THE ROLE OF VILLAGE-OWNED ENTERPRISE AND WASTE BANKS IN VILLAGE DEVELOPMENT (A STUDY IN VILLAGES IN CENTRAL SULAWESI PROVINCE)

Rasyid Muhammad Hartoyo[a], Andi Chairil Furqan[b], Ewrinsyah[c], Andiani Purwa Utari[d]

[abc]*Universitas Tadulako, Indonesia*
[d]*Badan Riset dan Inovasi Nasional Provinsi Sulawesi Tengah, Indonesia*
twinaryo46@gmail.com

ABSTRACT

Village development in Central Sulawesi has become the main focus of the government and society in recent years. In an effort to improve the quality of life of village residents and preserve the environment, two concepts that are increasingly being accepted are Village-Owned Enterprises (BUMDES) and Waste Banks. This research aims to investigate the role of BUMDES and Waste Banks in village development efforts in the Central Sulawesi region. BUMDES is a business entity owned by village communities and run to advance community welfare. They have the potential to improve the village economy by driving local business sectors, such as agriculture, tourism and crafts. This research reviews the role of BUMDES in creating jobs, empowering village communities, and contributing to the development of social infrastructure. Waste Bank is a concept that aims to manage waste in a sustainable way. By collecting, recycling and selling waste, the Waste Bank helps reduce environmental pollution and increase people's income. This research discusses the role of Waste Banks in maintaining environmental cleanliness, supporting environmental education, and generating additional income for village communities. The results of this research provide insight into the extent to which BUMDES and Waste Banks can contribute to village development in Central Sulawesi. These findings can be a basis for developing more effective strategies in exploiting the economic and environmental potential that exists at the village level. By understanding this key role, villages in Central Sulawesi have a greater opportunity to achieve equitable and sustainable development.

Keywords: BUMDES, Waste Bank, Village Development

INTRODUCTION

Sustainable village development is one of the main goals in the national and regional development agenda. In realizing this, two elements that play a significant role are Village-Owned Enterprises (BUMDes) and Waste Banks. BUMDes exists as a mechanism to mobilize village economic potential, encourage local economic growth and empower village communities in various business sectors. In this regard, research has developed that analyzes the role of village-owned enterprises and the existence of waste banks in increasing IDM achievements. Several studies conducted bySrirejeki, (2018);Furqan et al., (2023);Singhirunnusorn et al., (2012)&Purba et al., (2014)has analyzed the extent to which SMEs, waste management and village characteristics can support increasing IDM. It is still rare to find research that analyzes the role of village enterprises and waste banks as factors that can improve IDM. So, this research will specifically analyze how village-owned enterprises empower village communities and the existence of waste banks can create a clean and comfortable environment which will support the increase in IDM.

Waste management is a significant problem in many rural areas, and this problem can impact the environment, public health and sustainable development. Waste banks are one of the initiatives that have emerged to overcome this problem. A waste bank functions as an entity or program dedicated to

gathering, overseeing, and recycling waste, aiming to diminish waste and foster economic advantages for society. The inception of waste banks as a remedy to waste predicaments commences with heightened public awareness of environmental concerns. Social capital, inventive concepts, and governmental backing have become intrinsic components in waste management through banks. The Waste Bank stands as an inventive initiative, significantly contributing to village progress by offering comprehensive solutions to diverse challenges. Initially, it effectively diminishes the waste volume reaching disposal sites, fostering a clean village environment and minimizing health hazards. Moreover, by compensating residents for waste collection and recycling efforts, the Waste Bank stimulates economic empowerment, job creation, and increased income (Wijayanti & Suryani, 2015)Third, through educational programs, the Waste Bank increases residents' environmental awareness and knowledge, promoting sustainable practices (Suardi et al., 2018). Fourth, this initiative encourages community involvement and strengthens community ties by collaborating in waste management, developing a sense of collective responsibility (Fatmawati et al., 2022)Fifth, the profits generated can be reinvested into village infrastructure, such as improving roads and public facilities, which supports further development. Ultimately, the Waste Bank holistically improves the quality of life in villages by creating a cleaner, healthier environment and a more dynamic economy, paving the way for sustainable social and economic development. Through this research, we have identified and evaluated how BUMDes can mobilize local resources and encourage economic growth, as well as how Waste Banks contribute to environmental management and sustainable economic development.

Based on the data used in this research, several findings were obtained: First, bumdes has a positive influence on village development. Village governments that have Bumdes tend to have high IDM ratings and scores. If previous studies only analyzed the role of bumdes in improving village financial performance, this research analyzes the role of bumdes in village development. The results of this research contribute to providing an explanation for research conducted by Srirejeki, (2018) Bumdes should increase their participation in achieving IDM. Waste banks contribute positively to village advancement, aligning with higher IDM scores in areas with waste banks. The lack of prior research on waste banks' influence emphasizes the uniqueness of this study, clarifying waste bank variables. Hence, it's inferred that both Bumdes and waste banks are crucial for sustainable village development. The upcoming sections will cover literature review and hypothesis development, research methods, hypothesis testing outcomes, and end with implications, constraints, and suggestions for future research.

LITERATURE REVIEW

Economic Development Theory

According to Smith, (1937), often considered the father of modern economics, emphasized the importance of free markets and the power of the "invisible hand" in the process of economic development. Although the concepts of BUMDES (Village-Owned Enterprises) and Waste Banks may not be directly explained in Adam Smith's works, several principles from his theory can be applied to understand the role of these entities in village development. Where as Hutchison, (1976)outlines fundamental economic principles such as the division of labor and the concept of the "invisible hand" that governs free markets. Work divisions increase efficiency and productivity, aspects implemented by Village-Owned Enterprises (BUMDes) to maximize the potential of local resources and encourage economic growth at the village level.

Smith proposed that individual pursuit of personal gain, with limited government intervention, could indirectly benefit the overall economy. This principle aligns with the autonomous functioning of BUMDes and Waste Banks, fostering thriving small businesses and driving village economic advancement. Additionally, the Waste Bank embodies Smith's concept of capital accumulation by

transforming waste into valuable resources, contributing to essential physical or financial capital for sustainable economic growth in the village.

Developing Village Index (IDM)

The Developing Village Index (IDM) is an instrument used by the Indonesian government to measure and assess the level of welfare and development of villages throughout the country (Sofyani et al., 2019) IDM integrates various dimensions of development, including economic, human and social roles, and infrastructure to provide a comprehensive picture of village conditions and progress (Douglas, 2005).

The regulations governing the Village Development Index (IDM) are specifically formulated in the Regulation of the Minister of Villages, Development of Disadvantaged Regions and Transmigration(number 17 of 2015), which establishes a detailed methodology for the measurement and assessment of IDM. This regulation instructs the holding of regular surveys and monitoring to assess village development progress. Meanwhile,(Law no 5 of 2014)on Villages provides a broader legal framework, which supports IDM initiatives by demanding participatory, transparent and accountable village government management. This law also provides a legal basis to accommodate activities related to measuring and assessing village development performance, ensuring that the process is in line with the principles of democracy and good governance at the village level.

The Village Development Index (IDM) is a comprehensive measuring tool designed to describe the progress of village development in Indonesia through four main components (Adamowicz & Zwolińska-Ligaj, 2020). First, the "Economy and Work" aspect which focuses on evaluating the availability of sources of income and job diversity, as well as how easy it is for village residents to access the job market (Galperin et al., 2022)Second, "Social and Cultural" which assesses the level of education, public health conditions, as well as socio-cultural elements that determine the quality of life(Vasstrøm et al., 2019)Third, "Infrastructure and Facilities" which measures the availability and condition of vital infrastructure such as roads, sanitation and access to clean water which are the foundation for sustainable development.Fourth, "Government and Administration" which evaluates the effectiveness of village governance, administrative transparency, and the level of community participation in planning and implementing village development(Sabet et al., 2020)All of these components work together to provide a comprehensive picture of successes and areas that still need improvement in the village development process.

The Influence of BUMDes on Village Development

Village-Owned Enterprises (BUMDes) are an economic entity formed by the village government to manage local economic potential and improve community welfare(Arifin et al., 2020). BUMDes operates by utilizing local resources and working together with communities to create new economic opportunities, increase income, and encourage innovation and growth at the village level (Larasdiputra et al., 2019).The role of Village-Owned Enterprises (BUMDes) has not been fully optimized so far. However,(Village Law no. 6 of 2014)could be a turning point to revive the role of Village-Owned Enterprises, especially in village development. This could be an important stimulus for the development of Village-Owned Enterprises. Realizing its potential for rural development, a strategy to strengthen the role of Village-Owned Enterprises is very important (Biglari et al., 2022). Research shows that the problem with the efficiency and effectiveness of Village-Owned Enterprises is the lack of networks and participation from village communities(Srirejeki, 2018).In this research, it is suspected that Bumdes can have a positive impact on increasing IDM. Bumdes also contributes by providing educational services, encouraging entrepreneurship, managing natural resources and the environment as well as strengthening food security, health and welfare. The existence and success of BUMDes in carrying out these roles is the key to achieving a more independent, developed and sustainable village(Kania et al., 2021).The hypothesis can be described as follows.

H1. The role of BUMDes has a positive impact on village development

The Influence of Waste Banks on Village Development

The Waste Bank operates by gathering recyclable waste like plastic, paper, glass, and metal from the community. Depositors receive monetary compensation based on the type and weight of the waste.The Waste Bank will then sell the collected waste to parties who need it to be reprocessed into usable products (Wulandari et al., 2017). The presence of waste banks has increased the capacity of residents to become more independent in waste management, with increased awareness, knowledge and abilities due to the implementation of the 4R principles. Waste banks encourage community participation in environmental management(Rumpa et al., 2023).The results of this activity can be used as recommendations for waste management policies, with a collaborative, community-based multilevel approach. Educational activities with environmental communication strategies increase community creativity and innovation, especially in terms of managing waste recycling into finished goods with economic value(Asteria et al., 2017).The existence of waste banks is thought to be able to encourage an increase in IDM, especially in the IKL indicator by developing waste banks in more communities (Gunartin et al., 2020).The government and society can collaborate in creating a cleaner, healthier and more sustainable environment which ultimately improves IKL (Rachman et al., 2021).The hypothesis can be described as:

H2. The Role of Waste Banks Has a Positive Impact on Village Development

METHOD, DATA, AND ANALYSIS

Data

The data used in this research uses regional government data in Indonesia, especially in villages in the Central Sulawesi area. The data used in this research is 1842 villages, in 2019-2021. However, because there were 32 villages that did not have village secretary age data, they were removed from the sample, there were 36 villages that did not have village secretary education data, and there were 271 villages that did not have village head age data so they were removed from the sample. In addition, there were 145 villages Those who did not have data on the gender of the village head were excluded from the sample. Therefore, due to the unavailability of adequate data, the final sample size was set at 1,358 observations or 73.72% of the total village regional government data in Central Sulawesi. All data used in this research comes fromVillage Government in Central Sulawesi.

Table 1. General Description of the Research Sample

Description	**Sample**	
	Amount	**Percent**
		%
Number of Villages	**1,842**	**100.00**
does not have data on the age of the village secretary	32	1.74
does not have village secretary education data	36	1.95
does not have data on the gender of the village secretary	0	0.00
does not have data on the age of the village head	271	14.71
does not have village head education data	145	7.87
does not have data on the gender of the village head	0	0.00
Final Sample Size	**1,358**	**73.72**

Source processed by Rasyid, 2023

Empirical Model

To answer the problems in this research, the empirical model in this research is as follows, namely:

IDMt = α0 + α1bumdes$_{it}$ + α2Wastebank$_{it}$ +α3topografi$_{it}$ +α4distance$_{it}$ + α5kadesumur$_{it}$ + α6kadesjk$_{it}$ + α7kadespend$_{it}$ + εt……………………………………..…………………..e

IDMtis a village builder performance variable which is measured using 3 components, namely IKS, IKE and IKL which is a composite index from IDM which is measured using scores and status, namely, a score <0.50 for very underdeveloped villages, a score of 0.50-0.60 for villages which are still lagging behind, then a score of 0.60-0.70 for developing villages. Next, a score of 0.70-0.80 for developed villages and finally for independent villages is measured with a score of >0.80. IDM captures the development of Village independence based on the implementation of the Village Law with the support of Village Funds and Village Assistants. IDM directs the accuracy of interventions in policies with the correlation of appropriate development interventions from the Government in accordance with Community participation which correlates with the characteristics of the Village area, namely typology and social capital. Therefore, IDM is considered to be an indicator of village development performance.

Bumdest is a variable that shows the existence of Bumdes in the village government which is measured using a dummy, namely, "1" for existing and "0" for others. banksampaht is a variable that shows the existence of a Waste Bank in the village government which is measured using a dummy, namely, "1" for existing and "0" for others. topography is a variable that describes the geographical characteristics of a village which is measured categorically, namely, "1" for peaks/cliffs, "2" for slopes, "3" for plains, and "4" for valleys. distance traveled is a variable that measures the distance from the village head's office to the nearest sub-district office in kilometers. kadesumurt is a variable that shows the age of the village head in the year of observation which is measured using a year scale. Kadesjkt is a variable that shows the gender of the village head in the year of observation which is measured with a dummy, namely, "1" for male and "0" for female. "kadespendt is a variable that shows the educational background of the village head which is measured using categories, namely, "1" for never attending school, "2" for high school/equivalent, "3" for middle school/equivalent, "4" for Diploma IV/S1," 7" for not completing elementary school/equivalent, "5" for master's degree, "8" for completing elementary school/equivalent, "6" for academy/DIII, "9" for doctoral degree.

Table 2. Operationalization of Variables and Data Sources

Name	Variable operational	Data source
village owned enterprise	Village performance is measured by 3 components, namely the social resilience index, economic resilience index and environmental resilience index which is a composite index of the Village Development Index (IDM).	Central Statistics Agency (BPS)
Waste bank	Variable that shows the existence of waste banks in sub-district villages, which is measured using the dummy words "1" yes, "2" others.	Central Statistics Agency (BPS)
IDM	Village performance is measured by 3 components, namely the social resilience index, economic resilience index and environmental resilience index which is a composite index of the Village Development Index (IDM).	Central Statistics Agency (BPS)
Topography	Variable that shows the area of the sub-district village, which is measured using dummy data which means "1"	Central Statistics Agency (BPS)

Name	Variable operational	Data source
	Peak/Cliff, "2" Slope, "3" Plain, "4" Valley.	
Mileage	Variable that shows the distance traveled from the village head's office to the nearest sub-district office. Which is measured in Kilo meters (KM)	Central Statistics Agency (BPS)
village head's age (VHA)	Variable that shows the age of the village head in office.	Central Statistics Agency (BPS)
gender of village head (GVA)	The variable is the gender of the village head, which is measured using dummy data which means "1" is male, "0" is female	Central Statistics Agency (BPS)
village head education (VHE)	Variable that shows the level of education completed by the village/subdistrict head, which is measured using dummy data which means "1" Never attended school, "2" did not complete elementary school/equivalent, "3" completed elementary school/equivalent, "4" SMP/equivalent , "5" High School/Equivalent, "6" Academy/ETC, "7" Diploma IV/S1, "8" Masters, "9" Doctorate.	Central Statistics Agency (BPS)

Data Source: Processed by Researchers, 2023

RESULT AND DISCUSSION

Descriptive Statistics Results

A complete descriptive statistical description of the variables in this study can be seen in table 3 below:

Table 3. Descriptive Statistics

Information	Obs	Mean	Std. Dev.	Min	Max
Village owned enterprise	1,358	0.836	0.371	0	1
Waste Bank	1,358	0.020	0.140	0	1
Topography	1,358	2,327	0.489	1	4
Mileage	1,358	86,640	63,872	1	581
village head's age	1,358	47,881	7,638	28	74
gender of village head	1,358	0.962	0.190	0	1
village head education	1,358	5,388	0.862	4	8
the age of the village secretary	1,358	40,926	8,788	21	65
gender of village secretary	1,358	0.885	0.319	0	1
village secretary education	1,358	5,622	0.932	3	8

Source processed by Rasyid, 2023

Table 3 depicts descriptive statistics for all variables analyzed in this study. The mean of the Bumdes variable used is 0.836, which means that the average in the research for each village used has a Bumdes in it. The mean waste bank has a mean of 0.020, which means that the average person in this study does not have a waste bank in their village.

Several other variables such as topography show a mean of 2,327. This means that the average village government in the sample is located around a slope, while the distance shown shows a mean of 86,640, which can be interpreted as the average distance from the village head's office to the nearest sub-district office. Meanwhile, the village head and village secretary show an average mean of 47,881 and 40,926, which means that the average age of the village head and village secretary is over 40 years old, while the village head and village secretary show a mean of 0.962 and 0.885, which means that the average The average for the village head and village secretary is female, while the village head and village secretary show a mean of 5,388 and 5,622, meaning that most village heads and village secretaries only have high school graduates/equivalent. The results of the correlation analysis between each variable are presented in the following table.

Table 4. Correlation Test

	IDM	bumdes	Waste Bank	Topography	mileage	VHA	GVA	VHE
IDM	1,000							
bumdes	0.148***	1,000						
	0,000							
waste bank	0.069**	-0.008	1,000					
	0.01	0.766						
topography	0.132***	0.028	0.001	1,000				
	0,000	0.301	0.945					
mileage	0.036	-0.038	-0.004	0.147***	1,000			
	0.178	0.156	0.859	0,000				
VHA	0.083***	0.066**	0.025	-0.035	0.016	1,000		
	0.002	0.014	0.343	0.193	0.549			
GVA	0.008***	-0.014	0,000	0.044**	0.017	0.066**	1,000	
	0.002	0.596	0.988	0.097	0.516	0.014		
VHE	0.149***	0.058**	0.015	0.015	-0.058**	-0.144***	-0.095***	1,000
	0,000	0.03	0.569	0.575	0.031	0,000	0,000	

Data Source: processed by Researchers, 2023

Results from statistical correlation tests examining variables such as IDM (Developed Village Index), Bumdes (Village-Owned Enterprises), and Waste Bank (banksampah), alongside factors like topography and travel distance, reveal significant relationships. Notably, Bumdes exhibits a strong positive correlation with IDM, signifying that enhanced performance or existence of village-owned enterprises correlates with improved village development. Similarly, Waste Bank shows a significant positive correlation with IDM, albeit not as robust as Bumdes, indicating the positive impact of waste management initiatives on village development.

Hypothesis Test

Hypothesis testing in this research uses regression testing with the STATA-14.2 program.

Table 5. Hypothesis Test Results

Variable	Expected Sign	IDM
Cons		0.494
		0,000

Variable	Expected Sign	IDM
village owned enterprise	**H1** = +	0.021***
		0,000
Waste bank	**H2** = +	0.024**
		0.012
topography	+/-	0.021***
		0,000
mileage	+/-	0,000***
		0,000
village head's age	+/-	0,000***
		0,000
gender of village head	+/-	0,000**
		0.094
village head education	+/-	0.012***
		0,000
Prob>F		0,000
Adj R-Squared		0.060
Mean VIF		1,020
Number of Observations = 1358		
Explanation of variable operationalization in table 2.		
***,** =*P-value*significant 1% 5%		

Source: Secondary data, STATA output (Processed, 2023).

In general, the results of multiple linear regression testing using robust standards show that the R-Square is 0.060, the research model can explain 60% of the variation in the increase in IDM in village governments in Central Sulawesi with a significance level (F statistical value) of 1% and a mean VIF of 1.02 , so it can be interpreted that the model does not have multicollinearity problems and is reliable for use in explaining variations in the increase in IDM, especially in analyzing the existence of waste banks. Table 5 also shows that there is a positive influence of the existence of BUMDes on increasing IDM with a coefficient value of 0.021 at the 1% level. This shows that the data used in this research supports the first hypothesis. Furthermore, table 5 shows that the existence of a waste bank has a positive effect with a coefficient value of 0.024 which is significant at the 1% level. This can be interpreted as that the data used in this research supports the second hypothesis. Regarding the existence of control variables, namely, topography, distance traveled and characteristics of the village head have a positive and significant influence at the 1% level.

First finding, In general it supports previous research, especially that carried out by Srirejeki, (2018) which states that BUMDes operate by utilizing local resources and working together with the community to create new economic opportunities, increase income, and encourage innovation and growth at the village level. The role of Village-Owned Enterprises (BUMDes) has not been fully optimized so far. However, Village Law no. 6 of 2014 could be a turning point to revive the role of Village-Owned Enterprises, especially in village development. This could be an important stimulus for the development of Village-Owned Enterprises. Realizing its potential for rural development, a strategy to strengthen the role of Village-Owned Enterprises is very important. Research shows that the problem with the efficiency and effectiveness of Village-Owned Enterprises is the lack of networks and participation from village communities. Improving the Village Economy: BUMDes can help improve the village economy through various businesses such as agriculture, fishing or

handicrafts. This can increase the income of village residents and reduce poverty. Bumdes can carry out strategies to improve IDM such as community empowerment through training and skills development, which contributes to improving the quality of life, sustainable management of natural resources, which not only improves the economy but also protects the environment, infrastructure and public facilities such as roads, facilities education and health by Bumdes can improve accessibility and quality of life in villages, village innovation and development such as the use of technology for agriculture or marketing village products and collaboration with government and the private sector so that Bumdes can open up more opportunities for village development and improve social services such as education , health and sanitation.

Second finding, supports the results of previous research conducted by Asteria et al., (2017), which states that waste banks encourage better waste management in villages. This helps reduce pollution and improve environmental cleanliness, which is an important aspect in IDM assessment. With the existence of a waste bank, local communities are often involved in waste collection and management. Through waste banks, waste can be collected, separated and recycled, which can become a source of income for villages. This increases the economic aspect in IDM. Waste banks are often accompanied by educational programs about waste management and the importance of environmental sustainability, increasing public awareness and participation in protecting the environment. Better waste management contributes to reduced health risks, such as vector-borne diseases (e.g. mosquitoes that breed in open rubbish bins). Thus, waste banks can play an important role in improving village IDM, especially in environmental and economic aspects. Its success relies heavily on active community participation and support from the government and other organizations.

Additional Testing

IDM is a composite index consisting of three indicators, namely the Environmental Resilience Index, Economic Resilience Index and Social Resilience Index. Therefore, the first additional test was carried out by testing each index that forms the IDM. The results of the first additional test are as follows.

Table 6. Additional Test Results for Each IDM Forming Index

Variable	Expected Sign	IKS	IKE	IKL
Cons		0.628	0.293	0.56
		0,000	0,000	0,000
village owned enterprise	**H1** = +	0.017***	0.027***	0.018***
		0,000	0,000	0,000
Waste bank	**H2** = +	0.023***	0.012	0.037**
		0,000	0.441	0.012
topography	+/-	0.016***	0.035***	0.012***
		0,000	0,000	0,000
mileage	+/-	0,000***	0,000	0,000***
		0,000	0.557	0.004
village head's age	+/-	0,000***	0.001***	0,000***
		0,000	0,000	0,000
gender of village head	+/-	0,000**	-0.017**	0.018**
		0.088	0.071	0.088
village head education	+/-	0,000***	0.022***	0.004**
		0,000	0,000	0.029
Prob>F		0,000	0,000	0,000

Variable	Expected Sign	IKS	IKE	IKL
Adj R-Squared		0.050	0.047	0.016
Mean VIF		1,020	1,020	1,020

Number of Observations = 1358

Explanation of variable operationalization in table 2.

***,** =*P-value*significant 1% 5%

Source: Secondary data, STATAoutput (Processed, 2023).

Table 6 indicates a positive impact of Bumdes and Waste Bank variables on IKS and IKL within the IDM composite index, with no effect on IKE. Topographic factors, village head's age, and education influence all IDM composite village indices. Travel distance has no effect on IKE, affirming each index's contribution to IDM enhancement. Additional tests evaluated the village secretary's influence on IDM, recognizing their crucial role alongside the village head.

Table 7. Additional Test Results Changing the Village Head Variable to Village Secretary

Variable	Expected Sign	IDM	IKS	IKE	IKL
Cons	+/-	0.555	0.669	0.398	0.597
		0,000	0,000	0,000	0,000
village owned enterprise	**H1 = +**	0.028***	0.027***	0.036***	0.022***
		0,000	0,000	0,000	0.003
Waste bank	**H2 = +**	0.037**	0.033**	0.043	0.036
		0.039	0.018	0.148	0.147
topography	+/-	0.020***	0.015***	0.033***	0.013**
		0,000	0,000	0,000	0.024
mileage	+/-	-0.000	-0.000***	0,000	-0.000**
		0.105	0.004	0.538	0.034
the age of the village secretary	+/-	-0.008	-1,186**	-0.000	0.001***
		0.315	0.059	0.436	0.001
gender of village secretary	+/-	-0.008	-0.009	-0.008	-0.007
		0.136	1.89	0.436	0.446
village secretary education	+/-	0.007***	0.010***	0.013***	-0.000
		0.001	0,000	0.001	0.930
Prob>F		0,000	0,000	0,000	0,000
Adj R-Squared		0.055	0.063	0.042	0.024
Mean VIF		1.07	1.07	1.07	1.07

Number of Observations = 1358
Explanation of variable operationalization in table 2.
***,**,* = significant P-value 1% 5% 10%

Data source: Secondary data, STATA Output (Processed 2023)

Table 7 generally shows that the existence of the village head, waste bank and the characteristics of the village head by changing the variable for the characteristics of the village head to the characteristics of the village secretary shows a positive influence on IDM with an R-Square value of 0.055 which is significant at the 1% level. The influence on each composite index that forms the IDM also shows a significant positive influence at the 1% level. This can mean that apart from the village head, the village secretary also has an important role in the sustainability of the village government.

Thus, the role of the village secretary is key in achieving sustainable village development goals and in improving IDM, through effective management, activity coordination and community empowerment.

CONCLUSION

This research aims to explore the roles of BUMDes (Village-Owned Enterprises) and waste banks in rural development, providing insights into factors supporting village progress. Village Law No. 6 of 2014 is anticipated to bolster the role of BUMDes, emphasizing community collaboration and education to address inequality and promote sustainable development. Conversely, waste banks have shown significant impacts on various aspects of rural development, such as enhancing quality of life, community economic empowerment, and environmental education. Study findings affirm the positive influence of BUMDes and waste banks on village development, as measured by the Village Development Index (IDM). The study suggests improving the functionalities of BUMDes and waste banks to substantially advance sustainable village development goals.

Implications

The Waste Bank collects recyclable materials such as plastic, paper, glass, and metal from the community, providing depositors with financial compensation corresponding to the waste type and weight.

Limitations

This research experienced several limitations in the identification process, such as limited data availability, so this research only analyzed villages in Central Sulawesi. It is possible that other variables that influence IDM were not identified or controlled in this research so that they can be used as references for developing this research.

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