Research Article

The Role of Credit Facilities and Micro and Small Enterprises (MSEs) in Enhancing Rural Development Performance (A Study in Villages in Central Sulawesi Province)

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Abstract.

This research aims to analyze the extent to which the presence and role of credit facilities and micro and small enterprises (MSEs) in rural areas contribute to village development, especially in achieving the Village Development Index (VDI), which comprises three dimensions: the Social Resilience Index (SRI), Economic Resilience Index (ERI), and Environmental Resilience Index (EnRI). This study uses a quantitative method and cross-sectional data from 1842 villages in the Central Sulawesi Province sourced from the 2021 village potential data provided by the Central Statistics Agency, with a final sample of 1783 observations. The results indicate that the presence of both credit facilities and MSEs in rural areas has contributed to the achievement of VDI. Additionally, it was found that the presence of MSEs can mediate the influence of credit facilities on VDI. The existence of credit facilities in rural areas encourages the increase of MSEs in those areas, which in turn contributes to the improvement of VDI. The findings imply that for the strategy of accelerating rural development in Indonesia, the government, regional governments, financial institutions (banks and non-banks) and other stakeholders need to establish policies to enhance collaboration and innovative programs for the empowerment of village communities, including the provision of accessible, affordable, and reachable credit facilities for rural communities. The existence of such programs is expected to stimulate an increase in the number of MSEs and enhance economic activities in rural areas. This will then lead to an improvement in VDI.

Keywords: credit facilities, micro and small enterprises, rural development, village development index

1. Introduction

The independence of a village is characterized by its ability to independently meet its needs, not just depend on government assistance. Even though villages receive support from the government, the role of this assistance is only as an encouragement or stimulant [1]. In the implementation of *Sustainable Development Goals* (SDGs), the biggest challenge to achieving them is at the local level. Implementing the SDGs at the village level requires adapting global goals to the local context, taking into account the specific needs, priorities and conditions of the village. To ensure that the development

carried out is inclusive, sustainable and able to overcome the various challenges faced by village communities, several efforts can be made to build partnerships and manage resources by involving community empowerment. In this regard, research has developed that analyzes the role of credit facilities and MSEs in improving village development performance. Several previous studies stated that financial institutions that facilitate access to credit for MSEs can increase economic growth and reduce income inequality [2, 3, 4]. Information and communication technology can improve village development performance and the SDGs can only be achieved if these countries build strong micro and small enterprises (MSEs). However, research is still rare that analyzes credit facilities to improve village development performance. Therefore, this research aims to analyze how the role of credit facilities driven by MSEs can improve village development performance.

As a form of government effort to measure and monitor development progress at the village level in 2015 through village SDGs, the government officially issued the Village Development Index (VDI).VDI aims to provide a comprehensive picture of the level of village progress in various social, economic and environmental aspects. Since its existence, VDI become an important tool in assessing and directing village development in Indonesia [5]. One important aspect to consider in a village development plan is the economic aspect. Where, this aspect discusses how villages can generate their own income, availability and access to economic facilities such as credit, productive economic activities, village financial management, entrepreneurial innovation, economic cooperation and economic independence [6]. Rural areas must accelerate their growth to limit development gaps and contribute to the country's economic progress. Several factors such as credit facilities and MSEs are considered to be able to contribute to increasing village development found that financial institutions that facilitate credit access for MSEs can increase economic growth and reduce income inequality [2]. They argue that the availability of credit facilities can increase the capacity of MSEs to contribute to the local economy. However, the growth and sustainability of MSEs are often hampered by the availability of capital. This makes the role of credit facilities crucial and the limitations of MSE credit facilities are more influenced by the absence of information that can be used by management, potential investors or creditors in measuring and monitoring MSE development. Therefore, providing credit facilities for MSEs is one of the strategic steps in improving village development performance.

Apart from that, the main factor that can influence village development performance is the ability of Micro and Small Enterprises (MSEs) to contribute to the local economy. MSEs have a large capacity to increase the level of community welfare [21]. MSEs

are often considered the backbone of the economy in many countries, including in rural areas, given their ability to provide jobs and increase local income. To increase the capacity and involvement of micro and small enterprises (MSEs) in the country's economy, the central government, local government, private sector and society must work together in a comprehensive, synergistic and sustainable manner in providing support and strengthening the sector.

Based on the data used in this research, several findings are: First, credit facilities have a positive effect on village development performance. The village government that provides credit facilities means that the village must have an MSE. If previous research only analyzed the role of credit facilities in encouraging MSEs to invest, the novelty of this research is analyzing credit facilities in improving the performance of MSEs. The results of this research contribute to previous research conducted by [7-10] that credit facilities to improve the performance of MSEs are an important part of supporting economic growth, especially in villages that are still underdeveloped. Second, credit facilities have a positive effect on village development performance. Village governments that provide credit facilities tend to have high VDI scores. If previous studies only analyzed the role of credit facilities in increasing village productivity, the novelty of this research is using the VDI variable as a measure of village development performance. The results of this research contribute to explaining the research conducted by [11-14] that this credit facility is important to overcome financial obstacles in village development. The availability of sufficient funds and access to affordable credit sources allows villages to finance various initiatives that support economic growth, improving community welfare and sustainable development. Third, MSEs have a positive influence on village development performance. Village governments that can improve MSE performance tend to have high VDI scores. Previous research only analyzed how MSEs play a role in encouraging economic growth on a regional scale, so the novelty in this research is in specifically analyzing how MSEs can improve VDI which leads to increased village development performance. The results of this research contribute to explaining previous research conducted by [15] that overall, MSEs play a key role in inclusive and sustainable village development. The remainder of this article will be divided into 4 parts, namely the second part will discuss the literature review and basis for hypothesis development, the third part will discuss the research methods used, the fourth part will discuss the results of hypothesis testing and finally the fifth part will discuss the conclusions and implications of the research results and limitations and suggestions for further research.

2. Literature Review and Hypothesis Testing

2.1. Legitimacy theory

Legitimacy theory highlights a company's desire to operate by the standards and values held by society. Nowadays, companies increasingly recognize the importance of establishing good relationships with society and the environment for the sustainability of their business. Interaction between companies, society and the environment cannot be avoided, because every company activity is always related to the social and environmental context. This theory suggests that society permits companies to function as business units as long as the company implements policies and practices that are in accordance with society's norms and values. Organizations seek to establish conformity between the social values associated with or implicit in their activities and the norms of acceptable behaviour within the larger social system of which they are a part [16].

2.2. Developing Village Index

The Village Development Index (VDI) is a method developed by the Indonesian Government to measure the level of development progress at the village level. To raise people's standard of living and minimize the gap between villages and cities, VDI includes the following aspects.

1. Social conditions, namely education, health and population management

2. Economic conditions measure the level of welfare of village communities based on aspects such as income, employment and access to capital.

3. Infrastructure conditions to assess the availability and quality of basic infrastructure such as roads, clean water, sanitation and electricity.

4. Conditions of government, including good village governance, citizen participation, and village government capacity.

Village measured based on these indicators and categorized into various levels of development, from very underdeveloped villages to independent villages. This categorization allows the government to identify which areas require more attention and investment in development. As part of the government's initiative to accelerate progress in villages, VDI works together with other programs such as the allocation

of village funds taken from the APBN which aims to encourage village development. The VDI methodology is regularly updated by the government to ensure that this index remains relevant to current conditions and functions as an effective tool in planning and implementing village development strategies.

2.3. The Effect of Credit Facilities on Micro & Small Enterprises (MSEs)

Credit facilities have an important role in the growth and development of Micro and Small Enterprises (MSEs). Providing credit by financial institutions can have a significant impact on the growth and sustainability of MSEs. Credit facilities provide access for MSEs to obtain the working capital needed to run and increase the scale of their business. This is very important because many MSEs have limited access to capital [9]. Credit facilities also enable MSEs to invest in fixed assets such as machinery, equipment or property which can increase production capacity and operational efficiency [7]. With credit facilities, MSEs can allocate funds for research and development, which is an important investment for innovation and new product development [8]. Therefore, it is thought that the existence of credit facilities can help MSEs to survive difficult economic conditions and increase their ability to compete with larger companies or international players [10]. The hypotheses that can be described are as follows.

H1. The Role of Credit Facilities Has a Positive Impact on Micro, Small & Medium Enterprises (MSEs)

2.4. The Effect of Credit Facilities on Village Development Performance

Credit facilities provide a significant impact on village development performance. Credit facilities can encourage entrepreneurship development in villages, which means opening up more job opportunities and reducing unemployment. Credit can help establish or develop small businesses that provide local services and products [14]. Credit facilities for MSEs in villages can be used to improve infrastructure such as roads, water supply and electricity, which are important foundations for further development (World Bank, 2008). Providing better credit facilities can help local communities start and develop their businesses, which increases economic independence and community empowerment [12]. Credit can facilitate the purchase of

better agricultural inputs, machinery, and technologies that increase productivity. It also supports the diversification of economic activities beyond agriculture [13]. Therefore, it is suspected that with credit facilities, villages can be more resilient to economic shocks, because they have more varied economic activities and more stable sources of income [11]. The hypotheses that can be described are as follows.

H2. The Role of Credit Facilities Has a Positive Impact on Village Development Performance

2.5. The Influence of Micro & Small Enterprises (MSEs) on Village Development Performance

Micro and Small Enterprises (MSEs) are often viewed as a major driver in a country's economic progress, given their role in involving the younger generation as well as low-income community groups. This contributes to increased productivity and income among the lower-income population [17]. MSEs have an important role in village development. MSEs encourage economic growth from the grassroots, increase local income and reduce economic inequality. The existence of MSEs can create jobs for residents in villages and reduce migration rates to cities. Increasing the MSE can also strengthen the local economy and increase overall income. MSEs in villages enable communities to develop business and management skills, thereby increasing community economic capacity and resilience. Increasing the MSE can also minimize village dependence on the external economy and build village economic resilience against global economic turmoil. In the "Istanbul Declaration on Micro, Small and Medium Enterprises" adopted by the United Nations in 2017, it states: "We recognize that micro and small enterprises (MSEs), including handicrafts, cottage industries and start-ups, make substantial contributions to the achievement of sustainable development and targets of job creation, improvement of human resources and economic growth [15]. Therefore, it is suspected that the role of MSEs in village development is an important factor in efforts to realize sustainable development. The hypotheses that can be described are as follows.

H3. The Role of Micro, Small & Medium Enterprises (MSEs) Has a Positive Impact on Village Development Performance

3. Methodology

3.1. Data

This research was conducted in Indonesia, specifically in villages located in Central Sulawesi Province, which is the largest area on the island of Sulawesi with a size of approximately 61,841.29 square kilometres. This study uses quantitative methods and cross-sectional data with a total of 1,842 villages in 2021. However, because 59 villages do not have data available, the final sample size is 1,783 observations or 96 per cent of the total villages in Central Sulawesi Province. All data used in this research comes from the village Government in Central Sulawesi.

TABLE 1: Sample Selection Results.

INFORMATION	SAMPLE	
	AMOUNT	PERCENT (%)
Determination of Sample Number of Village Governments		
Number of Village Governments	1,842	100
Does not have total MSE data	59	0.03
Final Sample Number/Year	**1,783**	**96.41**
Source Processed by Researchers, 2023		

3.2. Empirical Model and Operationalization of Variables

To answer research problems as well as testing hypotheses, the empirical model in this research is as follows:

vdi$_i$ = β **0** + β **1totalmse**$_i$ + β **2creditfacilities**$_i$+ β**3signalhp**$_i$ + β**5signalinternet**$_i$ + β **7flagshipsproduct**$_i$ + ... **(1)**

totalmse$_i$ =α**0**+α**1creditfacilities**$_i$ + α**2signalhp**$_i$ + α **4signalinternet**$_i$ +α **6flagshipsproduct**$_i$ +ϵ_i. .... **(2)**

The main variables in this research are idmt, tumkt and fkreditt. idmt is a village development performance variable which is measured with 3 components (SRI, ERI and EnRI) which is a composite index of VDI which is measured using scores and status, namely, a score of <0.50 for very underdeveloped villages, a score of 0.50-0.60 for villages that are still underdeveloped, then a score of 0.60-0.70 for villages that are developing. Next, a score of 0.70-0.80 for developed villages and finally for independent villages is measured with a score of >0.80. VDI captures the development

of village independence based on the implementation of the Village Law with the support of Village Funds and Village Assistants. **totalmse**$_i$ is a variable that shows the number of MSEs in the village government. **creditfacilities**$_i$ is a variable that shows the existence of credit facilities which is measured using the dummy "1" for existing and "0" for others. The control variables in this research are **signalhp**$_i$, **signalinternet**$_i$, and **flagshipsproduct**$_i$. Telephone signal is a network variable that measures cellular telephone network connections with a score range of "4" for very strong signal, "3" for strong signal, "2" for weak signal, and "1" for no signal. internet signal is a network variable that measures the availability of the internet network at the village office. This variable is also measured categorically, with a score range of "4" for 4G LTE signal, "3" for signal 1 3G/H/H+/EVDO, "2" for signal 2 2.5G/E/GPRS to "1" for no internet signal. superior goods. is a variable that is measured using the categorical "1" for present and "2" for absent.

TABLE 2: Operationalization of Variables and Data Sources.

Name	Variable Operationalization	Data source
vdi$_i$	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 Stattistics Agency (BPS)
totalmse$_i$	The variable that shows the number of umk	Central Stattistics Agency (BPS)
creditfacilities$_i$	The existence of credit facilities is measured using the dummy "1" for existing and "0" for others	Central Stattistics Agency (BPS)
signalhp$_i$	Availability of cellular telephone networks with a score range of "4" for very strong signal, "3" for strong signal, "2" for weak signal, and "1" for no signal.	Central Stattistics Agency (BPS)
signalinternet$_i$	The availability of internet networks at village offices is measured categorically with a score range of "4" for 4G LTE signals, "3" for signals 1 3G/H/H+/EVDO, "2" for signals 2 2.5G/E/GPRS to " 1" for no internet signal	Central Stattistics Agency (BPS)
flagshipsproduct$_i$	The existence of main superior products in sub-district villages measured categorically "1" for present "2" for absent	Central Stattistics Agency (BPS)

Source Processed by Researchers, 2023

4. Result

4.1. Descriptive statistics

Statistical overview descriptive complete variables in this research can be seen in Table 3 below:

TABLE 3: Statistical Description of Variables.

Information	Mean	Standard Deviasi	Min	Max
vdi_i	0.648	0.073	0.37	0.89
$creditfacilities_i$	0.749	0.433	0	1
$totalmse_i$	11.997	15.303	0	98
$signalhp_i$	1.761	0.773	1	3
$signalinternet_i$	3.625	0.809	1	4
$flagshipsproduct_i$	0.239	0.426	0	1
Number of Observations = 1.783.				
Explanation of variable operationalization in Table 2.				
Source: Secondary Data, STATA-14.2 Output (Processed, 2023).				

Table 3 depicts descriptive statistics for all variables analyzed in this study. Variable mean vdi_i shows 0.648, meaning that the average village government in the sample falls into the disadvantaged village category. The mean $creditfacilities_i$ variable shows 0.749, meaning that on average the village governments in the sample have not provided $creditfacilities_i$. Furthermore, the mean of the $totalmse_i$ variable shows 11,997, meaning that the village government analyzed has 11,997 MSE. The mean of the $signalhp_i$ variable shows 1.761, which means that the average village government $signalhp_i$ analyzed is in the weak category and the mean $signalinternet_i$ variable shows 3.625, which means that the average village government $signalinternet_i$ analyzed is in category 1 3G/H/H+. /EVDO. The mean of the flagships $product_i$ variable shows 0.239, meaning that on average the village government, based on the results of the analysis, does not yet have flagships product.

Table 4 is the result of a statistical correlation test which measures the relationship between variables such as vdi_i, $creditfacilities_i$, $totalmse_i$, $flagshipsproduct_i$, $signalhp_i$ and $signalinternet_i$. Significant correlation values are marked using stars, indicating $signalhp_i$ that all the main variables of this research, such as the vdi_i variable $creditfacilities_{i,}$ and $totalmse_i$ correlate with each other. As for the existence of control variables $signalhp_i$ shows a temporary negative correlation $signalinternet_i$ not

TABLE 4: Variable Correlation Analysis.

Variable	vdi$_i$	credit facilities$_i$	totalmse$_i$	signalhp$_i$	signal internet$_i$	flagships product$_i$
vdi$_i$	1,0000					
creditfacilities$_i$	0.3226***	1,0000				
	(0.0000)					
totalmse$_i$	0.1296***	0.0881***	1,0000			
	(0.0000)	(0.0002)				
signalhp$_i$	-0.2099***	-0.167***	0.0290	1,0000		
	(0.0000)	(0.0000)	0.2202			
signalinternet$_i$	0.2422***	0.1292***	0.0174	-0.0828***	1,0000	
	(0.0000)	(0.0000)	0.4639	(0.0005)		
flagshipsproduct	0.1654***	0.1366***	0.1242***	-0.0645***	0.0662***	1,0000
	(0.0000)	(0.0000)	0.0000	(0.0064)	(0.0052)	
Number of Observations = 1.783.						
Operational explanation of variables in Table 2						
Source: Secondary Data, STATA-14-2 output (Processed, 2023).						

correlated with the creditfacilities$_i$ variable. while variable flagshipsproduct$_i$ shows a negative correlation with the signalhp$_i$ variable.

4.2. Hypothesis Test

Hypothesis testing in this study used CMP testing with the STATA-14.2 program.

Table 5 column (3) shows that the variable creditfacilities$_i$ positive influence on totalmse$_i$ with a coefficient of 2,829, significant at the 1% level, which means the data used in this study supports **H1** where an increase creditfacilities$_i$ can have a positive influence on MSEs in village governments. In table 5 column (4) shows the test of **H2**, namely the credit facilities variable has a positive effect on vdi$_i$ with a coefficient of 0.042, significant at the 1% level, so it can be said that increasing credit facilities have a positive effect on village development performance. Furthermore, table 5 column (4) shows that the total MSEs variable has a positive effect of 0.000, significant at the 1% level, which means the data used supports **H3**, namely that an increase in total MSEs has a positive impact on village development performance. Based on the results of the individual model test in Table 5 column (3) regarding the control variables in this study, it shows that the goods variable has a positive effect on totalmse$_i$ and is significant at the 1% level with a coefficient of 4.168. Meanwhile, signalhp$_i$ has a positive and significant effect at the 5% level with a coefficient of 0.093, in contrast to signalineternet$_i$

TABLE 5: Hypothesis Testing Results.

Variable	Expected Sign	Individual Model Test		Full Model Test	
		totalmse$_i$	vdi$_i$	totalmse$_i$	vdi$_i$
1	2	3	4	5	6
_CONS		6,890	0.569	6,890	0.569
		(0.001)	(0.000)	(0.001)	(0.000)
creditfacilities$_i$		2,829***	0.042***	2,829***	0.042***
		(0.001)	(0.000)	(0.001)	(0.000)
totalmse$_i$		-	0,000***	-	0,000***
			(0.000)		(0.000)
signalhp$_i$		0.993**	-0.014***	0.993**	-0.014***
		(0.035)	(0.000)	(0.035)	(0.000)
signalinternet$_i$		0.065	0.017***	0.065	-0.017***
		(0.884)	(0.000)	(0.884)	(0.000)
flagshipsproduct$_i$		4,168***	0.016***	4,168***	0.016***
		(0.000)	(0.000)	(0.000)	(0.000)
Prob > chi2 / Prob > F		0,000	0,000		
Pseudo R2 / Adj R-squared		0.0230	1845		
Number of Observations = 1783.					
Operational explanation of variables in Table 2					
***, **, * = significant P-value 1%, 5%, 10%.					
Source: Secondary Data, STATA-14-2 output (Processed, 2023).					

which does not influence MSEs. Furthermore, table 5 column (4) shows that all control variables, namely signalhp$_i$, signalineternet$_i$, and flagshipsproduct$_i$, have a positive and significant effect at the 1% level with coefficients of 0.014, 0.017, and 0.016, which means that all control variables have a positive influence on village development performance. Furthermore, based on the results of the full model test in Table 5, columns (5) and (6), it shows that the total MSEs can mediate between credit facilities and VDI, but partially.

Acceptance of the first hypothesis shows that credit facilities have a positive effect on total MSEs. In carrying out business activities, one of the influencing factors is the existence of business capital which usually comes from banks by providing credit facilities to MSEs owners. Broadly supports previous research conducted by [7] stated that many MSEs have limited access to capital so the existence of credit facilities can encourage MSEs to carry out operational activities and produce products with high-selling value. Apart from that, if MSEs can increase their productivity, many communities will be involved and community empowerment programs in villages can be achieved.

The research conducted by [18] stated that with the credit facilities provided to MSEs, as many as 50 percent of these MSEs contributed new employment opportunities. Meanwhile, research conducted by [19] shows that MSEs have an important role in achieving country growth, but the obstacle they face is funding. So, if credit facilities can play a role in improving the performance of MSEs, the country's growth can be achieved. Therefore, having credit facilities can help MSEs to survive difficult economic conditions and increase their ability to compete with larger companies. The second hypothesis also shows that credit facilities have a positive influence on village development performance. Credit facilities have a significant impact on village development performance. Credit facilities can encourage entrepreneurship development in villages, which means opening up more job opportunities and reducing unemployment. These findings support previous research conducted by [13] where credit can facilitate the purchase of better agricultural inputs, machinery, and technology that increases productivity. Research conducted by [20], researching traditional villages in Bali. To explore the potential and development of villages, it is necessary to establish village credit institutions to encourage people to increase their income and achieve village excellence so that it has an impact on achieving independent villages. Credit invested in local businesses helps in the economic growth of the village. This creates a positive cycle where increased business revenues and profits lead to more investment and consumption at the local level. Therefore, effective credit and wise use of funds are key to ensuring that credit facilities provide a sustainable positive impact on village development. The third hypothesis shows that Micro and Small Enterprises (MSEs) influence village development performance. MSEs encourage economic growth from the grassroots, increase local income and reduce economic inequality. The existence of MSEs can create jobs for residents in villages and reduce migration rates to cities. Increasing the MSEs can also strengthen the local economy and increase overall income. These findings support research conducted by [15] which states that MSEs empower communities by creating handicrafts, home industries, and start-up businesses, making a substantial contribution to achieving sustainable development and targets of job creation, increasing human resources, and economic growth. Therefore, the role of MSEs in village development is an important factor in efforts to realize sustainable village development performance.

4.3. Additional Testing

This additional testing was carried out to analyze the effect **creditfacilities**$_i$**, totalmse**$_i$**, signalhp**$_i$**, signalinternet**$_i$**, flagshipsproduct**$_i$ by replacing the **vdi**$_i$ variable using the composite index that forms **vdi**$_i$, namely **sri**$_i$, **eri**$_i$, and **enri**$_i$. The addition of this variable is also based on research [22], who found that cellphone and internet signals help advance rural areas in terms of the economy, social life and the environment. The test results are as follows.

TABLE 6: Additional Test Results Using Each IDM Forming Composite Index.

Panel A. Developing Village Index Indicators: Social Resilience Index					
Variable	**Expected Sign**	**Individual Model Test**		**Full Model Test**	
		totalmse$_i$	sri$_i$	totalmse$_i$	sri$_i$
1	**2**	**3**	**4**	**5**	**6**
_CONS		6,890	0.677	6,890	0.677
		(0.001)	(0.000)	(0.001)	(0.960)
creditfacilities$_i$	(+)	2,829***	0.041***	2,829***	0.041
		(0.001)	(0.000)	(0.001)	(0.994)
totalmse$_i$	(+)	-	0,000**	-	0,000
			(0.010)		(1,000)
signalhp$_i$	(+/-)	0.993**	-0.015***	0.993**	-0.015
		(0.035)	(0.000)	(0.035)	(0.994)
signalinternet$_i$	(+)	0.065	0.017***	0.065	0.017
		(0.884)	(0.000)	(0.884)	(0.894)
flagshipsproduct$_i$	(+)	4,168***	0.015***	4,168***	0.015
		(0.000)	(0.000)	(0.000)	(0.999)
Prob > chi2 / Prob > F		0,000	0,000		
Pseudo R2 / Adj R-squared		0.021	0.170		
Panel B. Developing Village Index Indicators: Economic Resilience Index					
Variable	**Expected Sign**	**Individual Model Test**		**Full Model Test**	
		totalmse$_i$	eri$_i$	totalmse$_i$	eri$_i$
1	**2**	**3**	**4**	**5**	**6**
_CONS		6,890	0.677	6,890	0.392
		(0.001)	(0.000)	(0.001)	(0.981)
creditfacilities$_i$	(+)	2,829***	0.041***	2,829***	0.082
		(0.001)	(0.000)	(0.001)	(0.990)
totalmse$_i$	(+)	-	0,000**	-	0,000
			(0.010)		(1,000)

TABLE 6: Continued.

Panel B. Developing Village Index Indicators: Economic Resilience Index					
signalhp$_i$	(+/-)	0.993**	-0.015***	0.993**	-0.023
		(0.035)	(0.000)	(0.035)	(0.992)
signalinternet$_i$	(+)	0.065	0.017***	0.065	0.025
		(0.884)	(0.000)	(0.884)	(0.871)
flagshipsproduct$_i$	(+)	4,168***	0.015***	4,168***	0.022
		(0.0000	(0.000)	(0.000)	(0.998)
Prob > chi2 / Prob > F		0,000	0,000		
Pseudo R2 / Adj R-squared		0.021	0.186		
Panel C. Developing Village Index Indicators: Environmental Resilience Index					
Variable	**Expected Sign**	**Individual Model Test**		**Full Model Test**	
		totalmse$_i$	enri$_i$	totalmse$_i$	enri$_i$
1	**2**	**3**	**4**	**5**	**6**
_CONS		6,890	0.639	6,890	0.639
		(0.001)	(0.000)	(0.001)	(0.000)
creditfacilities$_i$	(+)	2,829***	0.002	2,829***	0.002
		(0.001)	(0.723)	(0.001)	(0.722)
totalmse$_i$	(+)	-	0,000	-	0,000
			(0.443)		(0.442)
signalhp$_i$	(+/-)	0.993**	-0.003	0.993**	-0.003
		(0.035)	(0.257)	(0.035)	(0.256)
signalinternet$_i$	(+)	0.065	0.009	0.065	0.009
		(0.884)	(0.004)	(0.884)	(0.003)
flagshipsproduct$_i$	(+)	4,168***	0.012	4,168***	0.012
		(0.000)	(0.039)	(0.000)	(0.039)
Prob > chi2 / Prob > F		0,000	0,000		
Pseudo R2 / Adj R-squared		0.021	0.007		

Source: Secondary Data, STATA-14-2 output (Processed, 2023).

The test results above in panel A column (3) show that the creditfacilities$_i$, signalhp$_i$ and flagshipsproduct$_i$ variables have a positive effect on totalmse$_i$ with coefficients of 2.829 and 0.993, and 4.168 is significant at the 1% level, which means that creditfacilities$_i$, signalhp$_i$ and flagshipsproduct$_i$ have a positive effect on totalmse$_i$. Meanwhile, the signalinternet$_i$ variable does not affect totalmse$_i$. Table 6, column (4), shows that the variables creditfacilities$_i$, totalmse$_i$, signalinternet$_i$ and flagshipsproduct$_i$ have a positive effect on sri$_i$ with coefficients of 0.041, 0.000, 0.017 and 0.015, significant at the 1% level, which means that an increase in these variables has a positive effect

on sri_i. Meanwhile, the $signalhp_i$ has a negative effect with a significant coefficient of -0.015 at the 1% level, which means that increasing the $signalhp_i$ does not affect sri_i. The full model in panel A columns (5) and (6) shows that the $totalmse_i$ variable does not mediate between $creditfacilities_i$ and sri_i. The test in panel B column (3) shows that the $creditfacilities_i$, $signalhp_i$ and $flagshipsproduct_i$ variables have a positive effect on $totalmse_i$ with coefficients of 2.829, 0.993 and 4.168 which are significant at the 1% level except for the $signalhp_i$ variable which shows significant at the 5% level which means $creditfacilities_i$, $signalhp_i$ and $flagshipsproduct_i$ have a positive effect on $totalmse_i$. However, the $signalinternet_i$ variable does not affect the $totalmse_i$. In Table 7, column (4) shows that the variables $creditfacilities_i$, $totalmse_i$, $signalinternet_i$ and $flagshipsproduct_i$ have a positive effect on eri_i with coefficients of 0.041, 0.000, 0.017, and 0.015, significant at the 1% level, which means that an increase in these variables has a positive effect on eri_i. Meanwhile, the $signalhp_i$ has a negative effect with a significant coefficient of -0.015 at the 1% level, which means that an increase in the $signalhp_i$ does not affect the eri_i. The full model in panel B columns (5) and (6) shows that the $totalmse_i$ variable does not mediate between $creditfacilities_i$ and eri_i. From the test results in panel C column (3), the variables $creditfacilities_i$, $signalhp_i$, and $flagshipsproduct_i$ have a positive effect on $totalmse_i$ with coefficients of 2.829, 0.993 and 4.168 which are significant at the 1% level except for the $signalhp_i$ variable which shows significant at the 5% level which means $creditfacilities_i$, $signalhp_i$, and $flagshipsproduct_i$ have a positive effect on $totalmse_i$. However, the $signalinternet_i$ variable does not affect the $totalmse_i$. Column 4 in panel C shows that the variables $creditfacilities_i$, $totalmse_i$, $signalhp_i$, $signalinternet_i$ and $flagshipsproduct_i$ do not affect $enri_i$. Furthermore, testing the full model of panel C columns (5) and (6) shows that the $totalmse_i$ variable does not mediate between $creditfacilities_i$ and $enri_i$.

Additional testing is then carried out by replacing the credit facility variable using credit types. The results can be seen in the following table 7.

TABLE 7: Sensitivity Test Results using the People's Business Credit variable.

Panel A. Credit Facilities: People's Business Credit					
Variable	**Expected Sign**	**Individual Model Test**		**Full Model Test**	
		$totalmse_i$	vdi_i	$totalmse_i$	vdi_i
1	**2**	**3**	**4**	**5**	**6**
_CONS		6,709	0.568	6,709	0.568
$totalmse_i$		(0.000)	(0.000)	(0.001)	(0.994)
	(+)	-	0,000**	-	0,000

TABLE 7: Continued.

		(0.001)	(0.000)	(0.001)	(0.965)
peoplebusinesscredit$_i$	(+)	3,012***	0.043***	3,012***	0.043
signalhp$_i$			(0.000)		(1,000)
	(+/-)	1,035**	0.013***	1,035**	-0.013
signalinternet$_i$		(0.029)	(0.000)	(0.028)	(0.995)
	(+)	0.070	0.017***	0.070	0.017
flagshipsproduct$_i$		(0.876)	(0.000)	(0.875)	(0.900)
totalmse$_i$	(+)	4,129***	0.016***	4,129***	0.016
		(0.000)	(0.000)	(0.000)	(0.998)
Prob > chi2 / Prob > F		0,000	0,000		
Pseudo R2 / Adj R-squared		0.022	0.188		

Panel B. Credit Facilities: Food Security Credit					
Variable	Expected Sign	Individual Model Test		Full Model Test	
		totalmse$_i$	vdi$_i$	totalmse$_i$	vdi$_i$
1	2	3	4	5	6
_CONS		8,789	0.597	8,789	0.597
		(0.000)	(0.000)	(0.000)	(0.973)
creditfoodsecurity$_i$	(+)	3,136	0.043***	3,136	0.043
		(0.263)	(0.001)	(0.262)	(0.995)
totalmse$_i$	(+)	-	0,000**	-	0,000
			(0.000)		(1,000)
signalhp$_i$	(+/-)	0.741	0.017***	0.741	-0.017
		(0.113)	(0.000)	(0.113)	(0.990)
signalinternet$_i$	(+)	0.213	0.019***	0.213	0.019
		(0.633)	(0.000)	(0.633)	(0.964)
flagshipsproduct$_i$	(+)	4,495***	0.021***	4,495***	0.021
		(0.000)	(0.000)	(0.000)	(0.998)
Prob > chi2 / Prob > F		0,000	0,000		
Pseudo R2 / Adj R-squared		0.015	0.131		

Panel C. Credit Facilities: MSE Credit					
Variable	Expected Sign	Individual Model Test		Full Model Test	
		totalmse$_i$	vdi$_i$	totalmse$_i$	vdi$_i$
1	2	3	4	5	6

TABLE 7: Continued.

Panel C. Credit Facilities: MSE Credit					
_CONS		8,650	0.596	8,650	0.596
		(0.000)	(0.000)	(0.000)	(0.977)
creditmse$_i$	(+)	3,057**	0.023***	3,057**	0.023
		(0.013)	(0.000)	(0.013)	(0.997)
totalmse$_i$	(+)	-	0,000**	-	0,000
			(0.000)		(1,000)
signalhp$_i$	(+/-)	0.766	0.017***	0.766	-0.017
		(0.101)	(0.000)	(0.100)	(0.992)
signalinternet$_i$	(+)	0.175	0.019***	0.175	0.019
		(0.695)	(0.000)	(0.695)	(0.964)
flagshipsproduct$_i$	(+)	4,485***	0.021***	4,485***	0.021
		(0.000)	(0.000)	(0.000)	(0.998)
Prob > chi2 / Prob > F		0,000	0,000		
Pseudo R2 / Adj R-squared		0.018	0.134		
Panel D. Credit Facilities: Business Group Credit					
Variable	**Expected Sign**	**Individual Model Test**		**Full Model Test**	
		totalmse$_i$	vdi$_i$	totalmse$_i$	vdi$_i$
1	2	3	4	5	6
_CONS		8,765	0.597	8,765	0.597
		(0.000)	(0.000)	(0.000)	(0.982)
businessgroupcredit$_i$		1,378	0.023***	1,378	0.026
		(0.214)	(0.000)	(0.213)	(0.995)
totalmse$_i$		-	0,000***	-	0,000
			(0.000)		(1,000)
signalhp$_i$		0.751	0.017***	0.751	-0.017
		(0.108)	(0.000)	(0.108)	(0.994)
signalinternet$_i$		0.184	0.018***	0.184	0.018
		(0.680)	(0.000)	(0.680)	(0.974)
flagshipsproduct$_i$		4,481***	0.020***	4,481***	0.020
		(0.000)	(0.000)	(0.000)	(0.999)
Prob > chi2 / Prob > F		0,000	0,000		
Pseudo R2 / Adj R-squared		0.016	0.139		

Source: Secondary Data, STATA-14-2 output (Processed, 2023).

Table 7 panel A column (3) shows that the variables peoplebusinesscredit$_i$ and flagsipsproduct$_i$ have a positive effect on totalmse$_i$ with coefficients of 3.012 and 4.129 which are significant at the 1% level. The same as the signalhp$_i$ variable but is significant at the 5% level with a coefficient of 1.035. Meanwhile, the signalinternet$_i$ variable does not affect totalmse$_i$. In column 4, all variables have a positive effect on vdi$_i$ except

signalhp$_i$ which has no effect on vdi$_i$ with a significance level of 1%. Columns 5 and 6 show that the peoplebusinesscredit$_i$ variable has no effect on vdi$_i$ but mediates totalmse$_i$. In panel B column (3) only the flagshipsproduct$_i$ variable has a positive effect on totalmse$_i$ with a coefficient of 4.495% which is significant at the 1% level, while the other variables do not affect totalmse$_i$. Column 4 shows that all variables have a positive effect on vdi$_i$, except for the signalhp$_i$ variable which has no effect on vdi$_i$ and all variables are significant at the 1% level. Furthermore, columns 5 and 6 show that totalmse$_i$ cannot mediate between foodsecuritycredit$_i$ and vdi$_i$. In panel C, column (3) shows that creditmse$_i$ has a positive effect on totalmse$_i$ with a coefficient of 3,057 and is significant at the 5% level as well as the flagshipsproduct$_i$ variable but is significant at the 1% level. Meanwhile, the signalhp$_i$ and signalinternet$_i$ variables do not affect the totalmse$_i$. Column 4 shows that all variables have a positive effect except the signalhp$_i$ variable which is significant at the 1% level. Furthermore, columns 5 and 6 show that creditmse$_i$ has no effect on vdi$_i$ but mediates significantly with totalmse$_i$ at the 1% level. In panel D, especially in column 3, it shows that only the flagships product variable has a positive effect on totalmse$_i$ with a coefficient of 4,481 which is significant at the 1% level, while the other variables do not have a positive effect on totalmse$_i$. In column 4 all variables have a positive effect on vdi$_i$, except signalhp$_i$ which is significant at the 1% level. Furthermore, columns 5 and 6 show that the totalmse$_i$ variable cannot mediate between businessgroupcredit$_i$ and idm$_i$.

In additional testing in Table 7, it is found that people's business credit and MSEs credit affect increasing the number of MSEs in rural areas, while food security credit does not affect total MSEs because this credit is more directed towards agriculture. It was also found that business group credit did not affect the total MSEs in rural areas.

5. Conclusion

In general, this research aims to analyze the influence of credit facilities and MSEs on village development performance in Central Sulawesi. With this research, it is hoped that it can become a reference for the government in improving village development performance without ignoring all aspects that influence village development performance. What can be concluded based on the test results and discussion in this research are as follows. The existence of credit facilities in rural areas can have a positive impact on the growth and sustainability of MSEs. Rural communities that want to open new MSEs are no longer hampered by difficulties in obtaining capital. Providing this credit facility also has a significant effect on improving village development performance. The more MSEs

that have access to credit in rural areas will encourage economic growth and increase local income in the village. The MSEs variable in the test results was found to be able to mediate credit facilities on village development performance, but only partially.

This research has implications for the government's efforts to improve village development performance, one of which is by providing rural credit facilities which will affect the total MSEs in the village. It is important to continue to support MSEs with appropriate credit facilities. This support not only helps MSEs but also supports the government's plans to build better villages. Collaboration between credit provision, MSEs development, and complementary village development policies will bring greater changes to economic and social progress in rural areas.

This research has limited data, so it only tested the total MSEs and did not yet know which types of MSEs had an influence on village development performance and this data only used data for one year. Further research can expand the scope of research to target villages throughout Indonesia and measure it using data from more than 1 year.

References

[1] Puspayanthi NLPAD, Wahyuni MA, Prayudi MA. 2017. Penguatan pengelolaan keuangan desa dan optimalisasi peran BUMDes untuk kemandirian desa pada desa di Kabupaten Jembrana. JIMAT (Jurnal Ilmiah Mahasiswa Akuntansi) Undiksha, 8(2).

[2] Beck T, Demirgüç-Kunt A, Maksimovic V. Financial and legal constraints to growth: does firm size matter? J Finance. 2005;60(1):137–77.

[3] Adamowicz M, Zwolińska-Ligaj M. 2020. (2020). The "Smart Village" as a way to achieve sustainable development in rural areas of Poland.

[4] Toran VL. Nema DK. 2019. Role of micro, small and medium enterprises (msmes) in achieving sustainable development goals. International Journal for Research in Engineering Application & Management (IJREAM), 04(12), 2454–9150. https://ssrn.com/abstract=3669470

[5] Anggraini NW, Sutopo DS. Village government efforts in realizing the highest national building village Index (IDM) in Ngroto Village. Ecoplan. 2021;4(2):142–50.

[6] Nyakado A, Okello S. 2016. Effect of accessing bank credit facilities. International Journal of Information Research and Review, 3 (7), 2623, 2626.

[7] Hall G, Hutchinson P, Michaelas N. Industry effects on the determinants of unquoted SMEs' Capital structure. Int J Econ Bus. 2000;7(3):297–312.

[8] Freel MS. Perceived environmental uncertainty and innovation in small firms. Small Bus Econ. 2005;25(1):49–64.

[9] Beck T, Demirguc-Kunt A. Small and medium-size enterprises: access to finance as a growth constraint. J Bank Finance. 2006;30(11):2931–43.

[10] Fatoki OO, Asah F. The impact of firm and entrepreneurial characteristics on access to debt finance by SMEs in King Williams' Town, South Africa. Int J Bus Manage. 2011;6(8):170–9.

[11] Barrett CB, Reardon T, Webb P. Nonfarm income diversification and household livelihood strategies in rural Africa: Concepts, dynamics, and policy implications. Food Policy. 2001;26(4):315–31.

[12] Yunus M. 2007. Summary: Banker to the Poor by Muhammad Yunus. October, 296. http://www.capitolreader.com/bonus/BankertothePoor.pdf

[13] Dercon S, Christiaensen L. Consumption risk, technology adoption and poverty traps: Evidence from Ethiopia. J Dev Econ. 2011;96(2):159–73.

[14] Banerjee AV, Duflo E. Do firms want to borrow more? Testing credit constraints using a directed lending program. Rev Econ Stud. 2014;81(2):572–607.

[15] Bajaj P, Selvakumar K. 2017. The emergence of micro, small and medium-sized enterprises: Enhancing their role in international trade. Emerging Trade Issues for Small Developing Countries, 151.

[16] Dowling J, Pfeffer J. Organizational legitimacy: Social values and organizational behaviour. Pac Sociol Rev. 1975;18(1):122–36.

[17] Sari NT, Kusumawati A. Literature review: The efforts to strengthen of micro, small and medium-sized enterprises (MSME) in Indonesia. Asian Journal of Management. Entrepreneurship and Social Science. 2022;2(01):98–115.

[18] Gichuki JA, Njeru A, Tirimba OI. Challenges facing micro and small enterprises in accessing credit facilities in Kangemi Harambee market in Nairobi City County, Kenya. International Journal of Scientific and Research Publications. 2014;4(12):1–25.

[19] Haile MM. Factors affecting micro and small enterprises in accessing credit facilities: A Study in Gesuba Town. Ethiopia: Wolaita Zone, Southern Nation Nationalities Peoples Regional State; 2020.

[20] Wijaya PY, Hutnaleontina PN, Ismayanthi TIT. 2019. Social capital effectiveness toward competitive advantage and business performance (Case study of Village Credit Institutions In Gianyar Regency, Bali, Indonesia). Scientific Papers: Management, Economic Engineering in Agriculture & Rural Development, 19(3).

[21] Furqan AC, Karim F. Problematika Praktik Akuntansi pada Usaha Mikro, Kecil dan Menengah (UMKM), serta Keterkaitannya terhadap Akses Kredit. Media Litbang Sulawesi Tengah. 2012;5(1):23–35.

[22] Furqan AC, Karim F, Yuniar LS, Gunarsa A. The effects of information and communication technology on village development performance. International Journal of Data and Network Science. 2023;7(4):1941–8.