

determinants AFFECTING THE DECISION OF MILENIAL GENERATION IN THE BORDER AREA RI-RDTL TO WORK IN THE AGRICULTURE SECTOR

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ABSTRAK

Riset tentang determinan yang mempengaruhi keputusan generasi milenial di perbatasan negara RI-RDTL untuk bekerja pada sektor pertanian bertujuan untuk menganalisis faktor-faktor yang mempengaruhi kesediaan generasi milenial di daerah penelitian untuk bekerja di sektor pertanian. Hasil penelitian menunjukkan bahwa probabilitas generasi milenial yang bersedia bekerja di sektor pertanian sebesar 64,25 persen. Determinan yang secara signifikan mempengaruhi keputusan untuk bekerja di sektor pertanian tersebut adalah luas kepemilikan lahan pertanian, tingkat pendidikan, umur, dan gender. Sedangkan status perkawinan, status kepemilikan pekerjaan, dan ketersediaan motivator dan bantuan keuangan tidak secara signifikan mempengaruhi keputusan untuk bekerja pada sektor pertanian.

Kata Kunci: Generasi Milenial, Daerah Perbatasan, Pekerjaan Sektor Pertanian.

INTRODUCTION

The border areas include the RI - RDTL border, often known as the 3T region namely the frontier, the farthest, and the most deserted. Border areas are synonymous with various kinds of problems ranging from community economic issues, institutional issues, defense and security issues, social issues, and education issues. This problem is present due to that development becomes uneven. The social disparity between people who live directly adjacent to neighboring countries cannot be denied.

The border area is actually the forefront of the Indonesian state. This is stated in President Joko Widodo's Nine Nawacita Program, where the third point is "to build Indonesia from the periphery by strengthening regions and villages within the framework of a unitary state". This point is the government's promise to build a holistic border area.

Along with the existence of the Nawacita Program, in the last five years slowly but surely various infrastructures in the RI - RDTL border area have been built, although not evenly distributed throughout the village. Hot mix road infrastructure has been built from the city of Atambua to the

Mota Ain area (RI-RDTL Border Gate) with the aim of making superior products from the area easily brought to consumer centers. Apart from that, several communication towers have also been built from which the communication infrastructure has ensured that the relationship with other areas and with the outside world is very easy. It was also confirmed that the means of communication would become a commodity favored by various groups of society, especially the millennial generation, as has happened in other regions.

The millennial generation (Millennial Generation) according to Yuswohady in the article Millennial Trends (2016) is a generation born in the early 1980 to 2000 period. This generation is often referred to as Gen-Y, Net Generation, Generation WE, Boomerang Generation, Peter Pan Generation, and others. They are called the millennial generation because they are the generation who live at the turn of the millennium. Simultaneously in this era, digital technology has begun to penetrate all aspects of life.

On the other hand, Belu Regency which is a manifestation of the border area as much as 63.1 percent of its GRDP is from

the contribution of the agricultural sector (Statistics of Belu Bureau, 2018). This means that the agricultural sector is still the prime mover of the economy in the border region. But ironically, the agricultural sector business actors in this region are dominated by the older generation, so that the agricultural business being run is still semi-traditional. Many young people who drop out of school prefer to live in the city, working as little as a construction worker, a shop assistant, a transport contractor to a household assistant.

In fact, jobs in the agricultural sector do not require high skill requirements, let alone high educational qualifications. Working in the agricultural sector only requires determination, willingness and enthusiasm to work hard in order to obtain good results. Skills will naturally acquire over time. Moreover, the carrying capacity of the environment in Belu Regency is still wide open, such as: grasslands, empty land that has not been processed, coastal / marine resources, community sociocultural conditions, and others.

Certainly not all millennial generations in border areas do not like working in the agricultural sector. A rational millennial generation must have a vision for the future to advance the agricultural sector in this region. However, based on what has been described above, a study on the Interests of Millennial Generation in the RI-RDTL Border Area to Work in the Agricultural Sector is very relevant to be implemented.

This study aims to analyze the determinants of the willingness of millennial generation in the research area to work in the agricultural sector.

MATERIALS AND METHODS

The nature of research

Judging from the objective, this research is a descriptive study. According to Vredenberg (1979), and Arikunto, (2014), descriptive research aims to describe a more complex social reality by applying theoretical concepts that have been developed by social scientists. In this case study, the social reality that will be studied

is the response to employment in the agricultural sector by millennial generation in the region, with a focus on its influence on their social behavior.

Study site

According to Presidential Regulation No. 179/2014 concerning Spatial Planning for State Border Areas in East Nusa Tenggara Province, it is stated that the number of villages directly bordering land and sea with RDTL is 11 Districts and 44 Villages. Then, from 44 existing border villages were selected by purposive method with the intention of finding a location that was truly relevant to the research objectives, then 15 villages ($\pm 35\%$) were selected as research locations.

The population in this study is the number of millennial generations aged 17-39 years in 15 selected villages. The samples in the study were grouped according to the level of education, thus there are four sample groups, namely: undergraduate /student, high school, junior high school, and elementary school. Of the four groups of education level, 15 respondents were selected by disproportional random sampling for each education group so that the total number of respondents in the study was 225 people. However, it is not easy to categorize respondents according to their level of education in remote villages. In fact, villages that are far from the city will find it difficult to find respondents with a SLA education level of 15 respondents. On the other hand, in urban villages or those close to the city, it is difficult to find 15 respondents for primary school education. To anticipate these difficulties, the composition and number of respondents from each village is more flexible.

The poll was made for the 225 millennial respondents about their willingness to work in the agricultural sector. To see the responses of millennial respondents to jobs in the agricultural sector, about 25% of the 225 respondents were selected again to conduct in-depth interviews about the development of their

business / activities as well as their opinions on agricultural sector jobs.

Data Collection

The data collected consisted of two types of data, namely primary data and secondary data. Primary data were obtained through direct interviews with respondents using a prepared list of questions. Secondary data includes data on geography, demography, governance, and socioeconomic activities in border villages, as well as relevant literature and research results. Primary data collection is carried out by applying three ways, namely: structured interviews, free interviews, and direct observation. Structured interviews were conducted with respondents with the help of a prepared list of questions. Free interviews were conducted with informants or community leaders to gather some of the aspirations needed. Direct observation is applied to collect data about how the millennial generation carries out agricultural cultivation activities, processing and trading agricultural products.

Data Analysis

All data that had been collected were then validated and analyzed using descriptive analysis methods complemented by quantitative analysis through cross tabulation. This descriptive analysis method is carried out by applying the following procedures:

- 1) By developing categories that are relevant to the research objectives,
- 2) The interpretation of the results of the analysis is guided by appropriate theories.

Qualitative analysis of the data generated through direct observation regarding social symptoms that occurred while the research was ongoing. The analysis was carried out by applying the analytical method commonly used in field research (field research) as recommended by Babbie (1975); Meleong (2013).

Then, to analyze the determinants of willingness to work in the agricultural sector,

the Logit Model approach is used (Greene, 1997; Pindyck & Rubinfeld, 1998; Schmidt, 2005). This model can explain a person's decision case against willingness to work as a farmer. For example, starting with a simple example, the dependent variable is the decision to become a farmer depending on the respondent's education level as the independent variable.

The cumulative logistic probability function model can be written as follows:

$$P_i = F(Z_i) = (\beta_0 + \beta_1 X_i) = \frac{1}{1 + e^{-Z_i}} = \frac{1}{1 + e^{-(\beta_0 + \beta_1 X_i)}} \quad (1)$$

where e is the natural logarithm with a value of 2.718 and P_i is the probability that someone decides to work as a farmer with a certain level of education (x).

The Z value lies between $-\infty$ and $+\infty$ while the P_i value is between 0 and 1. Thus, this logistical probability meets the criteria with the model of cumulative distribution function (CDF).

The Cumulative Distribution Function (CDF) model is a model that is able to guarantee that the probability value lies between 0 and 1 so that using this CDF model a regression model can be made where the response of the dependent variable is dichotomous. Then, A person's decision to work farming or not, then the probability of working in farming is as follows:

$$P_i = \frac{1}{1 + e^{-Z_i}} \dots\dots\dots (2)$$

If we multiply the right side of equation (2) by e^{Z_i} , it will produce the following equation:

$$P_i = \frac{1}{1 + e^{-Z_i}} = \frac{e^{Z_i}}{1 + e^{Z_i}} \dots\dots\dots (3)$$

Meanwhile, the probability of deciding not to farm ($1 - P_i$) is as follows:

$$1 - P_i = 1 - \frac{e^{Z_i}}{1 + e^{Z_i}} = \frac{1}{1 + e^{Z_i}} \dots\dots (4)$$

So that, from equations (3) and (4) we can calculate the ratio of the probability of working or not working in farming as follows:

$$\frac{P_i}{1-P_i} = \left(\frac{e^{Z_i}}{1+e^{Z_i}} \right) \left(\frac{1+e^{Z_i}}{1} \right) = e^{Z_i} \dots\dots (5)$$

The ratio in equation (5) is called the odds ratio, which is the ratio of the probability of working on a farm and not working on a farm. Then we transform the equation into a natural logarithmic (Ln) model as follows:

$$\ln \left(\frac{P_i}{1-P_i} \right) = Z_i \ln e = Z_i$$

$$\ln \left(\frac{P_i}{1-P_i} \right) = \beta_0 + \beta_1 x_1 \dots\dots\dots (6)$$

Equation (6) is a logistic regression equation. Because there is only one independent variable, it is a logistic regression with one independent variable. A logit with two independent variables can be written using the following equation:

$$\ln \left(\frac{P_i}{1-P_i} \right) = Z_i = \beta_0 + \beta_1 x_{1i} + \beta_2 x_{2i} \dots (7)$$

P_i is the probability that someone decides to work farming or not; x_1 is the level of education, and x_2 is the ownership of agricultural land. Thus, in general if we have k as many variables, the logistic regression model is as follows:

$$\ln \left(\frac{P_i}{1-P_i} \right) = Z_i = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + \beta_7 x_7 \dots\dots\dots (8)$$

where P_i is the probability that someone decides to work farming or not; x_1 is the education level, and x_2 is the ownership of agricultural land, x_3 is the age of the respondent; x_4 : dummy variable for gender; x_5 : dummy variable for marital status, x_6 : dummy variable for employment status, and x_7 dummy variable for the existence of a capital provider / motivator.

RESULT

Research area profile

The geographical position of Belu Regency in the mainland of Timor of NTT Province is in the easternmost part and has a direct land border along 149.1 Km and is on the international crossing route with the Republic Democratic of Timor Leste (RDTL) State. The area of Belu Regency is 1,284.94 km² or 128. 494 Ha. Administratively, Belu Regency is divided into 12 Districts, 69 Villages of which 12 villages are in urban areas. According to Presidential Regulation No. 179/2014 concerning Spatial Planning for State Border Areas in East Nusa Tenggara Province, it is stated that the number of villages directly bordering land and sea with the RDTL state is 11 Districts and 44 Villages.

From the climatology aspect, it shows that the Belu Regency area has an average temperature of 27.6 °C with a temperature interval of 21.5°C - 33.7°C. The lowest temperature (21.5°C) occurred in August and the highest temperature (33.7°C) occurred in November. In accordance with the climate classification by Schmidt and Ferguson, Belu Regency is a type D climate area (semi arid climate) or tropical climate with two seasons, that are the dry season and the rainy season. The average rainfall (CH) for 5 years (2013-2017) is 209 mm / month with the number of Rainy Days (HH) is 8 days / month.

The rainy season in Belu Regency starts in October with low intensity until it peaks in January and February, followed by March to May with decreasing intensity. So the number of rainy months in Belu Regency is 8 months, of which 4 months have high rain intensity (January - April), and the other 4 months (October, November, December and May) have low rain intensity. The dry season runs from June to early October.

Regional Economic Structure and Economic Sector Growth

An indicator that can clearly describe the real condition from a regional macro perspective is the Gross Regional Domestic

Product (GRDP). The interesting thing related to the contribution of the existing economic sector is that the regional economic structure in Belu Regency is still supported by the agricultural sector. Furthermore, the five biggest (15.56%), government administration (13.52%), wholesale and retail trade and retail (12.17%), and the building or construction (7.83%).

The average economic growth of Belu regency in the 2015-2019 period reflects the totality of the contribution of the regional economic sector, where the average growth is 5.57% per year. The rate of economic growth per sector in Belu Regency in 2019 is as reflected in Table1. According to this Table, the only economic sector that has negative growth is the mining and quarrying sector by -2.21 percent.

The agricultural sector as the leading sector is growing very slowly, not in line with its very large contribution to the formation of Gross Regional Domestic Product. It can be seen that the growth in the agricultural sector in 2015 reached 3.32%, 2016 reached 3.06%, 2017 reached 4.87%, in 2018 it reached 4.33%, and in 2019 it reached 4.19%. The reason, among others, is that the real increase in production in the agricultural sector is relatively slow compared to other sectors. Another reason is that during the last two years, not too much rainfall has caused farmers not to be optimal in cultivating the land so that the resulting production is also not optimal, and even crop failure occurs.

Respondent characteristics

In this study, the characteristics of the respondents were discussed according to age, level of education, type of work, and ownership of agricultural land. Because the focus of the discussion is the millennial generation, the age limit of the selected respondents is stricter, They are in the age range of 17 to 39 years. Information about age is very important because the age factor has an influence on the respondent's attitude in making a decision to work in the agricultural sector. The age distribution of the respondents is shown in Figure 1

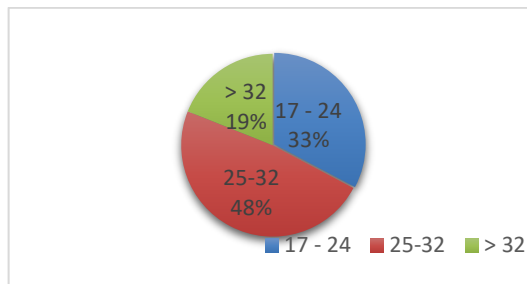


Figure 1. The age distribution of the respondents

The education level of the respondents in this research is the length of formal education undertaken by the respondent and the non-formal education that the respondent has attended. Respondents' formal education levels consist of elementary schools, junior schools, high schools and universities. Meanwhile, what is included in non-formal education is participation in taking courses, training, or counseling on a certain material. So for non-formal education it only consists of having attended or never.

The distribution of respondents by level of education is shown in Figure 2

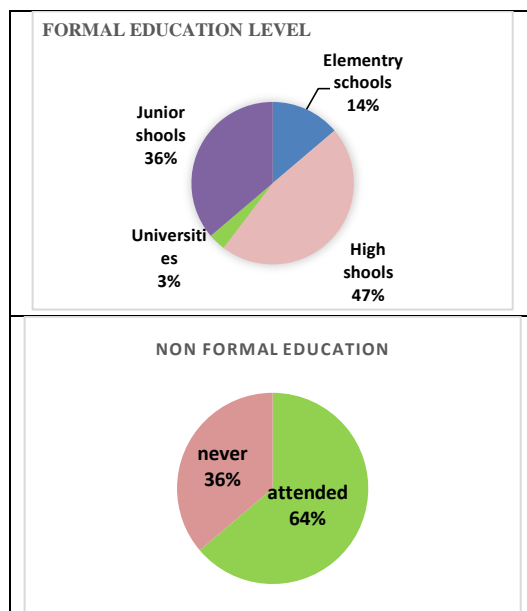


Figure 2. The distribution of respondents by formal and non formal education.

Characteristics of Respondents by Type of Work shows that most millennial do not have permanent jobs. As much as 29.31% stated that they already had permanent jobs. The remaining 70.69% of them stated that

they did not have a permanent job. Although they do not have a permanent job, they do work that give them generates income.

All of the millennial respondents with temporary jobs as farmers have a minimum high schools, even two of them have graduated from university. They are in the age range of 17 years to 26 years. Their motivation to choose to work as farmers is due to various considerations such as: 1) wanting to have their own income, 2) owning the land where they are working, 3) having a good market potential because the results are the basic needs of the community, 4) following their parent's work. 5) supporting from motivators.

Even though working as farmers has provided income, 83.33% of those who work as farmers still have dreams of getting better jobs, and the other jobs they dream of are as government employees. Even if later they succeed getting other job they dream of, they will continue to do farming work as a side job. Meanwhile, 16.67% said they did work as farmers to collect fees so that in the next one or two years they could continue their studies at higher education.

Farming Activities by Millennial Respondents

Millennial respondents who carried out farming activities in this study were divided into three groups. The first group are those who choose work as farmers to become permanent jobs. The second group is those whose daily activities are working as farmers, but they still want to have other, better jobs. The third group are those whose daily activities or main work are not as farmers, but do side jobs as farmers.

The first group is characterized by their ages ranging from over 32 years to those aged 39 years. The type of farming they do is food crops such as corn, field rice, and green beans. In addition, they also have gardens with crops such as coconut, cashew, cocoa, banana, or mango. Food crops are mainly used for family staple food consumption, except for green beans, which are mostly sold. This group certainly raises livestock. The cows and pigs they raise are for investment purposes, such as for

preparing their children's school fees, preparation for housing construction, preparation for customary affairs, and preparation for other needs.

The second group is characterized by their young age, ranging in age from 17 to 26 years. Their farming activities are planting horticultural commodities such as tomatoes, chilies, beans, eggplant, pariah, Chinese cabbage, cabbage, broccoli, spinach, long beans, papaya, lime and also raising livestock (chickens, sheep, pigs and cows). They do horticultural farming during the dry season on the land belonging to their parents. Meanwhile, during the rainy season their parents plant food crops such as corn, rice and beans. Some respondents planted horticultural crops by clearing land that was still untapped shrubs. Although their farming experience is still relatively short (2-5 years), but they are progressive farmers to be commercially oriented and always try to optimize the profits from their farming activities.

The third group is millennial respondents who are over 25 years old to 39 years old, daily work or their main job is not as a farmer; for example as a civil servant, teacher, kiosk entrepreneur, agricultural product collector or mason; however, in their spare time they still do farm work, especially raising livestock. Some of them cultivate both food and horticultural crops, some also work on post-harvest crops of plantation and forestry crops.

The determinant of millennial respondents' willingness to work in the agricultural sector

The poll was conducted on 225 millennial respondents to analyze the determinants of millennial respondent's willingness to work in the agricultural sector. Some of the determinants that influence the respondent's decision to work in the agricultural sector include age, education level, conception of agricultural land, marital status, gender, job ownership, and the existence of capital assistance from motivators. The analysis results are as shown in Table 1.

Table 1. Decision Analysis Result of Millennial Respondents' Willingness to Work in the Agricultural Sector.

Dependent Variable: Y				
Method: ML - Binary Logit (Quadratic hill climbing)				
Date: 11/02/20 Time: 00:10				
Sample: 1 225				
Included observations: 225				
Convergence achieved after 6 iterations				
Covariance matrix computed using second derivatives				
Variable	Coefficient	Std. Error	z-Statistic	Prob.
C: intercept	-17.72525	3.710098	-4.777570	0.0000
X1: education level	0.287388	0.137952	2.083240	0.0372
X2: agricultural land ow.	1.424974	1.161091	3.811049	0.0001
X3: Age	0.308036	0.127053	2.424467	0.0153
X4: gender	4.999421	1.019478	4.903904	0.0000
X5: Marital status	0.427900	1.036567	0.412805	0.6797
X6: Job status	-0.064845	1.547111	-0.041914	0.9666
X7: motivator	0.566324	0.700497	0.808460	0.4188
McFadden R-squared	0.792297	Mean dependent var		0.622222
S.D. dependent var	0.485913	S.E. of regression		0.191984
Akaike info criterion	0.346511	Sum squared resid		7.998168
Schwarz criterion	0.467972	Log likelihood		-30.98248
Hannan-Quinn criter.	0.395533	Deviance		61.96496
Restr. deviance	298.3346	Restr. log likelihood		-149.1673
LR statistic	236.3696	Avg. log likelihood		-0.137700
Prob(LR statistic)	0.000000			

Source: Primary Data Analysis

According to the table, of the 225 respondents who were polled their willingness to work in the agricultural sector, 140 millennial respondents stated that they were willing to work in the agricultural sector and as many as 85 respondents stated that they were not willing or less interested in working in the agricultural sector.

Of the seven variables that are thought to influence millennial decisions to be willing to work in the agricultural sector, the determinants that support this decision are land ownership, education level, age and gender. Meanwhile, the unsupported determinants were marital status, employment status and whether there was any provision of funds / motivators.

If the average high school education level (12), the average agricultural land ownership is 1.13 hectares, the average age of the respondents is 26 years, the probability of willingness to work in the agricultural sector can be calculated as follows:

$$Z_i = -17,725 + 0,287(12) + 1,423(0,82) + 0,308(25) + 4,999(1) + 0,428(1) - 0,065(0) + 0,566(1) = 0,5864$$

$$P_i = \frac{1}{1 + e^{-Z_i}} = \frac{1}{1 + e^{-0,5864}} = 0,6425$$

The predictive value of the probability of millennial willingness to work in the agricultural sector is 0.6425. Thus the probability of millennial who are not willing to work in the agricultural sector is: 1 - 0.6425 = 0.3575.

CONCLUSION

The probability value of millennial willingness to work in the agricultural sector is 0.6425. Thus the probability of millennial who are not willing to work in the

agricultural sector is 0.3575. While, the determinants that significantly support the decision of millennial generation in the RI-RDTL border area to choose to work in the agricultural sector are ownership of agricultural land, education level, age of respondents and dummy variables for gender. Meanwhile, variables such as marital status, employment status, provision of venture capital and the presence of activators did not significantly influence the decision of the millennial generation to choose to work in the agricultural sector.

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