Analysis of Youth Interest in Work as Sheep Farmers at P4S LKP2U

Analisis Minat Pemuda Bekerja sebagai Peternak Domba di P4S LKP2U

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ABSTRACT

An increase in the number of demands for lamb meat every year represents livestock business opportunity while the supply from smallholder farmers continues to decline, causing prices to rise yearly. Sustainability is important in the sheep farming business, which older farmer dominated. The objective of this research was to assess the inclination of the younger population towards pursuing careers as sheep farmers after participating at the Pusat Pelatihan Pertanian Pedesaan Swadaya (P4S) of Lembaga Kajian dan Pengembangan Potensi Umat (LKP2U) program in the Madiun Regency. Novelty of the research is the presentation of the latest information on youth interest in working as a farmer. Data collection was carried out in December 2022 using non-probability sampling. The data in this study were analyzed using a Likert scale to measure entrepreneurial interest and demographic factors. Furthermore, a binary logistic regression analysis was conducted to determine the relationship between the predictor and response variables. Youth interest after participating in the training program chooses an interest in working as a sheep farmer at 70%. Factors that influence youth interest after attending the training program towards employment as a sheep farmer are demographic factors namely age, marital status, duration of education, parents occupation, parents income, family members, and entrepreneurial factors (e.g personal, environmental, and social).

Keywords: demographics, entrepreneurship, interests, sheep, training

ABSTRAK

Peningkatan jumlah permintaan daging domba setiap tahunnya merupakan peluang usaha peternakan sedangkan pasokan dari peternak rakyat yang terus mengalami penurunan artinya harga akan cenderung naik setiap tahun. Pentingnya keberlanjutan dalam usaha peternakan domba yang didominasi peternak dengan umur tua. Tujuan penelitian ini adalah mengetahui minat generasi muda dalam bekerja sebagai peternak domba setelah mengikuti program di Pusat Pelatihan Pertanian Pedesaan Swadaya (P4S) Lembaga Kajian dan Pengembangan Potensi Umat (LKP2U) Kabupaten Madiun. Pembaruan dalam penelitian yaitu penyajian informasi terbaru pada minat pemuda terhadap pekerjaan sebagai peternak. Pengumpulan data dilaksanakan pada bulan Desember 2022 menggunakan *non probability sampling*. Analisis data dalam penelitian menggunakan skala *likert* untuk mengukur faktor tingkat minat wirausaha dan faktor demografi, selanjutnya dianalisis menggunakan *Regresi Logistik Biner* untuk mengetahui hubungan antara variabel prediktor dengan variabel respon. Pemilihan minat pemuda terhadap pekerjaan sebagai peternak domba dengan presentase 70%. Faktor yang memengaruhi minat pemuda setelah mengikuti program pelatihan terhadap pekerjaan sebagai peternak domba adalah faktor demografi yaitu umur, status pernikahan, lama pendidikan, pekerjaan orang tua, pendapatan orang tua, tanggungan keluarga, dan faktor wirausaha yaitu personal, lingkungan, dan sosial.

Kata kunci: demografi, domba, minat, pelatihan, wirausaha

INTRODUCTION

Sheep farming is one option that can be used as a business to gain profit. The need for lamb meat increases every year, along with the increase in population. Sheep farming is one type of business that must receive attention to be developed, because sheep is one type of livestock that increases community income. Human resources in the livestock sector have a role in sustainable agricultural development. The agricultural sector in the Badan Pusat Statistika (BPS) (2014) census data stated that in 2003 there were 31.2 million farming households while in 2013, there were 25.1 million households, so there was a decrease of 5.1 million farming households over 10 years. The number of agricultural farmers by age group stated that there was a decrease in farmers in the range of (<25) years with a percentage decrease of -24%, while in the productive age range, namely (35-44) years and (45-55) years, there was an increase. The highest increase was in the old age range, namely (>55) years with a percentage increase of 12%. The traditional issues with agricultural labor have been compounded by the increasing number of elderly farmers and the waning interest of younger workers in the sector. (Susilowati 2016). The study results corroborate indications of an aging farmer in Indonesia, where the young age group of 15-24 years does not affect the addition of labor in the agricultural sector, while the age group of 25-59 years has a positive effect (Yuniarti 2021).

The increase in demand for lamb meat each year is an opportunity for livestock farming. Still, the supply from smallholder farmers continues to decline, meaning that prices will tend to increase yearly. So that farmers with old age dominate the sustainability of the sheep farming business, this research is important to find out the younger generation's interest in working as sheep farmers after participating in the P4S LKP2U program in Madiun Regency. Previous research n socio-economic studies on the interest of the younger generation in the agricultural sector in Fauzi (2022) states that from a social perspective, the environment plays a supportive role in influencing the interest of the younger generation in the agricultural sector. Furthermore, this study aims to determine the youth's interest in working as a sheep farmer after attending training by looking at socio-economic factors and entrepreneurial factors as a comparison.

P4S LKP2U Madiun Regency is a Self-Help Agricultural and Rural Training Center training institution with agricultural and rural apprenticeship methods established, owned, and managed by the main actors and business actors independently, both individuals/groups. This study aimed to determine the younger generation's interest in working as sheep farmers after attending the P4S LKP2U program in Madiun Regency. Research on the next P4S training program is important to be able to increase youth interest in working as sheep farmers.

MATERIALS AND METHODS

Research Time and Location

The research was conducted at the Pusat Pelatihan Pertanian Pedesaan Swadaya (P4S) of Lembaga Kajian dan Pengembangan Potensi Umat (LKP2U) in Madiun Regency, East Java. The selection of the research location was carried out by purposive sampling (Sugiyono 2014). Data collection activities were carried out in December 2022.

Respondent Determination Method

The method of determining youth respondents who have attended training at P4S LKP2U uses non-probability sampling so that all population members have a different opportunity to be selected as research respondents. The total population of training participants was 100 people and a sample of 68 youth was obtained using the determination of the proportion of 16-30 years of age by the proportion of youth age (Law Number 40 of 2009 article 1 paragraph 1).

Data Analysis

The analysis used a Likert scale to measure entrepreneurial interest and demographic factors. Then it was analyzed using the SPSS Binary Logistic Regression program to determine the relationship between predictor and response variables. The response variable uses two dummy variables: youth who are interested in a job as a sheep farmer with a value of 1 and youth who are not interested in a job as a sheep farmer with a value of 0. The independent variables consist of demographic factors (age, gender, marital status, years of education, parents' income, parents' job, and family dependents) and entrepreneurial factors (personal, environmental, and sociological). The research model using the binary logistic regression formula is as follows:

$$Y = \beta 0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon i$$

Description:

Y	:	Youth interests
β0	:	Constant or intercept
β1, β2,… β8	:	Regression constant
X1	:	Age
X2	:	Gender
X3	:	Marital status
X4	:	Years of education
X5	:	Parents' job
X6	:	Parents' income
X7	:	Family dependents
X8	:	Personal
X9	:	Environment
X10	:	Social
εi	:	error term
i	:	1,2,3,…….,n

RESULTS AND DISCUSSION

Overview of P4S

P4S LKP2U is located in Wungu District, Madiun Regency, East Java. This self-help training institution is engaged in the livestock production sector of sheep commodities. Sheep farming commodities with a total population of BPS data (2019) in Indonesia of 17.769.084 heads while in East Java there are 1.416.969 heads, while in 2017 there were 1.362.062 heads so there was a percentage increase of 0.50% over 3 years.

The principles of self-help agricultural training institutions in Chapter 2 of the Ministry of Agriculture Regulation number 33/Permentan/Sm.230/7/2016 concerning Guidelines for the Development of Self-Help Agricultural Training Institutions are self-help, integration, partnership, usefulness, and sustainability. The background of the establishment of LKP2U is as follows:

a. Optimizing community service as a reflection of worship to God.
b. Unification of the potential of the people who have not been organized for the community's welfare.
c. An invitation to live dynamically and for the better in the agricultural sector

Development of the agricultural sector began in 1998 with a training approach based on organic farming by producing sheep manure.

Demographic Characteristics of Youth

Demographic characteristics included age, gender, marital status, years of education or level of education, parents' job, parents' income, and some family dependents. The distribution of demographic characteristics of the training youth is presented in Table 1.

The majority of youth age is in the range of 16-25 years, while in the age range of 26-30 years with a total percentage of 42%. The majority of youth respondents were male with a percentage of 82%. This shows that sheep business training is a double burden job, meaning that the workload received by one gender is more than that of the other gender. Marriage is a social status in society after leaving the single period. Most youths' marital status is unmarried with a percentage of 68%. The education level consists of primary (elementary and junior high school), secondary (high school/vocational school), and tertiary (diploma, bachelor's, master's, and doctorate) levels. Most youths have graduated from the secondary level with a percentage of 62%, while the highest level of youth is a bachelor's degree with a percentage of 38%. Parents' job is a supporting background for youth demographics. The majority of youth occupations are non-farmers (68%). Based on the interview results, the parents work as side farmers, livestock is used as savings. Parents' income is also an economic support for children to determine their education level and further employment. Most parents' income was less than the Upah Minimum Kabupaten/Kota (UMK) (76%). The income of both parents was summed up and then used as a reference for more or less than the UMK of the national domicile of the youth. The number of

Table 1. Demographic characteristics of youth trainees

Characteristics	Amount	Percentage
Age		
16-25	29	58%
26-30	21	42%
Gender		
Male	41	82%
Female	9	18%
Marital status		
Married	16	32%
Not married	34	68%
Education level		
Elementary	0	0%
Secondary	31	62%
Higher	19	38%
Parents' job		
Farmer	16	32%
Not a farmer	34	68%
Parents' income		
More than UMK	12	24%
Less then UMK	38	76%
Family dependents		
More than one	15	30%
Does not have	35	70%

family dependents in youth demographics is the number of family members without jobs or income, so they become a burden or dependents of the youth based on the family card. Most youths do not have family dependents (70%), while those with family dependents are husbands with dependents of wives, children, and parents on the family card. Research on agricultural families has predominantly overlooked the situation of farm children who, due to circumstances or personal decisions, willingly embrace the persistent gender-based societal norms associated with succession. Non-successors express their connections in significant ways, primarily through a shared and stable feeling of ownership (Cassidy and Grath 2014).

Youth Interest Analysis

Youth trainees follow a series at P4S LKP2U and determine their interest in working as sheep farmers. Demographic factors on interest include age, gender, marital status, years of education or the last level of education, parents' job, parents' income, and the number of family dependents using 50 youth respondents. The percentage of youth participants' demographics towards interest in livestock farming is presented in Table 2.

Youth demographic factors using seven categories that explain the percentage of interest in working as a sheep farmer as follows:

a. The percentage of youth aged on job interest shows that the 16-25 age category is high. This is because the early phase of youth age is a generation that has easy

Table 2. Percentage of youth demographics on interest in animal husbandry

Characteristics	Interest	No interest	Amount	Percentage
Age				
16-25	19	10	29	58%
26-30	16	5	21	42%
Gender				
Male	29	12	41	82%
Female	6	3	9	18%
Marital status				
Married	13	3	16	32%
Not married	22	12	34	68%
Education level				
Elementary	0	0	0	0%
Secondary	23	8	31	62%
Higher	12	7	19	38%
Parents' job				
Farmer	11	5	16	32%
Not a farmer	24	10	34	68%
Parents' income				
More than UMK	10	2	12	24%
Less then UMK	25	13	38	76%
Family dependents				
More than one	10	5	15	30%
Does not have	25	10	35	70%

access to information and knowledge about the potential employment of sheep farmers

b. The percentage of youth gender on job interest shows that the male category is the highest. This is because women who conduct training from only a portion of the population not interested in being sheep farmers consider the job commonly done by men.

c. The percentage of youth marital status on occupational interest shows that the unmarried category is the highest. This is because married youth are more responsible for supporting the family's financial needs, so working as a sheep farmer can be used as a main or side job.

d. The percentage of youth education level on job interest shows that the middle-level category (SMA/SMK) is the highest. This is because the higher the youth's education, the more likely they are to choose a job with suitable interests.

e. The percentage of youth's parents' job on job interest shows that the non-farmer category is the highest. This is because continuing to work as a breeder tends to be easier than working with youth who do not have a family background of breeders.

f. The percentage of youth parents' income on job interest shows that the less than MSE category is the highest. This is because high parental income can encourage

youth to continue their studies to higher education and get other jobs besides being a breeder.

g. The percentage of the number of family dependents of youth on job interest shows that the category of having no dependents is the highest. This is because youth with family dependents tend to be already working and working as sheep farmers to increase the family's financial needs.

Entrepreneurial interest is not innate but rather emerges and evolves in response to various influencing factors. The development of the decision to pursue entrepreneurship is influenced by a combination of personal traits and environmental factors that interact with one another (Bygrave 2004). Perceptual analysis statements were utilized to assess the level of interest in entrepreneurship. A positive or high interval scale results in high interest in a research variable. The results of testing entrepreneurial interest using a Likert scale with three factors influencing youth interest in employment as a sheep farmer are as follows:

a. Personal factors

There are five categories of personal factors in the questionnaire and the average score is 2.80 with the interpretation of agreeing with the proposed statement. The first category with a disagreed interpretation means that young trainees perceive that the expectations of other jobs are not the same or higher than the work of sheep farmers. The second category with a disagreed interpretation means negative perceptions dominate, so they are still interested in other jobs. The third category with the agree interpretation means that positive perceptions are dominant so that increasing age can increase interest in livestock farming jobs. The fourth category with a strongly agreed interpretation means that positive perceptions are dominant, so being a breeder is risky. The fifth category with a strongly agreed interpretation means that positive perceptions are dominant so that commitment forms a high attachment to work. The results of the Likert scale calculation of trainees' perceptions of the job as a breeder based on personal factors are presented in Table 3.

Table 3. Trainees' perceptions of working as a farmer based on personal factors

Category	Negative perception	Positive perception	Average score	Description
Other jobs besides farmer	32	18	2.30	Disagree
Job interest	37	13	2.04	Disagree
Age increases interest in work	18	32	2.82	Agree
Risk-taking courage	4	46	3.38	Totally agree
High commitment	2	48	3.48	Totally agree
Average score			2.80	Agree

b. Environmental factors

Environmental factors are broken down into five categories with an average score of 3.04. The first category with the interpretation of agree with means the perception of environmental factors in the community is a form of support in the work of breeders. The second category with a strongly agreed interpretation means that the dominant positive perception so that capital and resource factors are environmental factors that greatly support the work. The third category with the interpretation of agree means that the dominant positive perception is that training can increase interest in the work of breeders regarding applied science in the environment. The fourth category with the interpretation of agree with means the dominant positive perception so that youth get support with government regulations. The fifth category with a disagreed interpretation means that negative perceptions are dominant, so financing through credit is considered by youth training does not support interest in breeder jobs. The results of the Likert scale calculation of the trainees' perceptions of working as a breeder based on environmental factors are in Table 4.

Table 4. Trainees' perceptions of working as a farmer based on environmental factors

Category	Negative perception	Positive perception	Average score	Description
Community environment	8	42	3.04	Agree
Capital availability	5	45	3.26	Totally agree
Participation in business training	6	44	3.22	Agree
Ease of government regulation	6	44	3.20	Agree
Ease of financing or credit facilities	24	26	2.46	Disagree
Average score			3.04	Agree

c. Social factors

Social factors in the questionnaire's five categories get an average result of 2.90 with the interpretation of agreeing to the statements submitted. The first category with an agreed interpretation means the perception of social factors by increasing relationships to increase interest in the work of breeders. The second category with a strongly agreed interpretation means that the dominant positive perception is that the community supports job interests. The third category with the interpretation of agree with means that the dominant positive perception is that parents as the closest social factor to youth can motivate them in choosing a job. The fourth category with the interpretation of agree with means that the dominant positive perception is that youth with a family background of breeders can be used as a

reference in employment. The fifth category with an agreed interpretation means that the dominant positive perception is that experience in the business allows youth to know the procedures of a breeder's job. The results of the Likert scale calculation of trainees' perceptions of work as a breeder based on social factors are presented in Table 5.

Table 5. Trainees' perceptions of working as a farmer based on social factors

Category	Negative perception	Positive perception	Average score	Description
Farmer social relations	10	40	3.00	Agree
Community of breeders	11	39	3.06	Agree
Encouragement from parents	20	30	2.70	Agree
Family background of the farmer	15	35	2.86	Agree
Business experience	14	36	2.88	Agree
Average score			2.90	Agree

The Young Farmer Project Support initiative has been implemented to stimulate the participation of young individuals in agriculture within rural areas. While it has provided a much-needed boost, it is crucial for these supports to prioritize the establishment of economically sustainable businesses. Enhancing the entrepreneurial mindset of farmers, a vital factor in optimizing agricultural production, necessitates additional sector support, particularly directed towards entrepreneurial individuals. Simply providing grant awards to small businesses and enterprises that lack adequate production financing will not propel these supports beyond the realm of social assistance. Further research is required to explore effective strategies for fostering economic sustainability and entrepreneurial development within the agricultural sector, thereby maximizing the impact of young farmer support initiatives (Kan *et al.* 2018).

Binary Logistic Regression Analysis

The statistical analysis employed the binary logistic regression method using SPSS output to examine the influence of predictor variables on the response variable, specifically the inclination towards pursuing a career as a sheep farmer. Testing the feasibility of the regression model through the test stage is presented in Table 6.

The model eligibility test using SPSS output is used to measure the accuracy of the respondent sample regression function in interpreting actual data. The explanation of model feasibility is as follows:

a. The likelihood ratio test is found in the omnibus test with a significance value of 0.002, meaning it is smaller than the whole level ($\alpha = 0.05$). Based on the hypothesis results, reject H0, which means that at least one predictor

Table 6. Regression model feasibility test

Model Test	Value
Omnibus test	0.002
Hosmer and lemeshow	0.251
Nagelkerke R Square	0.597
Overall percentage	90

variable gets a significance value smaller than the whole level, affecting the response variable.

b. Goodness of fit or suitability test is expressed in Hosmer and Lemeshow getting a feasibility test value of 0.251. The regression model is accepted if the test value is greater than the real level ($\alpha = 0.05$), so the model in the study is feasible. The fit test is fulfilled, so the regression model fits the observational data.

c. The summary model is contained in the Nagelkerke r square value with a result of 0.597 with a conversion of 59.70%. The test determines the percentage of predictor variables able to explain and influence the response variable.

d. Classification table is contained in the overall percentage value with a percentage result of 90%. Testing is done to determine the amount of accuracy and accuracy in research. Regression models with higher values get better models in explaining predictions and model accuracy.

The response variable has two possibilities: dummy one for interested youth and dummy two for non-interested youth. The results of the binary logistic regression test model are presented in Table 7.

Table 7. Binary logistic regression analysis test results

Variables	B	Wald	P-value	Odds ratio
Demographic factors				
Age	0.710	4.852	0.028	2.034
Gender	-0.678	0,223	0.637	0.508
Marital status	9.584	7.261	0.007	14.533
Years of education	2.305	4.168	0.041	10.027
Parents' job	3.349	7.078	0.008	28.464
Parents' income	4.573	6.875	0.009	96.791
Family dependents	-5.472	8.936	0.003	0.004
Entrepreneurial Factors				
Personal	-4.840	5.079	0.024	0.008
Environment	-5.706	7.323	0.007	0.003
Social	3.338	5.896	0.015	28.151
Constant	1.878	0.050	0.823	6.541

The regression model is generated by looking at the Beta (β) coefficient and the following regression equation is formed:

$$Y = -1.878 + 0.710\ X_1 - 0.678\ X_2 + 9.584\ X_3 + 2.305\ X_4 + 3.349\ X_5 + 4.573\ X_6 - 5.472\ X_7 - 4.840\ X_8 - 5.706\ X_9 + 3.338\ X_{10} + \varepsilon$$

The whole level used in the research results is 95% and then can answer the direction of the relationship by looking at the P-value or significance level. The interpretation of the significant value of the relationship between the response variable, namely an interest in employment as a sheep farmer, and the predictor variables is as follows:

a. Demographic factors
   1) Age. If it is assumed that the other predictor variables are constant and there is a 1% increase in the age variable, interest will be increased by 0.71%. The significance value for age is 0.028 less than the whole level ($\alpha = 0.05$), so the age variable positively affects youth interest in working as sheep farmers.
   2) Marital status. If it is assumed that the other predictor variables are constant and there is a 1% increase in the marital status variable, there will be an increase in interest by 9.584%. The significance value for marital status of 0.007 is less than the real level ($\alpha = 0.05$) so that the marital status variable has a positive effect on youth interest in working as a sheep farmer.
   3) Length of education. If it is assumed that the other predictor variables are constant and there is a 1% increase in the length of education variable, there will be an increase in interest by 2.305%. The statistical analysis revealed a significant relationship between years of education and youth interest in pursuing careers as sheep farmers, as indicated by the obtained p-value of 0.041, which is below the predetermined significance level ($\alpha = 0.05$). These findings suggest a positive impact of educational attainment on the inclination of young individuals towards working in the sheep farming industry.
   4) Parents' job. If it is assumed that the other predictor variables are constant and there is a 1% increase in the parental work variable, interest will be increased by 3.349%. The significance value for parental employment is 0.008 less than the whole level ($\alpha = 0.05$), so the parental employment variable positively affects youth interest in working as a sheep farmer.
   5) Parents' income. If it is assumed that the other predictor variables are constant and there is a 1% increase in the parental income variable, interest will be increased by 4.573%. The significance value for parental income is 0.009 less than the whole level ($\alpha = 0.05$), so the parental income variable positively affects youth interest in working as sheep farmers.

b. Entrepreneurial factors
   Social. If it is assumed that the other predictor variables are fixed and there is a 1% increase in the social variable, interest will be increased by 3.338%. The significance value for social is 0.015 less than the whole level ($\alpha = 0.05$) so social variables positively affect youth interest in working as sheep farmers.

CONCLUSION

In summary, the findings of this study indicate that the participation of youth in the P4S LKP2U program results in a 70% interest rate among the participants. Demographic and entrepreneurial factors influenced youth interest in attending the training program towards working as a sheep farmer. Five predictor variables positively affect demographic factors: age, marital status, length of education, parents' job, parents' income, and entrepreneurial factors, namely social. Factors that have a negative effect are family dependents and personal and environmental.

SUGGESTION

Building upon the study's conclusions, the subsequent suggestions can be provided:
1. P4S LKP2U. Follow up on the results of youth training by increasing the percentage of youth who can turn desire and action to become sheep farmers.
2. Youth training. The research results on influential factors can be used as reference material to increase interest in a sheep farmer by looking at opportunities for entrepreneurial interest.
3. Continued research. Conduct a thorough training evaluation phase and testing of the AIDA concept to determine the uptake of the youth training.

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