Analysis of The Effect of Information and Communication Technology on the Production of Micro and Small Enterprises in Indonesia

Taufik Heryasa[1], Atik Purmiyati[2]*

[1,2,] Airlangga University

Article Information

A B S T R A C T

This study aims to analyze the effect of Information and Communication Technology on the production of Micro and Small Enterprises in Indonesia. This study uses panel data from 34 provinces in Indonesia between 2015-2020 which is estimated using the Generalized Method of Moments (GMM). The results show that capital, labor, computer users, fixed wireline users, cellular phone users, internet users and telecommunications expenses simultaneously have a positive and significant impact on the production of Micro and Small Enterprises in Indonesia. Partially, capital has a positive and significant effect on the production of Micro and Small Enterprises in Indonesia. On the other hand, telecommunications spending has a negative and insignificant effect on the production of Micro and Small Enterprises in Indonesia. While other variables have a positive and insignificant effect on economic growth in Indonesia. With these results, it is hoped that the government will issue policies to support micro and small businesses in increasing the use of information and communication technology to increase their production. Among other things, by building telecommunications infrastructure in areas that are not yet adequate, providing education to micro and small business actors in using information and communication technology, and providing light credit in the form of smartphones and computers to micro and small businesses so that they can be used to promote their products on the internet

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Author correspondence:
E-mail: atik-p@feb.unair.ac.id

INTRODUCTION

BPJS Archipelagic areas have different geographical and demographic characteristics from continental areas, and simultaneously, the economic development in archipelagic areas will also be different. The differences include the pattern of management and utilization of natural resources aimed at achieving the welfare of the community. The economic development can be defined as a process causing an increase in the real income per capita of a country's population in the long term, followed by improvements in the institutional system (Lincolin, 1999).

At present, the Indonesian business world is still dominated by Micro and Small Enterprises (MSE). From the results of the 2016-Advanced Economic Census, the number of these businesses reached more than 26 million businesses or 98.68 percent of the total non-agricultural businesses in Indonesia. This business is also able to absorb more than 59 million workers or around 75.33 percent of the total non-agricultural workforce (Badan Pusat Statistik, n.d.). When the crisis hit Indonesia around 1997-1998, MSEs were proven to remain strong when other big businesses fell. The superiority of MSEs in surviving the crisis was revealed by CIDES (Center for Information and Development Studies) in the article "The Impact of Fuel Price Increases on the SME sector in Indonesia" (Media, 2012).

According to CIDES, there are three advantages of MSEs. First, MSEs generally produce consumer goods and services that are close to the needs of the community. This was also experienced by Japan after it was devastated by the atomic bombing in World War II, the real sector driven by micro and small businesses remained strong. Second, MSEs do not rely on imported raw materials and rather utilize local resources in terms of human resources, capital, raw materials, and equipment. Third, the MSE business uses its own capital or is not

supported by loans from banks. With these advantages, MSEs in Indonesia were able to survive in the midst of the economic crisis that hit Indonesia in 1997 or in the following years which was usually marked by a deep decline in the rupiah exchange rate. The impact of this crisis was not felt by MSEs any further than Big Enterprises due to the lack of interaction with foreign currencies.

In the Indonesian economy, the advantage of MSEs that is no less important is its role in the absorption of labor. This absorption reaches more than 75 percent of the workforce outside the agricultural sector in Indonesia. Even according to (Tambunan, 2011), many MSEs were established by poor individuals or households because they did not get better job opportunities. Based on this opinion, it can be concluded that the development of MSEs is one of the best solutions to reduce unemployment while reducing poverty. Despite having several advantages, MSEs also have some limitations. These limitations make it difficult for MSEs to develop and be competitive. LPPI and BI (2015) describe these limitations, including the lack of access to banking; Human resources skills and knowledge are still low so that they are managed in a simple way; limited use of technology; and has not been able to keep pace with changes in consumer tastes, especially those that are export-oriented. (Suryanto & Muhyi, 2017) strengthen the opinion of LPPI and BI, if MSEs have several problems, including the limited entrepreneurial spirit of entrepreneurs, low competence of human resources, limited access to capital institutions, and lack of guidance. (Tambunan, 2009) also added that the majority of MSEs are not registered so they do not have access to taxes or government programs. These various limitations will certainly hinder the performance of MSEs in Indonesia, whose role is very real for the Indonesian

economy, especially for people with middle to lower economic scale.

Given the importance of the role of MSEs in driving the wheels of the Indonesian economy, these constraints and limitations should not discourage MSEs from developing their businesses and businesses. Opportunities to develop the MSE business are wide open if MSE actors are able to read the existing market situation. MSEs have an important role, especially in businesses that utilize natural resources and are labor intensive. These businesses are generally included in the Agriculture, Livestock, Forestry, and Fisheries Sector, as well as the Trade, Hotel and Restaurant Sector. According to the LPPI and BI (2015) the contribution of these two sectors in the added value of the MSE is 77.68 percent. However, other sectors are also able to contribute quite a

bit to the MSE economy.

In developing countries including Indonesia, the MSE's role is very significant for the economy, especially its contribution in creating jobs while reducing unemployment and creating added value in GDP. The very large number of MSEs in Indonesia has had a positive impact. In 2017, the number of non-agricultural MSEs in Indonesia has reached around 26 million businesses, or 98.68 percent of the total number of businesses in Indonesia. The number of MSEs is spread across all non-agricultural categories. The MSE actors mostly work in the Wholesale and Retail Trade, Car and Motorcycle Repair and Maintenance Sector (Category G). The number of businesses in this sector dominates the number of MSEs reaching almost 50 percent (Figure 1).
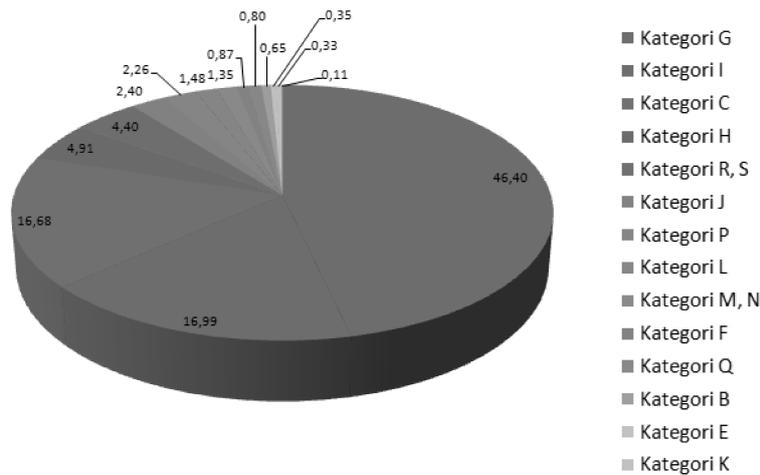
Source: BPS

Figure 1.
Percentage of Total MSE by Category, 2017

As a business that is mostly driven by the lower middle class population, the distribution of the number of MSEs also follows the distribution of the population. The island of Java with a population of almost half of Indonesia's population is still a concentration of MSEs. The number of MSEs on this island reaches more than

60 percent. The provinces of East Java, West Java, and Central Java are the three provinces with the highest number of MSEs in Indonesia. Meanwhile, other provinces outside Java with a large number of MSEs are North Sumatra and South Sulawesi (Table 1).

Table 1.
Distribution of MSEs by Island, 2017

Province	Distribution of MSEs by Island (%)
(1)	(2)
Sumatra	18,63
Java	60,74
Bali dan Nusa Tenggara	5,66
Kalimantan	5,13
Sulawesi	8,12
Maluku and Papua	1,72
Total	100

Source: BPS

According to (Tambunan, 2011), this distribution shows the role of the presence of MSEs to spread business activities in all regions. In fact (Urata & Kokusai Kyoryoku Jigyodan, 2000) stated that MSEs play an important role in local economic development and community economic development. Thus, it is expected to be able to lift the regional economy while reducing economic inequality between regions in Indonesia.

In addition to creating business opportunities, MSEs also create added value that is not small, although not as large as the number of businesses. With the number of businesses reaching 99 percent of all non-agricultural businesses in Indonesia, the contribution of MSEs in shaping Indonesia's GDP reached more than 57 percent in 2018. The value added contribution of MSEs is not as large as the amount, but the potential contained in MSEs is quite large. On the one hand, the ever-increasing GDP growth of MSEs may indicate an increase in MSE performance. This increase is expected to be able to increase the income of the population at the lower middle level as UMK actors, so that the income disparity of the population can be reduced.

With several advantages of MSEs in Indonesia so far, MSEs' position has been tested in facing the global crisis that occurred both during the 1997-1998 period

and in the years since. During the crisis period that occurred around 2005, the national economy slowed down. As a result of this slowdown, Indonesia's economic growth declined drastically in 2006. This significant decline was contributed by the decline in the GDP of UMB which was quite deep. On the other hand, MSE growth has increased significantly. This shows an indication of the resilience of MSEs in this critical period.

The very large number of MSEs in Indonesia will certainly play a role in creating job opportunities. MSEs is one of the most appropriate places to accommodate workers who do not have high skills. The SE2016-Continued data provides information that MSEs have absorbed nearly 60 million workers, or about three quarters of the workforce in Indonesia. In general, the absorption of labor from MSEs in developing countries in Asia is quite large, reaching around 50 to 80 percent (Tambunan, 2011).

Most of the absorption of MSEs in Indonesia occurs in wholesale and retail trade, car and motorcycle repair and maintenance (Category G), accounting for more than one-third of the workforce in MSEs as a whole (Figure 2). This sector will develop along with the increase in people's income and population. The increase in people's purchasing power will encourage consumption growth and demand for

goods, so that this sector will be the first to grow. In addition, the Trade Sector is a sector that is easy to operate because it can be done with relatively small capital, is simple, does not require special skills and can be done on a home-based business scale. Based on this opinion, most of the business in the trading sector is carried out by business actors who are just starting a business. Meanwhile, businesses in the Manufacturing Industry Sector (Category C) and the Provision of Accommodation and Food and Drink (Category I) rank second and third in the absorption of labor in MSEs.
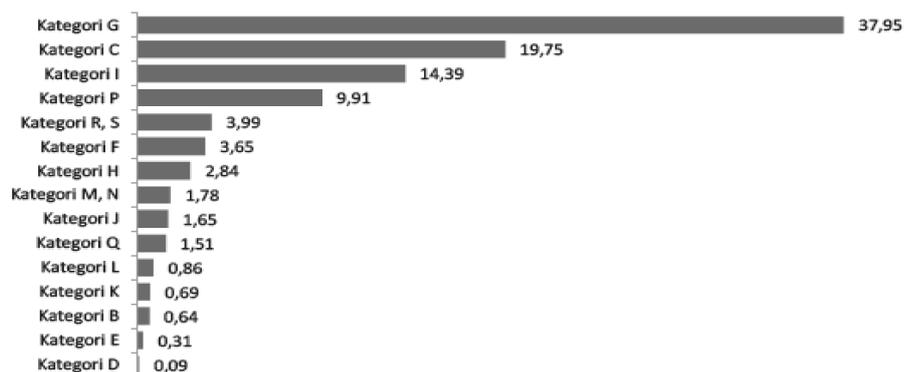
Source: BPS

Figure 2.
Percentage of MSE Labor Absorption by Category

It is undeniable that in this era of globalization, the free market is a necessity that cannot be avoided by business actors in Indonesia, including MSEs, which are the parties most affected by it. Therefore, an integrated policy must be carried out by the government and various interested parties. Starting from the integration of the provision of capital to the development of MSEs must be a priority, so that Indonesian commodities are able to compete at the domestic and global level. In the end, MSEs are able to become a buffer for the Indonesian economy as well as improve people's welfare.

In addition, the rapid development of information and communication technology has an impact on changes in various fields, such as social, economic, political, and cultural, as well as having an impact on changes in lifestyle, including consumption patterns and the way people sell and shop. In this era, people use information and communication technology to buy and/or sell goods and/or services via the internet. This phenomenon is known as electronic commerce or e-commerce. The e-commerce phenomenon provides a choice of ways to shop for people without the need to come directly to the store. This of course can be used by MSEs to reach larger consumers so as to increase the production and income of the MSEs.

In urban areas, SMEs that use mobile phones are more likely to experience growth in business profits or develop new products or services than those who do not. In both remote and rural areas, SMEs using landlines and websites are more likely to develop new products or services. On the other hand those who use computers are more likely to make business profits. However, those who use websites and the internet are less likely to increase product sales and develop new products or services (Odhuno & Ngui, 2018). Awareness of benefits, government support, top management support,

and financial support are important determinants of ICT adoption in rural SMEs in Bangladesh (Hoque et al., 2016). The involvement of small and medium-sized enterprises (SMEs) in ICT is a function of their annual sales turnover and the location where they operate, but no correlation was found with age, ownership structure, or type of business (Lu et al., 2019).

ICT has a significant influence on the performance of SMEs in Jos North during the COVID-19 period. Therefore, all SME owners/managers in Jos North prioritize the adoption and use of ICT in all their business operations even after the COVID-19 era (Gumus et al., 2021). ICT adoption has a significant impact on driving internal and external capabilities on the performance of SMEs. Adoption of ICT such as computer technology, communication technology, and media technology is an important factor influencing the business performance of SMEs in this era (Faisol et al., 2022). Only a small number of SMEs in Kumasi are aware of the benefits of ICT adoption. Most SMEs have reported positive performance and other benefits of leveraging ICT in business. Lack of internal capacity, lack of financial support, unavailability of infrastructure and other personal reasons are the main barriers in adopting ICT (Akomea-Bonsu & Sampong, 2012). ICT has a diverse and positive impact on the growth and competitiveness of SMEs in Rwanda (Yusuf, 2013). Information and Communication Technology is changing the work style of organizations and increasing the efficiency and performance of SME employees (Garg, 2020).

The use of ICT in SME business operations should be encouraged. SMB owners should also maintain the use of traditional ICT tools and integrate the use of cloud-based solutions in their business practices (Jeremiah et al., 2021). ICT has an impact on improving external and internal communication and that for best performance, it is important to align ICT investment with internal capabilities and organizational processes. Technology itself is not as important as the social and economic achievements it brings (Tarutė & Gatautis, 2014). Besides, ICT helps SME businesses survive in difficult times and become more competitive (Nuamah-Gyambrah et al., 2016).

ICTs have the most impact on costs/ time reduction compared to sales/revenue increase, the mobile phone is the most used ICT and ICTs have the most impact on supplier-related activities (Sianjase, 2016). ICT has a positive effect on the performance of selected Small and Medium Scale food, fruit drink and Beverages Firms operation in Nigeria, buttressing the significance relationship between ICT and performance in the selected food and beverages business enterprises (Moruf, 2014).

Information and communication technology has led to the growth of the business through volume of sales, access to new markets, volume of service / products and allowing businesses the capacity to handle a greater volume of work. Further, ICT leads to better quality/ service in the business by increasing customer satisfaction, allowing innovation through introduction of new product/ service and improving product/service quality (Masenge, 2015). On the other hand, ICT adoption was hindered by anabsence of innercapabilities, the higher ICT cost, and information deficiency of the application and solution of ICT. there is more need for training in the use of ICT in small enterprises and free professional assistance and advising for SMEs (Xin, 2021).

Lack of internal capabilities, high cost of ICT and lack of information about suitable ICT solutions and implementation were some of the major barriers in adopting ICT. There is a need for more focus and concentrated efforts on increasing

awareness among SMEs on the benefits of ICT adoption. There is a need for more training facilities in ICT for SMEs, measures to provide ICT products and services at an affordable cost, and availability of professional advice at reasonable cost to SMEs (Kavle & Shringarpure, 2018).

Top management participation and employee motivation in the innovation process enhance the effect of introducing ICT. The effect of ICT use raises innovation capability, in particular the ability to connect with external linkages. ICT use, innovation capability and external linkages enhance innovation activity, and the effect of ICT use and innovation capability promote innovation directly (Idota et al., 2020).

These studies have not used the variable of telecommunications expenditure as an indicator. Therefore, this study seeks to fill the research gap. This study aims to analyze the effect of the variables of capital, labor, computer users, fixed wireline users, cellular phone users, internet users, and telecommunications expenditures on the production of Micro and Small Enterprises in Indonesia.

METHODOLOGY

In this study, panel data from 34 provinces in Indonesia were used between 2015-2020 which were estimated using the Generalized Method of Moments (GMM). The data used are secondary data which all come from the Central Statistics Agency. The analytical model used in this study is an analytical model that refers to research (Odhuno & Ngui, 2018) which is formulated as follows:

$$
\begin{aligned}
sqrtOUTPUT_{it} = {} & \beta_0 + \gamma\, sqrtOUTPUT_{it-1} \\
& + \beta_1 sqrtCAPITAL_{it} + \beta_2 sqrtLABOR_{it} \\
& + \beta_3 COMPUTER_{it} + \beta_4 TELEPHONE_{it} \\
& + \beta_5 CELLPHONE_{it} + \beta_6 INTERNET_{it} \\
& + \beta_7 sqrtTELECOMMUNICATION_{it} + \varepsilon_{it}
\end{aligned}
$$

Where OUTPUT is the output value of Micro and Small Enterprises (in million rupiahs) as the dependent variable, CAPITAL is the capital of Micro and Small Enterprises (in million rupiahs) as the independent variable, LABOR is the workforce of Micro and Small Enterprises (in people) as the independent variable, COMPUTER is the user computer (in percent) as an independent variable, TELEPHONE is a fixed line telephone user (in percent) as an independent variable, CELLPHONE is a cellular telephone user (in percent) as an independent variable, INTERNET is an internet user (in percent) as an independent variable, and TELECOMMUNICATION is telecommunications expenditure (in rupiah) as an independent variable.

The data is estimated using Generalized Method of Moments (GMM), in this case System GMM. GMM estimation result is better and unbiased when compared to the Fixed Effect and Ordinary Least Squares (OLS) estimation results. Sargan test is used to determine the validity of the use of instrument variables whose number exceeds the number of estimated parameters (overidentifying restriction). While the Arellano-Bond test is used to determine whether or not there is a correlation between the first difference error in the i-th observation. The significance test of the model used is the Wald test and the Z test. The Wald test is used for simultaneous significance testing, while the Z test is used for partial significance testing.

RESULT AND DISCUSSION

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Table 2.
Descriptive Statistics

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Variable	Observation	Mean	Std. Dev.	Min	Max
OUTPUT	204	1.60e+07	2.96e+07	257319	1.40e+08
CAPITAL	204	9087745	1.78e+07	113220	8.85e+07
LABOR	204	283964.8	536663.6	3115	2716163
COMPUTER	204	20.44392	5.967112	11.03	36.95
TELEPHONE	204	2.199363	2.49049	0.02	18.36
CELLPHONE	204	88.83422	7.603889	47.27	98.4
INTERNET	204	58.0502	17.12169	16.28	93.33
TELECOMMUNICATION	204	156449.2	52113.67	64263.07	303521.9
SOUTPUT	204	3118.467	2511.578	507.2662	11832.43
SCAPITAL	204	2293.237	1961.548	336.4818	9408.951
SLABOR	204	418.5702	330.6049	55.81218	1648.079
STELECOMMUNICATION	204	390.3364	64.08456	253.5016	550.9282

Table 2 shows descriptive statistics where the number of observations of all variables is the same, which is 204. The output variable has an average value of 1.60e+07 with a minimum value of 257319 and a maximum value of 1.40e+08 with a standard deviation of 2.96e+07. Capital variable has an average value of 9087745 with a minimum value of 113220 and a maximum value of 8.85e+07 with a standard deviation of 1.78e+07. Labor variable has an average value of 283964.8 with a minimum value of 3115 and a maximum value of 2716163 with a standard deviation of 536663.6. Computer variable has an average value of 20.44392 with a minimum value of 11.03 and a maximum value of 36.95 with a standard deviation of 5.967112.

Meanwhile, Telephone variable has an average value of 2.199363 with a minimum value of 0.02 and a maximum value of 18.36 with a standard deviation of 2.49049. The Cellphone variable has an average value of 88,83422 with a minimum value of 47.27 and a maximum value of 98.4 with a standard deviation of 7.603889.

The Internet variable has a mean value of 58.0502 with a minimum value of 16.28 and a maximum value of 93.33with a standard deviation of 17.12169. The Telecommunication variable has an average value of 156449.2 with a minimum value of 64263.07 and a maximum value of 303521.9 with a standard deviation of 52113.67.

Meanwhile, SOutput has an average value of 3118.467 with a minimum value of 507.2662 and a maximum value of 11832.43 with a standard deviation of 2511.578. SCapital has an average value of 2293.237 with a minimum value of 336.4818 and a maximum value of 9408.951 with a standard deviation of 1961.548. SLabor has an average value of 418.5702 with a minimum value of 55.81218 and a maximum value of 1648.079 with a standard deviation of 330.6049. STelecommunication has an average value of 390.3364 with a minimum value of 253.5016 and a maximum value of 550.9282 with a standard deviation of 64.08456.

Table 3.
Sargan test result

Statistical Value	P-Value
39.4437	0.0002

The results of the Sargan test show that the statistical value of the Sargan test is 39.4437 with a probability value of 0.0002. This probability value is smaller than the value of α which is 0.05, which means rejecting H0.

This means that the instrument variable is correlated with error (heteroscedasticity occurs) so that the instrument variable is not valid. To overcome this, a robust standard error is applied.

Table 4.
Arellano-Bond test result

Order	Statistical Value	P-Value
1	-2.2867	0.0222
2	-0.52318	0.6008

The Arellano Bond test results show that the statistical value (order 2) is -0.52318 with a probability value of 0.6008. This probability value is greater than the value of α which is 0.05, which means accept H0. This means that there is no autocorrelation in the first difference error so that the model is consistent.

Table 5.
Pooled Least Square (PLS) result

Variable	Coefficient	Std Error	Z	P-Value
$OUTPUT_{it-1}$	0.0720829	0.0318349	2.26	0.025
CAPITAL	1.120033	0.0455939	24.57	0.000
LABOR	0.2695463	0.2174524	1.24	0.217
COMPUTER	16.61005	5.405224	-3.07	0.002
TELEPHONE	75.61756	11.39707	6.63	0.000
CELLPHONE	2.124168	3.715673	0.57	0.568
INTERNET	1.631132	1.913283	0.85	0.395
TELECOMMUNICATION	0.4817755	0.4636659	1.04	0.300
β_0	65.72427	358.7581	-0.18	0.855

Pooled Least Square (PLS) result show that the Capital variable has a coefficient value of 1.120033 with a z value of 24.57 and a probability value of 0.000. The variable Capital has a positive coefficient value and the probability value is smaller than the value of α which is 0.05, which means rejecting H0. This means

that MSE capital partially has a positive and significant effect on MSE production in Indonesia. The variable Labor has a positive coefficient value and the probability value is greater than the value of α which is 0.05, which means accepting H0. This means that MSE workers partially has a positive and insignificant effect on

MSE production in Indonesia. The variable Computer has a positive coefficient value and the probability value is smaller than the value of α which is 0.05, which means rejecting H0. This means that computer users partially has a positive and significant effect on MSE production in Indonesia.

The variable Telephone has a positive coefficient value and the probability value is smaller than the value of α which is 0.05, which means rejecting H0. This means that fixed cable telephone users partially has a positive and significant effect on MSE production in Indonesia. The variable Cellphone has a positive coefficient value and the probability value is greater than the value of α which is 0.05, which means accepting H0. This means that cellular telephone users partially

has a positive and insignificant effect on MSE production in Indonesia. The variable Internet has a positive coefficient value and the probability value is greater than the value of α which is 0.05, which means accepting H0. This means that internet users partially has a positive and insignificant effect on MSE production in Indonesia. Telecommunication variable has a coefficient value of 0.4817755 with a z-value of 1.04 and a probability value of 0.300. The Telecommunication variable has a positive coefficient value and the probability value is greater than the value of α which is 0.05, which means accepting H0. This means that telecommunications expenditure partially has a positive and insignificant effect on the production of MSEs in Indonesia.

Table 6.
Fixed Effect result

Variable	Coefficient	Std Error	Z	P-Value
$OUTPUT_{it-1}$	-0.0129282	0.0319854	-0.4	0.687
CAPITAL	1.018223	0.0529397	19.23	0.000
LABOR	1.863224	0.5493819	3.39	0.001
COMPUTER	12.3549	13.97902	0.88	0.378
TELEPHONE	53.40732	24.86294	2.15	0.034
CELLPHONE	-1.338318	9.675116	-0.14	0.890
INTERNET	2.816605	3.134832	0.9	0.371
TELECOMMUNICATION	0.0979398	1.161525	0.08	0.933
β_0	-406.2487	962.7551	-0.42	0.674

Fixed Effect result show that the Capital variable has a coefficient value of 1.018223 with a z value of 19.23 and a probability value of 0.000. The variable Capital has a positive coefficient value and the probability value is smaller than the value of α which is 0.05, which means rejecting H0. This means that MSE capital partially has a positive and significant effect on MSE production in Indonesia. The variable Labor has a positive coefficient value and the probability value is smaller than the value of α which is 0.05, which

means rejecting H0. This means that MSE workers partially has a positive and significant effect on MSE production in Indonesia. The variable Computer has a positive coefficient value and the probability value is greater than the value of α which is 0.05, which means accepting H0. This means that computer users partially has a positive and insignificant effect on MSE production in Indonesia.

The variable Telephone has a positive coefficient value and the probability value is smaller than the value of α which

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is 0.05, which means rejecting H0. This means that fixed cable telephone users partially has a positive and significant effect on MSE production in Indonesia. The variable Cellphone has a negative coefficient value and the probability value is greater than the value of α which is 0.05, which means accepting H0. This means that cellular telephone users partially has a negative and insignificant effect on MSE production in Indonesia. The variable Internet has a positive coefficient value and the probability value is greater than the value of α which is 0.05, which

means accepting H0. This means that internet users partially has a positive and insignificant effect on MSE production in Indonesia. Telecommunication variable has a coefficient value of 0.0979398 with a z-value of 0.08 and a probability value of 0.933. The Telecommunication variable has a positive coefficient value and the probability value is greater than the value of α which is 0.05, which means accepting H0. This means that telecommunications expenditure partially has a positive and insignificant effect on the production of MSEs in Indonesia.

Table 7.
Wald test result (System GMM)

Statistical Value	P-Value
8893.31	0.0000

The results of the simultaneous test (Wald test) for System GMM show that the statistical value of the Wald test is 8893.31 with a probability value of 0.0000. This probability value is smaller than the value of α which is 0.05, which means rejecting H0. This means that MSE capital,

MSE workforce, computer users, fixed cable telephone users, cellular telephone users, internet users, and telecommunications expenditures simultaneously have a positive and significant impact on the production of MSEs in Indonesia.

Table 8.
Z test result (System GMM)

Variable	Coefficient	Std Error	Z	P-Value
$OUTPUT_{it-1}$	0.0004473	0.0704882	0.01	0.995
CAPITAL	1.057912	0.0903285	11.71	0.000
LABOR	1.146893	0.6105562	1.88	0.060
COMPUTER	33.35669	22.38506	1.49	0.136
TELEPHONE	43.46567	25.09709	1.73	0.083
CELLPHONE	9.247407	14.94638	0.62	0.536
INTERNET	5.053762	3.608815	1.40	0.161
TELECOMMUNICATION	-1.52957	1.653278	-0.93	0.355
$β_0$	-1077.671	1541.639	-0.70	0.485

The results of the Z test show that the Capital variable has a coefficient value of 1.057912 with a z value of 11.71 and a probability value of 0.000. The variable Capital has a positive coefficient value and the probability value is smaller than the value of α which is 0.05, which means rejecting H0. This means that MSE capital partially has a positive and significant effect on MSE production in Indonesia. The variable Labor has a positive coefficient value and the probability value is greater than the value of α which is 0.05, which means accepting H0. This means that MSE workers partially has a positive and insignificant effect on MSE production in Indonesia. The variable Computer has a positive coefficient value and the probability value is greater than the value of α which is 0.05, which means accepting H0. This means that computer users partially has a positive and insignificant effect on MSE production in Indonesia.

The variable Telephone has a positive coefficient value and the probability value is greater than the value of α which is 0.05, which means accepting H0. This means that fixed cable telephone users partially has a positive and insignificant effect on MSE production in Indonesia. The variable Cellphone has a positive coefficient value and the probability value is greater than the value of α which is 0.05, which means accepting H0. This means that cellular telephone users partially has a positive and insignificant effect on MSE production in Indonesia. The variable Internet has a positive coefficient value and the probability value is greater than the value of α which is 0.05, which means accepting H0. This means that internet users partially has a positive and insignificant effect on MSE production in Indonesia. Telecommunication variable has a coefficient value of -1.52957 with a z-value of -0.93 and a probability value of 0.355. The Telecommunication variable has a negative coefficient value and the

probability value is greater than the value of which is 0.05, which means rejecting H0. This means that telecommunications expenditure partially has a negative and insignificant effect on the production of MSEs in Indonesia.

CONCLUSION

The results showed that the production of MSEs in Indonesia was positively and significantly influenced by capital. This means that capital investment has encouraged the production of MSEs in Indonesia. Meanwhile, telecommunications expenditures affect the production of MSEs in Indonesia negatively and insignificantly. This means that telecommunications spending has not been able to encourage an increase in MSE production in Indonesia. Meanwhile, MSE workers, computer users, fixed cable telephone users, cellular telephone users and internet users have a positive and insignificant effect on MSE production in Indonesia. Based on previous research, the use of information and communication technology has been able to provide a significant influence on micro and small businesses. However, the results of this study indicate that only capital investment has a positive and significant effect on the production of micro and small enterprises in Indonesia. While the other variables are not significant. Therefore, the government needs to issue policies so that the use of information and communication technology, especially by micro and small businesses, is aimed at more productive activities.

One of the policies that can be taken is to provide convenience for micro and small businesses in accessing e-commerce. As we know that currently e-commerce is growing rapidly in Indonesia. By utilizing e-commerce, micro and small businesses can expand the market for their products so that their products are better known by the wider community. This can increase the number of consumers who will buy

these micro and small business products. With the faster micro and small business products sell, there will be time efficiency where the available time can be used by micro and small businesses to produce more goods. This causes micro and small businesses to survive and develop faster.

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