

# Micro, Small, and Medium Scale Industry as Means of Poverty Reduction

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**Abstract**—The development of micro, small, and medium scale enterprises (SMEs) expectantly contributes to the reduction of poverty, particularly in the developing countries like Indonesia. This paper presents the theoretical phenomena of how the relationship between the two of them. The aims of this study are to determine which factors are the measurement of the development of small-scale industry and to create the mapping factors that generate poverty reduction. We used secondary data at national and provincial levels. The scatter diagram method is used to describe the relationship between development of SMEs with poverty in Indonesia and West Java Province. The results show that there is a negative relationship between the development of SMEs as measured by the number of business units, number of workers, output value, and investment value with the development of poverty levels measured by the percentage of poor people both at the national level and West Java Provinces.

**Keywords**—small scale industry; poverty reduction; garment industry

## I. INTRODUCTION

The quality of the economic development in many developing countries can improve as long as the poverty rate decreases. Poverty is defined as not having enough today in some dimension of well-being [1]. Vicious Circle's poverty theory by Ragnar Nurske explains that poverty is a systemic problem. Therefore, poverty alleviation strategy must be comprehensive [2]. Furthermore, systemic poverty implies that poor families are likely to continue to have the poor generation in the future [3]. Hence, poverty alleviation strategy is necessary to intervene in the cycle of poverty.

When estimating poverty using monetary measures, one may have a choice between using income or consumption as the indicator of well-being. Consumption will be a better indicator of poverty measurement than income for many reasons. Consumption may better reflect a household's actual standard of living and ability to meet basic needs [1]. With this approach, the determination of absolute poverty is the inability to meet minimum basic needs such as food, clothing, health, housing, and education. The minimum requirement is measured financially in the value of consumption expenditure. The minimum needs of these basic needs are known as poverty

lines. People whose income is below the poverty line are classified as poor.

The poverty rate in Indonesia is relatively fluctuating. In the period 2000-2018, the level of poverty measured by the number of poor people, in general, has declined. In that period the number of poor people fell by 13.35 million, from 39.30 million people in 2000 to 25.95 million people in March 2018. The relative poverty rate also declined. The percentage of poor people has declined from 19.14 percent in 2000 to 9.82 percent in March 2018 [4].

Indonesian government implements several programs in order to accelerate the poverty reduction. One of the government programs in pro-poor growth strategies is to create and encourage productive and competitive small-scale enterprises that will contribute to the poverty reduction in Indonesia. The impacts of SMEs development on poverty reduction can occur through (a) job creation, (b) creating opportunities to increase family income, (c) increasing ownership of family assets, (d) improving business skills, (e) increasing access to financial institutions and (f) providing goods and services that are affordable to the poor.

In some countries, there have been many studies that have proven the significance of the relationship between small and medium enterprise development with economic growth and poverty reduction. Small and medium enterprises play a significant role in reducing poverty through job creation, increasing the income of poor families and improving the purchasing power of the poor [5–12].

This research explains the empirical phenomenon of the relationship SMEs development and the reduction of poverty rate within the country along with the study case in one cluster garment industry in the Metropolitan area of Bandung Raya. This research is fundamental for future research in selecting and analyzing the poverty factors and the measurement of small-scale development with its relation to the poverty reduction.

## II. LITERATURE REVIEW

Today, the main objective of economic development has been shifting. The current development objectives are not only limited to the achievement of high economic growth but also how to reduce poverty, unemployment, and inequality [13].

One of the industrial sector development strategies that were closely related to poverty alleviation is the development of industries on the micro and small scale. In some countries, the industrial sector on the micro and small scale is managed informally by the poor and employs workers from poor families [12,14]. Low-class labors are relatively low-educated resulting in low-paying at informal jobs. The most possible jobs opportunity for the low-class families are the informal jobs, in most cases small-scale businesses. Consequently, the strategy of the micro and small-scale industrial development will likely to expand job vacancies that leads to the unemployment reduction and rise income.

In some countries in Africa, it is evident that the empowerment of SMEs have an impact on reducing poverty and hunger [15–17]. Other research conducted in Nigeria in 2013 showed that empowering small and medium enterprises has an impact on increasing the number of people whose income is above the poverty line of 39% [18]. A study in Ghana showed that empowering SMEs in rural areas helped people to get out of the poverty trap [19].

Other studies showed that SMEs play an important role in economic growth, job creation, and poverty reduction in Pakistan [8]. SMEs in India contribute to increased industrial productivity and export, job opportunity, and also contribute to the gross domestic product (GDP) of India [20]. Small business development contributes to poverty reduction, through the establishment of new companies or development the existing ones that create job opportunities. The creation of this work will have an impact on providing income opportunities for the poor [12]. In his research, Tambunan explains that in Indonesia SMEs in the long term can survive and continue to grow, caused by three factors [21,22]: (a) SMEs can create their own markets, (b) SMEs as a "last resort" for the poor, and (c) SMEs have a production subcontracting linkage with big business..

This research is the initial part of the main research. In this initial study, it was intended to find out how (1) the empirical evidence of the development of SMEs and conditions of poverty, and (2) the empirical relationship between the development of SMEs and the level of poverty, at the national and at the provincial level represented by West Java Province. West Java Province was chosen, because in the next study an analysis will be carried out using primary data taken from a survey of low-income workers in a cluster of garment industries around the Metropolitan of Bandung. Further studies will use this relationship as theoretical support to determine and create the mapping variables as indicators of the development of the SMEs that are closely related to poverty indicators with case studies in the specific business field.

### III. RESEARCH METHOD

The method used to find out how the empirical relationship between the development of SMEs and the level of poverty at the national and the provincial level is a scatter diagram method for several indicators that represent the development of SMEs and poverty indicators in Indonesia and in the West Java Province.

The development of SMEs indicators in national level is in 2010-2015 are: (a) number of business units, (b) number of

workers, and (c) of output value. The data used at the district / city level in West Java Province with the period 2011-2014 are: (a) the number of SMEs units (b) the number of workers, (c) the value of investment, and (d) percentage of poor population. On the other hand, the development of poverty in Indonesia and West Java Province is viewed from the percentage of poor people.

The hypothesis in this initial study is that there is a negative relationship between: (1) the number of unit SMEs with the percentage of poor people (2) the number of workers of SMEs with the percentage of poor people (3) the output of SMEs with the percentage of poor people, and (4) investment value of SMEs with the percentage of the poor people.

## IV. RESULT

### A. Empirical Evidence of Poverty and SMEs Industry in Indonesia

Figure 1 and 2., shows that during the period of 2010-2018 in general poverty in Indonesia showed a downward trend in terms of the number and percentage of poor people. In 2010 the number of poor people in Indonesia was 31.02 million people or 13.33% of the total population of Indonesia. However, there has been a decline in terms of number and percentage of poor people, to 25.95 million people or 9.82% of the total population of Indonesia in 2018.

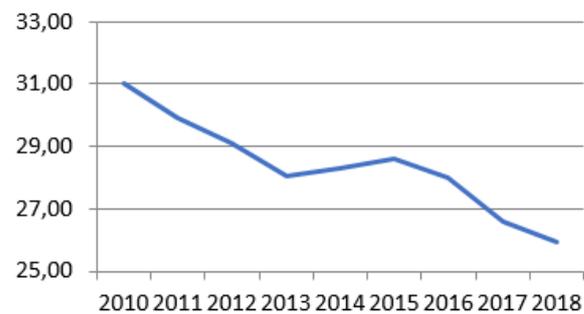


Fig. 1. Number of Indonesian poor people (Million people). Source: BPS.

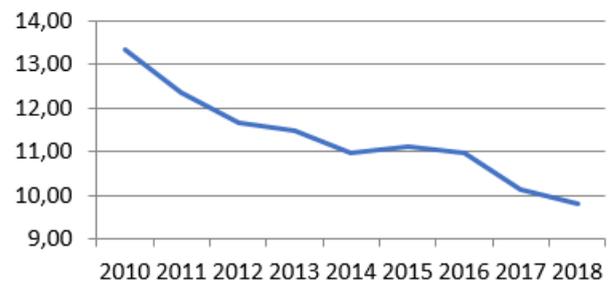


Fig. 2. Percentage of Indonesian poor people (%). Source: BPS.

Table 1 shows that during the period 2010-2015 most of the Indonesian industrial sector business units are micro and small-scale enterprises. It is apparent that on average from 2010 to 2017, 88.40% of businesses in Indonesia's industrial sector are micro-scale enterprises, 10.86 % is small-scale business, and 0.74% is medium and large-scale business. Table 2 shows that the average number of workers of micro-scale enterprises was

41.42%, small-scale enterprises workers were 21.61%, and workers of medium and large-scale enterprises were 36.96%.

TABLE I. PERCENTAGE OF MICRO, SMALL, MEDIUM AND LARGE SCALE BUSINESS UNITS IN INDONESIA

Year	Micro	Small	Medium & Large
2010	91.79	7.36	0.85
2011	85.09	14.13	0.78
2012	86.77	12.50	0.73
2013	83.87	15.44	0.69
2014	91.24	8.06	0.69
2015	91.63	7.66	0.71
<b>Average</b>	<b>88.40</b>	<b>10.86</b>	<b>0.74</b>

Source: BPS.

TABLE II. PERCENTAGE NUMBER OF WORKERS IN MICRO, SMALL, MEDIUM AND LARGE SCALE INDUSTRIES OF INDONESIA

Year	Micro	Small	Medium & Large
2010	44.00	14.89	41.11
2011	37.13	27.00	35.88
2012	39.88	25.06	35.06
2013	36.70	29.35	33.96
2014	44.60	17.15	38.25
2015	46.23	16.24	37.53
<b>Average</b>	<b>41.42</b>	<b>21.61</b>	<b>36.96</b>

Source: BPS.

B. The Relationship between Poverty and Small Medium Scale Industry in Indonesia

1) *The relationship between development of micro and small scale industries and poverty in Indonesia:* The graph in figure 3 is a scatter diagram of the relationship between the number of micro and small scale business units and the percentage of the poor in Indonesia. Scatter diagram has a negative trend with the distribution of centralized data.

Figure 4 shows that the data set of the number of workers in micro and small enterprises with the percentage of poor people in Indonesia are scattered but have a negative trend. It suggests that there is a negative relationship between the development of the number of workers in the micro and small-scale industries with the percentage of the poor in Indonesia.

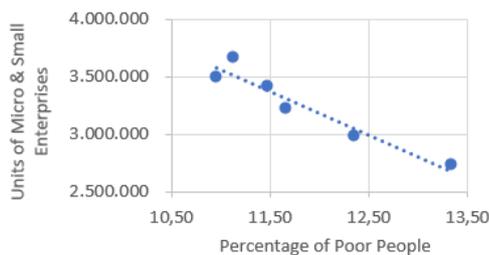


Fig. 3. Scatter diagram relation of micro-small enterprises units and percentage of poor in Indonesia 2010-2015.

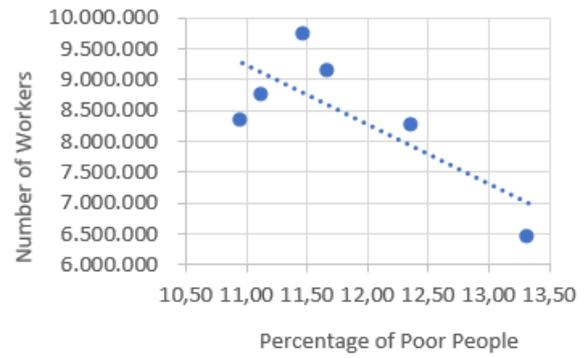


Fig. 4. Scatter diagram number of workers of small-micro enterprises and percentage of poor people in Indonesia year 2010-2015.

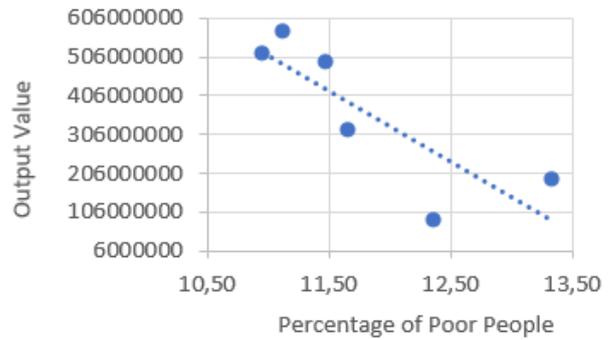


Fig. 5. Scatter diagram output value of micro small enterprises and percentage of poor people in Indonesia 2010.

Figure 5 illustrates that the data trend of the two variables is quite centralized in the negative slope direction. This suggests that there is a negative relationship between the development of output value of the micro and small-scale industry sector with the percentage of poor people in Indonesia in the period 2010-2015.

2) *The relationship between small and medium scale industries development with poverty in West Java Province Indonesia:* The first analysis is the relationship between the average number of SMEs units with the average percentage of the poor in each district city in West Java within the period 2011-2014. The following chart is a scatter diagram of 26 districts in West Java (Figure 6). Nonetheless, the diagram has a negative trend that connects all the combination of data points between the numbers of SMEs units with the percentage of the poor. Therefore, it is apparent from the chart that there is a negative relationship between the two variables.

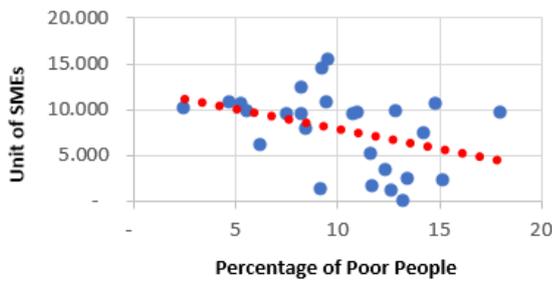


Fig. 6. Scater diagram number of smes units and percentage of poor people in West Java Province of Indonesia 2010-2015.

The second scatter diagram (Figure 7) shows the relationship between the average absorption of SMEs workers and the average percentage of the poor in each district city in West Java within the period 2011-2014. There is a negative trend between the two variables. Thus it suggests that there is a negative relationship between labor absorption in SMEs with the poverty rate.

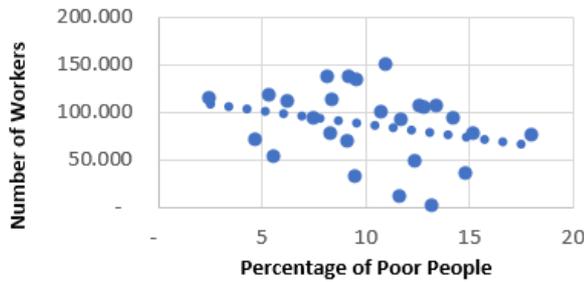


Fig. 7. Scater diagram number of workers SMEs & percentage of poor people in Indonesia 2010-2015.

The final analysis is between the average value of investment in SMEs and the average percentage of the poor in each city/district in West Java within the period 2011-2014. It is shown in Figure 8. the slope of the trend is not too sharp although there is a negative relationship between the two variables. This means that there is a negative correlation between the value of investment in small and medium scale industries with poverty in every district/city in West Java, although the relation is not significant.

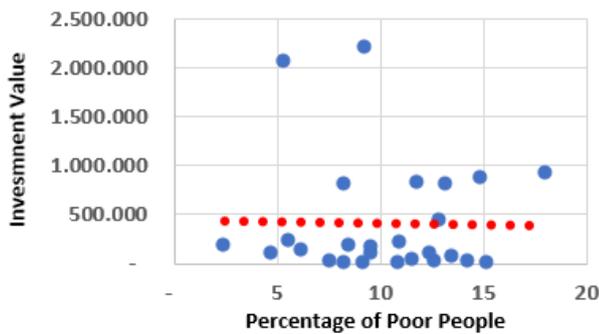


Fig. 8. Scater diagram investment value of SMEs & percentage of poor people in West Java Province of Indonesia.

## V. DISCUSSION

Based on empirical data from the development of small and medium enterprises at the national level as well as in the province of West Java, both of them show an encouraging phenomenon. An accordance with the number of small-scale business units that continue to grow, the number of workers absorbed and the output value of these business units also continues to increase.

Previous studies indicate that the development of micro and small-scale industries leads to poverty reduction in some countries. Jobs opportunity and income opportunity for low-class people have an impact on the poverty reduction. This phenomenon is the initial hypothesis of the research study.

The scatter diagram of the relationship between the number of micro and small scale business units and the percentage of the poor in Indonesia and in West Java Province both of scatter diagram has a negative trend with the distribution of centralized data. This indicates that there is a negative relationship between the number of micros and small-scale business units with the percentage of poor people in Indonesia and in West Java Province.

There is very limited possibility for labor from poor families to work in a medium or large enterprise that requires higher quality of human capital. So, the type of business possibly accessed by poor groups are micro or small enterprises [23,24]. Therefore, the growing number of SMEs units has an impact on increasing employment opportunities for the poor and their income.

The development of the number of business units and workers of micro and small enterprises shows the significant role of micro and small enterprises in the Indonesian economy. The increase in the number of workers in micro, small and medium enterprises which correlates with a reduction in poverty rates also occurs in several other developing countries [8,12,14,25].

The relationship between output value of micro, small, enterprises and poverty in Indonesia can be seen in figure 5. From the picture, it can be seen that the data trend of the two variables is quite centralized in the negative slope direction. This negative relation is in line with the results of research in Pakistan, which shows a negative and significant relationship between the percentage of SMEs output to GDP and poverty (8).

Investment is an important factor in business development, including in small and medium enterprises. In figure 8, it can be seen how the relationship between the value of investment in small and medium scale businesses with poverty levels in West Java Province. The scatter diagram shows that the trend's slope is not too sharp although there is a negative relationship between the two of the variables. This means that there is a negative correlation between the value of investment in small and medium scale industries with poverty in every district/city in West Java, although the relation is not significant.

The results of analysis using scatter diagram for both national-level data and data at the municipal district level of West Java Province show the fact that empirical evidence

supports the theory that postulates the correlation between the development of the micro, small and medium scale industrial sector with poverty reduction. Further studies will use this correlation as theoretical support to determine and create the mapping variables as indicators of the development of the micro, small and medium scale industrial sectors that are closely related to poverty indicators with case studies in the specific business field.

## VI. CONCLUSION

The development of micro, small and medium scale enterprises can be used as a driving force in poverty reduction. Based on scatter diagram analysis result, there is a relationship between poverty and the development of micro, small and medium scale industries. There is a negative relationship between the development of small medium scale industry as measured by the number of business units, number of workers, output value, and investment value with the development of poverty levels measured by the percentage of poor people both at the national and West Java Province of Indonesia.

This analysis of relations can be used as a theoretical framework in subsequent research studies that will determine and create the mapping variables as indicators of the development of the micro, small and medium scale industrial sectors that are closely related to poverty indicators studies in the specific business field.

## ACKNOWLEDGMENT

We gratefully acknowledge the help provided by the Directorate of Research and Community Service, Directorate General of Research and Development Reinforcement, Ministry of Research, Technology and Higher Education, the Republic of Indonesia that has funded this research. Also expressed my gratitude to the 1st UPI INTERNATIONAL CONFERENCE ON ECONOMICS, BUSINESS, ENTREPRENEURSHIP, AND FINANCE "Digital Economics Society: Opportunity and Challenges" which has facilitated this article to be published in these seminar proceedings.

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