ESTIMATING THE IMPACT OF THE COVID-19 PANDEMIC ON POVERTY LEVELS IN KULON PROGO REGENCY, YOGYAKARTA SPECIAL REGION, INDONESIA

Suparmono
Sekolah Tinggi Ilmu Manajemen YKPN Yogyakarta, Indonesia.
E-mail: suparmono@stimykpn.ac.id

ABSTRACT

The research aims to analyze the impact of the Covid-19 pandemic on poverty in Kulon Progo Regency in 2020 and estimates until 2024. Kulon Progo is one of five regencies in the province of Yogyakarta's Special Region with the highest economic growth before the Covid-19. The high economic growth is triggered by the development of international airports and the development of an airport city. Several poor people, it is estimated that in 2020, the number of poor people will be 83.39 thousand people, an increase of 8.77 thousand people from 2019 of 74.62 thousand people. In 2021, marked by the regular operation of the YIA airport, it will have an impact on the increasing mobility of the community and affect the formal and informal sectors of the economy. So it is predicted that the number of poor people will decrease to 79.83 thousand people. The sparse population in Kulon Progo Regency is predicted to continue to decline until 2024, with the number of poor people reaching 78.43 thousand people.

Keywords: poverty, income inequality, Covid-19, regional economy

JEL classification: I32, P36

INTRODUCTION

COVID 19 or Novel Corona epidemic has taken control in most of the world's countries and has affected the daily lives of billions of people worldwide. The medical experts agree that the total number of new infections produced by a single infected person is more than five times that of the seasonal infections (Ranasinghe, Karunarathna and Pradeepamali, 2020) Novel Corona outbreak has influenced the normal function of an individual, household, village, city, province, country, region and that of entire globe as at present. Thus, following the strict measures taken by the Chinese government in closing down Wuhan until the outbreak is controlled all most all the countries have taken varying measures to restrict movements, continuous curfew, total lockdown, travel restrictions, suspending air travel operations to control the pandemic (Ranasinghe et al 2020. The World Health Organization (WHO) headquarters in China was informed on 31 December 2019 of cases of pneumonia, of unknown etiology, found in the city of Wuhan, Hubei province (Chaudry and Wimer, 2016). A new type of coronavirus was detected on January 7, 2020, and new cases in Thailand, Vietnam, Japan and South Korea. On 30 January 2020, the WHO revealed a simultaneous presence of public health (Maciel, Castro-Silva and de Farias, 2020). Such contractions may have an effect in all regions of the world, but with some degree of heterogeneity depending on their level of development (Sumner, Hoy, and Ortiz-Juarez, 2020).

Coronavirus Disease 2019 (COVID-19) is set to infect millions of people worldwide. The economic effect is projected to be high, driving millions into poverty. In this paper we estimate COVID-19 's im-

pact on Indonesia's poverty (Suryahadi, Al Izzati, and Suryadarma, 2020). It is expected that the economic effects will be significant, lowering the financial growth forecast to between 4.2% and -4.7% by 5% in 2020. We estimate that the poverty rate will increase from 9.2 per cent in September 2019 to 9.7 per cent by the end of 2020 under the mildest COVID-19 impact on development , meaning that 1.3 million more people will be forced into poverty. Deprivation reduction (sometimes referred to as administration of deprivation) is an inherent and paradoxical aspect of capitalist society (Baker, Evans, and Hennigan, 2020).

The problem in economic development is to improve the welfare of the community in the form of increased income, but the distribution must also be distributed among community groups (Tolmachev et al., 2019). The most crucial thing in ensuring the sustainability of economic growth and socio-economic development is how people become rich but are not much different from the poor so that the existing inequality is still reasonable (Choi, 2019).

Indonesia's economic disparity has been on the rise, hitting a record peak of 0.41 calculated in the 2011–2014 Gini household consumption spending index. Not just economically, the issue of increasing inequality is also socially and politically important, as it can threaten the unity of society , particularly in a big, diverse and young democracy that is threatened by widespread deprivation and vulnerability. (Tadjoeddin et al., 2020). We accept that dwelling on the current has long-term risks and that contribute to deprivation traps, but we do not believe that a debate of this nature is in turn harmful to all citizens. Most individuals choose to actively leverage their money to fulfill essential requirements (e.g. food, shelter) or reside in environments that potential benefits are impossible to materialise (Frankenhuis and Nettle, 2020).

To lower income inequality, Countries around the world have various modalities and differing potential for implementing social welfare programs, including their own success stories and implementation limitations (Teka, Temesgen, and Fre, 2019). Social security has gained popularity in recent decades as a way of minimizing and minimizing the risk of drought and earthquakes and maintaining long-term sustainability. The emergence of the COVID-19 pandemic in low- and medium-income countries (LMICs) poses

questions regarding the ability of health services in these countries to cope with the epidemic if it begins to propagate. (Lau et al., 2020).

There have been several studies that the effect of the current Covid-19 outbreak has overwhelmingly impacted neighbourhood-related historically disadvantaged populations, Such as percentage of racial and national groups, migrants and households with low incomes (Maroko, Nash, and Pavilonis, 2020). The economic effects of COVID-19 in those Countries include high insurance rates, policy shortfalls in pluralist health services , high out-of-pocket spending, increased risk of non-communicable disorders, lost opportunities for growth and socio-economic consequences such as unemployment and deprivation (Rodela et al., 2020). The COVID-19 pandemic and subsequent food availability challenges have exposed deep gaps in the food supply and delivery network. In stressful situations such as this, customers often exhibit habits intended to minimize the likelihood that they will not be able to afford food or other products at a later date (Power et al., 2020). The disparity, however, was still the same range, that is to say, low impartation. 'COVID-19 does not discriminate, has reiterated a risky lie, amid the growing deprivation of the most socially and economically vulnerable (Patel et al., 2020)

Kulon Progo is one of five regencies in the province of Yogyakarta's with the highest economic growth before the Covid-19. The high economic growth triggered by the development of international airports and the development of an airport city. Dilihar from its economic structure, sector that shapes economic growth in Kulon Progo in 2020, almost all areas experienced a decline in growth, except for the Health Services and Social Activities, Transportation and Warehousing, and Information and Communication sectors. The central government's budget reallocation policy of at least 50% has a significant effect on the economic structure in Kulon Progo Regency. The budget will be focused on handling the settlement of the Covid-19 pandemic case so that several regional strategic projects have to be postponed or rescheduled.

REVIEW OF LITERATURE

Poverty reduction has become a central topic for researchers from the economics to finance, management

and entrepreneurship across the social sciences. Generally speaking, the faster and wider economic growth in recent decades has enabled large numbers of people to move out of poverty so that extreme poverty has fallen to less than 10% of the world 's population. (Si et al., 2020). Poor urban communities, such as those living in informal settlements, are often undercounted, and the indicators used to measure basic deprivations are not providing policy-makers with the information they need to formulate and implement policy to tackle urban deprivations (Lucci, Bhatkal, and Khan, 2018).

Poverty is often induced by gender wage disparity, as calculated by the Gini index. The Gini index is a standard indicator of wealth inequality, e.g. disparities in employment, education and ability (Furman, Kye, and Su, 2019). Increases equal income Biased tax regimes, by lower economic development, benefit wealthier and well-connected lower rates and government spending performance, and unequal access to schooling and public services (Policardo, Sanchez, and Risso, 2019). Comprehensive literature analyzed the Relation between urbanization on the one side and economic growth and equality of wealth on the other (Sulemana et al., 2019). The global development cycle reduced income inequality by raising the per capita income. At the beginning of a development cycle, it shows a spike in income inequality followed slowly by a decrease in income inequality (Fawaz and Frey, 2020).

The data used in this research from 2010 until the year 2019. The data is then projected using eleven projection methods and selected the best models by choosing the best goodness of fit value. The projection method is as follows:

Alternative Forecasting Methods With Time Trends.
(1) Linear $Yt = \beta 0 + \beta 1T$
(2) Logarithmic $Yt = \beta 0 + \beta 1 \ln (T)$
(3) Inverse $Yt = \beta 0 + \beta 1 / T$
(4) Quadratic $Yt = \beta 0 + \beta 1T + \beta 2T2$
(5) Cubic $Yt = \beta 0 + \beta 1T + \beta 2T2 + \beta 3T3$
(6) Compound $Yt = \beta 0 \beta 1T$
(7) Power $Yt = \beta 0 T \beta 1$
(8) S $Yt = e (\beta 0 + \beta 1 / T)$
(9) Growth $Yt = e (\beta 0 + \beta 1T)$
(10) Exponential $Yt = \beta 0 e \beta 1T$
(11) Logistic $Yt = (1 / u + \beta 0 \beta 1T) -1$

Note: Yt = Variable predicted; T = Year; ln = natural logarithm;
e = number 2.718282; u = upper bound value (upper-bound) used in the logistic regression equation.

RESULT AND DISCUSSION

The number of poor people in Kulon Progo Regency in 2019 has decreased compared with the year 2014, although in the process there are several fluctuations. In 2014, the population was 84.67 thousand. However, in 2015 there was an increase in the number of poor people that were quite significant to 88.13 thousand souls. In the next year 2016, the government of Kulon Progo was able to reduce the number to 84.34 thousand people. This decline is quite significant because it is below the year number 2014. At the time of 2014-2016, there were substantial fluctuations due to considerable increase and decline. Only in the next two years is 2017 and 2019 there is a significant decline in numbers. In 2017, the number of poor people decreased to 84.17 thousand, and then it declined again in 2018 to 77.77 thousand. In the year 2019, the decline in poverty figures reached 74.62 thousand.

It is appropriate to control the population size, as indicated by the slowing growth graph. Population control is carried out to reduce the potential for the population explosion that is incompatible with the capacity of services and regional development. Therefore, the government has had to rethink related to the formulation of comprehensive population control efforts. Moreover, land for settlement will be increasingly limited in line with the number of national strategic projects that require a large area of land.

The poverty line in Kulon Progo Regency is predicted to increase slightly in 2020, even though the prolonged case of the Covid-19 pandemic affects people's economic activities. The main impact is the decreasing income of the community. The poverty line is the minimum standard of community income in meeting their basic needs. If a person's income is below the poverty line, they are categorized as weak. The ideal condition that must be achieved is to increase the poverty line gradually but followed by a decrease in the number of poor people. This shows that the community's income has steadily increased and the poor has decreased.

If you look at the projection graph of the poverty line and the percentage of poor people in Kulon Progo Regency, it is quite good. Each year the poverty line rising slowly and is reflected by the raising number of disadvantaged citizens. Though the proportion of poor people grew relatively fast in 2020 owing to the Covid-19 pandemic. In 2020, the poverty line rate is IDR 341,966, with a percentage of poor people of 19.56%.

In 2021 the poverty line will increase by IDR 10,174 to IDR 352,140 with the percentage of poor people decreasing to 18.58%. The year 2022 is predicted to be a turning point in improving poverty in Kulon Progo Regency. The poverty line will increase by IDR 9,810 to IDR 361,950 with the percentage of poor people returning to decline to 18.33%. This first graph in 2022 is due to the effects of the Covid-19 pandemic, which is estimated to have ended and economic activity has returned to normal in addition to the large projects already operating so that it will revive the economy of Kulon Progo Regency.

In 2023, the increase in the poverty line will slow down from Rp9,446 to Rp371,396 with the percentage of poor people reducing to 18.10%. Until the end of 2024, the poverty line is predicted to increase again to Rp. 380,477 with the rate of poor people reducing to 17.88%.
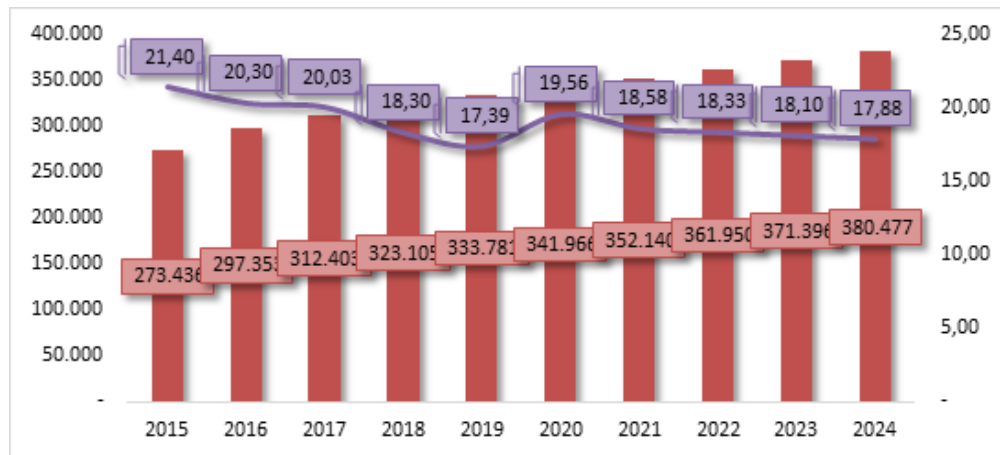

Figure 1
Poverty Line (IDR) and Percentage of Poor Population (%) in Kulon Progo Regency 2015-2019 and Projection for 2020-2024

While in Yogyakarta Province, in 2019 the number of poor people was 448.47 thousand inhabitants. The spread of poor people in Yogyakarta Province is dominant in the urban area of 304.66 thousand inhabitants. The rural area is 143.81 thousand inhabitants. Compared to the data from Kulon Progo and Yogyakarta Province, Kulon Progo Regency accounted for 16.64% of the poor people in Yogyakarta Province. This percentage experienced a reasonably high increase. Because in the year 2014, Kulon Progo only accounted for 15.54%. This indicates that despite the decline in Kulon Progo regency, it will increase if the number is paired with the Data on the percentage of the number of poor people in the Yogyakarta Province level.

CONCLUSION

Covid-19 increased the number of poor people in Kulon Progo Regency. The poverty line is predicted to increase slightly in 2020, even though the prolonged case of the Covid-19 pandemic affects people's economic activities. Every year the poverty line rising slowly and is shown by raising number of disadvantaged citizens.
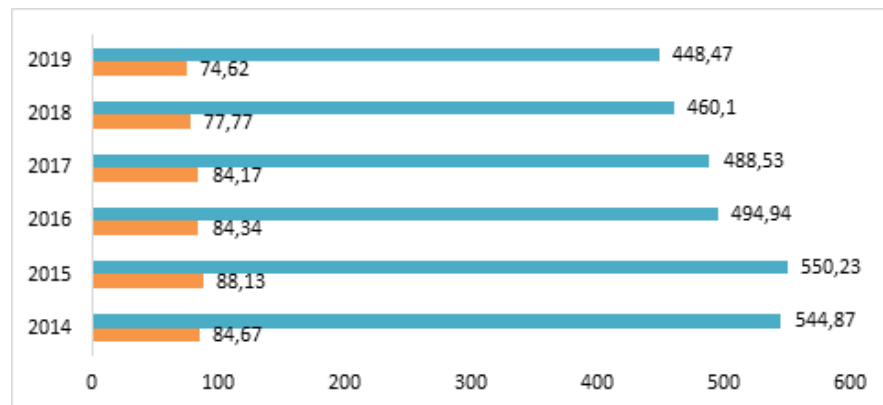
Figure 2
The Number of Poor People in Kulon Progo Regency and Yogyakarta Province in 2014-2019
(in Thousand)

Even though in 2020, the increase in the proportion of poor people was quite high due to the Covid-19 pandemic. In 2020, the poverty line rate is IDR 341,966, with a percentage of poor people of 19.56%. In 2021 the poverty line will increase by IDR 10,174 to IDR 352,140 with the percentage of poor people decreasing to 18.58%. The year 2022 is predicted to be a turning point in improving poverty in Kulon Progo Regency. The poverty line will increase by IDR 9,810 to IDR 361,950 with the percentage of poor people returning to decline to 18.33%. This first graph in 2022 is due to the effects of the Covid-19 pandemic which is estimated to have ended, and economic activity has returned to normal. In addition to the large projects already operating so that it will revive the economy of Kulon Progo Regency. When viewed from the number of poor people, it is estimated that in 2020, the number of poor people will be 83.39 thousand people, an increase of 8.77 thousand people from 2019 of 74.62 thousand people. In 2021, marked by the regular operation of the YIA airport, it will have an impact on the increasing mobility of the community and affect the formal and informal sectors of the economy. So it is predicted that the number of poor people will decrease to 79.83 thousand people. The sparse population in Kulon Progo Regency is predicted to continue to decline until 2024, with the number of poor people reaching 78.43 thousand people.

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