

## **THE IMPACT OF ENVIRONMENT AND BEHAVIOR OF DAILY CATTLE BREEDERS ON CONSIDERATION OF INVESTORS IN INVESTING IN GALENGDOWO VILLAGE, JOMBANG**

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**Abstract:** The purpose of the study was to determine and analyze whether cow dung, environmental permits, and farmer behavior affect investors in investing in Galengdowo village. Design/Methodology/approach, the population in this study were all dairy farmers who had more than 5 dairy cows, while the number of samples used was 73 respondents. Data collection in this study was carried out by distributing research instruments using a Likert scale instrument and after the data was collected, data processing was carried out using the SPSS version 25 program. towards investors; (2) the environmental permit variable partially has a significant effect on investors, and (3) the breeder's behavior variable partially has a significant effect on investors. Based on the multiple linear regression equation, it can be explained as follows: First, the cow dung waste variable (X1) has the highest influence. Second, the farmer behavior variable (X3) has the lowest effect compared to the cow dung waste variable (X1) and the environmental permit variable (X2).

**Keywords:** Cow dung waste, Environmental permit, Frmer behavior, Investors

### **1. Introduction**

Economic growth is always associated with a fertile business climate. But in fact, this also does not escape the role of investment in economic recovery in Indonesia. Steps that must be taken include (1) this investment has a positive correlation with the country's infrastructure development, (2) this investment will also grow the business climate. and (3) the number of emerging businesses will open up more job opportunities (Ministry of Investment / BKPM, 2020). Investors, of course, before carrying out or deciding on an investment, usually have a tendency to pay attention to things to anticipate and even minimize the risk of investing (Anisah & Wicaksono: 2017). As the object of this research, namely in Teaching Hamlet, Galengdowo Village, the livelihood of the community is dairy farmers, it has been around for 21 years. Data for the last 3 (three) years on the number of dairy cows in Galengdowo Village can be seen in Table 1 below.

Table 1. Number of Dairy Cows and Milk Yield in 2019 – 2021

Year	Number of Cows (tail)	Milk Yield (liters)
2019	806	8.666
2020	903	9.933
2021	1.205	13.255

Source: Data processed in 2022.

Based on Table 1, every year the number of dairy cows tends to increase by around 33%,

every year and per dairy cow can produce milk on average 11 liters per day (Ardiansyah & Ma'rifah, 2020).

Table 2. Number of Dairy Farmers in Galengdowo Village in 2021

Number of Dairy Cows (tail)	Number of Breeders	Percentage (%)
1 – 5	283	76.08
6 - 10	65	17.47
11 – 15	8	2.15
16 - 20	9	2.42
21 – 25	4	1.08
> 35	3	0.81
Total	372	100

Source: Data processed in 2022.

Data on dairy farmers on average, each person has 1 to 5 cows or about 76.08%, based on Table 2 of the number of dairy farmers in 2021. Farmer behavior is all individual biological manifestations in interacting with the environment, while the ability to treat waste in the livestock sector has a close relationship with the social and economic aspects of the breeder (Aziz, et al., 2019). In fact, the processing of dairy cow dung waste has not been managed properly, so most of the dairy cow dung waste by the community is disposed of directly into river bodies (Maeanti, et al., 2013), as shown in Table 3 below.

Table 3. Average Dairy Cow Manure Waste Per Day

	Quantity (Tons)	Percentage (%)
Use for biogas production	3.360	27.88
Thrown into the river	8.690	72.12
Total	12.050	100

Source: Data processed in 2022.

The impact of the dairy cow dung waste, which is 72.12% of the community in Galengdowo, is discharged into the river body, thereby directly causing a decrease in environmental quality in Galengdowo Village and its impact on humans (Romansah, 2020). : 320 farmers as the main target = 86.02%, 40 farmers as a sideline = 10.75% and a small part for investment = 12 farmers (3.23%). Until now, the people of Galengdowo Village are limited in that their cattle produce only milk and there has been no effort to increase the added value of milk production, for example, products: Yoghurt; Cheese; Kefir; Butter; Caramel, Ice cream, etc. (Suciati & Safitri, 2021; Wihansah et al., 2018; Ayyash, et al., 2018). The obstacle that is still being faced today is that there is no tendency for investors to be interested in investing in Galengdowo Village as can be seen in Table 4 below.

Table 4.

Number of Investors with Legal Entities in 2019 – 2021 (Business Scale: MSME)

Scale enterprises	Number of Investors	Percentage (%)
Micro (number of employees: 1- 4)	0	0
Small (number of employees: 5 – 19)	2	100

Medium (number of employees: 20 – 99)	0	0
Total	2	100

Source: Data processed in 2022.

## **2. Literature Review**

### **2.1 Investors (Invest)**

Understanding investors are individuals, groups of people, institutions, or even companies that make an investment in other terms, an investor is a person or company that invests a certain amount of capital and expects a profit or return from the investment that has been made (Hendrian,2019). Investors want to invest to get economic, social, or other benefits for a certain period of time (Godker & Mertins, 2018; Mohamad, Tahir, & Ahmad, 2019)

According to Kasmir and Jakfar (2012), investment can be interpreted as an investment in an activity that has a relatively long period of time in various businesses. The government in order to realize a policy for investment is conceptualized a general investment plan (Husnul & Yanuarsi,2021). The investment must be part of the implementation of the national economy and be placed as an effort to increase national economic growth, create jobs, increase sustainable economic development, increase national technological capacity and capability, and expands ourage people's economic development, as well as in the context of realizing community welfare in an economic system that is sustainable. competitive (Husnulwati & Yanuarsi, 2021). Alemany, and Villanueva (2015), have identified three criteria or indicators that are most important for early-early-stage investor sectors evaluating: (1) the quality of the entrepreneurial team (founders), (2) market attractiveness (market potential), and (3) the characteristics of the product in question.

### **2.2 Cow Manure Waste**

According to Saputra, et al. (2016), the livestock sector is one of the important fields and needs to be developed. One form of livestock business that has great potential to be developed is cattle which have the advantage of being easier to maintain. According to Muharsono. (2021), cattle business does not only produce output in the form of chicks, meat, or milk but can cause negative externalities from livestock waste generated by livestock activities such as (1) feces (feces), (2) urine, (3) leftover feed, (4) as well as water from cleaning livestock and cages that cause pollution, including water pollution, and air pollution (Aziz, et al., 2019). One cow every day produces dung in the range of 10 Kg per day or 2.6 - 3.6 tons per year. Cattle business activities in Galengdowo Village are still concerned with livestock productivity and have not maximized considering environmental aspects of the impact of activities on the environment (Adityawarman, et al. 2015)

### **2.3 Environmental Permit**

Environmental Permit is a permit granted to every person who conducts a business and/or activity that is required to have (1) AMDAL or (2) UKL-UPL mandatory and or (3) SKPPL mandatory in the context of environmental protection and management as a prerequisite for obtaining a business license. Amdal is used as an effort to reduce negative impacts and risks to the level that may occur and manage these risks through environmental legal mechanisms and systems. Keywords and Environmental Impact Analysis, better known as AMDAL (Febriyanti, et al., 2021; Yakin, 2017).

Government Regulation No. 27 of 2012 concerning Environmental Permits as an implementation of Law no. 32 of 2009 concerning Environmental Protection and Management (UUPPLH) is an adjustment step and existing laws and regulations are new developments that still need to be discussed and become important discussions related to the urgency of AMDAL as the formation of environmental law. (Sukananda & Nugraha, 2020; Hasibuan, 2018).

### *2.3 Breeder's Behavior*

The definition of behavior is all the biological manifestations of individuals in interacting with the environment, from the most visible behavior to the invisible, from what is felt to the most that are not felt (Phan & Zhou, 2014). Poor behavior in handling waste can have bad consequences, including decreasing the beauty of the environment, unpleasant odors, reducing the quality of water, soil, air, and can cause health problems (Khoiron, 2012).

The handling of dairy cattle waste that is still not good has something to do with the behavior of farmers in handling their livestock waste. According to (Fitriani, et al., 2018; Andiani et al., 2021), the indicators of farmer behavior include: first, the knowledge indicator is at the synthesis stage, meaning that the respondent is able to express ideas in product activities with milk raw materials; second, the attitude indicator is at the characteristic stage, meaning that they can believe in the importance of product diversification through the use of milk products which can later increase the added value or income for farmers, and third, the skill indicator is at the articulation stage, meaning that respondents are familiar with the work steps of making products. from milk raw materials.

Behavior is influenced by three factors, namely: (1) predisposing factors manifested in knowledge, attitudes, beliefs, values, socio-demography (education, age, gender), and so on, (2) driving factors, manifested in speech, attitudes and actions of health workers, the environment, livestock, family, friends, community leaders, and the existence of an award and sanction, and (3) supporting factors that are manifested in the availability of facilities, in this case, livestock waste handling facilities (equipment, sewerage, eligible shelter).

## **3. Research Method**

This study uses quantitative methods. This research was conducted by distributing questionnaires as a means of collecting data so that it can be analyzed statistically. Quantitative research is useful for testing and examining the relationship between variables to make it easier to measure and analyze so that the truth can be known from the research studied (Fatihudin, 2020). The calculation technique in the questionnaire will use a Likert scale. The Likert scale is a scale used to measure the attitudes, opinions, and perceptions of a person or persons about social phenomena (Sugiyono, 2019).

### *3.1 Research Population and Sample*

The population is a generalization area consisting of objects/subjects that have certain qualities and characteristics determined by researchers to be collected and then drawn conclusions (Sugiyono, 2019). The population in this study were all dairy farmers in Galengdowo Village, Jombang. According to Ardiansyah and Ma'rifah (2020), the number of dairy farmers in Galengdowo Village was divided into 2 categories, namely:

- a. Small-scale breeders (< 5 heads) = 283 people
- b. Large scale breeders (> 5 heads) = 89 people

The sample itself is part of the population, with the number and characteristics of the

population itself (Sugiyono, 2017). If the population is large, it is impossible for the researcher to study everything in the population, due to limited funds, manpower, and time. Sampling technique is a sampling technique. To determine the sample to be used in research, there are various sampling techniques. This research was conducted with a non-probability sampling technique. To determine the number of samples in this study, the Slovin formula is used as follows:

$$n = \frac{N}{(1 + N e^2)}$$

Remarks:

- n = Total of sample
- N = Total of population
- e = Level of error (5%)

$$\begin{aligned} \text{Total of sample} &= 89 / [1 + (89 \times 0.05^2)] \\ &= 89 / [1 + (89 \times 0.0025)] \\ &= 89 / 1,2225 \\ &= 72.80 \approx 73 \text{ respondent.} \end{aligned}$$

While the sampling method uses purposive sampling because the sampling members are selected according to certain criteria (Ghozali, 2018),

## 4. Results and Discussion

### 4.1 Results

The descriptive research variable is a description of each variable, namely cow dung waste (X1), environmental permits (X2), farmer behavior (X3), and investors (Y) which were analyzed using descriptive analysis.

Table 3.1 Cow Manure Waste.

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std.Deviation
X1.1	73	1.00	3.00	1.6301	.61253
X1.2	73	1.00	3.00	1.5890	.61994
X1.3	73	1.00	3.00	1.5753	.59902
X1.4	73	1.00	3.00	1.6849	.54966
Total X1	73	4.00	9.00	6.4795	1.48239

Source: Data processed in 2022.

Table 3.2 Environmental Permit

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
X2.1	73	1.00	3.00	1.5342	.57932
X2.2	73	1.00	3.00	1.7397	.62422
X2.3	73	1.00	3.00	1.6164	.61532
X2.4	73	1.00	3.00	1.7808	.62908
Total X2_	73	4.00	9.00	6.6712	1.48188

Source: Data processed in 2022.

Table 3.3 Farmer Behavior

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
X3.1	73	1.00	3.00	1.6849	.59807
X3.2	73	1.00	3.00	1.5479	.57834
X3.3	73	1.00	3.00	1.6986	.59360
X3.4	73	1.00	3.00	1.6438	.69462
X3.5	73	1.00	3.00	1.6027	.57105
Total X3	73	5.00	11.00	8.1781	1.66952

Source: Data processed in 2022.

Table 3.4 Investors  
(Invest)

<b>Descriptive Statistics</b>					
	N	Minimum	Maximum	Mean	Std. Deviation
Y.1	73	2.00	4.00	3.2603	.64609
Y.2	73	2.00	4.00	3.1781	.71380
Y.3	73	2.00	4.00	3.2603	.64609
Y.4	73	2.00	4.00	3.1507	.72017
Y.5	73	2.00	4.00	3.1918	.71991
Total	73	12.00	20.00	16.0411	2.23258

Source: Data processed in 2022.

#### 4.1.1 Multiple Linear Regression Equation Test Results

The following are the results of multiple linear regression tests shown in Table 3.5 below:

Table. 3.5 Multiple Linear Regression Test Results

<b>Coefficient</b>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.537	.811		8.062	.000
	X1	.494	.171	.328	2.891	.005
	X2	.642	.180	.426	3.565	.001
	X3	.247	.107	.185	2.301	.024

a. Dependent Variable: Y

The following are the results of the resulting regression equation:

$$Y = 6.537 + 0.494 X1 + 0.642 X2 + 0.247 X3$$

Based on the multiple linear regression equation, it can be explained as follows:

- First, that the cow dung waste variable (X1) has the highest influence
- Second, the farmer behavior variable (X3) has the lowest effect compared to the cow dung waste variable (X1) and the environmental permit variable (X2).

#### 4.1.2 Hypothesis Test

A partial test (t-test) was conducted to find out how much influence one independent



variable partially has on the dependent variable. If the significance value of Sig. < 0.05, the independent variable is partially independent of the dependent variable and based on Table 3.5, the following results are obtained:

- a. The cow dung waste variable (X1) has a value of sig = 0.005 < 0.05, so the conclusion obtained is that the cow dung waste variable has a partially significant effect on the investor variable.
- b. While the environmental permit variable (X2), has a value of sig = 0.001 < 0.05, then the conclusion obtained is that the environmental permit variable has a partially significant effect on the investor variable.
- c. Then, for the breeder's behavior variable (X3), having a value of sig = 0.024 < 0.05, the conclusion obtained is that the farmer's behavior variable has a partially significant influence on the investor variable.

## **4.2 Discussion**

### *4.2.1 Effect of Cow Manure on Investors*

The results of the first hypothesis test show that cow dung waste (X1) has a significant relationship with investors (Y) in Galengdowo village, Jombang. In this case, it can be said that the more cow dung waste has not been managed properly, the higher the possibility for investors to consider investing in Galengdowo village, Jombang.

### *4.2.2 Effect of Environmental Permits on Investors*

The results of the second hypothesis test show that environmental permits (X2) have a significant relationship with investors (Y) in Galengdowo village, Jombang. In this regard, it can be said that the more environmental permits are not important for cattle breeders, the higher the possibility for investors to consider investing in Galengdowo village.

### *4.2.3 Effect of Beef Breeder's Behavior on Investors*

The results of the third hypothesis test show that the behavior of farmers (X3) has a significant relationship with investors (Y) in Galengdowo village, Jombang. In this regard, it can be said that the higher the behavior of cattle farmers not paying attention to environmental waste, the higher the possibility that investors will consider investing in Galengdowo village, Jombang.

## **5. Conclusions and Suggestions**

Based on the results of the research that has been done, the following are

### *5.1. Conclusion*

1. Cow dung waste partially has a significant effect on investors' considerations of investing in Galengdowo village, Jombang.
2. Environmental permits, partially have a significant effect on investors' considerations of investing in Galengdowo village, Jombang.
3. The behavior of farmers partially has a significant effect on investors' considerations of investing in Galengdowo village, Jombang

### *5.2 Suggestions*

For further research, it can be done by utilizing the same variable or other variables that have not been used in this study. In terms of the object of research, mass researchers.

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