

THE INFLUENCE OF EDUCATIONAL LEVEL, TYPE OF JOB, AND COMMUNITY INCOME ON COMMUNITY PARTICIPATION IN WASTE MANAGEMENT IN WEST PAYAKUMBUH DISTRICT

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ABSTRACT: Effective urban waste management is crucial, encompassing various dimensions such as financial, technical, legal, environmental, spatial planning, socio-cultural aspects, and stakeholder involvement. The household waste management landfill in Regional Payakumbuh is currently overcapacity, and the city lacks an independent waste landfill. This quantitative research utilizes Partial Least Squares Structural Equation Modeling (PLS-SEM) version 3.0 to analyze data, a method within Structural Equation Modeling (SEM). The study population consists of 120 households in the Talang Payakumbuh Barat neighborhood, selected using proportional random sampling. Results indicate that the education level of the West Payakumbuh community positively influences waste management. This is supported by a P value of 0.044 (< 0.05), with a t-statistic of 1.786 (lower than 1.96). The original sample value of 0.188 is positive, leading to the acceptance of hypothesis H1. Similarly, the type of occupation significantly and positively influences community participation in waste management in Payakumbuh, supported by a P value of 0.022 (< 0.05) and a t-statistic of 4.351 (> 1.96). The original sample value of 0.463 is positive, confirming the acceptance of hypothesis H2. Additionally, community income has a positive and significant impact on their participation in waste management in Payakumbuh, as evidenced by a P value of 0.031 (< 0.05), a t-statistic of 2.292 (> 1.96), and an original sample value of 0.031. Hence, hypothesis H3 is accepted. Community participation in waste management in Payakumbuh is also influenced by social and cultural factors. The diversity in educational backgrounds and occupations presents unique challenges, contributing to the creation of a clean and comfortable city environment. This research emphasizes the need for integrated waste management strategies and community involvement to address the waste disposal challenges faced by Payakumbuh.

Keywords: Education level, income, employment, community participation

1. INTRODUCTION

Waste management in the community is important to maintain environmental cleanliness and health. In some places, waste management is still not in accordance with environmentally sound methods and techniques. Environmentally sound waste management is needed to reduce these negative impacts. In Indonesia, there are laws and regulations relating to waste management, such as Law No. 18 of 2008 concerning waste management and Law no. 32 of 2009 concerning Environmental Protection and Management [1-6]. One of the main problems in waste management is the processing of plastic waste, which is one of the most dangerous types of waste for the environment. Plastic waste takes up to 1000 years to decompose, and if not processed properly, can pollute the environment and have a negative impact on health. Therefore, innovative and creative waste management ideas

are needed to have a big impact on Indonesian society.

A good urban waste management and disposal system is crucial. Urban waste management is a complex matter, covering various dimensions such as financial, technical, legal, environmental, environmental planning, socio-cultural and stakeholder involvement. Each dimension is closely related and provides feedback to each other. However, it is very unfortunate when waste management that is already running very well is not fully supported by the community, this is caused by a lack of awareness [7-8], the level of education and income of the local population.

The amount of waste generated in Indonesia in 2021 will reach 65,800,000 tons per year [8-10]. Based on data from the Regional Development Planning Agency, the volume of waste production in 2020 in Payakumbuh City was 644,692 tons per

day. Meanwhile, the volume of waste handled in the same year was 583,800 tons per day. The Payakumbuh city regional government has issued Payakumbuh Mayor Circular Number 660/14/SE/WK-PYK-2022 concerning Waste Reduction Efforts in Payakumbuh City which aims to follow up and reinforce Payakumbuh Mayor Regulation Number 89 of 2018 concerning Regional Policies and Strategies in Waste Management Household and similar household waste. Besides that, the condition of the Payakumbuh Regional TPA is currently over capacity, while Payakumbuh City does not yet have an independent waste TPA.

Various efforts have been made to manage this waste, including by selecting organic and inorganic waste. Next, inorganic waste such as plastic bottles, paper, cardboard and the like is handed over to collectors or waste banks. Meanwhile, we can make organic waste into fertilizer by composting, where composting can be done using 3 methods, including: Hole Method (if you have empty land), Sack Method and Composter Method. However, it is very unfortunate that the level of public awareness in maintaining cleanliness is still relatively low, especially seen in the undisciplined way of disposing of rubbish. Therefore, outreach and education to the public about the importance of maintaining cleanliness and the correct way to dispose of waste is very necessary.

Based on the results of observations carried out in the city of Payakumbuh, rubbish was found scattered especially in the afternoon around markets, housing and public places. The rubbish found is food wrappers, plastic, etc. The results of interviews with several Payakumbuh residents stated that every day the community's rubbish is brought in as much as 2 trucks/day, sometimes even up to 3-4 trucks/day. Researchers also made observations on people's behavior in disposing of organic and inorganic waste in only one place. According to Lawrence Green's theory, the factors that influence waste management behavior are the level of education, knowledge, behavior and others. So, based on the background that has been described, researchers are interested in conducting research on the relationship between education level, type of education and population income and waste management behavior in the Payakumbuh city community.

2. METHODS

The research is quantitative research using data analysis adapted to the research pattern and variables studied. A quantitative approach is used to search for detailed factual information regarding current symptoms and identify problems or to obtain justification for ongoing conditions and

activities. According to [10-15] quantitative research is an objective theory test by looking at whether or not there is a relationship between variables. This variable can be measured so that numerical data can be analyzed using statistical procedures so that the research is more concrete. This research uses a survey method through a correlational approach. Data collection was carried out by distributing questionnaire instruments to the community from several sub-districts in West Payakumbuh sub-district. The population in this study were residents of the Talang Payakumbuh Barat subdistrict with 120 heads of families. The sampling technique was determined by Proportional random sampling technique using the Slavin formula [15-16].

3. RESULTS AND DISCUSSION

The respondent's description is a description of the community in Talang Payakumbuh Barat subdistrict related to gender, education level, type of work of the head of the family, community income. Based on the results of this research, we will know the extent of community participation in waste management in the city of Payakumbuh. The measurement model testing stage includes testing Convergent Validity, Discriminant Validity and Composite Reliability. The results of SEM PLS analysis can be used to test research hypotheses if all indicators in the PLS model meet the requirements for convergent validity, discriminant validity and composite reliability.

The convergent validity test is carried out by looking at the loading factor value of each indicator on the construct. For confirmatory research, the loading factor limit used is 0.7, while for exploratory research the loading factor limit used is 0.6 and for development research, the loading factor limit used is 0.5 [16-20]. Because this research is confirmatory research, the loading factor limit used is 0.7. The following are the estimation results. Based on the analysis results in the image above, it can be seen that several indicators have loading factors above 0.7. According to [20-25] the outer loading value > 0.7 means the data used is valid. Therefore, all the indicators used have met the outer loading value > 0.7 so that the model has met the requirements for convergent validity. Apart from looking at the loading factor value of each indicator, convergent validity is also assessed from the AVE value of each construct, from the results of data processing the PLS model is declared to have met convergent validity if the AVE value for the construct is > 0.5 [26-29]. Based on the results of the analysis above, the AVE value for all constructs, both in the form of dimensions and variables, has exceeded 0.5,

which indicates that all indicators for each construct have met the required convergent validity criteria

Construct reliability can be assessed from the Cronbach's Alpha value and the Composite Reliability value of each construct. According to (Hair et al, 2019) a value > 0.7 means the data used is valid. The recommended composite reliability and Cronbach's alpha values are more than 0.7. However, in development research, because the loading factor limit used is low (0.5), low composite reliability and Cronbach's alpha values are still acceptable as long as the validity requirements convergent and discriminant validity have been fulfilled.

Based on the results of data processing using SEM PLS, it shows that the level of community education in West Payakumbuh sub-district has a positive and significant effect on community participation in waste management. This can be seen from the P value of $0.044 > 0.05$ while the t statistic is $1.786 > 1.96$. The original sample value is 0.188 which is positive. So, the conclusion is that hypothesis H1 is accepted. In participation theory, it is explained that community participation in development is defined as community participation in development, taking part in making plans, and making decisions about alternative solutions to deal with problems, as well as implementing efforts. In improving and encouraging the emergence of an attitude of participation, what community developers need to understand are the real needs that are felt. Orderly behavior in maintaining environmental cleanliness is part of community participation in development as well as one of the efforts to solve waste management problems in the city of Payakumbuh. With the high influence of the level of education on positive attitudes, the community will certainly be able to support every local government policy in creating a clean, beautiful and comfortable city.

Community participation or citizen participation is a process when citizens as individuals and social groups and organizations take part in the development process both in the form of statements and in the form of activities with the aim of improving their quality of life. In participation, the process of giving voluntary contributions from a community group in making a decision where the community must of course have adequate knowledge and skills (Hakim, 2015). Therefore, a high level of education can increase community participation in development.

4. CONCLUSION

In the city of Payakumbuh, waste management is a central issue which is influenced by various factors, including the level of education and type of

work of the community. Diverse levels of education among city residents create variations in environmental awareness. Communities with higher levels of education tend to be more aware of the importance of good waste management, while lower levels of education may require greater efforts to increase this awareness.

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6. REFERENCE

- [1] AM Hakim, Dudung Darusman, 2015 Perception, attitude, and participation of the community around about mangrove forest management in Wonorejo, Surabaya, East Java.
- [2] Bonorowo Wetlands 5 (2): 85-93, December 2015. ISSN: 2088-110X, E-ISSN: 2088-2475 DOI: 10.13057/bonorowo/w050204
- [3] Azsuar Hari Pratama, Pengaruh Tingkat Pendidikan, Motivasi dan Pengalaman kerja terhadap Kinerja Pegawai PT Bank Sumsel Babel cabang syariah Palembang, Di akses 27 November 2023.
- [4] Badan Pusat Statistik. 2018. Statistik Lingkungan Hidup Indonesia 2018. Jakarta: Badan Pusat Statistik.
- [5] Badan Perencanaan Pembangunan Daerah Kota Payakumbuh . 2022. Pengelolaan Sampah 2019- 2023 Yogyakarta: Badan Perencanaan Pembangunan Daerah Payakumbuh
- [6] Brooks, G., Carroll, K. C., Butel, J., & Morse, S. 2012. Jawetz, Melnick & Adelberg's Medical
- [7] Microbiology (26th ed.). New York: McGraw-Hill Medical. h 305-506
- [8] Chin, W. W. 1998. Commentary: Issues and opinion on structural equation modeling.
- [9] Mis Quarterly, 22(1), pp. vii-xvi.
- [10] Cecep Dani Sucipto, (2012), Teknologi Pengolahan Daur Ulang Sampah, Yogyakarta: Gosyen Publishing
- [11] Coleman, J. S. (1961). The Adolescent Society: The Social Life of the Teenager and

- its Impact on Education. The Free Press.
- [12] F. Hair Jr, J. et al. 2014. Partial least squares structural equation modeling (PLS-SEM) An emerging tool in business research. *European Business Review*, 26(2), pp. 106–121.
- [13] Fransiska Tanuwijaya, dkk. 2016. Partisipasi Masyarakat dalam Pengelolaan Sampah di Bank Sampah Pitoe Jembangan Kota Surabaya. *Kebijakan dan Manajemen Publik* ISSN 2303- 341X Vol. 4 No. 2
- [14] Ghozali, I. (2014). *Structural Equation Modeling, Metode Alternatif dengan Partial Least Square (PLS) (4th ed.)*. Badan Penerbit Universitas Diponegoro.
- [15] Gharib, R. K., Philpott, E. and Duan, Y. 2017. Factors affecting active participation in B2B online communities: An empirical nvestigation. *Information & Management*, 54(4), pp. 516–530.
- [16] Hair, J. F. et al. 2006. *Multivariate data analysis 6th Edition*“, New Jersey: Pearson Education.
- [17] Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis (7th ed.)*. Pearson Prentice Hall.
- [18] Hair, J. F., Hult, G. T., Ringle, C. M., & Sarstedt, M. (2014). *A primer partial leastsquaresstructural equation modeling (PLS- SEM)*. SAGE Publications.
- [19] Hijrah Purnama Putra, Anggun Reza Taufiq, dan Any Juliani, 2013, “Studi Hubungan antara Tingkat Pendidikan dan Pendapatan Keluarga terhadap Sikap dalam Pengelolaan Sampah Rumah Tangga (studi kasus di Desa Condongcatur, Depok, Sleman, Yogyakarta)”. *Jurnal Sains dan Teknologi Lingkungan* ISSN: 2085-1227
- [20] Undang-Undang Nomor 18 Tahun 2008 tentang Pengelolaan Sampah. Jakarta
- [21] Pandu, N. A., Hardjomidjojo, H., & Dan Jono M Munandar3. (2020). Faktor-Faktor Yang Mempengaruhi Partisipasi Masyarakat Dalam Mereduksi Sampah Rumah Tangga Di Kota Bogor. 14(1), 31–41.
- [22] Putra Hp, Wahid Sn. Pembuatan Trainer Tempat Sampah Otomatis Guna Menyasati Masalah Sampah Di Lingkungan Masyarakat (Making Automatic Trash Trainer To Get Rid Of Waste Problems In The Community Environment). *Jeee-U (Journal Electr Electron Eng.* 2019;3(1):120.
- [23] Rosseel, Y. 2012. lavaan: An R Package for Structural Equation Modeling. *Journal of Statistical Software*, 48(2), pp. 1–36. Available at: <http://www.jstatsoft.org/v48/i02/>.
- [24] Sari N, Mulasari Sa. Pengetahuan, Sikap Dan Pendidikan Dengan Perilaku Pengelolaan Sampah Di Kelurahan Bener Kecamatan Tegalrejo Yogyakarta. *J Med Respati [Internet]*. 2017;12(April):1907–3887. Available From: <Http://Eprints.Uad.Ac.Id/8012/1/30-55-1-Sm.Pdf>
- [25] Sugiyono, 2007, *Metodologi Penelitian Bisnis*, PT. Gramedia, Jakarta
- [26] Winardi, *Pengantar Ilmu Ekonomi*. Cetakan Ketujuh (Bandung PT Raja Grafindo Persada, 2002), H.130
- [27] Wiltshire. (2015). *The Meanings Of Work In A Public Work Scheme In South. Africa*.
- [28] *International Journal Of Sociology And Social Policy*, 36
- [29] Zulkifli Arif, (2014), *Pengelolaan Limbah Berkelanjutan*, Jakarta: Graha Ilmu