Poverty Analysis of Medan City

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Abstract. Poverty is a major issue in socio-economic development. Based on BPS data, the number of poor people in Medan City in 2021 is 193.03 thousand people. This number increased by 9.49 thousand people compared to the number of poor people in 2020. The high poverty rate is a problem and priority that must be resolved in development in Medan City. This study aims to analyze the development of poverty conditions in the city of Medan. The method used in this research is literature study with 2016-2021 time series data. Data were analyzed using 4 indicators, namely poverty line, percentage of poor population, poverty depth index and poverty severity index. Meanwhile, the components analyzed are relative position, analysis of development over time, analysis of effectiveness and analysis of relevance and priority interventions. The results show that Medan City in 2021 is in 1st place with the highest number of poor people, namely 193.03 thousand people with a contribution of 14.36% above Langkat Regency which has 106.59 thousand poor people. with a contribution of 7.93%, with the poverty line of Medan City which is also higher than the province which is only Rp. 525,756 per capita per month or Indonesia with a value of Rp. 486,168 per capita per month. The poverty depth index (p1) for the city of Medan in 2021 is 1.1, which is below the average for other regions in North Sumatra which reached 1.58. Meanwhile, when compared to the provincial and national levels, the poverty depth index of Medan City is below North Sumatra which reached 1.52 and National reached 1.67. The Poverty Severity Index (P2) for Medan City in 2021 is 0.23 which is below the average for other regions in North Sumatra province which is 0.36. Meanwhile, when compared to provincial and national levels, the poverty severity index (P2) for Medan City is below North Sumatra which reached 0.38 and National as of September 2021 reached 0.42. Although the developments between time, relative position, and intervention, the effectiveness of poverty reduction policies have improved the achievement of indicators, but the relevance of policies is not yet fully aligned with national targets so that the priority of interventions in poverty reduction in the future must be more focused and focused on determinants of poverty, especially those forming increased spending on food and food expenditures. non-food.

Keywords: Poverty, Poverty Lines, Depth Index and Poverty Severity.

1. Introduction

The problem of poverty requires a multidimensional understanding, namely seeing poverty from various dimensions and look at the causes of poverty from various sides. Viewpoint about poverty affects the formulation of policies, strategies, programs designed by the government to poverty alleviation. In other words, the theoretical framework on the phenomenon of poverty

gives direction to conduct an interpretive analysis of the poverty reduction policies formulated in regional development planning documents.

Poverty reduction approaches that developed at the national level were replicated to regional level. Broadly speaking, the development of poverty alleviation policies in Indonesia since The New Order followed the paradigm of growth, growth with equity, and empowerment Public. The growth paradigm puts economic development as its main goal.

The assumption is made that equity occurs through the trickledown effect when the strength of the national economy has been raised. The growth paradigm is suspected to be insensitive to poverty, when faced with the fact that there is a poverty gap between income groups and between regions.

The number of poor people and the percentage of poverty in Medan City in 2010 - 2020 are described in the following table

Table 1. Number of Poor People in Medan City in 2010 – 2020

Year	Number of poor people (in thousand)	Poverty Percentage
2010	212,30	10,50
2011	204,19	9,63
2012	201,06	9,33
2013	209,69	9,64
2014	200,32	9,12
2015	207,50	9,41
2016	206,87	9,30
2017	204,00	9,11
2018	186,45	8,25
2019	183,79	8,08
2020	183,54	8,01

Source: BPS, Medan in Figures, Processed

From the table above it appears that the number of poor people for the 2016-2020 period continues to decline, namely in 2016 the number of poor people was 206,870 people, in 2017 as many as 204,000 2018 186,450 in 2019 the number of poor people had increased to 183,790 people and in 2019 the number of poor people was 183,790 people. in 2020 amounted to 183,540. There was a decrease in the poverty rate in 2020, but the data for 2020 was obtained in March 2020 before the Covid-19 pandemic.

On the basis of this background, the formulation of the main problems discussed and answered in the. This research consists of:

1. How is the poverty condition of Medan City in terms of the Relative Position aspect that can be used? the basis for determining Poverty reduction programs in comparison with cities/districts in the province North Sumatra and

2. How is the poverty condition of the city of Medan in terms of the inter-time development aspect? can be used as the basis for determining the success of the Poverty Reduction Program in Medan City

2. Literature Review

According to the World Development Report [1], poverty policies have utilized a broad conceptualization of poverty related to various dimensions of poverty. According to the statement Schiller [2], Laderchi, Saith and Stewart [3], show that the way we conceptualize and measure

poverty affects the foundations of poverty policies and programs. While the measure of poverty different ones have been used, little attention has been paid to the results and implications comparative [4]. Over the years, different perspectives on poverty influence government welfare policies towards poverty reduction. According to the statement Ranks [5] noted that understanding the true causes of poverty is important to enlighten our perspective on the causes of poverty. According to Rank [6] , our understanding of the cause poverty can be grouped into three main factors: individual factors, cultural and environmental factors, and structural factors.

There are three (3) main factors related to poverty, namely, the first individual factor factors that trigger poverty include individual attitudes, human capital, and welfare participation [7]. The theory of individualism is rooted in American values and beliefs in a free market system, a system that is considered to provide opportunities for all. Belief in individualism much emphasis on hard work and individual responsibility to obtain basic needs

including food, shelter and health care services[6]; second, cultural factors and the environment is related to the influence of the environment in which people live which tend to

create poverty or success. Oscar Lewis first coined the term culture poverty when he conducted a study on poverty in Mexico and Puerto Rico in 1961 and 1966 [8]. The cultural theory of poverty is built on the assumption that both the poor and the rich have different patterns of values, beliefs, and behavioral norms and third, larger economic and social structures have been found to be the cause of poverty.

The perspective on structural factors argues that capitalism creates conditions that encourage poverty. According to the statement Beeghley [9] notes the effect of economic structure which states that regardless of individual effort (hard work, skill); the economic structure of the United States ensures that millions of people are poor.

Poverty is a worldwide concern. Despite global attention to reducing poverty, there is little agreement on a single definition and measurement of poverty [10]. According to Kotler et al. [10], the problem of reaching a single definition Poverty has been exacerbated by a number of factors. Poverty affects heterogeneous groups so that the concept of poverty relative depending on the interest groups and individuals who experience it differently [6]. Difficulties surrounding definition and measurement poverty often leads poverty researchers and policy makers to link poverty with the concept of impoverishment, deprivation, the less fortunate, inequality, the less able and needy [10] outlines four approaches key to the definition and measurement of poverty.

3. Research Method

This study was conducted to determine the relative position of poverty in Medan City in Indonesia compare with other regions in North Sumatra Province, developments over time Medan City poverty, relevance of poverty programs in Medan City and effectiveness poverty in Medan City. The data that will be used in the poverty analysis process in the city of Medan are

in the form of data which will be taken from the relevant agencies/institutions (government) related to poverty and efforts to overcome it. Some secondary data used (particularly for macro poverty) is time series data for a period of time at least the last 5 years.

Data Analysis and Presentation Methods. Secondary data that has been obtained so that it can be interpreted first carried out data analysis using descriptive method with secondary data analysis approach. Analysis of the data as follows:

1) Relative Position is done by comparing the data for the last year which is higher, the same or more low when compared to data conditions at the North Sumatra Province and National level

2) Timeline development is carried out by means of trend analysis for the last 5 years

To measure the development of poverty conditions, four indicators related to the expenditure of poor households per capita are used, including:

1) Line of poverty

The poverty line shows the minimum amount of rupiah needed to meet the minimum basic needs of food which is equivalent to 2100 kilo calories per capita per day and non-food basic needs. People who have an average consumption expenditure per capita per month below the poverty line are categorized as poor.

$$GK = GKM + GKNM \qquad (1)$$

Information:

GK = Poverty Line

GKM = Food Poverty Line

GKNM = Non-Food Poverty Line

2) Percentage of Poor Population (P0)

The percentage of the poor is the proportion of the population categorized as poor. A high percentage of poor people indicates that the poverty rate in an area is also high.

$$P_0 = \frac{1}{n}\sum_{i=1}^{q}\left[\frac{Z-y_i}{Z}\right]^0 \qquad (2)$$

Information:

P_0 = Percentage of poor people

Z = Poverty Line

y_i = Average monthly expenditure per capita of the population below the poverty line (I = 1,2,…,q), $y_i < z$

q = Number of people living below the poverty line

n = Total population

3) Poverty Depth Index (P1)

The poverty depth index is a measure of the average expenditure gap of each poor population against the poverty line. The decrease in the value of the poverty depth index indicates that the average expenditure of the poor tends to be closer to the poverty line and the expenditure inequality of the poor is also narrowing.

$$P_1 = \frac{1}{n}\sum_{i=1}^{q}\left[\frac{Z-y_i}{Z}\right]^1 \qquad\qquad (3)$$

Information:
P1 = Poverty Depth Index

4) Poverty Severity Index (P2)
The poverty severity index provides an overview of the distribution of spending among the poor. The higher the index value, the higher the disparity of expenditure among the poor.

$$P_2 = \frac{1}{n}\sum_{i=1}^{q}\left[\frac{Z-y_i}{Z}\right]^2 \qquad\qquad (4)$$

Information:
P2 = Poverty Severity Index

All analyzes are carried out using charts or graphs in accordance with the characteristics of the analysis based on the four indicators, then an analysis of relative position, development over time, effectiveness, relevance is presented in graphical form.

4. Results and Discussion

To find out the achievement of consumption poverty reduction performance is by looking at the development of the Poverty Line (GK), Number of Poor Population, Percentage of Poor Population (P0), Poverty Depth Index (P1), and Poverty Severity Index (P2).

1) Poverty Line (GK).
The poverty line is the minimum standard of expenditure (in Rupiah) per capita per month to meet basic food and non-food needs. In 2021, the poverty line in Medan City is Rp. 577,126,- per capita per month, this figure increased from Rp. 553,796.- in 2020. The relative position of the Medan City Poverty Line and the Regency/City in North Sumatra is shown in Figure 1.

Figure 1. The Relative Position of the Medan City Poverty Line in 2021

Figure 1 relates to the relative position of the poverty line for the city of Medan in North Sumatra Province as well as Indonesia. The poverty line of Medan City is also higher than the province which is only Rp 525,756 per capita per month or Indonesia with a value of Rp 486,168 per capita per month. The high poverty line in Medan City is understandable considering that in the province of North Sumatra, Medan City is the metropolitan capital which is the concentration of business and government centers in North Sumatra.

Based on the development over time and its effectiveness is shown in Figure 2 below:

Figure 2. Development over time and the Effectiveness of the Medan City Poverty Line

In the picture, the poverty line of Medan City continues to increase from Rp. 491,496.00 in 2017 increased to Rp. 577,126.00 in 2021 with a percentage growth of 17.42% during the period 2017-2021. This means that during this period there was an increase in prices for food consumption needs equivalent to 2,100 calories per capita per day and 17.42% non-food in Medan City. Meanwhile, the North Sumatra Poverty Line rose from Rp. 411,345 in 2017 to Rp. 525,756 in 2021 or an increase of 27.81%. This indicates that during this period there was an

increase in prices for food consumption needs equivalent to 2,100 calories per capita per day and 27.81% non-food in Indonesia. From the data on the Poverty Line of Medan City and North Sumatra Province, it shows that the percentage rate of increase in the Medan City Poverty Line is lower than the Province of 9.35% during the 2017-2021 period.

2) Number of Poor Population and Percentage of Poor Population (0)
   Based on the value of the 2021 poverty line in Medan City, the number of poor people, namely residents who are able to meet basic food and non-food basic needs per month below the poverty in Medan City in 2021, is 193.03 thousand people. This number increased by 9.49 thousand people compared to the number of poor people in 2020. Meanwhile, the development of the number of poor people and the percentage of poor people in Medan City based on their relative position in 2021 is as illustrated in the following graph.
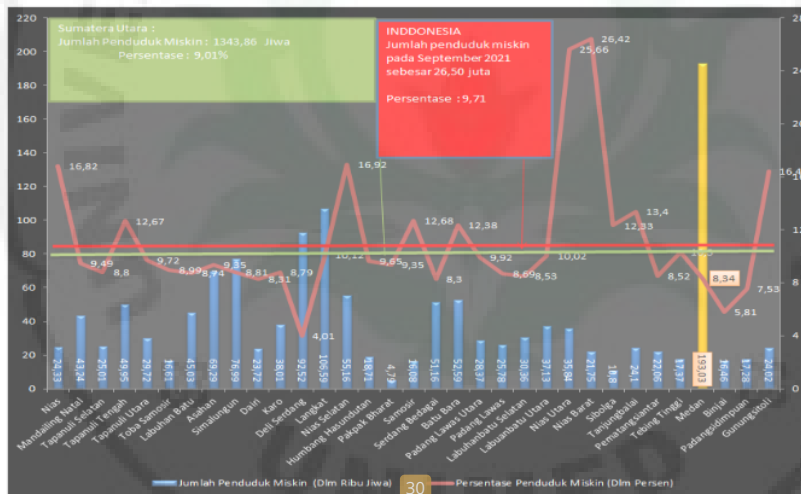
Figure 3. The Relative Position of the Number of Poor People in 2021

Based on the relative position in Figure 3 it is shown that the number of poor people in Medan City in 2021 compared to other regions in North Sumatra Province, Medan City in 2021 is in 1st (one) place with the highest number of poor people, namely 193.03 thousand people with a contribution of 14.36% above Langkat Regency which has a total poor population of 106.59 thousand people with a contribution of 7.93%. Furthermore, the third position with the highest number of poor people is Deli Serdang district has a total population of 92.52 thousand poor people and contributes to the province of North Sumatra by 6.88 percent. Meanwhile, the lowest number of poor people is West Pakpak District with a total of 4.79 thousand people with its contribution to the Province of North Sumatra amounting to 0.36 percent.

However, when viewed from the percentage of poor people, Medan is not in the first rank (not the highest), because in terms of the percentage of poor people, the three highest in North Sumatra are West Nias, North Nias and South Nias with each percentage being 26.42%. , 25.66

percent and 16.92% in which the three regions had an increase in poverty percentage compared to the previous year. Medan is in the 5th (five) lowest place in terms of poverty percentage, which is 8.52 percent.

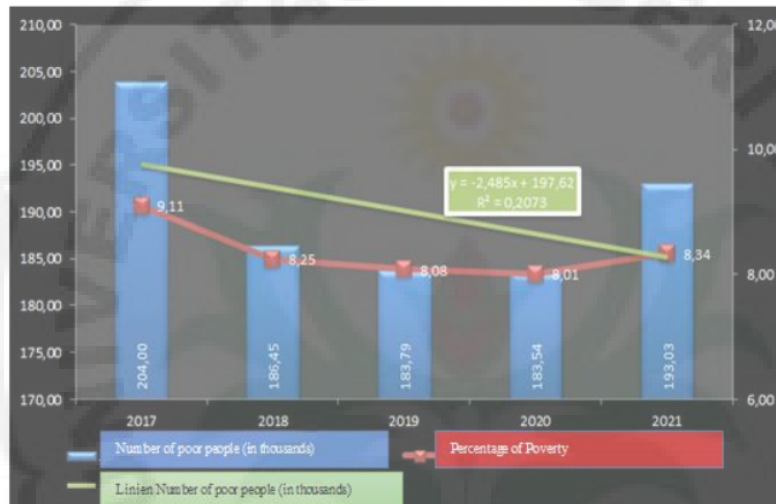Based on the development over time in Figure 3 it is shown as follows:

Figure 4. Intertime Development of the Number of Poor People and Percentage of Poor People in Medan City in 2017-2021

In Figure 4 show that, the poverty rate in Medan City from 2017 to 2021 shows quite good progress, where the number of poor people and the percentage of the poor (%) has decreased from 2017 to 2020, although for each year there is a fluctuating trend, increasing and decreasing in 2017. certain year. Figure 3.5 shows that the percentage of poor people in Medan City has a declining trend in 2017-2020 but in 2021 it will increase. In the last five years, namely in 2017, the percentage of poor people in Medan City was 9.11 percent, down to 8.34 percent in 2021. This indicates that in terms of the number of poor people or the percentage of poor people in Medan City from 2017 to 2020 relatively better, but in 2021 it will decrease

3) The Poverty depth index.
   The poverty depth index is a measure of the average expenditure gap of each poor population against the poverty line, where the higher the index value, the further the average population expenditure is from the poverty line. The achievement of the poverty depth index (p1) in the city of Medan for 2021 is 1.1 percent. Based on the relative position related to the poverty depth index of Medan City, it is shown in the following figure:

Figure 5. Relative Position of Poverty Depth Index (Rp/capita/month) in 2021

Based on Figure 5, it is shown that the poverty depth index data for Medan City in 2021 is 1.1, which is below the average for other regions in North Sumatra province which reached 1.58. Meanwhile, when compared to the provincial and national levels, the poverty depth index of Medan City 23 below North Sumatra which reached 1.52 and National reached 1.67. This shows that the average expenditure gap of each poor to the poverty line in Medan City is lower than that of North Sumatra and National Provinces. and the disparity in the expenditure of the poor in Medan is narrowing in comparison to the provincial and national levels.
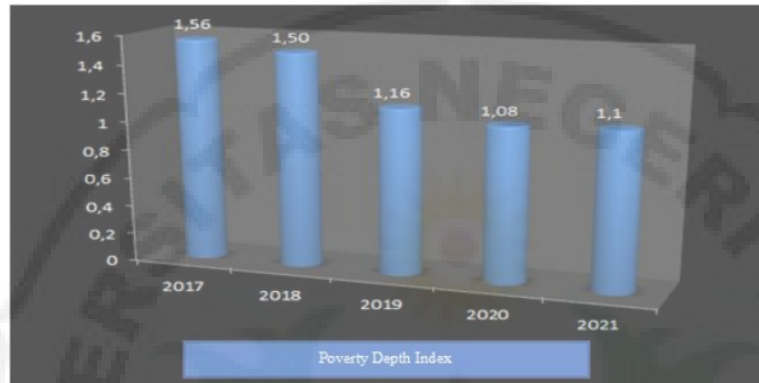
Figure 6. Timeline Development of Poverty Depth Index 2017-2021

Based Figure 6 show that achievements based on developments over time, the poverty depth index (P1) for the city of Medan 2017-2021 is shown in Figure 6. The achievement of the poverty depth index in Medan City for 2021 is 1.1 percent. The value of this achievement has increased to the achievement in 2020 which was 1.08 percent. With the increase in the value of the poverty depth index, it indicates that the average expenditure of the poor in the city of Medan tends to move further away from the poverty line so that the disparity in the expenditure of the poor to meet their basic needs is also widening.

4) Poverty Severity Index (P3)

The poverty severity index is a measure of the average expenditure gap between the poor and the poverty line, where the higher the index value, the farther the average expenditure among the poor from the poverty line. Based on the relative position related to the poverty severity index (P3) Medan City is shown in the following figure:
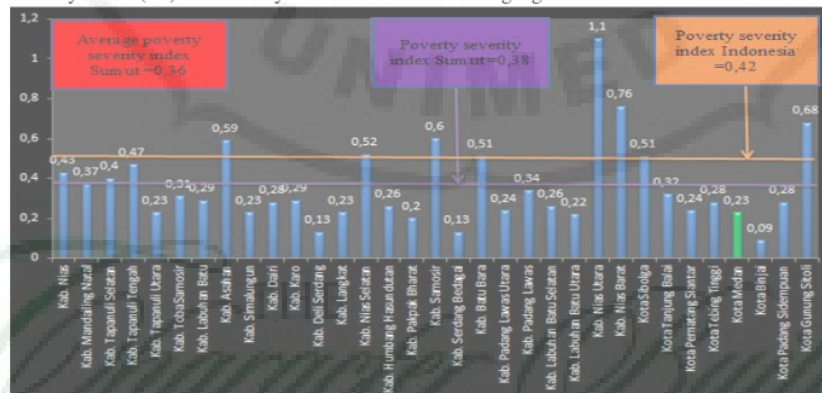

Figure 7. Relative Position of Poverty Severity Index (Rp/capita/month) 2021

Based on Figure 7, it is shown that the poverty severity index (P3) data for Medan City in 2021 is 0.23 which is below the average with other regions in North Sumatra province which reached 0.36. Meanwhile, when compared to provincial and national levels, the poverty severity index (P3) of Medan City is below North Sumatra which reached 0.38 and National as of September 2021 reached 0.42. The poverty severity index (P3) of Medan is the twelfth lowest compared to the regencies/cities in the province of North Sumatra. This indicates that the distribution of expenditure of the poor in Medan City has a narrower inequality than North Sumatra and nationally.

Based on developments over time, the poverty severity index (P3) for the city of Medan 2017-2021 is shown in the following figure:
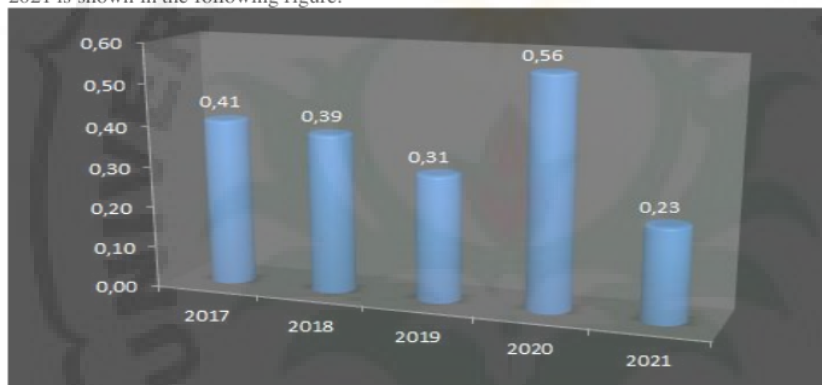

Figure 8. Timeline Development of Poverty Severity Index 2017-2021

In the Figure 8, show taht the position of the poverty severity index in Medan City, in 2017 was 0.41 and increased in 2020 to 0.56. For 2021, it will decrease to 0.23. This indicates that the lower the poverty severity index value, the lower the level of expenditure inequality among the poor in Medan City from 2017-2021.

5. Conclusion and Recomendation

5.1 Conclusion
Based on the results of the studies that have been carried out, several conclusions can be drawn related to the problems studied, namely as follows:
The number of poor people in Medan City in 2021 compared to other areas in North Sumatra Province, Medan City in 2021 ranks 1 (one) with the highest number of poor people, namely 193.03 thousand people. Medan City's poverty depth index in 2021 is 1.1, which is below the average for other regions in North Sumatra province which reached 1.58. The poverty severity index (P3) of Medan City in 2021 is 0.23 which is below the average for other regions in North Sumatra province which is 0.36.

5.2 Recomendation

Although the developments between time, relative position, and intervention, the effectiveness of poverty reduction policies has improved the achievement of indicators, but policy relevance

is not yet fully aligned with national targets so that it must be a priority in policy interventions in future poverty reduction strategies.

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