

The Mystery of the Impact of SMEs on Unemployment, Poverty, and Job Participation in Indonesia

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Abstract

The lack of studies on SMEs and economic growth and their influence on unemployment and community work participation in Indonesia highlights the SMEs' Economic Importance and their impact on unemployment and community work participation. With diverse correlations in the results of past studies, the demand for study on SME economic growth, unemployment, and labor participation is growing. This research took 21 years, from 2000 to 2020, by modeling "autoregressive vectors" to understand the causal relationship between variables. The World Bank, Kementerian Koperasi dan Usaha Kecil dan Menengah (KemenkopUKM), and the Badan Pusat Statistik (BPS) provided secondary data for this study. We use the variables of the number of SMEs in Indonesia, economic growth, poverty alleviation, and unemployment reduction in Indonesia. We found that the increasing number of SMEs will reduce the unemployment rate, but when the unemployment rate decreases, SMEs will be lower, this happens because when unemployment is high, people in Indonesia open SMEs only as an alternative to lost jobs, but when the unemployment rate decreases SME will be abandoned. The increase in SME is also followed by an increase in poverty, as evidenced by the relationship between SME and economic growth, but this study also has a limitation, namely SME represents "the number of SME's, not SME turnover, so the suggestion in future research is to include SME turnover to link it with the poverty alleviation indicator.

Keyword: SMEs, Poverty, Unemployment, Indonesia

JEL Classification : C10, E04, E44

Received: March 6,2024 Accepted: March 25,2024

DOI : 10.54204/TAJI/Vol132024008

Introduction

MSEs have great potential in increasing community participation in the economy (Zhu, Nguyen, Siri, Malik, 2022). SMEs encourage people to create their jobs by opening SMEs. The growth of SMEs in Indonesia is quite good during this pandemic. The number of layoffs at large companies encourages new unemployment. However, on the other hand, the growth of SMEs has increased in number due to the urge to survive from the community in this pandemic era (Wahyono, Narmaditya, Wibowo, Kustiandi,2021; Lestantri, Janom, Aris, Husni, 2022).

When viewed per company, SMEs on an economic scale have a small value compared to large companies. However, cumulatively, the MSE has a significant value to the economy, both in

terms of transactions and the ability to rotate the economy, especially in Indonesia (Kristiningrum, Ayundyahrini, Susanto, Setyoko, Kresiani, Suparmanto, 2021).

In general, MSEs provide an alternative for new economic development where people can create their jobs and encourage the creation of new jobs by involving friends and family. The ability of MSEs to absorb labor in Indonesia is very significant with the increase in informal workers but still able to survive in difficult times (Smallbone, Saridakis, Abubakar, 2022).

MSEs must undoubtedly be maintained and cultivated to expand and transition into new massive companies. The growth of the MSE is also followed by the absorption of labor in the informal sector. MSMEs, of course, professionally also have the potential to develop so that in the future, they can recruit professional and educated personnel with salaries commensurate with the skills possessed by workers (Herman, 2012).

In Indonesia, SMEs have a very strategic role. SMEs in Indonesia are the backbone of Indonesia's economic situation. a high number of individuals, of course, will be challenging to provide massive jobs for all Indonesians of productive age if they only rely on the government or big companies. SMEs play an important role in reducing unemployment, creating new jobs, and creating new SMEs (Putra & Santoso, 2020).

In developing countries such as Indonesia, infrastructure is an important factor in encouraging the economy. Infrastructure is an expensive common good, so it is appropriate if the Indonesian government manages it. Infrastructure investment can increase economic efficiency and the ability of SMEs to survive with the ease of distribution of good infrastructure (Musaiyaroh & Bawono, 2018).

Infrastructure plays an important role in the economy, including developing and expanding SMEs in Indonesia. Infrastructure such as roads accelerates the distribution process, which impacts accelerating transactions and business turnover in Indonesia (Rahayu & Day, 2015).

SMEs have the potential to develop and grow into large companies in Indonesia. This is a phenomenon where SMEs in the future become new companies that have a major effect influence and contribution to economic growth. Start-up is one of the spirits of SMEs that continues to grow. It cannot be dammed with the power of the millennial generation, who are creative and actively encourage the creation of a new generation of companies that continue to grow and become big (Jaswadi, Iqbal, Sumiadji, 2015).

The role of start-ups in Indonesia and the change in start-ups from the SME class to large companies in Indonesia are phenomena and real examples that the SME business is a form of business that has the potential to grow and develop into a large company that has a significant impact on the economy in Indonesia (Weerd, Mangula, Brinkkemper, 2016). However, many studies in various countries are not in line with previous studies on the significance of SMEs in economic development, which found that the role of SMEs in the economy was not significant (Anastasiou, Kallandranis, Drakos, 2022). Unemployment is a familiar phenomenon in the discussion of the economy in various literature. SMEs are small businesses that automatically become jobs for their owners. The creation of new SMEs is one of the alternatives in creating new jobs. Of course, the development of SMEs also impacts increasing the need for

employment, which means creating new job opportunities for people (Cornille, Rycx, Tojerow, 2019).

The growth of SMEs, which started as informal businesses and grew into more professional businesses, created new jobs for both educated and uneducated people. The creation of new jobs from the creation of SMEs is an alternative that is quite attractive at this time, especially during the epidemic of COVID-19 (Caballero-Morales, 2021). Many studies related to SMEs have been carried out in developing countries and developed countries. Research related to SMEs has contributed to the economic and business scientific literature and has attracted the attention of many policymakers in various countries (Kottika, Özsomer, Rydén, Theodorakis, Kaminakis, Kottikas, Stathakopoulos, 2020).

The lack of research related to SMEs and economic growth and their impact on unemployment and community work participation in Indonesia creates a need for the role of SMEs in the economy, reduce unemployment and increase work participation in Indonesia needs to be done. The need for research related to SME's economic growth, unemployment, and work participation is getting stronger with various relationships in the results of previous research. In previous studies, it was found that the impact of SMEs on the economy was not greater than that of large industries. However, other research states otherwise that SMEs significantly contribute to economic growth. Likewise, research related to SMEs and unemployment still has pros and cons. Previous research found that increasing SMEs has not been effective in reducing unemployment. However, other studies have found that SMEs are an alternative in reducing unemployment. Likewise, in previous studies and previous studies, SMEs with infrequent work participation also have pros and cons.

Literature Review

SMEs are never separated from entrepreneurship and business theory. The business theory itself is also based on economic theory. One of the conflicting but underlying theories of the formation of businesses, including SMEs, is the theory of mercantilism and free trade. Mercantilism is a theory that believes that prosperity can be created by increasing domestic gold reserves, protecting domestic businesses, and trading surpluses. On the other hand, the free trade theory contradicts mercantilism. Free trade theory believes that the prosperity of the people can be formed by fair, free trade so that each country can meet each other's needs fairly. Both theories relate to trade, and trade is related to business, and SMEs are inseparable from the business (Aizenman, Jinjark, Zheng, 2018; Copeland & Taylor, 2005).

Before the internet era came, SMEs might find it difficult to achieve international trade or trade. However, with the existence of the internet, trade is increasing and is increasingly reaching across countries even though it is carried out by SMEs (Jean & Kim, 2020). Classical theory with the thought of Adam Smith believes that trading can increase the capitalization and profits of the company supported by skilled workers. Increased capitalization and company profits allow companies to grow and create new jobs. Regarding skilled labor, human capital theory is one of the popular theories related to the relationship between human skills and business performance (McCauley, 2000). The human capital theory believes that human abilities in the form of skills in

earning income affect increasingly profitable business performance. Both entrepreneurs and workers get an increase in income (Puspaningtyas & Harnani, 2021).

The theory of human capital gave birth to the knowledge economy theory, which believes that the human knowledge factor that impacts the economy with knowledge of skills can be improved. Technology can be developed to increase human performance, which improves business performance, one of the most important sources of economic development (Prabowo, Puspaningtyas, Murniati, 2019; Widarni & Bawono, 2021). Anderson (1982), in his study, found that SME profits will continue to decline due to competition with large companies so that large companies are more efficient with more profitable economies of scale. In the end, only large companies contribute significantly to the economy, and SMEs contribute less and less significant to the economy. However, other studies have found different things regarding SMEs and economic growth.

Even the smallest SMEs become new jobs for their owners and founders, and it is not impossible that SMEs can continue to survive and grow. SMEs in modern times make many contributions through technological developments; SMEs are increasingly getting opportunities ranging from increased sales to the ability to access capital so that they have the opportunity to grow and develop better (Fernet, Torrès, Austin, St-Pierre, 2016).

SMEs that grow and develop can change the lives of owners and people who are involved in the businesses run by these SMEs so that their welfare can continue to grow and in the end, can contribute to poverty alleviation and provide new jobs for members of the community in need thereby contributing to the reduction of unemployment. SMEs are important in economic development in various countries in the world (Epede, Wang, 2022).

SMEs in modern times get various opportunities to grow and develop, followed by information technology that continues to develop and provides various conveniences. Cumulatively SMEs can be said to influence the world economy positively. SMEs themselves are small businesses that started from establishing a person with limited capital and are easier to open than large companies in terms of capital. Of course, SMEs are more accessible to the public than large companies. Of course, SMEs create new companies and increase competition in the business industry that SMEs enter. The inclusion of SMEs in the industry can increase the competitive climate that needs to be managed to provide a healthy business climate (McDougall, Wagner, MacBryde, 2022).

Large companies have large capital and good economies of scale efficiency compared to SMEs with the same line of business. However, it is not impossible that SMEs and large companies can collaborate to grow together. Miller (1990) explains that job creation can be done more quickly through the creation of small-scale enterprises (SMEs). Gebremariam, Gebremedhin, and Jackson (2004), Mateev and Anastasov (2010), Wen (2011), Uma (2013), in their research that the development of SMEs affects the economy and poverty alleviation. However, Vijayakumar (2013) found something different, namely the role of SMEs in the economy is not significant.

In developing countries, SMEs are an alternative in alleviating poverty by providing new job opportunities informally through small and medium enterprises. SMEs provide opportunities to do business with minimal capital but can grow. SMEs provide independent opportunities for the

community to start a business even though it is small. Increasing economic independence can, directly and indirectly, encourage welfare to reduce poverty. In Indonesia, SMEs play a critical role in poverty alleviation and job creation (Lestantri, Janom, Aris, Husni, 2022; Zameer, Shahbaz, Vo, 2020).

The existence of information technology that continues to develop as well as the development of policies in the financial sector that are getting better and better in Indonesia, directly and indirectly, encourage financial access literacy in the community so that SMEs can gain access to good finance to grow and develop (Mushtaq, Gull, & Usman, 2021).

Micro-scale businesses have a significant impact, including SMEs, encouraging economic growth in Indonesia. Millions of workers have been absorbed in the informal sector by working in SME businesses in Indonesia. This shows that SMEs can alleviate poverty and reduce unemployment in Indonesia (Jaswadi et al., 2015).

Indonesia is one of the most important countries in Asia, both economically and geographically. Indonesia is a country with many beautiful islands and has a variety of economic potential (Susanto, Zheng, Liu, Wang, 2020). Indonesia is an important country in the economy because of its large population, attracting investors to invest in Indonesia. With many human resources, it is certainly very significant in the product market and labor market in Asia, especially the Southeast Asia region (Alam, Murad, Noman, Ozturk, 2016).

With a population of nearly 250 million people, Indonesia is one of the most populous countries globally, or about 5% of the world's population in total live in Indonesia. From the international business point of view, this shows that Indonesia is a potential market, especially in the Southeast Asian region. The figure is quite significant from the total population of Indonesia to the world's population. This can illustrate that Indonesia has enormous human resources that can be used to drive the Indonesian economy and have the potential to influence the world (Jones & Hull, 2000).

Indonesia, with a very large population, is supported by abundant natural resources. Indonesia provides potential natural wealth from the potential of the sea to land and various mining goods. However, the tourism potential is no less economically than the thousands of beautiful islands in Indonesia, which is a very large natural and tourism potential and needs to be managed properly. Indonesia's large population certainly requires economically viable jobs. SMEs provide alternative solutions for creating new jobs for residents in Indonesia. New job opportunities are created from the opening of new SMEs or the growth of old SMEs that continue to need workers. Of course, this requires good management and is the responsibility of all parties in maintaining and developing Indonesia's human resources and the abundant natural resources in Indonesia (Lestantri et al., 2022).

Previous research has yielded mixed results on the influence of SMEs on the economy. However, research on SMEs and the Indonesian economy is still minimal. Research on SMEs in Indonesia related to unemployment is also still minimal. This is a strong reason for conducting research and investigations in terms of the significance of SMEs in the Indonesian economy. SMEs make a significant contribution in many countries in the world, thereby strengthening the belief that SMEs need to be studied in depth because of the many differences and diversity of results in

previous studies. Research related to SMEs in various countries gives mixed results. However, this is still based on country differences, and the conditions of each country studied. This diversity of results from SME research in various fields is the motivation for our study in analyzing the role of SMEs in Indonesia in economic expansion, poverty alleviation, and reducing unemployment in Indonesia.

Research Method

This research takes 21 years, namely from 2000 to 2020, by modeling the "vector autoregressive" to understand the causality relationship between variables. This research is based on secondary world bank data. and Kementerian Koperasi dan Usaha Kecil dan Menengah (KemenkopUKM). We use variable SME total in Indonesia, economic growth, poverty alleviation, and reducing unemployment in Indonesia. SME total data from Kementerian Koperasi dan Usaha Kecil dan Menengah (KemenkopUKM).

To evaluate the causality relationship of SME total in Indonesia, economic growth, poverty alleviation, and reducing unemployment in Indonesia, the following multivariate regression model was used:

$$\begin{aligned}
 \text{SME}_t &= \beta_0 + \beta_1 \text{EG}_t + \beta_2 \text{PA}_t + \beta_3 \text{RU}_t + e_t && \text{eq1 1} \\
 \text{EG}_t &= \beta_0 + \beta_1 \text{SME}_t + \beta_2 \text{PA}_t + \beta_3 \text{RU}_t + e_t && \text{eq1 2} \\
 \text{PA}_t &= \beta_0 + \beta_1 \text{SME}_t + \beta_2 \text{EG}_t + \beta_3 \text{RU}_t + e_t && \text{eq1 3} \\
 \text{RU}_t &= \beta_0 + \beta_1 \text{SME}_t + \beta_2 \text{EG}_t + \beta_3 \text{PA}_t + e_t && \text{eq1 4}
 \end{aligned}$$

Description :

SME : SME total in Indonesia

EG : economic growth

PA : poverty alleviation

RU : reducing unemployment

E : error term

t : time series

β : the magnitude of the effect of causality

eq1: equation

This study uses vector calculations where each regression relationship will be brought together so that each variable will alternately become the dependent variable and the independent variable. The zero theory of Dickey-Fuller, taken from the PP test, and $p=1$ is the formula in $\Delta y_t = (\rho - 1)y_{t-1} + u_t$, in which Δ – for the first time different operators. This research used the following equation for the "unit root test":

$$\Delta Y_1 = \alpha_0 + \beta_0 T + \beta_1 Y_{t-1} + \sum_{i=1}^q \alpha_i \Delta Y_{t-1} + e_t$$

Description:

Y as the variable is being examined for unit root

T as the variable which indicates the "linear trend," the "lag difference" means is ΔY_{t-1} ,

α_0 are shown as "constant term," with the

"t" as a "time trend" indicator.

The null and alternative hypotheses for the "unit root test" are as follows:

$H_0: \alpha=0$

$H_1: \alpha \neq 0$

Result and Discussion

To meet one of the causality test and VAR assumptions, it is necessary to do a stationarity test first. The Augmented Dickey-Fuller Test is used in the unit root test (ADF Test), which is going to be used to determine the research's stationarity since the ADF Test takes into account the potential of autocorrelation in the error term if the series being tested is non-stationary. The following are the results of the unit root test:

Table 1. Unit Root Test with ADF on SME, EU, EG, and PA data in Indonesia

Variable	Unit Root	Include in the examination Equation	Statistics for the ADF Test	5% Critical Value	Description
SME growth in Indonesia (SME)	Level	Intercept	-1.828482	0.0007	Stationer
Reducing Unemployment (RU)	Level	Intercept	-0.606491	0.8482	
	Early Diff	Intercept	-3.886074	0.0089	Stationer
Economic Growth (EG)	Level	Intercept	-0.527808	0.8660	
	Early Diff	Intercept	-1.929268	0.3129	
	Second Diff	Intercept	-3.319458	0.0293	Stationer
Poverty Alleviation (PA)	Level	Intercept	-1.177089	0.6629	
	First Diff	Intercept	-3.985327	0.0073	Stationer

SME data were stationary in the original data, RU and PA data were stationary at first different, and EG data was stationary at second different, According to the SME unit root test's findings, EU, EG, from 2000 to 2020, as well as PA data. -1.828482 was found to be the ADF value (Augmented Dickey-Fuller test statistics), 0.0007 is the crucial value. It is smaller than the p-value, suggesting that it is less. In this case, the SME data reveals that it is stationary compared to the original data. What happened next with the EU, EG, and PA data? At the second and first difference levels, the data was stationary and was similar. As a result, VAR may directly assess SME, EU, EG, and PA (Vector autoregression). Because of causality tests and VAR testing, The sensitivity of the ideal lag duration is great. It's crucial to figure out the most suitable lag duration before doing a VAR or a causality test analysis. In this study, the shortest or lowest Akaike Information Criteria (AIC) value is used to identify the appropriate lag time. The duration of the gap utilized in this test spans from 0 to 3 since the data used are annuals with a 21-year data span. This latency is thought to be long enough to describe SME, EU, EG, and PA over an annual timescale.

Table 2. AIC value at Lag 0 to 3 SME, EU, EG, and PA data in Indonesia

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-112.6065	NA	4.978966	12.95627	13.15413	12.98355
1	-74.77678	54.64286*	0.467294	10.53075	11.52006	10.66716
2	-53.54269	21.23409	0.364995	9.949188	11.72993	10.19473
3	-23.10927	16.90746	0.226363*	8.345475*	10.91766*	8.700144*

The results of the Optimum Lag test are shown in Table 2. the AIC values at Lag 0 to 3 show that the Lag lengths of SME, EU, EG, and PA are at FPE, AIC, SC, and HQ at Lag 3. Because the results of all four criteria are the same, lag 3 will be chosen. The interaction between SMEs is shown in this figure, the EU, the EG, and the PA during the period. Based on the data, there is no preceding effect for these four variables, implying that, according to the FPE requirement of 0.226363, the best lag is at lag 3.

Table 3. Johansen system cointegration test

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None	0.732954	46.85663	47.85613	0.0619
At most 1	0.602418	21.77028	29.79707	0.3114
At most 2	0.198132	4.245574	15.49471	0.8827
At most 3	0.002636	0.050156	3.841466	0.8228
Trace test indicates no cointegration at the 0.05 level				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None	0.732954	25.08634	27.58434	0.1010
At most 1	0.602418	17.52471	21.13162	0.1487
At most 2	0.198132	4.195418	14.26460	0.8382
At most 3	0.002636	0.050156	3.841466	0.8228
Max-eigenvalue test indicates no cointegration at the 0.05 level				

To identify the link between variables, a cointegration test is required; this test is used to explain the connection between economic characteristics such as SME, EU, EG, and PA in their long-term balance. The test of cointegration The data suggest a consistent long-term relationship if the variable in the time series is cointegrated. The findings of the cointegration test, on the other hand using the trace statistic approach, show that there is no cointegration at the 5% significance level; similarly, when using the maximum eigenvalue approach, the same results are obtained, namely that at the 5% significance level, there is no cointegration. The data was found to be stationary and not cointegrated in this study, as indicated in table 1 and point 3. This suggests that the variables do not have a long-term equilibrium connection.

Table 4. Var model analysis

	SME	RU	PA	EG
SME	-0.164749	0.095154	-0.204292	-0.758754
	(0.35171)	(0.13450)	(0.26442)	(0.61614)
	[-0.46843]	[0.70745]	[-0.77260]	[-1.23145]

RU	-0.318686	-0.434813	-0.778138	2.828627
	(0.77755)	(0.29736)	(0.58459)	(1.36218)
	[-0.40986]	[-1.46224]	[-1.33109]	[2.07655]
PA	0.574956	0.228746	0.511746	0.113090
	(0.49896)	(0.19082)	(0.37513)	(0.87412)
	[1.15230]	[1.19876]	[1.36417]	[0.12938]
EG	-0.289744	0.139789	0.521620	-0.249098
	(0.63570)	(0.24311)	(0.47794)	(1.11366)
	[-0.45579]	[0.57500]	[1.09140]	[-0.22367]
C	4.740202	0.820696	-1.636526	-3.409792
	(5.40043)	(2.06529)	(4.06020)	(9.46087)
	[0.87775]	[0.39738]	[-0.40307]	[-0.36041]
R-squared	0.694329	0.981041	0.977863	0.718507
Adj. R-squared	-0.039282	0.935538	0.924734	0.042924
Sum sq. resids	5.321749	0.778322	3.008101	16.33280
S.E. equation	1.031673	0.394543	0.775642	1.807363
F-statistic	0.946454	21.56023	18.40535	1.063536
Log likelihood	-14.57377	2.727984	-9.439328	-24.66613
Akaike AIC	3.063752	1.141335	2.493259	4.185125
Schwarz SC	3.706798	1.784381	3.136305	4.828171
Mean dependent	2.655556	5.515000	13.14444	5.004559
S.D. dependent	1.011988	1.553975	2.827225	1.847448
Covariance of determinant resids (dof adj.)		0.025731		
Determinant resid covariance		0.000153		
Log likelihood		-23.10927		
Akaike information criterion		8.345475		
Schwarz criterion		10.91766		
Number of coefficients		52		

The relationship between SME and SME itself is significantly negative with coefficient -0.164749 and t-statistic 0.35171, the relationship between SME and RU is significant positive coefficient with 0.095154 and t-statistic 0.13450, meaning that the higher the SME, the higher the RU, the RU relationship with SME is significant negative with coefficient -0.318686 and t-statistic 0.77755, meaning that the higher the RU the lower the SME with coefficient -0.204292 and t-statistic 0.26442, this indicates that when unemployment is high, people in Indonesia are more choices to open an SME business as an alternative to the lost job. However, when the unemployment rate decreases or people find work, the alternative SME is abandoned. The relationship between SME and PA is significant negative with coefficient -0.204292 and t-statistic 0.26442, meaning that the higher the SME the lower the PA, when SME increases (the number of SME's not turnover) it is followed by an increase in poverty which is reinforced by the indicator of the relationship between SME and EG, which is negative and not significant. However, the positive relationship between PA and SME is not significant with a coefficient of 0.574956 and t-statistic 0.49896, which means that there are fewer poor people or the greater the reduction in poverty, which is indicated by a

significant positive relationship between PA and EG with a coefficient of 0.113090 and a t-statistic of 0.87412, which means that SME and PA are difficult to be indicators of one another others without the EG indicator.

Table 5. Granger Causality Test results

The Null Hypothesis:	Obs	F-Statistic	Prob.
SME Granger cause does not cause by RU	18	2.23532	0.1413
RU Granger cause does not cause by SME		1.87294	0.1926
SME Granger cause does not cause by EG	18	1.50369	0.2679
EG Granger cause does not cause by SME		0.67515	0.5851
SME Granger cause does not cause by PA	18	0.35872	0.7840
PA Granger cause does not cause by SME		1.44990	0.2814
RU Granger cause does not cause by EG	18	1.27812	0.3300
EG Granger cause does not cause by RU		3.15811	0.0682
RU Granger cause does not cause by PA	18	2.57634	0.1069
PA Granger cause does not cause by RU		2.90834	0.0824
PA Granger cause does not cause by EG	18	0.99899	0.4294
EG Granger cause does not cause by PA		0.32742	0.8057

The Granger causality test results with the SME, RU, EG, and PA variables show that there is no one-way link since The significance level (p-value) is less than 0.05, reject H₀.

Conclusion

The increasing number of SMEs will reduce the unemployment rate, but when the unemployment rate decreases, SMEs will be lower, this happens because when unemployment is high, people in Indonesia open SMEs only as an alternative to lost jobs, but when the unemployment rate decreases SME will be abandoned. The increase in SME is also followed by an increase in poverty, as evidenced by the relationship between SME and economic growth, but this study also has a limitation, namely SME represents "the number of SME's, not SME turnover, so the suggestion in future research is to include SME turnover to link it with the poverty alleviation indicator.

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