

## INCOME ANALYSIS OF POOR HOUSEHOLDS DURING COVID-19 PANDEMIC IN THE COASTAL AREA OF SOUTH SULAWESI

Nursini<sup>1\*</sup>, Mardiana E. Fachry<sup>2</sup>, and Sri Undai Nurbayani<sup>1</sup>

<sup>1</sup>Faculty of Economics and Business, University of Hasanuddin, Indonesia

<sup>2</sup>Faculty of Marine and Fisheries Science, University of Hasanuddin, Indonesia

\* Correspondence email: [ninitawakkal@gmail.com](mailto:ninitawakkal@gmail.com)

Submitted 09 November 2021; Approved 06 June 2022

### ABSTRACT

The policy of limiting population mobility during the Covid-19 pandemic caused a slow economic turnaround. The economic slowdown has had an impact on the economic conditions of the poor, especially in coastal areas. This research aimed to analyze the income of poor households during the co-19 pandemic and analyze the effect of the large-scale social restriction (PSBB) policy and cash social assistance on poor household income. This study used a survey method in Makassar City and Pangkep Regency. Determination of the location used stratified random sampling. Unit of analysis of this research was the head of a poor household whose source of income is more dependent on fisheries and marine resources. This study used primary data and secondary data. Primary data was obtained from in-depth interviews with respondents and secondary data was obtained from the publication of the Central Bureau of Statistics (BPS). The data were analyzed using a statistical-descriptive model and multiple regression. This study found that the average income of respondents during the Covid-19 pandemic decreased by 14.5%. The PSBB policy variable significantly reduced the income of poor households in the study locations, but the cash social assistance variable did not significantly affect income because the amount was quite low and the value of cash social assistance received by poor households was uneven. To encourage poor households in coastal areas to get out of poverty problems.

**Keywords:** *coastal, demographic factors, poor households, social assistance, social distancing*

### BACKGROUND

The Covid-19 pandemic that hit all regions in Indonesia has brought major changes to the performance of the national and regional economies. This is not only reflected in the contraction in economic growth, but what is far more concerning is the increasing number and percentage of poor people in 2020. According to BPS (2021), the poor are residents who have an average expenditure per capita per month below the line poverty. The poverty line reflects the rupiah value of the minimum expenditure needed by a person to meet his basic needs for a month, both food and non-food needs. Based on data released by the Central Statistics Agency (BPS) that the number of poor people on a national scale have jumped sharply from 24.78 million people in 2019 to 27.53 million people in 2020. Likewise, the percentage of poor people has increased to double digits, namely 10.19% in 2020 compared to 9.22% in 2019. An increase in the number and percentage of poor people during the Covid-19 pandemic was caused by a decrease in economic movement as a result of the implementation of large-scale social restriction policies which had a broad impact on the socio-economic activities of society in general and especially the poor in coastal areas.

The impact of the COVID-19 pandemic on household economic life has been studied by several previous empirical studies (Marchisio (2020); Suryahadi et al. (2020); Martin et al. (2020); UNICEF (2020); Sumner et al. (2020); Saad Moeen et al. (2021); and Manuel et al. (2020)). Martin et al. (2020) using the individual micro unit model found that the application of social distancing reduced individual income and then increased the percentage of poor people from 17.1% to 25.9% within 3 months for the case of the San Francisco Bay Area. Sumner et al. (2020) has estimated the impact of covid-19 on global poverty and found that 20% of income and consumption experienced a contraction as a result of which the number of global poor people increased in the range of 420-580 million from 2018. UNICEF et al. (2021) has analyzed the impact of Covid-19 on the socio-economic households in Indonesia and found that around 74.3% of households interviewed in October-November 2020 received lower income than in January 2020. Saad Moeen et al. (2021) using the SAM multiplier model found that the impact of covid-19 reduced GDP and increased poverty in Pakistan.

The PSBB policy was also implemented in South Sulawesi as one of the regions in Indonesia which once ranked as the third most infected with Covid-19. The PSBB policy which was implemented twice in 2020 has had a broad impact on productive economic activities so that the number and percentage of poor people in South Sulawesi have increased. By 2020, the number and percentage of the poor population will reach 800.24 thousand people and 8.72% in 2020 which are spread across all regencies/cities in South Sulawesi Province. However, it should be noted that most of the poor in South Sulawesi live in coastal areas where their source of livelihood comes from fisheries and marine products. Productive economic activity fishing/fishing is a routine daily activity carried out by poor households without and or with the implementation of social distancing policies so that the impact on decreasing income is still being debated. Studies conducted by Saad Moeen et al. (2021) found that the lockdown policy had a greater impact on the industrial and service sectors in urban areas than the agricultural sector in rural areas.

However, the level of spread of Covid-19 is still relatively high and has spread to all districts/cities in South Sulawesi so that in the long run it has a major impact on reducing the income of poor households in coastal areas. Small-scale fishing businesses and coastal communities will be affected by Covid-19 if the target for implementing the lockdown touches the fisheries export sector (Bennett et al., 2020). The life of coastal communities that are synonymous with fishermen has a positive correlation with poverty because they do not have a choice of work as a source of livelihood (Somoebwana et al., 2021). In line with the findings Diaz-Saracaga, (2020) that during the covid-19 pandemic, households faced difficulties in maintaining daily life and recommended that in the future, especially after the covid-19 pandemic, an inclusive social empowerment program was needed. Comprehensive government intervention support is urgently needed by poor households and financial support for social protection and health insurance and direct cash assistance (Manuel et al., 2020; Moses, 2020; Saad Moeen et al., 2021). Providing social assistance to the community, especially those affected by the COVID-19 pandemic during the pandemic, can increase household income and help maintain consumption patterns.

Previous empirical studies did not focus on surveying poor households in coastal areas. Poor households in coastal areas have their own characteristics and are different from the characteristics of poor households in non-coastal areas in responding to policies implemented by the government, including social distancing policies during the Covid-19 pandemic. The existence of these differences has different implications for the income earned. Related to that, this study aims to analyze the income

of poor households during the Covid-19 pandemic through survey research in Makassar City and Pangkep Regency using statistical descriptive analysis and multiple regression.

## RESEARCH METHODS

This research was conducted in two locations in South Sulawesi, Makassar City and Pangkep Regency. Makassar City as the capital of South Sulawesi Province has the second largest number of poor people who have been heavily affected by the implementation of the PSBB policy. Pangkep Regency, which has the second largest percentage of poor people in South Sulawesi Province and is close to Makassar City, has been affected by policies in handling Covid-19. The steps for determining location samples and respondent samples using stratified random sampling were: (i) choosing 2 sub-districts per district, (ii) choosing 1 village/kelurahan per each sub-district which is located on the coast and has a relatively large number of poor people. (iii) determining a sample of poor households whose main income comes from fisheries and marine products. The number of poor households is 20 per village/kelurahan, bringing a total of 80 poor household samples. Unit of analysis of this study was the head of a poor household. Poor households are households that have the characteristics determined by the BPS, the average household member, the average education level, the main source of income, and the head of the household.

This study used one of the characteristics of poor households, namely poor households whose main source of income comes from the agricultural sector including fisheries and marine affairs, both directly such as fishermen and cultivators/bakers and indirectly such as fish traders, seaweed processors, small micro enterprises whose raw materials come from fishery and marine products and have an average expenditure per capita per month below the poverty line. Primary data was collected through in-depth interview techniques using an open questionnaire focusing on three substances: (i) respondent's identity, (ii) economic conditions, (iii) respondents' perceptions regarding the impact of implementing the PSBB policy on household economic activities. In addition to primary data, secondary data was also collected to reveal a macro picture of the condition of poverty in the two research locations.

Data were analyzed using statistical-descriptive analysis techniques and multiple regression analysis to analyze the impact of implementing the PSBB policy and cash transfers on the income of poor households. In the multiple regression equation, in addition to the PSBB or social distancing (SD) policy variables, savings (S), and cash transfers (Tr) demographic factors are also included as control variables. The demographic variables included are the respondent's education (Ed), age (Ag), and household size (Hz). The functional equation of household income and consumption is as follows:

$$Y_i = F( SD, S, Tr, Ed, Hz, Ag) \quad (1)$$

Equation (1) is transformed into an estimation equation and in semi-log form as follows:

$$\ln Y_i = \ln \alpha_0 + \alpha_1 \ln SD_i + \alpha_2 \ln S_i + \alpha_3 \ln Tr_i + \alpha_4 Ed_i + \alpha_5 Hz_i + \alpha_6 Ag_i + e \quad (2)$$

Equation (2) explains that household income is affected by social distancing policies, savings, cash transfers, education level, household size, age. Where  $\alpha_1, \alpha_2, \alpha_3, \alpha_4, \alpha_5, \alpha_6 > 0$ .  $i$  is respondent  $i, \dots, 80$ .

The  $t$  test is used to determine the significance level of the observed variables, the  $R^2$  test to determine the goodness of fit of the model, and the  $F$  test to test all variables in the model.

**Operational Limitations**

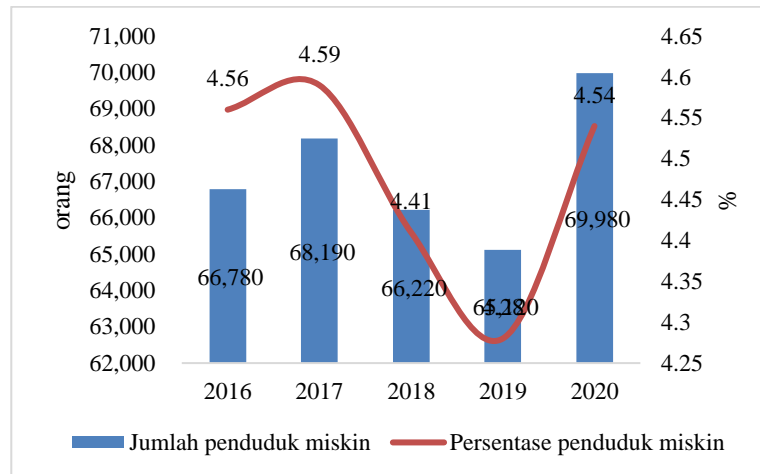
- Y : is the average net income of the respondents which is obtained from the difference between the gross income of the business unit conducted and the operating costs of the business unit which are valued in rupiah
- Tr : is a cash transfer, namely the amount of money received by respondents during the pandemic, including capital assistance
- SD : is the social distancing policy from which the data is obtained from the results of the perception of respondents using a Likert scale. The Likert scale uses two options, namely effect and no effect. Influential is given a value of 1 and has no effect is given a value of 0.
- Ed : is the last level of education attained by the respondent expressed by year
- Aq : is the age of the respondent at the time the interview was conducted, expressed in years.
- Exp : is the variable of the respondent's work experience as measured by the length of time he has been at work expressed in years
- FH : is the size of the household obtained from the number of members in the household expressed by persons

**RESULT AND DISCUSSION****Overview of Poverty in Makassar City**

Based on BPS data, it is recorded that the number of poor people in Makassar City fluctuates from year to year. The lowest number of poor people occurred in 2018 of 65,120 people. The development of the number of poor people from 2017 to 2019 tends to decrease. This indicates that some of the poor in the previous year have obtained better incomes in the coming years so that spending per capita per month has exceeded the poverty line. However, in 2020, as a result of the Covid-19 Pandemic, the number of poor people increased sharply from 65,120 people to 69,980 people or an increase of 4,860 people. To prevent the spread of Covid-19, the Makassar City Government implemented the PSBB policy in the first phase starting from April 24 to May 7 2020 (14 days). In the first phase, the PSBB policy was considered unsuccessful, so the Makassar City government extended the implementation of the second phase of the PSBB for 14 days from 8 May to 21 May 2020. The implementation of the PSBB policy in Makassar City which was implemented for two times (28 days) has caused many workers to lose their jobs so that those who lost their jobs did not receive remuneration or wages. In addition, the informal sectors engaged in services such as retail traders, industrial workers, construction workers have lost their income as a result of the co-19 pandemic. This condition has an impact on the macro-economy of Makassar City. Makassar City's economic growth experienced the fourth largest contraction, namely -1.27% after Maros Regency at 10.87%, Selayar Regency at -1.78% and Pangkep Regency at -1.68%. Makassar City's open unemployment rate also ranks the largest in 2020, namely 15,92% compared to other districts/cities such as Palopo which ranks second at 10.37%. With unemployment soaring high, the poverty rate will also increase in 2020.

Likewise with the percentage of poor people, during the 2016-2019 period the number tended to decrease from year to year, namely from 4.56% in 2016, although it increased slightly in 2017 but the following year it continued to decrease until it reached 4.28% in 2019. This this means that the number of poor people has decreased from the total population of Makassar City. In 2020, the percentage of poor people experienced a sharp jump from 4.28% to 4.54%. This condition is

inseparable from the impact of the Covid-19 pandemic. Although the government of Makassar City has disbursed poverty alleviation programs in various forms such as capital assistance for micro and small business actors and empowerment programs carried out by regional apparatus such as training for poor households,

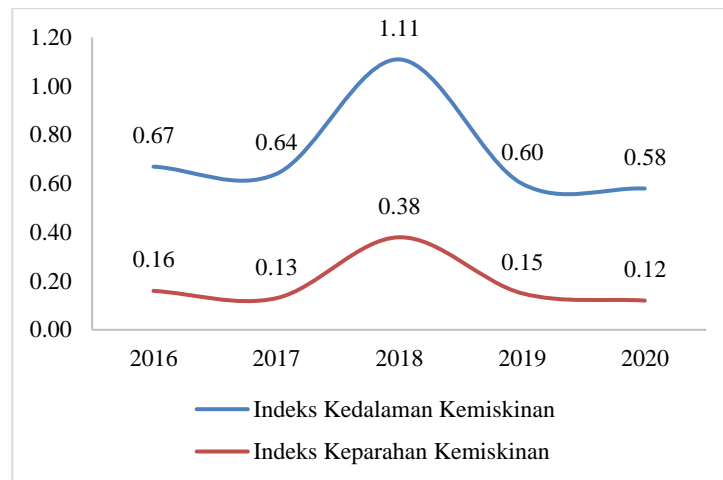


**Figure 1.** Development of the Number and Percentage of Poor People in Makassar City, 2016-2020

In addition to the percentage and number of poor people, the poverty depth index and severity index are also of great concern to the government of Makassar City. The poverty depth index in Makassar City is quite high and even got the number 1 in 2018. The higher the depth index number explains that the average expenditure per capita per month for the poor is further away from the poverty line. The number of poor people has a different average per capita expenditure per month. For those who have an average per capita expenditure close to the poverty line, it is said that the population has a relatively low level of poverty depth. For those who belong to this group have a great opportunity to get out of poverty. The empowerment model is relatively more appropriate and does not take longer for them to get out of poverty. However, for those whose average per capita expenditure per month is small, it means that they are very far from the poverty line, it means that the depth of poverty is quite high. It is more difficult for those who belong to this group to get out of poverty quickly. This condition requires a long time and maybe some of them will never get out of the vicious circle of poverty. It is more difficult for those who belong to this group to get out of poverty quickly. This condition requires a long time and maybe some of them will never get out of the vicious circle of poverty. It is more difficult for those who belong to this group to get out of poverty quickly. This condition requires a long time and maybe some of them will never get out of the vicious circle of poverty.

Based on BPS data (2021) it was found that the Makassar City poverty depth index fluctuated but tended to decrease in 2020. This means that during the Covid-19 pandemic, the average per capita expenditure of the poor was getting closer to the poverty line. In other words, the average spending gap is getting smaller. One of the contributing factors was that during the Covid-19 pandemic, many parties provided assistance to the poor both in cash and in the form of basic needs so that the purchasing power of the poor in general tended to increase during the Covid-19 period. This condition is contrary to the national condition and South Sulawesi Province where the poverty depth and severity index has actually increased in 2020. The poverty depth index for South Sulawesi Province

in 2020 was 1.65, an increase from 1.63 in 2019 per semester 2 (September). This means that the average expenditure per capita of the poor is further away from the average poverty line.



**Figure 2.** Development of Poverty Depth Index and Poverty Severity Index in Makassar City, 2016-2020

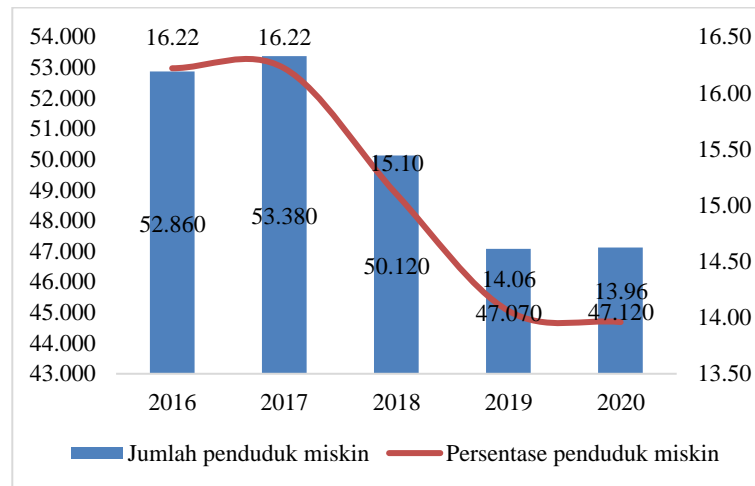
One of the factors causing the difference in conditions in Makassar City and National and South Sulawesi Province is that the coverage area is quite large and the poor are spread to rural areas where access to infrastructure is relatively limited so that cash assistance is not effective enough in increasing the purchasing power of the poor. The same condition with the poverty severity index in Makassar City also shows the same pattern with the poverty depth index. In 2020, although the number and percentage of poor people have increased, the severity of poverty has actually decreased. This means that the gap in average expenditure of the poor does not widen. This explains that the consumption pattern of the poor can be said to be evenly distributed because the COVID-19 pandemic has an equal impact on all residents, including the poor. The average income earned decreases almost the same for all poor people.

**Poverty in Pangkajene Kepulauan Regency (Pangkep)**

Pangkep Regency is a district that is relatively close to the capital city of South Sulawesi Province, with a distance of about 60 Km from Makassar City. The characteristics of the people of Pangkep Regency are different from the characteristics of the people of Makassar City. As an archipelago area, the accessibility of infrastructure in the archipelago area is generally limited and the people on the island are the source of livelihoods dominated by activities in the capture fisheries sector. It's different from the people near the Pangkep Capital City, where the majority are fishery too, but fishery activity is engaged in the aquaculture sector. The two fishing activities provide different added values for the fishing communities themselves.

As an island region that is completely limited in terms of infrastructure, of course it has a broad impact on the socio-economic conditions of its people. The number of poor people in Pangkep is contributed by the island area. Overall development of the number of poor people in Pangkep Regency can be seen in Figure 4.7. The number of poor people in Pangkep Regency has decreased sharply since 2017, namely 53,380 people to 47,070 people in 2019. Since Covid-19, the number of people who are categorized as poor or spending per capita per month is below the Kab. poverty line.

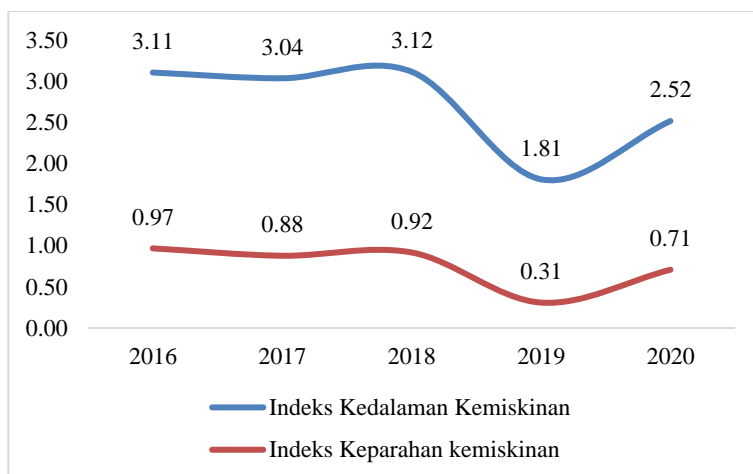
Pangkep amounted to 47,120 people or an increase of 50 people. This explains that the Covid-19 pandemic in Kab. Pangkep does not significantly affect the average income of the people in Pangkep Regency.



**Figure 3.** Number and Percentage of Poor People in Pangkep Regency, 2016-2020

By observing the development of the percentage of poor people, Pangkep Regency has a decreasing percentage of poor people in line with the decrease in the number of poor people. This means that the development of the number of poor people is getting smaller relative to the total population every year in Pangkep Regency. This condition shows that the local government's performance is quite good because it is able to suppress the increase in the number of poor people in their area. One of the government programs that has made a significant contribution to poverty alleviation in Pangkep Regency is the micro and small business empowerment program, especially in coastal areas that utilize raw materials from fisheries and marine products. In addition, the local government cooperates with the Semen Tonasa Company to employ community members who live around the industry. In 2020, the percentage of poor people in Pangkep Regency has decreased. This indicates that the Covid-19 pandemic does not have a broad impact on all community activities so that the average expenditure per person per month during 2020 does not experience drastic changes. At the same time, the government's empowerment program for micro and small business actors and the collaboration with PT Semen Tonasa remains ongoing.

Even so, Pangkep Regency is still listed as the district that ranks second in the highest percentage of poor people after Jeneponto Regency. This condition pays attention to the regional government to maintain the pattern of cooperation between the private sector, especially PT Semen Tonasa and empowerment programs and provide support for access to infrastructure, especially in the archipelago area which has so far been the largest contributor to poverty in Pangkep Regency.



**Figure 4.** Development of Poverty Depth Index and Severity Index in Pangkep Regency, 2016-2020

Poverty analysis in addition to the number and percentage of poor people, which is also important is the poverty depth index and poverty severity index. By observing the development of poverty depth index data in Pangkep Regency, it was noted that over the past five years, the poverty depth index was quite high, namely above the number 3 in the 2016-2018 period, but decreased drastically in 2019 and increased again in 2020. In 2019 it marked that the average expenditure per capita of the poor is getting closer to the poverty line. With a poverty alleviation program that is right on target, it will contribute to elevating the degree of the poor to non-poor. In 2020 the poverty depth index will be higher but still lower than in 2018. The increase in the poverty depth index in 2020 is also a result of the co-19 pandemic. Thus, even though the percentage of poor people decreases in 2020, the average expenditure per capita per month during 2020 is less or farther from the poverty line limit of Rp. 358,061. This poverty line has increased compared to 2019 of Rp. 322,958.

Likewise with the poverty severity index, namely the wider the expenditure gap per capita between the poor, the more unequal the income of the poor. The data shows that the poverty severity index in Pangkep Regency has the same pattern as the poverty depth index. This means that the disparity in average per capita spending among the poor is quite high and the conditions are even more unequal in 2020. In general, this condition occurs in island areas where the average per capita expenditure for the poor is less than for the poor who are outside the islands. . It is true that they are poor but their average monthly income is still relatively higher than that of the poor in the islands.

**Economic Conditions of the Respondents at the Research Location**

The type of business the respondent is engaged in is sufficient to determine the amount of income earned and also shows their survival. For Makassar City, out of 40 respondents, the most dominant type of business is fishermen, namely 57% or 23 people, 35% of whose main work is processing shredded fish, rajukan and stone masons. Meanwhile, in Pangkep Regency, the majority of respondents are cultivating fish and fishermen. There are relatively few other types of work.

Based on the aspect of the type of business that the respondents were involved in, in general said that there was no change in the type of business either before the Covid-19 pandemic or during the Covid-19 pandemic. This means that respondents who worked as fishermen or cultivators before the pandemic continued to work as fishermen/cultivators during the pandemic. However, these two



conditions still have an impact on the income earned. For example, before the Covid-19 pandemic, fishermen's catch was directly marketed both in local markets and outside the area so that it directly generated income. However, during the Covid-19 pandemic, fishermen continued to do their job by catching fish but their market goals were reduced or even most said the catch was consumed or given to families.

The existence of the PSBB policy, especially in Makassar City, has hampered the marketing of fishery products from coastal areas, including in Pangkep Regency. At the beginning of the Covid-19 pandemic and the implementation of the PSBB in Makassar City, the activities carried out by respondents, for example cultivators, were only maintaining their cultivation and trying not to sell their production. However, in the following months, with the easing of the PSBB, the activities of the population began to move and the demand for fish from Makassar City increased, so the cultivators began to market their fishery products.

Table 1 shows an overview of the average income received by respondents before and after the Covid-19 pandemic. Based on the results of processed data, it was found that the average income earned by respondents in Makassar City was relatively lower than in Pangkep Regency both before Covid-19 and after Covid-19. The difference is mainly due to the type of work that the respondents are involved in. Average respondents' income in Makassar City before Covid was Rp. 3,197 thousand or around Rp. 3.2 million and after Covid-19 it decreased to Rp. 2.8 million or decreased by around 11.5%. Out of the 40 respondents, the average income most respondents earned was Rp. 3.6 million per month. However, if one pays attention to the income between respondents, it appears that there is a fairly large gap caused by the type of business they are involved in. For example, for the type of fish shredded business, the average respondent earns around Rp. 40-50 thousand per day.

InPangkep Regency, the average income of respondents per month was Rp. 4.7 million before Covid and after Covid decreased to Rp. 3.1 million or a decrease of 17%. This is also caused by the type of work. Respondents' occupations are milkfish farming, seaweed farming, and fishing. In general, the decline in income was mainly contributed by a decrease in income from capture fisheries production. The highest income received by respondents before Covid-19 was Rp. 8.2 million and after Covid-19 it was an average of Rp. 7.5 million. It should be noted that the value of the respondents' income in this study is still classified as gross income because they have not incurred operational costs such as fertilizer costs, labor costs and seed costs.

**Table 1.** Average Income of Respondents per Month in Research Locations

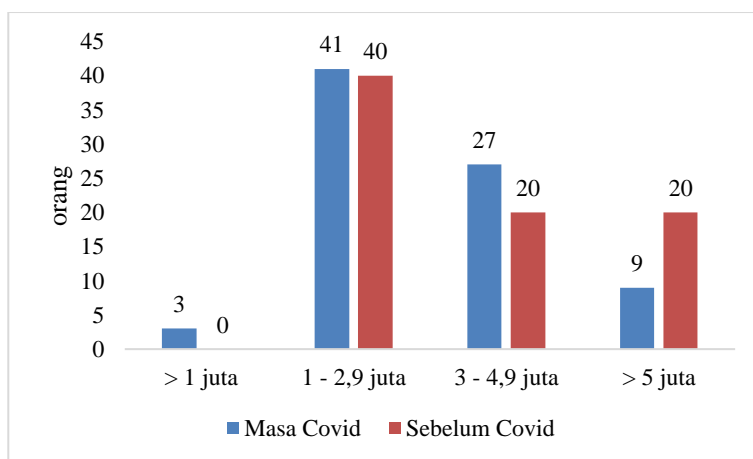
Description	Makassar City		Pangkep Regency	
	Before Covid	After Covid	Before Covid	After Covid
Average (thousand)	3,197	2,829	3,800	3.154
Median (thousand)	2,900	2,550	3,375	3,120
Mode (thousand)	3,600	2,800	3,000	3,640
Lowest value (thousand)	1,000	1,000	1,000	750
Highest value (thousand)	6,200	6,000	8,250	7,500

Source: Primary Data Processed, 2021

Overall, for the two research locations, the average income of respondents during the Covid-19 pandemic was Rp. 2.99 million, while before the Covid pandemic it was Rp. 3.5 million. This

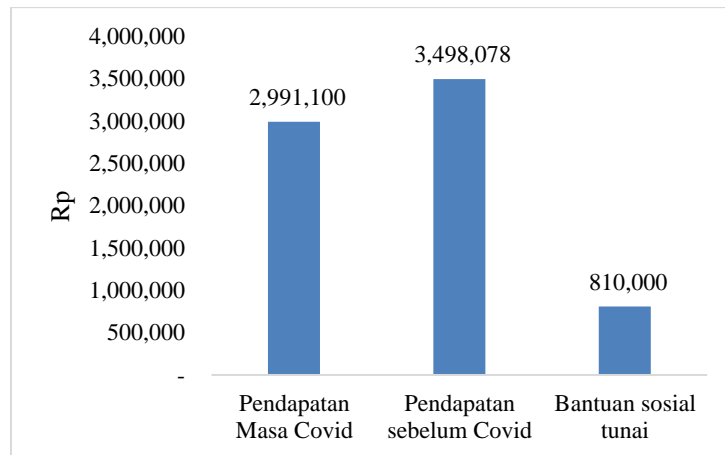
shows that there is a difference of around 506 thousand or a decrease of around 14.5%. However, if observed per respondent, some respondents experienced an increase in income during the Covid-19 pandemic and some also experienced a decrease. The difference is mainly due to the type of business the respondents are involved in. Respondents who tend to experience a decrease in income are respondents whose business units are capture fisheries whose marketing is highly dependent on the Makassar City area. Respondents whose type of business is micro businesses also experienced a decrease in income due to reduced production volume and even some respondents stopped production and respondents who did not have a side business during Covid-19. Meanwhile, respondents who had the type of pond aquaculture business only at the beginning of implementing the PSBB experienced a decrease in income because they were more likely to decide not to catch and sell fish. However, when economic activity began to move, some respondents actually benefited because the selling value of fish had increased. In addition, several respondents also carried out side activities during Covid and also online marketing so that the income received increased compared to offline marketing methods.

During the Covid-19 period, the distribution of respondents who had an average monthly income at the study locations varied according to income group. During the pre-covid and covid-19 periods, the average respondent had a monthly income of between Rp. 1 million - Rp. 2.9 million. For respondents who are in Makassar City, the average income is only sufficient to meet a minimum standard of living, assuming that the average number of household members is 3 people. During the Covid period, there were three respondents who had an average income of less than Rp. 1 million per month and 9 respondents who earned above 5 million. This is very different from before Covid-19, the number of respondents who earned income above 5 million was quite large. However, after Covid-19, the number of respondents decreased.



**Figure 5.** Distribution of Respondents According to Average Income per Month

In the early days of implementing the PSBB policy, the government's efforts to deal with the population affected by Covid-19 were quite large. The policy of refocusing and reallocating local government budgets is a significant effort. The budget refocusing policy is the government's action to focus the budget on activities related to preventing the spread of Covid-19 into the 2020 Regional Revenue and Expenditure Budget (APBD), such as purchasing medical equipment, isolation shelters for residents infected with the virus and several others.



**Figure 6.** The average Income and Cash Social Assistance

The implication is that the budget for the prevention of Covid-19 has increased. Budget reallocations for infrastructure development and official travel have been partially diverted to handling Covid-19, for example purchasing Personal Protective Equipment (PPE) both for government agencies and for the community in general. Likewise social assistance, both in the form of handling the prevention of transmission of Covid-19 and cash assistance to the community, including the poor and the poor to maintain their necessities of life.

Based on the results of interviews with respondents, the poor and the poor generally receive social assistance, both in the form of cash and in the form of capital. The value of cash social assistance received by respondents was in the range of Rp. 300 thousand - Rp. 600 thousand. Several respondents also received social assistance in the amount of Rp. 1.8 million including capital assistance. The average social assistance received by respondents during the Covid period was Rp. 810,000. The highest value is Rp. 3.6 million and the lowest is Rp. 300 thousand.

Differences in cash social assistance among respondents are caused by two things, namely: (i) budget constraints and at the same time the number of target recipients is quite large, (ii) priority aspects, namely government policy prioritizing recipients of cash social assistance in communities most affected by Covid-19. In such conditions, even though they are both poor, some of them are the most affected and some are not because it depends on the different types of bussines they are involved in. Even though there are differences in conditions, it should be appreciated that the government has contributed to helping the poor.

**The Effect of Social Distancing Policies, Cash Assistance, Savings, and Demographic Factors on the Income of Poor Households**

Table 2 shows the results of estimating the influence of independent variables that affect the income of poor households in the study locations. The independent variables observed were social distancing policies, cash social assistance, education, household size, and age. Based on statistical testing, the R2 value is 0.68 which explains that 68% of the variation in changes in poor household income is influenced by the variables contained in the regression model. The remaining 32% is influenced by other factors that are not included in the regression model. The F test also shows a fairly large value with probabilityUS0.000 which explains that simultaneously all variables significantly influence the income of poor households in the research location. To analyze the effect of each variable partially on the income of poor households, it can be explained by the p-value.

**Table 2.** Estimation Results of the Effect of Social Distancing Policy, Cash Social Assistance, Education, Household Size, and Age on Poor Household Income

<b>Independent Variable</b>	<b>Regression Coefficient</b>
intercept	4.102 (0.001)
SD	-0.292*** (0.005)
BS	-0.259ns (0.157)
S	0.668*** (0.000)
Aug	0.146* (0.09)
Hz	0.010ns (0.903)
Ed	0.098ns (0.303)
R2	0.68
F Statistics	11.45
probability	0.0000

Source: Author, 2021

\*significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%. ns = nonsignificant. The numbers in brackets indicate the p-value

Based on the estimation results, three statistically significant variables were found, namely social distancing policies, savings, and age, with coefficient values of -0.292, 0.668, and 0.146, respectively. Meanwhile, the variables that were not significant were education level, household size, and cash social assistance with coefficient values of 0.098, 0.010 and -0.259 respectively. Significant and insignificant explanations of the observed variables are explained in detail in the following paragraphs.

The implementation of the social distancing policy has had a negative impact on economic activities, especially in Makassar City and several surrounding areas including Pangkep Regency. This negative impact was marked by a contraction in economic growth in almost all districts/cities in South Sulawesi. The weakening of economic growth has had a major impact on increasing the number of poor people and people who are poor. Based on the results of a survey of 80 respondents in Makassar City and Pangkep Regency, it was found that the average income of households who were respondents experienced a decrease of 14.5%. The average value of income before Covid-19 was Rp. 3,498,078 and after Covid-19 it was Rp. 2,991,100. The decline in people's income was caused by a lack of public demand caused by the weakening of people's purchasing power.

The implementation of the PSBB policy caused the movement and mobility of the population not to run as before the Covid-19 pandemic. Demand from the general public and restaurants/hotels has decreased so that fishermen's catches and processed fishery products by respondents are not sold as was the case before Covid-19. The next impact is that people's incomes in general have decreased, including the poor. This decrease in income was reinforced by the results of estimating the effect of the social distancing policy on household income in the study locations.

This study found that the effect of social distancing on income is statistically significant and has a negative sign. The regression coefficient value is -0.292 with a p-value of 0.005. This means that the implementation of the social distancing policy reduced income during the 2020 Covid-19 period by 0.29%. The significant effect of social distancing policies on income is due to the fact that the average income of respondents has decreased by 14.5% due to reduced public demand. Decrease in public demand as a result of restrictions on population mobility during the Covid-19 period. This finding is in line with Sumner et al. (2020) who found that about 20% of income has decreased, causing the global poverty rate to increase.

In theory, cash social assistance is one of the poverty alleviation programs. This social assistance during the Covid period was mainly intended for people who were greatly affected by the Covid-19 pandemic, including the poor and the poor. The purpose of this type of social assistance is to protect people's productive businesses. However, based on the estimation results, it was found that cash social assistance received by poor households in the study locations had no effect on household income. This is indicated by the p-value of 0.157 which is above the 0.05% significance level. One of the causes of the non-significance of the cash social assistance variable is that the amount of assistance received by respondents is relatively small and not evenly distributed among respondents.

Based on the results of the interviews and the results of data processing, several respondents stated that the cash social assistance received only once was Rp. 300,000. Several other respondents stated that once but the amount received was Rp. 600,000, and also some respondents received once with an amount of Rp. 1,200,000. The percentage of respondents who received Rp. 300,000 social assistance was 28.75%, 35% received Rp. 600,000 social assistance and the rest of the respondents received Rp. 1,000,000 (7.5%); Rp. 1,200,000 (20%); Rp. 2,400,000 (6.5%); and Rp. 3,600,000 (1.25%).

Basically, the assistance received by the respondents consisted of two types, namely cash social assistance and capital assistance. For capital assistance, it is generally only received once, specifically for respondents who have business units and are affected by the co-19 pandemic. With varying values and the initial economic conditions of the respondents also varied, the effect on the income of the respondents was not significant. In fact, the cash social assistance received by the respondents did not increase their income but only maintained consumption patterns during the Covid-19 pandemic. In fact, the average value of the decline in the income of respondents is greater than the cash social assistance received.

Social protection spending in the form of social assistance is one type of poverty alleviation program in Indonesia and is implemented in the regions. This study is in line with the study of Alamanda (2020) who found that social protection spending had no effect on poverty reduction. Other studies that support such as Muhammad et al. (2019) and Taruno (2019). An interesting variable to observe is the savings variable. Savings are positive with a coefficient of 0.668 and a p-value of 0.000. This explains that if the addition of savings is 1% then household income increases by 0.67%. This can be explained in theory that income that is not consumed by households will be used as capital formation for the next production cycle. In coastal areas, where people generally work as fishing or cultivating fishermen, savings are very important for investment or investment purposes. With investment will increase revenue in the next production cycle. But on the other hand, when savings increase, it will further suppress consumption and have the potential to not fulfill household basic needs.

There are three control variables included in the estimation model, namely age, education, and household size. Based on the estimation results, the age variable has a significant effect on household income during the Covid-19 pandemic. The coefficient value of the age variable is 0.146 with a p-value of 0.09. This means that the more mature the respondent is, the more mature the mind is for things that encourage increased income. A significant causal factor for the age variable is in accordance with the facts in the field where the respondent's age is classified as a productive age, namely 29-65 years old. During the Covid-19 pandemic, high creativity or innovation was needed to survive. Forms of creativity are usually in line with one's maturity.

The other control variables, namely the level of education and household size, each have a coefficient value of 0.098 and 0.010 with a sign that is in accordance with the theory, but statistically not significant which is marked by a p-value each above the 5% significance level. The level of education did not affect the income of poor households during the Covid-19 pandemic at the research location. The significance of this variable is caused by the real condition of the respondents, most of whom have an education level at the elementary and junior high school levels. A low level of education indicates that the ability to create or seek other sources of income during the Covid-19 period is very limited. Based on the results of the interviews, it was found that only a few respondents had side jobs during the Covid-19 period. Apart from the low level of education, it is also reinforced by the type of work the respondents generally do are fishermen.

To work as a fisherman, in many facts in the field does not require high skills and knowledge. However, what fishermen generally need is adequate capital and strong physical conditions. Large capital because it can be used to buy modern fishing gear so that with modern fishing gear it is predicted to produce more fish catches. In addition to capital, the physical condition of fishermen is also needed because they have to deal with high risks while at sea. Although it is still recognized that in the era of technological advancement, fishing gear has become more sophisticated, of course in operating it requires fishermen who have a high level of education.

The household size variable also has no significant effect on the income of poor households in the study locations. In theory, household size affects household income depending on the number of household members. This means that the more household members the more it encourages the head and members of the household to increase household income. The household size variable is not significant because the average number of household members is 3-4 people. This amount is a non-demanding amount to find additional work that can increase household income. Even so, some of the respondents in this study had 5-7 household members.

## CONCLUSION AND SUGGESTION

The average income of poor households had decreased by 14.5% during the Covid-19 period. The decrease in respondents' income was caused by a decrease in public demand for the production of respondents' business results as a result of implementing the social distancing policy. This was reinforced by the results of estimation calculations that the social distancing policy variable has a statistically significant effect on reducing the income of poor households. While the cash social assistance variable statistically had no effect on poor household income. This was due to the relatively small amount of cash social assistance and not evenly distributed among respondents. In addition, the time for receiving cash social assistance was shorter than during the Covid-19 period and the average

amount of cash social assistance received was lower than the average decrease in income for poor households during the Covid-19 period.

The control variable that had a significant effect on poor household income is age. This result was reinforced by the condition of the age of the respondents who on average are classified as productive age. Meanwhile, both education level and household size did not have a significant effect. This is due to the low average level of education of the respondents, which is elementary and junior high school and the relatively small size of the household, so that it did not pressure poor households to look for other sources of income.

This study recommends that the empowerment program for poor households in coastal areas, especially in the research location, be maintained and increased in the form of: (i) providing cash social assistance with a larger portion that aims to ease the expenditure burden of poor households in coastal areas and finance activities household productive economy, (ii) increasing skills through training and coaching to poor households not only to producing products but fostering broad marketing access.

## REFERENCES

- Alamanda, A. 2020. The Effect of Government Expenditure on Income Inequality and Poverty in Indonesia. *Info Artha*, 4(1), 1–11.
- Bennett, N.J., E. M. Finkbeiner, N.C Ban, D. Belhabib, S.D. Jupiter, J.N. Kittinger, S. Mangubhai, J. Scholtens, D. Gill & P. Christie. 2020. The COVID-19 Pandemic, Small-Scale Fisheries and Coastal Fishing Communities. *Coastal Management*, 48(4), 336–347.
- Diaz-Saracaga, J.M. 2020. Combining Participatory Processes and Sustainable Development Goals to Revitalize a Rural Area in Cantabria (Spain). *Lands*, 9, 412.
- Manuel, M., L. Carson, E. Samman & M. Evans. 2020. Financing the reduction of extreme poverty post-Covid-19 (p. 14) [Briefing Note]. ODIs.
- Marchisio, M. 2020. The impact of COVID-19 on poverty in China. *LinkedIn*.
- Martin, A., M. Markhvida, S. Hallegatte, & B. Walsh. 2020. Socio-Economic Impacts of COVID-19 on Household Consumption and Poverty. *Economics of Disasters and Climate Change*, 4(3), 453–479.
- Muhammad, S., T. Zulham, D. Sapha & J. Saputra. 2019. Investigating the Public Spending and Economical Growth on the Poverty Reduction in Indonesia. *Industrial Engineering & Management Systems*, 18(3), 495–500.
- Musa, M. 2020. Fighting Extreme Poverty During COVID-19: Two Proven Ways to Build Resilience in Times of Catastrophic Disruption [Article]. *Next Billion*.
- Saad Moeen, M., Z. Haider, S. Shikoh, N. Rizwan, A. Ejaz, S. Davies & A. Rana. 2021. Estimating the economic impacts of the first wave of COVID-19 in Pakistan using a SAM Multiplier Model.
- Somoebwana, M.I., O.I. Ayuya & J.M. Mironga .2021. Marine fisheries dependence, poverty and inequality nexus along the coastal lowlands of Kenya. *National Accounting Review*, 3(2), 152–178.
- Sumner, A., C. Hoy, E. Ortiz-Juarez & Unu-Wider. 2020. Estimates of the impact of COVID-19 on global poverty (43rd ed., Vol. 2020). *UNU-WIDER*.
- Suryahadi, A., R. A. Izzati & D. Suryadarma. 2020. The Impact of COVID-19 Outbreak on Poverty: An Estimation for Indonesia, 20.
- Taruno, H.T. 2019. Public Spending and Poverty Reduction in Indonesia: The Effects of Economic Growth and Public Spending on Poverty Reduction in Indonesia 2009-2018. *The Indonesian Journal of Planning and Development*, 4(2), 49–56.

UNICEF. 2020. Estimating the Impact of Covid-19 on Child Poverty in Georgia Using a Micro-Simulation Model (p. 32).

UNICEF, UNDP & Prospera. 2021. Analysis of the Social and Economic Impacts of COVID-19 on Households and Strategic Policy Recommendations for Indonesia.