



The Relationship of Traders' Participation, the Role of Managers, and Policies with Waste Management

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ABSTRACT

Waste is something that is not used, is not worn, is not liked, or is something that is thrown away that comes from human activities and does not happen by itself. Based on a survey conducted by researchers at Pancur Batu Market, Deli Serdang Regency, traders do not participate enough in waste management, traders still throw waste carelessly and do not collect and separate waste according to type, and there is a lack of information provided by market managers regarding market management policies. This research aims to determine the relationship between trader participation, the role of managers and policies in waste management at Pancur Batu Market, Deli Serdang Regency. This type of research is quantitative research with a cross sectional design. The population of this research was 600 traders at Pancur Batu Market, Deli Serdang Regency. The research sample was 86 traders using proportional random sampling techniques. Data were analyzed univariately and bivariately using the chi-square test. The results of this study indicate that trader participation has value ($p = 0.024 < 0.05$), the role of managers ($p = 0.030 < 0.05$), and policy ($p = 0.000 < 0.05$) with waste management at the Pancur Batu Regency Market Deli Serdang in 2024. It is recommended that the Pancur Batu market management provide information regarding waste management policies and provide strict sanctions if traders throw rubbish carelessly.

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1. Introduction

In Indonesia, the waste problem is a very complicated problem because the public lacks understanding of the impacts caused by waste and does not ensure proper and adequate waste disposal. According to the World Health Organization (WHO) waste is something that is not used, is not used, is not liked or something that is thrown away that originates from human activities and does not occur by itself (Yulianti et al., 2023). According to the Government Regulation of the Republic of Indonesia Number 27 of 2020, waste is the remains of daily human activities and/or natural processes in solid form. Waste is solid waste material from household activities, markets, offices, accommodation, hotels, restaurants, industry, rubble from building materials and scrap metal used from motor vehicles (Pangesti & Wijayanti, 2023). Waste is a by-product of human activity that has been used. Solid waste that is not managed properly has been proven to often cause environmental and health problems for humans. These include aesthetic problems, blocked waterways which can cause flooding, fire hazards, environmental pollution, and an increase in vector-borne diseases (Sakir, 2023).

According to the World Bank report, China is the largest waste producing country, reaching 395.1 million tons in 2020. Based on data from the National Waste Management Information System (SIPSN) of the Ministry of Environment and Forestry (KLHK), Indonesia produces 35.93 million tons of waste generation throughout the year 2022. The largest waste generation in 2022 will come from Central Java province, reaching 5.76 million tons. Unmanaged waste still reaches 37.51% or 13.47 million tons. These figures show an increase of 22.04% compared to 2021 (Karnowati & Yuwono, 2023).

According to the Head of the Environmental Service (DLH), in North Sumatra Province there are around 10 thousand tonnes/day or 3.68 million tonnes/year of landfill waste. Meanwhile, the population of Deli Serdang Regency will increase to 2.156 million in 2021, according to data from Central Statistics Agency (BPS). This number is expected to continue to increase until 2024. As the population increases, of course waste accumulation will increase. Where, in 2021, the annual amount will reach 408,129.86 tons (ZULFA, 2023a). The current research differ from previous research Research conducted by Tri Waluyo with title "Optimization of Market Vegetable Waste Composting Sunday as a Source of Organic Fertilizer" has similarities with this research, we both discuss organic waste at Pasar Minggu. However The difference in this research is the focus on performance selected by researchers according to their respective fields. Research conducted by Laelani Dina, Nur Hilal, Agus Subagiyo with the title "Analysis of Related Factors With Trader Behavior in Waste Management in Segamas Market, Purbalingga Regency" has a difference in using the methodology, previous research using observational with a cross approach sectional with quota sampling research design and on The current research uses a qualitative methodology with case study approach with a purposive research design sample.

Waste is a public health problem that is often found in public places, especially in markets. According to the source, the majority or 38.4% of national waste comes from household waste and traditional market waste which contributes quite a large figure, namely 27.7% (Dina et al., 2020). Based on this data, the market is the second largest waste contributor after households. According to the Minister of Health of the Republic of Indonesia Number 17 of 2020, people's markets are business places that are organized, built and managed by the Central Government, Regional Government, Private Sector, State-Owned Enterprises and/or Regional-Owned Enterprises, which can be in the form of shops, kiosks, stalls and tents owned/managed by small and medium traders, non-governmental organizations, or cooperatives as well as micro, small and medium enterprises with a process of buying and selling goods through bargaining (Bustomi et al., 2022).

The market is one of the most important institutions in economic institutions, the market appears as a center of exchange, trade as the actual exchange activity and money as a means of exchange, the market is also a meeting place for sellers and buyers who serve buying and selling transactions (Sitanggang & Harsasto, 2019). The amount of waste produced by market waste is increasing along with the increase in trading activities and the number of traders and buyers as well as the diversity of goods and integrated waste management sites leading to the final processing site. Handling of waste management systems in the market must be implemented effectively and efficiently, so that maximum results can be achieved as expected by the community and government (Kurniawati & Khosiah, 2019). Market waste management is not only the responsibility of the government alone, but is largely determined by the level of participation of market traders (NURHALIMAH, 2019).

What causes the waste problem in Indonesia to become increasingly complicated is the increasing standard of living of the community which is not accompanied by knowledge about waste and also lack of community participation in maintaining cleanliness and disposing of waste in its proper place (Gloria et al., 2019). The attitude of traders towards cleanliness will influence the high participation of traders in waste management so that the better the attitude of traders towards environmental cleanliness, the better the participation of traders in managing waste will be and to improve market waste management, community participation plays a very important role, because apart from government support by providing space (Kurniawati & Khosiah, 2019). general waste disposal and providing land for final storage (TPA) and temporary storage areas (TPS), traders must also participate in waste management at least where they sell by making their own trash cans and separating organic

and non-organic waste into two trash cans. different and not throwing rubbish in every flowing ditch or ditch and also near where they sell (MONINTJA et al., 2022).

Based on research conducted by Syahdatu Nabila Indana Zulfa in 2022 regarding "The Relationship between Knowledge, the Role of Managers, and the Availability of Trash Bins with Trader Participation in Waste Management at the Caruban Public Market". This research uses a cross sectional study design. The population in this study were all Caruban Public Market traders, totaling 160 traders with a sample of 113 respondents using a simple random sampling technique. The test used was the chi square test, obtaining a value of $p = 0.000$ ($p < 0.05$). This means that there is a relationship between the role of market managers and the availability of rubbish bins and the participation of traders in waste management (ZULFA, 2023b).

The expected benefits of the research in the field of science It is hoped that this research will provide academic benefits, namely for the development of knowledge related to Waste Banks as one way to deal with waste. It is hoped that the research results can become a reference in matters evaluate the implementation of the Waste Bank program in terms of perceptions and community participation oriented towards increasing roles community and is expected to be a positive input for the villages who have not implemented the Waste Bank program can do so carry it out.

The urgency of this research is that much of the waste consumed by urban residents does not decompose easily, especially plastic. The increasing accumulation of plastic waste causes serious pollution. New plastic bags can begin to decompose for at least 20 years in the soil. If the plastic bag is in water, it will be even more difficult to decompose. Some people are aware of this condition by increasing efforts to reduce plastic waste. One of the waste management efforts is the Waste Bank. As of 2015, 3533 Waste Bank units have been established in Indonesia, which have succeeded in managing 5,550,333 kilograms of waste every month, with an economic potential value of 34 billion every month with a total of 174,413 customers. Seeing this condition, a long-term plan is very necessary and urgent for the City Government to prioritize landfill conversion. Apart from that, we are starting to develop the concept of smart city, sustainable environmental city, green city, green and blue economy.

2. Research Method

This research is an analytical survey, namely to see the cause and effect relationship between variables. Trader participation, the role of managers and policies as independent variables and waste management in the market as the dependent variable. The research design used was cross sectional. The location of this research was carried out at Pancur Batu Market, Deli Serdang Regency, North Sumatra in 2024. The population in this study was all 600 traders who traded at Pancur Batu Market, Deli Serdang Regency. Based on the Slovin formula, the results obtained were 86 people so that the sample in this study consisted of 86 traders at Pancur Batu Market, Deli Serdang Regency. In accordance with the research objectives, this research sample was taken using proportional random sampling technique, the data collected is processed by computer. The data analysis carried out was univariate to bivariate analysis.

3. Analysis And Result

Research results are used to describe the data carried out on each variable from the research results. The respondents sampled in this research were traders at Pancur Batu Market. The characteristics of respondents in this research include:

Table 1.
Frequency Distribution Based on Gender, Age, Length of Trading, Paying Retribution of Respondents at Pancur Batu Market, Deli Serdang Regency in 2024

Variabel	Total	
	F	%
Gender		
Man	46	53,3
Woman	40	46,7
Age		
26 – 35 years	16	18,0

Variabel	Total	
	F	%
36 – 45 years old	37	43
46 – 55 years old	26	30,1
56 – 65 years old	7	8,1
long time trading		
15 years	28	32,6
6 – 10 years	41	47,7
11 – 15 years	17	19,8
Pay Retribution		
Yes	68	79,1
No	18	20,9

Based on the table above, it can be seen that the gender of traders at Pancur Batu Market, Deli Serdang Regency in 2024 will be 46 men (53.5%) and 40 women (46.5%). In the table above, it can be seen that the age of traders at Pancur Batu Market, Deli Serdang Regency in 2024, the majority of whom are 36 - 45 years old, is 37 people (43.0%). Based on the table above, it can be seen that 41 people (47.7%) have been trading at the Pancur Batu Market in Deli Serdang Regency in 2024, on average, 6 - 10 years. It can be seen that there were 68 traders (79.1%) who paid retribution at Pancur Batu Market, Deli Serdang Regency in 2024 and 18 (20.9%) traders who did not pay retribution.

Table 2
Frequency Distribution of Respondents Based on Participation, Manager's Role, Policy and Trader Waste Management at Pancur Batu Market, Deli Serdang Regency, 2024

Variabel	F	%
Participation		
Not Enough	57	66,3
Good	29	33,7
Manage's Role		
Not Enough	65	75,6
Good	21	24,4
Policy		
Not Enough	54	62,8
Good	32	37,2
Waste Management		
Not Enough	54	62,8
Good	32	37,2

Based on Table 2, it can be seen that of the 86 respondents, 57 people (66.3%) had poor participation and 29 people (33.7%) had good participation. Based on Table 4.12, it can be seen that of the 86 respondents with poor management roles, 65 people (75.6%), and 21 people (24.4%) with good management roles. Based on Table 4.14, it can be seen that of the 86 respondents with poor policies, 54 people (62.8%), and 32 people (37.2%) with good policies. Based on Table 4.16, it can be seen that of the 86 respondents with poor waste management, 54 people (62.8%), and 32 people (37.2%) with good waste management. Bivariate analysis is used to analyze the relationship between independent variables, namely trader participation, the role of managers and policies in market waste management with the results in the following table

Table 3.
Cross Tabulation of the Relationship between Traders' Participation in Waste Management at Pancur Batu Market, Deli Serdang Regency in 2024

No	Participation	Waste Management				Total		Sig-p
		Good		Not Enough		F	%	
		f	%	f	%			
1.	Good	16	18,6	14	16,3	30	34,9	0,035
2.	Not Enough	16	18,6	40	46,5	56	65,1	
Total		32	37,2	54	62,8	86	100,0	

The results of the cross tabulation in table 4.17 can be seen from 86 respondents, the most participation was good as many as 30 people (34.9%) with good waste management as many as 16 people (18.6%) and poor waste management as many as 14 people (16.3%), and poor participation as many as 56 people (65.1%) with good waste management as many as 16 people (18.6%) and poor waste management 40 people (46.5%). Based on the results of the fisher's exact test, the p value = 0.035 < 0.05 was obtained, so it can be stated that there is a relationship between participation and waste management at the Pancur Batu Market, Deli Serdang Regency in 2024.

Table 4.
Cross Tabulation of the Relationship between Respondents' Management Roles in Waste Management at Pancur Batu Market, Deli Serdang Regency in 2024

No	Role Of Manager	Waste Management				Total		Sig-p
		Good		Not Enough		F	%	
		f	%	f	%			
1.	Good	12	14,0	9	10,5	21	24,4	0,039
2.	Not Enough	20	23,3	45	52,3	65	75,6	
Total		32	37,2	54	62,8	86	100,0	

Discussion

The Relationship between Trader Participation and Waste Management at the Pancur Batu Market, Deli Serdang Regency in 2024. Based on the results of the Fisher's exact test, it shows that there is a p value of 0.024 and therefore the p value is (0.035 < 0.05). It was concluded that there is a relationship between trader participation and waste management at Pancur Batu Market, Deli Serdang Regency in 2024.

The results of this research are in line with Samuel Marganda's research entitled "The Relationship between Knowledge, Attitudes and Participation of Traders in Waste Management at the Batang Kuis Market". The research results show that there is a relationship between participation and value (p value = 0.000 < 0.05) with waste management (Marganda & Ashar, 2018). According to Notoatmodjo, participation is the best approach or way to solve health problems in developing countries, because participation is the cheapest way in terms of resources and funds and participation will make everyone learn to be responsible for their own health, apart from that through The participation of each member of society is stimulated to learn to organize and take on roles that suit their respective abilities (Assa et al., 2021).

Factors that become obstacles in waste processing are a lack of knowledge about waste processing, poor habits in waste management, there are still many habits of throwing waste carelessly, and community participation in maintaining cleanliness is still lacking (Sakir, 2023). Waste management in markets is also influenced by trader participation. Traders' participation in waste management is the voluntary involvement of traders in maintaining environmental cleanliness and waste management (Dien et al., 2023).

According to researchers' assumptions, trader participation in good waste management at Pancur Batu Market is still lacking. Traders feel that the cleaners should be responsible for managing waste in the market markets where the average trader already pays retribution every week so that

traders are less concerned about the participation they have to provide for better waste management and traders think that traders' participation in waste management is enough to pay market retribution. There are still many traders who do not participate in waste management, such as not collecting rubbish in bins and not sorting the types of waste, as a result, a lot of rubbish is scattered and piled up in the market area, giving rise to an unpleasant odor.

The Relationship between the Role of Managers and Waste Management at the Pancur Batu Market, Deli Serdang Regency in 2024. Based on Fisher's exact results, it shows that there is a p value of 0.024 and therefore the p value is ($0.039 < 0.05$). It was concluded that there is a relationship between the role of the manager and waste management at the Pancur Batu Market, Deli Serdang Regency in 2024.

The results of this research are in line with Syahdatul Nabila's research with the title "Relationship of Knowledge, Role of Managers, and Availability of Trash Bins with Trader Participation in Waste Management at the Caruban Public Market." The research results show that there is a relationship between the role of managers and value ($p \text{ value} = 0.000 < 0.05$) with participation in waste management (Assa et al., 2021).

Market managers are parties who accommodate and control market conditions and situations. Market cleanliness is greatly influenced by the role of market managers. The role of market management can be in the form of policies that regulate market cleanliness (Haq et al., 2020). With socialization regarding waste management, It is hoped that the level of awareness and concern for waste management will result from this socialization (Azzikri & Pitono, 2024).

According to researchers' assumptions, the role of managers at Pancur Batu Market is still lacking because market managers never provide information about good waste management to traders. According to several traders, market managers also never provide information on how to manage waste properly. Most traders do not carry out good waste management due to lack of supervision from managers every day. The role of market managers is very important to increase traders' participation in waste management, so it is hoped that managers will be more concerned with the waste produced by traders. The management should impose sanctions if someone does not manage waste properly and carry out supervision to encourage traders to manage waste properly.

4. Conclusion

Based on the results of the research that has been carried out, the conclusions are: There is a relationship between trader participation and waste management at Pancur Batu Market, Deli Serdang Regency in 2024 with a value of $p = 0.035 < 0.05$. There is a relationship between the role of the manager and waste management at Pancur Batu Market, Deli Serdang Regency in 2024 with a value of $p = 0.039 < 0.05$. There is a relationship between policy and waste management at Pancur Batu Market, Deli Serdang Regency in 2024 with a value of $p = 0.000 < 0.05$. To the Pancur Batu market management to implement regulations regarding market cleanliness, provide information regarding good waste management and provide strict sanctions if traders throw rubbish carelessly. For traders at Pancur Batu market to have their own trash bins before they are picked up by market cleaners. So that market cleanliness can be maintained and provide comfort for buyers when shopping. The contributions to this research are: In conclusion, participants were reminded of the important messages from each speaker. They were invited to contribute to reducing the production of new waste. When producing waste, sorting and recycling are not only good for the environment, but also have a positive impact on public health. All participants are expected to be able to utilize the knowledge and insights gained from taking concrete steps in managing waste more wisely for further awareness in maintaining environmental cleanliness and health. The contributions in this research are: It is hoped that the results of this research can provide basic information consideration, support, and contribution of thought to decision makers in business to increase income and carry out development waste management efforts. It is hoped that the research implications based on the findings of this research can become a reading resource and friends' additional theoretical studies in learning about trader compliance, waste management, as well as trader compliance in waste management. Besides It is theoretically hoped that this research will be able to

provide deeper benefits improve waste management in our respective environments. Based on the findings of this research, it is hoped that this can be a lesson

which is important for all of us in managing waste well, so that we can reduce pollution that often occurs in the environment, especially for residents which is around the market. For this reason, we as good citizens should care more about the environment, both safety and cleanliness. Because a comfortable place to live is heaven for us on earth. Furthermore, hopefully this research can be a driving force for readers both ordinary people and the government have the right to care more by managing waste and overcoming frequent waste problems disturbing residents, resulting in flooding and environmental pollution. There are natural limitations to the research several limitations that researchers obtained during the research process taking place, namely: During the research there were some doubts about the information obtained from the informant's answers to which the informant answered questions with answers that do not match the circumstances actually in the field. During field research it is difficult to find visitors willing to conduct interviews on research causes visitors who want to go home quickly. Suggestions made to future researchers require further and in-depth research to find out pollution that may be caused as well observing the phenomenon of both generative and permanent health impacts so that negative externalities can be suppressed. Apart from that, further investigation regarding direct income is needed that is accepted by the community from the existence of a landfill that has not yet been established known apart from scavengers and livestock breeders.

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