Does Microfinance Affect Poverty Reduction and Inequality in Indonesia?

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Abstract: This study is to discuss the question of whether microfinance (specifically micro-credit) can reduce poverty and income inequality in Indonesia. Using data from 33 provinces in Indonesia, we show that higher levels of micro-credit provision can indeed reduce poverty in Indonesia. However, it turns out that this cannot be done to reduce the income income inequality. The results of this study add to the discussion about the impact of microfinance on poverty and inequality in Indonesia. Because so far micro finance is considered a very effective tool to be applied in an effort to improve people's welfare by reducing the level of poverty and inequality in Indonesia. Although poverty can decline, but no less important is economic development must be followed by a decrease in the gap between the rich and poor.

Index Terms: Inequality, Indonesia, Microfinance, Microcredit, Poverty, Poverty Reduction, Rural Bank.

1 INTRODUCTION

The issue of poverty and inequality is one of the main problems that are a major concern in the topic of economic development, especially by developing countries or less developed countries in the world. This is because until now, the problem of poverty and equality is still difficult to resolve or at least requires a long period of time (Todaro and Smith, 2012). One method that is believed to be able to reduce poverty and inequality is through the microfinance institution. This theory began to spread in the 1980s with Grameen Bank as its pioneer (Bateman and Chang, 2009). The appeared of the Grameen Bank was able to provide a large number of sustainable micro-loans to the poorest in Bangladesh. Furthermore, it is assumed that 'entrepreneurial poor' can expand various types of projects that generate income, thus ensuring they are in the aggregate and permanently out of poverty. Indonesia is one of the developing countries that still has a high level of poverty and inequality. In 2017, Indonesia's poor population reached 26.58 million or 10.12% and gini ratio (inequality) 0,391 (BPS, 2018). Based on the theory that believes that microfinance can reduce poverty and inequality as mentioned above, the Indonesian government also encouraged the establishment of various financial institutions, including one of them was microfinance institutions, in order to overcame the problems of poverty and inequality. In 1988, the Indonesian government issued a banking deregulation economic policy package called the October 1988 Package (Paket Kebijaksanaan Oktober 1988 / Pakto 88) which was considered to have changed the lives of many national banks. The policy was considered successful which was shown in absolute numbers such as the rapid increase in the number of banks, branch offices, the amount of funds raised, the number of loans channeled, the labor that could be employed, and the volume of business in the form of assets and their results until now. Indonesia's Central Bank noted that in September 1988, only 108 national banks consisted of six state banks, 64 private banks, 27 BPDs, 11 mixed banks. The total number of commercial bank offices in that period was 1,359 units. But after the Pakto 88, the number rose to 1,525 units at the end of the 1999 financial year. The highlight of the addition of banks was in 1994, when private banks reached 166 units, banks mixed 40 units and Rural Bank (Bank Perkreditan Rakyat / BPR) 9,196 units. (Pakto 88 dan booming perbankan Indonesia | Liputan Khusus Perbankan". lipsus.kontan.co.id. 2017-10-29). Rural Banks are official institutions that can provide micro credit to the public. Increasing the number of Rural Bank automatically increases the distribution of micro-credit to the public. Based on data from the Indonesian Central Bureau of Statistics, the distribution of microcredit in Indonesia continues to increase from year to year. In line with this, the poverty rate in Indonesia from year to year has also decreased. However, the reduction in poverty levels is not in line with the decrease in the level of inequality. The level of inequality in Indonesia tends to be stagnant, and even tends to increase. The debate about the effect of microcredit on reducing poverty and inequality continues to occur today. Several studies have shown that increasing microcredit (and financial development) can reduce poverty and inequality levels (Roodman and Morduch, 2009; Bakhtiari, 2011, Miled and Rejeb, 2018). However, some studies actually show the opposite results, among them Hulme and Mosley (1996), Pollin (2007), Bateman (2009), Seven and Coskun (2016). Meanwhile, inequality is a concept that is even further away from poverty, because it does not only focus on the poor, but also on the entire population. Todaro and Smith (2012) define Income Inequality as a disproportionate distribution of total national income in the population. The problem of inequality is important to note because the purpose of financial development is not only focused on high economic growth, but also the achievement of prosperity for all levels of society in a country. According to Todaro and Smith (2012), high inequality will bring some negative impacts, such as economic inefficiencies, weaken social stability and state unity, strengthen the political power of the rich, and create injustice. Although this has been a matter of debate, the Indonesian government believes in the opinion that microfinance can effectively reduce poverty and inequality levels. This can be seen in various policies that encourage the expansion of access to micro credit to the people of Indonesia, among others through the People's Business Credit (KUR) program that provides low interest rates, encourages the development of Rural Banks, and campaigns for financial inclusion. And based on data from the Indonesian Central Bureau of Statistics, the distribution of microcredit in Indonesia continues to increase from year to year. For this reason, it is important to conduct research to find out whether microfinance has an influence on reducing poverty and inequality in Indonesia. So that it can be ascertained whether the Indonesian government has carried out the right policy or it has become a useless work.

2 Literature Review

2.1 Review Stage

Providing financial access to the poor is believed to reduce the level of poverty and inequality. This is supported by several studies, among others, by Beck (2007), Roodman and Morduch (2009), Bakhtiari (2011), Miled and Rejeb (2018). The development of the financial sector can influence poverty levels in several ways. First, financial development can help the poor by reducing barriers to obtaining credit and the high cost of small loans, thereby increasing access of the poor to financial services (Greenwood and Jovanovic 1990). By getting capital, the poor can increase their productivity and income. Second, financial development encourages economic growth, which has a good impact on those on low incomes (Jalilian and Kirkpatrick, 2002). Rapid growth, creation of employment, macroeconomic stability and a sustainable balance of payments, should be able to reduce poverty through a trickle-down effect, especially through job creation. However, some studies actually show the opposite results, among them Hulme and Mosley (1996), Pollin (2007), Bateman (2009), Seven and Coskun (2016). In addition to access to financial services, there are other factors that influence the level of poverty and inequality in society. These include economic growth, inflation rates, education levels, population growth, and trade opennes. According to Dollar and Kraay (2002), economic growth will benefit the poor if the growth is supported by various policies such as law enforcement, openness in international trade, and advanced financial markets. Rapid economic growth, can create employment, macroeconomic stability and a sustainable balance of payments, which in turn, should be able to reduce poverty through trickle down effects. The relationship between inflation and poverty can be explained in two ways. First, inflation results in the real value of money held down. When prices increase, money to buy less (purchasing power falls). Second, inflation results in the real interest earned from saving money in the bank to decrease so that purchasing power falls. This decline in purchasing power resulted in people becoming poorer than before. According to Becker (1995), human capital, including education, has an important role in the economic progress of a country. This began in the 19th century in England, where education began to become a major concern for the economy because the development of science provided more efficient product development and production methods, which were then followed by other countries. The population of an area has an impact on the process and results of development efforts. A large population if able to play a quality workforce will be a large development capital and will be very profitable for development efforts in all fields. But on the contrary, if the large population is not followed by good quality, then this can be a burden on the state. The export and import trade of a country (trade openness) is considered to have an influence on the level of poverty and inequality of a country. According to a World Bank study (2004), trade liberalization has brought better conditions for developing countries, in the form of high economic growth (above 5 percent), longer life expectancy, and better education.

3 Research Method

This study aims to find out how the effect of microcredit expansion on reducing poverty and inequality in Indonesia. For this reason, there are two calculated research models. the first is the effect of microcredit on reducing poverty and the second on how the influence of microcredit on reducing inequality. In this study, we use methods from several literature related to microfinance and a reduction in poverty and inequality, including research from Beck et al (2007) and Clarke et al (2006). In these research, financial development is used as an independent variable. While we use a similar approach but replace the financial development variables with the depth of microfinance represented by the number of lending credits by Indonesian Rural Bank (BPR), and several other adjustments according to the conditions of the study sample. We use credit lending data from Rural Bank because Rural Bank is one of the microfinance institutions that has been recognized in Indonesia as an institution that has a leading role in the spread of micro-credit in Indonesia. Customers who are not bankable at commercial banks, may be accepted at the BPR because customer eligibility requirements are looser when compared to commercial banks. The data used in this study were obtained from the Indonesian Financial Services Authority (OJK), Indonesian Ministry of Trade, Central Bank of Indonesia, and Indonesian Central Bureau of Statistics (BPS) covering banking, demographic, trade, poverty and inequality data in 33 provinces in Indonesia in 2011-2016. The regression model we use to evaluate the impact of microfinance on the poverty level is specified as follows:

$$Poverty_{i,t} = \alpha_{i,t} + \beta MF_{i,t} + \gamma X_{i,t} + \varepsilon_{i,t}$$

And the regression model we use to evaluate the impact of microfinance on the inequality level is specified as follows:

$$GINI_{i,t} = \alpha_{i,t} + \beta MF_{i,t} + \gamma X_{i,t} + \varepsilon_{i,t}$$

In this specification, $Poverty_{i,t}$ is the number of poor people/headcount of province i in period t. $GINI_{i,t}$ is the GINI coefficient of province i in period t. The Gini coefficient is the most regularly used measure of a country's income inequality. The Gini coefficient is favored over alternative measures since data for this index are easier to obtain and can more easily be interpreted regarding of social welfare. $MF_{i,t}$ is a vector of variables estimating microfinance intensity, which is the variable of attention in our study. Microfinance intensity measures how much credit does the rural bank loan divided by the province's GDP. $X_{i,t}$ is a set of control variables that have been shown to be related to levels of poverty and income inequality, consisting of real per capita GDP growth rate (GGDP) to test the impact of economic growth on poverty/inequality, school participation rate (SCHOOL) as indicators of human capital, inflation during the sample period (INFLATION) to control macroeconomic environment, and the average number of exports and imports divided by GDP (TRADE) to capture the level of openness of trade. In addition, population growth (GPOP) is also included as an additional regressor in the poverty rate regression calculation.

4 Result and Discussion

4.1 Result

The results of the calculation of the influence of microfinance on poverty levels are reported in Table 1, while microfinance to the level of inequality is reported in Table 2 using panel data regression analysis.

TABLE 1

The effect of Microfinance on poverty

Dependent Variable: HCOUNT
Method: Panel Least Squares
Sample: 2011 2016
Periods included: 6
Cross-sections included: 33
Total panel (balanced) observations: 198

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	19.9186	1.28892	15.4536	0.0000
MF	-102.710	32.3863	-3.17141	0.0018
GGDP	-0.07151	0.02751	-2.59877	0.0102
INFLATION	-0.01479	0.02295	-0.64467	0.5201
SCHOOL	-0.09751	0.01502	-6.49121	0.0000
GPOP	0.26351	0.23462	1.12312	0.2631
TRADE	-0.00253	0.00772	-0.32786	0.7434

TABLE 2

The effect of Microfinance on Inequality

Dependent Variable: GINI
Method: Panel Least Squares
Sample: 2011 2016
Periods included: 6
Cross-sections included: 33
Total panel (balanced) observations: 198

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.417659	0.029187	14.30961	0.0000
MF	-0.977399	0.733376	-1.332740	0.1845
GGDP	0.000290	0.000623	0.464677	0.6428
INFLATION	0.001594	0.000520	3.066172	0.0025
SCHOOL	-0.000798	0.000340	-2.345025	0.0203
GPOP	-0.000928	0.005313	-0.174674	0.8616
TRADE	0.000378	0.000175	2.161449	0.0322

From the data in table 1 above, we can find out that microfinance has a significant negative effect on poverty with a probability of <0.05. So it can be concluded that increasing microfinance can reduce poverty. In addition, other factors that have a significant effect on reducing poverty are economic growth and education levels. While in table 2, we can find out that microfinance does not have a significant effect on the level of inequality with a probability of 0.1845 or more than the significance level at either 1%, 5%, or 10%. While other factors that have a significant effect on the level of inequality are the inflation rate which has a positive effect, the level of education has a negative effect, and the level of trade openness that has a positive effect.

4.2 Discussion

From the results of this study, it is known that microfinance in 33 provinces in Indonesia has a significant influence on poverty reduction efforts, seen from the decline in the number of poor people in Indonesia. This shows in line with several previous studies including research by Beck (2007), Roodman and Morduch (2009), Bakhtiari (2011), Miled and Rejeb (2018). Microfinance can influence poverty levels in several ways. First, microfinance, which is one of the financial development programs, can help the poor by reducing barriers to obtaining credit and the high cost of small loans, thereby increasing access of the poor to financial services (Greenwood and Jovanovic 1990). By getting capital, the poor can increase their productivity and income. According to Chowdhury (2009), microfinance has an important role for the poor by providing safety-net and consumption smoothening. Microfinance can help poor people to smooth consumption when cyclical downturns or unexpected crises occur. So that, when their financial conditions are weak, the poor can still afford to pay for their children's schooling, meet nutritional needs, or buy needed medicines, so that microfinance can provide increased productivity in the long run. However, even though microfinance can reduce poverty in Indonesia, the increase is not too large when compared to the size of the Indonesian economy, so that the reduction in poverty levels is not necessarily accompanied by a decrease in the level of inequality. Microfinance institutions which are profit-seeking institutions still have to consider the feasibility of the poor who will be given microcredit. Only a few poor people deserve credit. According to Banerjee (2017), microfinance also has a negative impact causing increased levels of debt among already poor communities and exacerbating economic, social and environmental vulnerabilities. So getting out of poverty also requires good entrepreneurial skills and strong social capital. Economic growth can have a good impact on those on low incomes (Jalilian and Kirkpatrick, 2002). Rapid growth, job creation, macroeconomic stability and a sustainable balance of payments, can reduce poverty through the trickle-down effect, especially through job creation. The education level of the Indonesian population is illustrated by the variable level of school participation (The proportion of the population in the age group of junior high school / 13-15 years who are still attending school to the population in that age group) shows a negative sign and significantly influences the number of poor people in Indonesia. An increase in pure school enrollment rate of 1 percent will reduce the percentage of poor population by 0.975 percent. Meanwhile, the average level of pure participation up to the age of junior high school in all provinces in Indonesia in 2016 was 77.95%, meaning that there were still around a quarter of Indonesia's population who did not have education up to junior high school age. According to Chriswardani (2005), the linkage of poverty with education is very large because education provides the ability to develop through mastery of knowledge and skills. Education is an important tool in increasing labor productivity, product strategy development, technological innovation, and research to address the problem of poverty and inequality. According to Easterly and Fischer (2001), the occurrence of inflation has more adverse effects on the poor compared to the rich. Wealthy people are better able and ready to deal with inflation better, even some of them will like inflation because they will get the potential profit from increasing interest rates on financial instruments. Thus, the occurrence of inflation can lead to an increase in the number of poor people and even exacerbate the condition of those who are already in the poor group, so that inequality becomes even wider. Meanwhile, trade openness affects the level of inequality. Cockburn's (2001) research in Nepal concluded that trade liberalization in Nepal had an impact on the decline of urban poor while rural poverty had increased. This happened because trade liberalization hit the agricultural sector in rural areas with cheaper agricultural products, while urban residents benefited from the opening of new jobs in the trade sector. Urban residents can do business in the trade sector by buying cheap imported goods and then selling them by gaining profit margins.

5 Conclusion

Based on the results of research on the analysis of the effect of microfinance on poverty and inequality in Indonesia for the period 2011-2016, we can conclude a number of things as follows:

1. Microfinance in 33 provinces in Indonesia has a significant influence on efforts to reduce poverty in Indonesia.
2. Microfinance in 33 provinces in Indonesia does not have a significant influence on efforts to reduce inequality in Indonesia.
3. The other factors that have a significant effect on reducing poverty are economic growth and education levels. While other factors that have a significant effect on the level of quality are the inflation rate which has a positive effect, the level of education has a negative effect, and the level of trade openness that has a positive effect.
4. In addition to making efforts to reduce poverty, the Indonesian Government must also pay attention to efforts to reduce inequality. Because the reduction in poverty that is not accompanied by a decrease in the level of inequality will have a negative impact on the community.

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