THE INFLUENCE OF FINANCIAL INSTITUTIONS ON THE GROWTH OF THE MICRO AND SMALL AGRIBUSINESS INDUSTRY IN INDONESIA

Syalma Nabila Kamal^{*}, Dwi Rachmina, and Feryanto

Agribusiness, Faculty of Economic and Management, IPB University, Bogor, West Java, Indonesia

*Correspondence Email: syalmakamal15@gmail.com

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ABSTRACT

Agribusiness micro and small industries (MSI) have contributions in economic and social aspects. Financial institutions provide facilities and products to increase the accessibility of capital for Agribusiness MSIs. This study aims to analyze the influence of banks and non-bank financial institutions on the growth of micro and small food and non-food agribusiness industries. This study uses secondary data from potential village surveys in 2018 and 2022 with 82,900 villages in Indonesia annually. Data were analyzed using the Fixed Effect Model in Stata 15.0 software. The results show that four variables significantly positively affect Agribusiness MSIs: non-bank financial institutions (savings and loan cooperatives), electricity index, infrastructure and distribution index, and telecommunications and information index. The disaggregation results based on Agribusiness MSIs sector (food and non-food) show that the food and non-food agribusiness MSIs is positively and significantly influenced by non-bank financial institutions (saving and loan cooperative), the electricity index, as well as the telecommunication and information index. However, bank financial institutions, as well as infrastructure and distribution indexes, only have a significant positive effect on non-food Agribusiness MSIs. Alternative to increasing the number of Agribusiness MSIs units can be done with government support through policies to optimize the role of cooperatives and distribute infrastructure, especially related to telecommunications and information.

Keywords: agribusiness MSIs, financial institution, growth industry

BACKGROUND

Financial institutions provide facilities to increase the accessibility of capital for micro and small industries (MSIs) using credit so that businesses have the availability of funds to buy production inputs such as raw materials, machinery, and labor and can turn around business cash flows. Financial institutions act as mediators between groups of people with excess funds and those who need funds, including MSIs. Financial institutions are divided into banks and non-banks (cooperatives, pawnshops, and others). The basic difference between the two types is the collection method and the purpose of distributing the funds (Caroline et al., 2021).

Micro and small industry (MSIs) comprises various micro and small enterprises (MSEs). In this case, the most common business groupings are micro, small, and medium enterprises (MSMEs) and large businesses, so MSEs are included in MSMEs. However, micro and small businesses have the largest percentage of businesses compared to medium businesses. Data from Ministry of Cooperatices and SMEs of the Republic of Indonesia (2021) shows that there will be 63,955,368 micro-business units in Indonesia in 2021. This number is equivalent to 99.62% of the total MSMEs Influence of Financial Institutions on the Growth of the Micro and Small Agribusiness 711 (Kamal et al., 2023) in Indonesia. Meanwhile, small businesses numbered 193,959 business units in 2021, equivalent to 0.3% of the total MSMEs in Indonesia in 2021.

MSMEs have a significant role in the Indonesian economy and society. In the economic aspect, MSMEs contribute 60.5% to the total national GDP (Ministry of Cooperatices and SMEs of the Republic of Indonesia, 2021). In addition, the total national MSME investment also reaches 60% of the total investment activities carried out. The number of MSMEs that continues to increase has implications for increased employment. In the social aspect, labor-intensive MSMEs have the potential for enormous employment growth and are an important element of national policy for absorbing the workforce (Tambunan, 2021). Data from Ministry of Cooperatices and SMEs of the Republic of Indonesia (2021) shows that there are 119.6 million workers distributed to MSMEs. This amount is equivalent to 96.92% of the total workforce in Indonesia. With sufficiently high employment, equitable distribution of people's income can be carried out to increase people's welfare.

Agribusiness has a broad scope for various MSIs categories in it. It is because agribusiness covers business processes from upstream to downstream. Agribusiness is a new paradigm of agriculture-based economic development with agribusiness development's main elements including micro, small, medium, and large-scale businesses (Krisnamurthi, 2018). In this case, agribusiness includes upstream, on-farm, and downstream subsystems, which are integrally supported by various inputs like agro-industry, marketing, and supporting services, making many SMIs grows in it, especially in the downstream subsystem. The food and non-food sectors are the two main sectors for grouping in agribusiness SMIs because 60% of MSIs is engaged in the food sector, and the rest are in the non-food sector (Ministry of Cooperatices and SMEs of the Republic of Indonesia, 2021).

One of the limitations of Agribusiness MSIs is that the accessibility to credit at bank financial institutions is lower than that of medium industries. MSMEs, mostly micro and small businesses, only obtain 1/6 of the share of national credit (Darwin, 2018). Limitations happen because SMIs needs to have valuable assets for collateral and good financial records for their business (Tambunan, 2021). Access to financial resources requires more resources to buy production factors such as new machines, expand business networks, employ trained employees, and innovate (Jinjarak & Wignaraja, 2016). In addition, SMIs relies more on savings or credit from informal sources because it operates in the informal sector, needs to be better organized and managed, and is run by households that need more assets as collateral.

Various studies have been conducted to analyze financial institutions' influence on Agribusiness MSIs growth. Research by Osoro & Muturi (2013) on micro and small businesses in Kenya shows that providing credit, training, and savings accounts provided by microfinance institutions can help business growth. Research by Bongomin et al. (2017) at the center of the Jinja and Iganda markets shows that access to finance significantly affects the growth of SMIs. However, different results were found by Hilmawati & Kusumaningtias (2021) which state that financial inclusion has no significant effect on MSME performance. The research that has been conducted shows a variety of results and focuses more on looking at the effect of credit from bank and non-bank financial institutions on business growth.

The research that has been carried out has yet to be clustered based on the Agribusiness MSIs category, namely food and non-food, as the largest grouping of Agribusiness MSIs. This is because 60% of MSIs operate in the food sector and the rest in the non-food sector (Ministry of Cooperatices

and SMEs of the Republic of Indonesia, 2021). The food agribusiness industry covers everything from biological sources, agricultural products, plantations, forestry, fisheries, animal husbandry, waters, and processed and unprocessed water. Meanwhile, the non-food agribusiness industry includes cultivating non-plant creatures such as fish, livestock, and non-edible plants and agricultural and livestock services. Thus, this study aims to analyze the influence of bank and non-bank financial institutions on the growth of food and non-food Agribusiness MSI units.

RESEARCH METHODS

This study uses secondary data from the 2018 and 2022 Indonesian Village/District Potential data collection results. This data is used because it can describe village characteristics, characteristics of financial institutions, characteristics of Agribusiness MSIs, and other supporting factors in the growth of Agribusiness MSIs, such as infrastructure and industrial locations. The data is collected through a census conducted by the Indonesian Central Bureau of Statistics with 82,900 villages annually. The census parameters used in this research are the number of bank financial institutions, the number of savings and loan cooperatives, the existence of pawnshops, the existence of Baitul Maal Wa Tamwil, and the number of Agribusiness MSIs. The infrastructure characteristic parameters contained in the census data are also used to reflect the level of infrastructure readiness that supports the growth of financial institutions and Agribusiness MSIs through the Electricity Index, Infrastructure and Distribution Index, and Telecommunications and Information Index.

The division and unification of the regions that occurred caused the number of villages to be censused to be different in 2018 and 2022, so data cleaning was carried out. Furthermore, the data will be analyzed by descriptive and panel data regression analyses. Descriptive analysis was performed to see the distribution and variation of the data. Panel regression is used to estimate the causal relationship between the variables Agribusiness MSIs and other selected independent variables (Hsiao, 2022). Data disaggregation is also carried out based on the type of Agribusiness MSIs, namely, food and non-food. The disaggregation is done to get more comprehensive results from the analysis performed.

Panel Regression

The model used in this study is the growth model for the number of Agribusiness MSIs units associated with the growth of bank and non-bank financial institution units (Savings and Loans Cooperatives, Pawnshops, and Baitul Maal Wa Tamwil). The Agribusiness MSIs used in this research are all industries recorded in the census that are only run by the community (not village government). It was done because this research focuses on looking at the accessibility of businesses run by the community in the village. The model will also be linked to the level of infrastructure readiness through indices supporting Agribusiness MSIs growth, namely, the electricity index, the infrastructure and distribution index, and the telecommunication and information index. The index is an index number calculated based on the condition of the infrastructure in each sample compared to the average infrastructure condition of all samples, considering the minimum and maximum conditions of all samples. The index calculation formula is as follows (Rachmina et al., 2014):

$$Y_{id} = (X_{id} - MinX_{id}) / (MaxX_{id} - MinX_{id})$$

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Information:

Xid : The Ith infrastructure in the dth village, index numbers range between 0 and 1.

The electricity index consists of analysis indicators, namely, lighting on the village/kelurahan main road and the presence of Extra High Voltage Air Lines (SUTET) and Direct Current High Voltage Air Lines (SUTTAS). The infrastructure and distribution index consists of indicators for analyzing the type of road surface, road traffic for vehicles with four or more wheels, the presence of a post office, mobile postal services, and the presence of private expeditions. The telecommunications and information index consists of indicators of analysis of internet presence, number of BTS (Base Transceiver Station), number of cellular telephone communication service operators, and signal strength (no, weak, strong, and powerful signals). The log-linear model was used in this study to normalize data distribution and make interpretations more meaningful (Dobson & Barnett, 2018). Based on this description, the model formulation to be used in panel regression is expressed in the following equation (Hsiao, 2022):

 $logY_{it} = \beta0_{it} + \beta1 X1_{it} + \beta2 X2_{it} + \beta3 X3_{it} + \beta4 X4_{it} + \beta5 X5_{it} + \beta6 X6_{it} + \beta7 X7_{it} + \epsilon_{it}$

Information:

- Y : Micro and Small Agribusiness Industry (log)
- X1 : Bank Financial Institution (unit)
- X2 : Savings and Credit Cooperatives (units)
- X3 : Pawnshop Existence (dummy, 1 = there is; 0 = none)
- X4 : Baitul Maal Wa Tamwil (Sharia non-bank financial institutions) Existence (dummy, 1 = there is; 0= none)
- X5 : Electricity Index
- X6 : Infrastructure and Distribution Index
- X7 : Telecommunications and Information Index

There are three tests for selecting the panel data regression model: the Chow test, the Lagrange Multiplier test, and the Hausman test. The explanation of each test is as follows:

- 1. The Chow test is used to determine the best model between the Fixed Effect Model and the Common Effect Model using F-test statistics (Latuconsina, 2017).
- 2. The Hausman test is used to determine the best model between the Fixed Effect Model and the Random Effect Model using the H test statistic, which follows the chi-square distribution with degrees of freedom (db) equal to the number of independent variables (Latuconsina, 2017).
- 3. The Lagrange Multiplier test determines the best model between the Fixed Effect Model and the Random Effect Model. The test is based on the residual value of the Common Effect method. The LM test is based on the Chi-Squares distribution with degrees of freedom (df) equal to the number of independent variables.

Based on the regression panel model, the hypothesis in this study is that the independent variables are the number of bank financial institutions (X1); The number of non-bank financial institutions is reflected by the existence of savings and loan cooperatives/Kospin (X2), the existence of pawnshops (X3), the existence of baitul maal wa tamwil (sharia non-bank financial institutions)

(X4), and the availability of supporting infrastructure, namely the electricity index (X5), the infrastructure index and distribution (X6), as well as the telecommunication and information index (X7) have a significant positive effect on the number of Micro and Small Agribusiness Industries (Y).

RESULT AND DISCUSSION

Overview of Micro and Small Agribusiness Industries (MSIs) and Financial Institution

A business can be categorized as an industrial business when in its business process, there are economic activities aimed at producing goods or services and located in a certain location, and have administrative records. The categorization of micro and small industries in the Village/District Potential survey was carried out with the criteria for businesses having a workforce of less than 20 people. Based on a Village/District Potential Survey, Agribusiness MSIs was spread throughout Indonesia, with 2,177,775 industries in 2022. This number has increased by 25.59% from the previous survey period (2018) of 1,734,058 industries. Bank and non-bank financial institutions experienced changes (growth and decline) in number from 2018 to 2022. Bank financial institutions in this research are an aggregation of Government Commercial Banks, Private Commercial Banks, and Rural Credit Banks. Meanwhile, non-bank financial institutions are reflected in one way by the number of savings and loan cooperatives. Figure 1 shows the development of the number of financial institutions that have the most significant number of units compared to other financial institutions.



Figure 1. Growth of Bank Financial Institutions in 2018 – 2022 (in units) Source: Indonesian Central Bureau of Statistics, 2022

Table 1 shows the statistical description of this research variable. The statistical description shows the average value and growth of the research variables in each survey period. Table 1 shows that bank financial institution and Savings and Credit Cooperatives had an average value of less than 1 in 2018 and 2022. Table 1 also shows statistics from supporting infrastructure readiness data as reflected through the variable electricity index, infrastructure and distribution index, and telecommunication and information index. The lowest growth percentage is seen in the infrastructure and distribution index, and the highest is in the telecommunication and information index.

the telecommunication and information index still has the smallest average, and the infrastructure and distribution index has the largest average. It is done because these three things indicate that currently, the government is focusing on equalizing the distribution of the availability of each supporting infrastructure component in the village. Thus, supporting infrastructure can be utilized optimally for economic activities (Palei, 2015).

Table 1. Statistical Description of Research Variables for Bank and Non-Bank Financial Institutions in Indonesia

Variable –		Average	
		2022	(%)
Dependent Variable			
Micro and Small Agribusiness Industry (unit)	20.92	26.27	25.59%
Independent Variable			
Bank Financial Institution (unit)	0.29	0.29	2.08%
Savings and Credit Cooperatives (unit)	0.45	0.42	-7.92%
Pawnshop Existence (dummy, 1=there is; 0=none)	0.04	0.04	3.82%
Baitul Maal Wa Tamwil (sharia non-bank financial	0.04	0.04	-3.36%
institutions) Existence (dummy, 1=there is; 0=none)			
Electricity Index	0.39	0.46	18.25%
Infrastructure and Distribution Index	0.55	0.57	2.31%
Telecommunications and Information Index	0.05	0.08	48.35%

Source: Processed Data, 2018-2022

Panel Regression Model Selection Test

Selection of the best panel regression model between the Fixed Effect Model, Common Effect Model, or Random Effect Model is based on the results of the tests performed. Based on the results of the Chow test, the Prob>F value in the Fixed Effect test results is 0.000, which is smaller than the F-stat value (0.005), so that panel regression is best using the Fixed Effect Model. Furthermore, the results of the Hausman test show that the Prob > Chi2 value is 0.000, which is smaller than the p-value (0.005), so the best panel regression uses the Fixed Effect Model (FEM).

The Influence of Bank and Non-Bank Financial Institutions on Agribusiness SMIs

The panel regression analysis in this study was adjusted using the variance-covariance (VCE) matrix so that the classical assumptions in the model were fulfilled. Table 2 shows the panel regression results on the independent variables on the dependent variable in this study.

Variable	Coef.	$\mathbf{P} > \mathbf{t} $
Bank Financial Institution (unit)	-0.0005	0.942
Savings and Credit Cooperatives (units)	0.020***	0.000
Pawnshop Existence (dummy, 1=there is; 0=none)	0.030	0.337
Baitul Maal Wa Tamwil (sharia non-bank financial institutions)	0.004	0.845
Existence (dummy, 1=there is; 0=none)		
Electricity Index	0.176***	0.000
Infrastructure and Distribution Index	0.010**	0.012
Telecommunications and Information Index	10.483***	0.000

Table 2. The Panel Regression Results of The Research Variables

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Number of Observation	165,800
Number of groups	82,900
R-sq (overall)	0.232
F (7,829)	443.41
Prob>F	0.0000

Robust standard errors in parentheses

*** $\alpha < 0.01$; ** $\alpha < 0.05$

Table 2 shows an R-squared value of 0.232, or the model can explain that the independent/free variables simultaneously affect 23% of Agribusiness MSIs (the dependent variable), and the rest are influenced by other variables not tested in the study. Variables that significantly affect the growth of Agribusiness MSIs are non-bank financial institutions (savings/loan cooperatives) and all supporting infrastructure as reflected through the electricity index, infrastructure and distribution index, and telecommunications and information index. The analysis results also show that the bank financial institution variable has no significant effect. The result shows that the increase in bank financial institution units in villages, such as Government Commercial Banks, Private Commercial Banks, and Rural Banks, has not significantly impacted increasing Agribusiness MSIs. The result indicates that optimizing the role of bank financial institutions as providers of capital for MSIs must be carried out in terms of increasing the number of bank units and the amount of credit extended and control over the use of credit for productive activities.

The savings/loan cooperative variable significantly positively affects the growth of Agribusiness MSIs with a coefficient of 0.02. These results indicate that an increase in the number of savings/loan cooperative variable units by 1 unit will increase the number of Agribusiness MSIs units by 0.02%, assuming the other independent variables are constant (cateris paribus). It is because the purpose of a savings/loan cooperative is to prosper its members through lending the capital provided. The capital provided by savings/loan cooperatives has easier conditions (does not require guarantees and complete business legality data) than banks with adjusted interest (flat, declining, effective decline, or annuities. However, cooperative members are also encouraged to make a refund (installments), and loans are allocated for productive activities (Fadliansyah et al., 2022). Optimizing the use of cooperatives in providing capital assistance to MSI Agribusiness can also be seen from the results of the descriptive statistical analysis, which shows a decrease in the growth of cooperative units, but the results of the regression panel show a significant positive effect of cooperatives on IMK Agribsinsnis. It is because cooperative human resources are improving because of government programs running for cooperatives, such as the modernization and improvement of the cooperative system. Similar results were obtained by Edelia & Aslami (2022). which show that there is a relationship positive as well as the strong role of cooperatives in business development through expanding the accessibility of capital.

Supporting infrastructure, namely, the electricity index, infrastructure and distribution index, and telecommunications and information index, have a significant positive influence on the growth of Agribusiness MSIs. The electricity index is measured by lighting indicators on the village/kelurahan main road and the presence of extra high voltage overhead lines (SUTET) and direct current high voltage overhead lines (SUTTAS). The panel regression results show that an increase in the electricity index has a significant positive effect on the growth of Agribusiness MSIs. It is because electricity is a component of production costs at Agribusiness MSIs to run factories, machines, and

others. Adequate availability of electricity for production (projected through the existence of SUTET and SUTTAS) and good distribution of electricity (projected through the availability of lighting on main roads of villages/districts) will have implications for increasing the motivation of prospective entrepreneurs to start a business so that SMIs growth can occur. The study's results align with Forkuoh & Li (2015) namely electricity plays a role in supporting business production. Other infrastructure aspects must accompany electricity to become a single unit supporting the business's operations.

The infrastructure and distribution index is measured by road accessibility indicators (type of road surface and road traffic for vehicles with four or more wheels) and courier services (presence of POS offices, mobile postal services, and private couriers). The regression results show that the infrastructure index and distribution significantly positively affect the growth of Agribusiness MSIs. It shows that road accessibility and expedition services can increase the number of Agribusiness MSIs. This increase is due to the ease of product distribution, which will reduce production costs so that the motivation of prospective entrepreneurs increases. Good road accessibility allows businesses to reach an area, increasing employment and the number of businesses, especially in areas far from markets (Gibbons et al., 2019).

This study's telecommunications and information index is measured by indicators of internet presence, number of cellular telephone towers/Base Transceiver Stations (BTS), number of cellular telephone communication service operators, and signal strength. The regression results show that the telecommunications and information indices significantly positively affect the growth of Agribusiness MSIs. The regression coefficient on the telecommunication and information index is the highest compared to the other indices, which means that information distribution for entrepreneurs and potential consumers is the most important thing. Good information dissemination can have implications for expanding market share so that the motivation of prospective entrepreneurs increases and there is growth in Agribusiness MSIs. Digital communication, including social media and internet access, positively affects the growth of innovation and labor productivity (Gaglio et al., 2022). Similar results were found in the research by Heryasa & Purmiyati (2022) and Mukhtar et al. (2020), which shows a positive correlation between the use of the Internet and telecommunication to produce micro and small businesses.

Bank and Non-Bank Financial Institutions Against Agribusiness MSIs by Sector (Food and Non-Food)

Agribusiness has a large diversity of types, which can be divided into two main sectors: food and non-food. The grouping of food and non-food Agribusiness MSIs is based on the MSI categorization in the Village/District Potential Survey. Food Agribusiness MSIs consist of the food and beverage industry. Non-food Agribusiness MSIs consist of the leather industry, wood furniture and the like, the textile industry, the apparel industry, the non-metallic mineral goods industry, the wood industry, the tobacco processing industry, the paper industry, the printing industry, the transportation equipment industry (boats, rafts, and others), handicraft industry and the like, as well as repair and installation of machines (grinding machine repair, and dynamo repair) and other industries. The number of Agribusiness food and non-food MSIs units has increased over time. Figure 2 shows the growth in the number of Food and Non-Food Agribusiness MSIs.

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Figure 2. Growth of Food and Non-Food Agribusiness MSIs in 2018 – 2022 (in units) Source: Indonesian Central Bureau of Statistics, 2022

The regression model is disaggregated by sector (food and non-food) to see more comprehensively the influence of financial institutions on each of the main sectors of Agribusiness MSIs. Table 3 compares the regression results on the effect of independent variables in food and non-food Agribusiness MSIs.

Table 3. Comparison of	f The Effect of Independent	Variables on Food and I	Non-Food Agribusiness
MSIs.			

Variable	Food Agribusiness	Non-Food	
v al lable	SMI	Agribusiness SMI	
Bank Financial Institution (unit)	-0.003	0.010	
	(0.008)	(0.008)	
Savings and Credit Cooperatives (units)	0.010**	0.018*	
	(0.004)	(0.004)	
Pawnshop Existence (dummy, 1=there is; 0=none)	0.034	0.008	
	(0.032)	(0.029)	
Baitul Maal Wa Tamwil (sharia non-bank	-0.016	0.028	
financial institutions) Existence (dummy, 1=there	(0.022)	(0.021)	
is; 0=none)			
Electricity Index	0.074*	0.131*	
	(0.013)	(0.013)	
Infrastructure and Distribution Index	-0.020	0.095***	
	(0.037)	(0.036)	
Telecommunications and Information Index	9.818*	8.801*	
	(0.204)	(0.180)	
Number of Observation	165,800	165,800	
Number of groups	82,900	82,900	
R-sq (overall)	0.178	0.197	
F (7,829)	373.90	410.04	
Prob>F	0.0000	0.0000	

Robust standard errors in parentheses *** $\alpha < 0.01$; ** $\alpha < 0.05$

Influence of Financial Institutions on the Growth of the Micro and Small Agribusiness (Kamal et al., 2023)

Disaggregation based on the main sectors of Agribusiness MSIs, namely food and non-food, has different results. The results in Table 3 show that non-bank financial institutions, the electricity index, and the telecommunication and information index positively and significantly influence the food and non-food Agribusiness MSIs. The difference in results is found in the infrastructure and distribution index variables, which only have a significant positive effect on non-food Agribusiness MSIs with a coefficient of 0.095. This is because non-food products require a more comprehensive distribution reach for product delivery, so land road accessibility and the availability of expedition services in villages/expatriates play an essential role in business continuity.

The infrastructure and distribution index has not had a significant effect on the Food Agribusiness MSIs. This indicates that the available facilities and infrastructure index cannot support the development of Food Agribusiness MSIs. Table 1 in the statistical description shows that the infrastructure and distribution index has an average of 0.57, with an average growth of 2.31% in 2022 from 2018. This figure proves that the infrastructure and distribution index is not evenly distributed. At the same time, Food Agribusiness MSIs have product characteristics that could be more durable, so it requires a relatively fast time for the product to reach consumers. There is no synchronization between the need and availability of supporting infrastructure, especially in infrastructure and distribution, which means that the infrastructure and distribution index has not increased the IMK of Food Agribusiness MSIs.

Policy Implications

Strategic steps that can be taken to optimize the role of bank and non-bank financial institutions for the growth of Agribusiness MSIs are optimizing the role of cooperatives through government policies that support optimizing the role of cooperatives through supportive government policies such as channeling the National Economic Recovery program revolving fund to cooperative partners, modernizing cooperatives (digitizing and improving the cooperative system), strengthening cooperative supervision, financing cooperative guarantees, and developing cooperative human resources through development. It is because the existence of cooperatives has been proven to significantly increase the number of Agribusiness MSIs due to the affordability of the capital provided. Infrastructure components (electricity, infrastructure, distribution, telecommunication, and information) must have the same availability synchronization. When one of these components is not properly available to support the business component, the other infrastructure components cannot be utilized properly. Equitable infrastructure development is needed, especially in areas with good natural and human resource potential but still need good supporting infrastructure. The development of telecommunication and information infrastructure in the regions through policies that support the use of technology (digitization of machines, communication equipment, and the internet) needs to be improved and is of particular concern to the government. It is because of the telecommunications and information indices with the highest significance coefficient. The push for inclusive digitalization must begin to be carried out for the even distribution of market information for all Agribusiness MSIs business actors.

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CONCLUSION AND SUGGESTION

Non-bank financial institutions, namely savings and loan cooperatives, have a significant positive influence on the growth of IMK Agribusiness units. Supporting infrastructure, which is reflected through the electricity index, infrastructure and distribution index, and the telecommunication and information index, has a significant positive influence on the growth of IMK Agribisis. Data disaggregation is also carried out by sector (food and non-food) and region (Java and outside Java). The disaggregation results show that savings and loan cooperatives, electricity and telecommunication, and information index positively and significantly influence IMK Agribusiness food and non-food. However, bank financial institution variables, as well as infrastructure and distribution indices, only have a significant positive effect on IMK non-food agribusiness. Utilization of the role of savings and loan cooperatives needs to be optimized through supportive government policies so that the accessibility of capital for IMK Agribusiness will increase. Distribution of infrastructure development is also needed to create a supportive business climate so that the number of agribusinesses IMK can increase. Future researchers should elaborate on data with digital financial institutions (financial technology/fintech). Due to the accelerated movement of technology, especially in the financial sector, fintech is an option for business capital loans.

REFERENCES

- Bongomin, G. O. C., Ntayi, J. M., Munene, C., and Akol, C. M. 2017. The relationship between access to finance and growth of SMEs in developing economies: Financial literacy as a moderator. Review of International Business and Strategy, 27(4): 520–538. https://doi.org/10.1108/RIBS-04-2017-0037
- Caroline, Sugiarto, D., Nuraeni, E., Warsiati, W., Fitriana, A. I., Saputra, H. E., Defitri, S. Y., Hikmah, Arumingtyas, F., Wiliana, E., Trisavinaningdia, A., Febrianto, H. G., Djuaniardi, D., Abdurohim, and Firmansyah, H. 2021. Bank dan lembaga keuangan lainnya. Insania.
- Darwin. 2018. MSMES in inclusive financing perspective in Indonesia. Jurnal Ekonomi Pembangunan, 26(1): 59–76. https://jurnalekonomi.lipi.go.id/JEP/article/view/228
- Dobson, A. J., and Barnett, A. G. 2018. An introduction to generalized linear models (4th ed.). CRC Press.
- Edelia, A., and Aslami, N. 2022. The Role of empowerment of the cooperative and msme office in the development of small and medium micro enterprises in Medan City. Marginal : Journal of Management, Accounting, General Finance and International Economic Issues, 1(3): 31–36. https://doi.org/10.55047/marginal.v1i3.163
- Fadliansyah, Marwiyati, and Adi, R. 2022. Peran koperasi simpan pinjam dalam upaya pengembangan usaha mikro kecil dan menengah (UMKM) di Kabupaten Aceh Barat (Studi kasus pada Koperasi Simpan Pinjam (KSP) Mandiri Jaya Meulaboh). Jurnal Ilmiah Basis Ekonomi Dan Bisnis, 1(1): 72–90. https://doi.org/10.22373/jibes.v1i1.1562
- Forkuoh, S. K., and Li, Y. 2015. Electricity power insecurity and smes growth: A case study of the cold store operators in the Asafo Market Area of the Kumasi Metro in Ghana. Open Journal of Business and Management, 3(3): 312–325. https://doi.org/10.4236/ojbm.2015.33031
- Gaglio, C., Kraemer-Mbula, E., and Lorenz, E. 2022. The effects of digital transformation on

innovation and productivity: Firm-level evidence of South African manufacturing micro and small enterprises. Technological Forecasting and Social Change, 182(2021): 121785. https://doi.org/10.1016/j.techfore.2022.121785

- Gibbons, S., Lyytikäinen, T., Overman, H. G., and Sanchis-Guarner, R. 2019. New road infrastructure: The effects on firms. Journal of Urban Economics, 110(2018): 35–50. https://doi.org/10.1016/j.jue.2019.01.002
- Heryasa, T., and Purmiyati, A. 2022. Analysis of The Effect of Information and Communication Technology on the Production of Micro and Small Enterprises in Indonesia. Media Trend, 17(2): 329–342.
- Hilmawati, M. R. N., and Kusumaningtias, R. 2021. Inklusi keuangan dan literasi keuangan terhadap kinerja dan keberlangsungan sektor usaha mikro kecil menengah. Nominal: Barometer Riset Akuntansi Dan Manajemen, 10(1): 135–152. https://doi.org/10.21831/nominal.v10i1.33881
- Hsiao, C. 2022. Analysis of panel data (4th ed.). Cambridge University Press.
- Jinjarak, Y., and Wignaraja, G. 2016. An empirical assessment of the export—financial constraint relationship: How different are small and medium enterprises?. World Development, 79: 152–163. https://doi.org/10.1016/j.worlddev.2015.11.012.
- Krisnamurthi, B. 2018. Refleksi Agribisnis: 65 Tahun Profesor Bungaran Saragih. Bogor: IPB Press.
- Latuconsina, Z. M. Y. 2017. Analisis faktor-faktor yang mempengaruhi indeks pembangunan manusia Kabupaten Malang berbasis pendekatan perwilayahan dan regresi panel. Journal of Regional and Rural Development Planning, 1(2): 202. https://doi.org/10.29244/jp2wd.2017.1.2.202-216
- Ministry of Cooperatices and SMEs of the Republic of Indonesia. 2021. KUKM dalam angka. https://kemenkopukm.go.id/kumkm-dalam-angka/?type=indikator-ekonomi&sub=1.
- Mukhtar, S., Putri, K. Y. S., Suseno, D. A., Wibowo, A., and Wardana, L. W. 2020. Influence of information technology towards the development economics of SMEs in Indonesia. Humanities and Social Sciences Letters, 8(3): 268–279. https://doi.org/10.18488/journal.73.2020.83.280.291
- Osoro, K., and Muturi, W. 2013. The role of micro financial institutions on the growth of smes in kenya:a case study of micro financial institutions in Kisi Town. IOSR Journal Of Humanities and Social Science, 16(1): 83–93. https://doi.org/10.9790/0837-1618393
- Palei, T. 2015. Assessing the impact of infrastructure on economic growth and global competitiveness. Procedia Economics and Finance, 23(2014): 168–175. https://doi.org/10.1016/s2212-5671(15)00322-6
- Rachmina, D., Daryanto, A., Tambunan, M., and Hakim, D. B. 2014. Impact of infrastructure on profit efficiency of vegetable farming in West Java, Indonesia: Stochastic frontier approach. Journal of ISSAAS, 20(1): 77–92.

Tambunan, T. T. H. 2021. UMKM di Indonesia: Perkembangan, kendala, dan tantangan. Prenada.