due to necessity and becomes a necessity entrepreneur. Ideally, becoming an entrepreneur is a rational choice to be wealthier and more prosperous and chosen by younger generations as well as educated people. Second, the formal education sector should be encouraged to develop entrepreneurship in order to be productive. The existing education system seems to encourage the student to become a mere employee rather than a productive entrepreneur. Third, access to productive credit /loans is important to be more inclusive and can be accessed. It is expected to improve the quantity and quality of entrepreneurs to become more flourish. Having said that, there needs to be financial and business education, empowerment and expanded access to a wider loan that can be accessed and used to increase the business capacity.

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