THE EFFECT OF ISLAMIC HUMAN DEVELOPMENT INDEX ON POVERTY LEVEL IN BIREUEN DISTRICT PERIOD 2000-2017

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\textbf{ARTICLE INFORMATION ABSTRACT}

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The study aims to determine the Influence of the islamic human development index on poverty levels in Bireuen District 2000-2017". The data used in this study are series from 2000-2017 obtained from BPS Bireuen. Data are analyzed by multiple regression methods. The results of the research based on Index ad-dien showed that the crime rate has a significant and negative effect on the poverty level, based on Index an-nafs show that life expectancy does not have a significant effect on poverty levels, based on Index al-'aql showed that the average length of school has a negative and significant effect to the level of poverty, Index an-nasl showed that the birth rate does not affect the level of poverty and expenditure per capita does not affect the level of poverty in Bireuen District. This reflects that although per capita expenditure remains high, it will not increase the number of poor people in Bireuen District.

1. INTRODUCTION

Poverty is a problem that is a challenge throughout the world. Natural poverty can occur due to the limitations of Natural Resources that are owned, the use of technology that is still minimal and the occurrence of incidents of natural disasters. Artificial poverty is caused by economic actors in a country or region, both the government that takes policy and the community itself which is less productive in their daily lives, resulting in difficulties in getting out of poverty. This is not only an Indonesian problem, but also become a world problem.

The 2005 report from the World Bank shows that towards the end of the 1990s there were around 1.2 to 5 billion more people in poverty of the entire world. In this case poverty is a factor that has a large influence on the country's economic growth. In Indonesia during the 2005-2006 period there were 4.2 million poor people.

Only after adjusting for some macro economic stabilization policies. The level of the poor has declined since 2007. In relative terms, in 2007 it is the same as before the 1997-1998 crisis (Tambunan, 2012). This problem has always been a problem of economic development which requires serious handling from the government in making policies. Economic development that pursues growth often faces dilemmatic choices between progress and poverty. Poverty reduction, should be used as a center of attention in economic development. Reducing the number of poor people as aspirations but requires a more centralized strategy for poor groups. The development
strategy must design well at the national level as well as under the government level in a fairly long period of time and well implemented (Bappeda Aceh, 2011).

Bireuen District has a high level of poverty. According to the author's observation, the main cause of inequality in Bireuen Regency is limited available jobs, while the population is increasing every year. In addition, the characteristics of the majority of Bireuen District residents are less productive in exploiting their potential. This is due to the low quality of human resources, making it difficult to get out of poverty.

When there is a decline in the value of poverty in Bireuen District, the depth index of poverty tended to fluctuate and the poverty severity index also fluctuated. This shows that the average expenditure of the poor is far from the level of welfare and inequality with the wealthy population. To reduce poverty, it is necessary to look for factors that can influence the level of poverty. So that this can be used as a reference in reducing poverty.

The Human Development Index ratio, better known as the Human Development Index, is an indicator used for measuring aspects related to economic quality and quantity, namely the degree of human development. As a measure of quality of life, it is built through a 3-dimensional basic approach, namely life span measured by life expectancy, then knowledge measured by a combination of literacy rates and average length of school, then life-worth is measured by purchasing power indicators for a number of basic needs, per capita expenditure as an approach that represents the achievement of development for decent living (Todaro 2005).

The existence of HDI offered by the United Nation Development Program (UNDP) as one tool that can be used to measure the level of human development which may be the most comprehensive indicator, but it is not fully compatible and sufficient to measure human development in an Islamic perspective. Underlying theories and concepts to build HDI is not based on maqasidh sharia. Because of that for measure the level of human development in a country that is predominantly populated Muslims will be more appropriate if they use Islamic Human Development Index (I-HDI), where theories and concepts are based on an Islamic perspective. I-HDI is calculated based on data that describes the five dimensions of maqasidh sharia. For the dimensions of religion (ad-dien), soul (an-nafs), intellectual (a ‘aql), descent (an-nasl) which indicators used are the number of crime detected, property (al-maal).

The religious dimension (ad-dien) becomes a benchmark of good or bad life not measured by other indicators but only from the extent to which a human being clings to the truth (Center for Islamic Economic Research & Development (P3EI), Indonesian Islamic University, 2012). To measure the dimensions of hifdzu ad-dien, an ad-dien index is formed using indicators that can reflect the dimensions of ad-dien. The measurement indicator for hifdzu ad-dien is the crime rate data because it can be used as a reflection of the implementation of one of the most important worship in the pillars of Islam is prayer (Rafsanjani, 2014). The crime rate in Bireuen Regency is still high, this can be seen from the number of cases of theft, murder, sexual violence and some fraud cases which tend to rise. Such recorded the crime rate in Bireuen Regency since 2015 as many as 498 cases have increased to 525 in 2016 (BPS Bireuen, 2017).

Furthermore I-HDI is measured by the dimension of the soul (an-nafs), the indicator used is life expectancy. Life expectancy of people in Bireuen District has decreased. According to the documentation reported by BPS Bireuen in 2017, the life expectancy of the Bireuen community in 2013 is 70.34 years, then increases in 2014 to 70.35 years, in 2015 it increases 70.64 years, in 2016, it again rose to 70.72 years.

For the intellectual dimension (a ‘aql) an indicator of the average length of school is used. The average length of school in Bireuen District in 2013 is 8.58 years, in 2014 it increases to 8.85 years and in 2015 it was 9.14 years and 2016 became 9.15 years. This condition does not show the achievement of education that should be more advanced.

Furthermore, for the hereditary dimension (an-nasl) an indicator is used, namely the birth
rate. The baby birth rate in Bireuen Regency since 2013 increases from 8,231 people, a number of 8,622 in 2014 and 2015 to 8,909 people.

The next dimension for assets (al-maal) is used per capita expenditure level indicator. The level of per capita expenditure in Bireuen District shows an increase in expenditure from 7,232 Million Rupiah in 2013, increases to 7,319 in 2014, in 2015 increased to 7,622 and in 2016 again increases to 7,885 Million Rupiah.

The majority of Bireuen regencies are Muslim, indicated by the number of Bireuen district residents who embrace Islam, which is 98% of the total population of Bireuen district (BPS Bireuen, 2016), so it would be more appropriate to use the Islamic Human Development Index (I-HDI), the theory and concept are based on an Islamic perspective.

Poverty

According to the Central Bureau of Statistics, poverty is the inability to meet the basic standards of minimum needs which also include the need for food or non-food. Comparing the level of consumption of the population with poverty lines or the amount of rupiah for monthly consumption of people. The definition according to UNDP experts in (Cahyat, 2004), is the inability to expand life choices, including the assessment of the absence of participation in public policy making as one of the indicators of poverty.

The condition of the community called poor can be known based on the ability of income to meet living standards (Nugroho, 2005). In principle, the standard of living in a society is not only sufficient for food, but also for the need for health and education. A proper residence or settlement is one of the standard of living or the standard of welfare of the people in an area. Based
on this condition, a society is called poor if it has income far lower than the average income so that it does not have many opportunities to prosper itself (Suryawati, 2004).

**The Islamic Human Development Index (IHDI) relationship with poverty**

Research conducted by (Sukmaraga, 2011) found that each increasing numbers of the Human Development Index (HDI) will have an effect on increasing work productivity of the population, so that it will improve income generation and reducing the number of poor people. As explained above, almost all indicator components the one used to compile I-HDI is the same as the indicator component compile HDI, it's just equipped with a number of indicators that represent religious values where the theory and concept are based on an Islamic perspective.

### 3. RESEARCH METHODS

**Data and Sources of Data**

The object of the research is Index ad-dien, Index an-nafs, Index al-‘aql, Index an-nasl Index al-maal and the level of poverty. The study is conducted in Bireuen District, Aceh Province. The study uses time series data from the BPS Bireuen Aceh Province from 2000-2017.

**Operational definitions of variables**

The research consists of two variables as Independent and dependent variable. The independent variables include:

1. Index ad-dien (X1) is a crime rate data because it can be used as a reflection of the implementation of one of the most important worship in the pillars of Islam, namely prayer. Which measured by the number of criminal cases.
2. Index an-nafs (X2) is an indicator that can be used to measure the dimensions of hifdzu an-nafs is life expectancy data. Which measured by age.
3. Index al-‘aql (X3) is an indicator that can be used to measure the dimensions of hifdzu al-‘aql which is the average length of school. Which measured by years.
4. Index an-nasl (X4) is an indicator that can be used to measure the dimensions of hifdzu an-nasl is the total birth rate data, which measured by the number of birth rate.
5. Index al-maal (X5) is the indicator used to measure the dimensions of hifdzu al maal is real per capita expenditure data adjusted as a reflection of individual property ownership. Measured by Rupiah (Rp.).
6. Poverty level (Y) is the number of poor people in Bireuen District, measured by the number of of poor people.

**Data Analysis Method**

Data obtained processes using a percentage formula which is useful to see trends of each indicator. To measure the magnitude of the impact of the variables, the data are analyzed using by multiple linear regression equations (Sugiyono, 2009). The formula is as follows:

\[
Y = a + bX_1 + bX_2 + bX_3 + bX_4 + bX_5 + e
\]

- **Y** = Poverty
- **X1** = Criminal Rate
- **X2** = Life Expectancy
- **X3** = Average School Length
- **X4** = Total Birth Rate
- **X5** = Per Capita Expenditures
- **a** = Constant
- **b** = Coefficient sought
- **e** = standard error
4. RESULTS AND DISCUSSIONS

Research Results

Based on the results of the study it can be seen that the description of the research variables is presented in Table 1 below:

Table 1
Description of Research Variables

<table>
<thead>
<tr>
<th>Source: Data processed, 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Based on Table 1 above, it can be seen that the average poverty rate in Bireuen Regency from 2000-2017 is 81,792 households, the average crime rate is 588 cases, the community life expectancy is 70.26 years, the average length of school is 8.08 years, the birth rate is 7,948 people and the average expenditure per capita is Rp. 5,375,594.</td>
</tr>
</tbody>
</table>

This study uses the Jarque-Bera (J-B) Test method to determine the normal or abnormal of regression model, the residual or disturbing variable, by comparing the value of J-B count with the value of X² (Chi-Square) table. If the value of J-B counts> the value of X² table, then the residual value is abnormally distributed and if the value of J-B counts <value X² table, then the residual value is normally distributed.

Normality test

Source: Data processed, 2018

Based on Table 1 above, the value of X² with df = 18-6 = 12. When compared with the Jarque-Bera value in the figure above of 3.449138, it can be concluded that the regression model, the disturbing or residual variable is normally distributed because the Jarque-Bera value <X² table value or 3.449138 <21.026 with a significance of 0.178> 0.05.

Analysis of Multiple Linear Regression

To find out the results of this study can be seen from the multiple linear regression output table 2 below:

Table 2
Results of Multiple Linear Regression

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-1156.847</td>
<td>2044.633</td>
<td>-0.565797</td>
<td>0.5820</td>
</tr>
<tr>
<td>X1</td>
<td>-0.042612</td>
<td>0.020350</td>
<td>-2.093950</td>
<td>0.0582</td>
</tr>
<tr>
<td>X2</td>
<td>20.26774</td>
<td>30.31419</td>
<td>0.668589</td>
<td>0.5164</td>
</tr>
<tr>
<td>X3</td>
<td>-22.79953</td>
<td>10.31225</td>
<td>-2.10917</td>
<td>0.0472</td>
</tr>
<tr>
<td>X4</td>
<td>0.002482</td>
<td>0.007369</td>
<td>0.336789</td>
<td>0.7421</td>
</tr>
<tr>
<td>X5</td>
<td>0.000804</td>
<td>0.000954</td>
<td>0.842267</td>
<td>0.4161</td>
</tr>
</tbody>
</table>

Source: Data processed, 2018

Based on the data from the table 2 above, a multiple linear regression equation can be made as follows:

\[ Y = -1156.847-0.042612X_1+ 20.26774X_2-22.79953X_3+0.002482 X_4+0.000804 X_5 \]

From the formulation model above shows that the value of the constant variable is -1156.847 - which means that if Index ad-dien, Index an-nafs, Index al-'aql, Index an-nasl and Index al-maal value 0, then the poverty rate amounting to -1,156 households per year.

The ad-dien index coefficient is -0.042612 which means that if the crime rate decreases by 1 case, then poverty will decrease by 0.042%.

An-nafs index of coefficient of 20.26774 means that if life expectancy increases by 1%, it will increase the number of poor people by 20 families per year.

The index al-aql coefficient value is -22.79953, which means that if the average length of school increases by 1%, it will reduce the number of poor people by 22 families per year.
An in-nasi index coefficient of 0.002482 means that if the average birth rate increases by 1% per year, it will increase the number of poor people by 0.002% per year.

Index al-maal coefficient value is 0.000804 which means that if per capita expenditure increases 1%, it will increase the number of poor people by 0.0080% per year.

In this multiple linear regression equation, it will be seen the contribution value for the independent variables simultaneously on the dependent variable by looking at the magnitude of the total determination coefficient (R²). R² has an interval of 0 to 1 (0 ≤ R² ≤ 1). The greater the R² (close to 1), the better the results for the regression model and the closer to 0, the overall independent variable is not able to explain the independent variables (Wahid Sulaiman, 2004).

Adjusted R Square value is 0.419659 or 41.96%. This means that the independent variables namely Index ad-dien, Index an-nafs, Index al-'aql, Index an-nasl and Index al-maal can explain the dependent variable namely the poverty rate of 41.96%, while the remaining 58.08% is explained by other variables not included in the regression model in this study such as literacy rates, infant mortality rates, gini ratio.

**Classical Assumption Test**

**Classic Assumption Test**

There are several ways that can be used to detect the presence or absence of autocorrelation. One of them is LM test. The following are the results of data processing to detect autocorrelation:

**Table 3**

Autocorrelation Test of LM Test Method
Breusch-Godfrey Serial Correlation LM Test:

<table>
<thead>
<tr>
<th>F-statistic</th>
<th>Prob. F(2,10)</th>
<th>Obs*R-squared</th>
<th>Prob. Chi-Square(2)</th>
<th>0.1552</th>
</tr>
</thead>
</table>

Source: Data processed, 2018

Based on Table 3 above, it can be explained that the LM Test value through Obs * R-squared is 3.726397 with Prob. Chi-Square is 0.1552 greater than 0.05. Thus it can be concluded that there is no autocorrelation in this study.

**Multicollinearity**

Multicollinearity is a significant linear relationship between several or all independent variables in the regression model.

**Table 4**

Multicollinearity Test Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient Variance</th>
<th>Uncentered VIF</th>
<th>Centered VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>4180522</td>
<td>1080175.</td>
<td>NA</td>
</tr>
<tr>
<td>X1</td>
<td>0.000414</td>
<td>39.42078</td>
<td>2.326453</td>
</tr>
<tr>
<td>X2</td>
<td>918.9502</td>
<td>1172245.</td>
<td>15.10124</td>
</tr>
<tr>
<td>X3</td>
<td>106.3426</td>
<td>1811.483</td>
<td>14.14842</td>
</tr>
<tr>
<td>X4</td>
<td>5.43E-05</td>
<td>891.1067</td>
<td>4.682943</td>
</tr>
<tr>
<td>X5</td>
<td>9.11E-07</td>
<td>8.790617</td>
<td>1.989861</td>
</tr>
</tbody>
</table>

Source: Data Processed, 2018

In Table 4 above shows that in the regression model there is no multicollinearity. This is evidenced by the correlation value above VIF > 1.0.

**Heteroscedasticity**

A study is said to have a heteroscedasticity problem if the error value or residual model observed does not have a constant variant of one observation to the other observation. The results of heteroscedasticity tests based on the White test can be seen in the following table

**Table 5**

Heteroscedasticity Test

<table>
<thead>
<tr>
<th>F-statistic</th>
<th>Prob. F(5,12)</th>
<th>Obs*R-squared</th>
<th>Prob. Chi-Square(5)</th>
<th>0.5062</th>
</tr>
</thead>
</table>

Source: Data processed, 2018

Based on the Table 5 above we can see that the Obs * R-square probability value is 4.306391 compared to the level of significance (alpha). If the probability of significance is above 0.05 or 0.5062, it can be concluded that there is no heteroscedasticity.
Proof of Hypothesis

t Test

The t test is used to see the significance of the effect of individual independent variables on the dependent variable by assuming that other variables are constant. This test is done by comparing t count with t table (Sulaiman, 2004). To test the partial effect can be done in two ways to compare the value of t count in the coefficients table with t table. If t count> t table then H1 H2, H3, H4 and H5 are accepted, meaning that there is a partial effect between the independent variables on the dependent variable. If t count < t table then H1 H2 and H3 are rejected, meaning that there is no partial effect between the independent variables on the dependent variable. Based on probability values. If the significance value is smaller than 0.05 or 5%, the proposed hypothesis is accepted or said to be significant. If the significance value is greater than 0.05 or 5%, the proposed hypothesis is rejected or not significant.

1. Effect of Index ad-dien on poverty

The ad-dien index coefficient is -2.093950 which means that if the crime rate decreases by 1 case, it will reduce the number of poor people by 2.093%.

From the results of partial test calculations obtained by the value of t count of 2.093950, and table of 1.795 or (2.093950 > 1.795) or significance significance (0.0472 < 0.05). The significance value is <0.05 and the t count value is greater than t table, it can be concluded that the average length of school has a significant and negative effect on the level of poverty in Bireuen Regency, reflecting that the higher the level of a person goes to school, it will reduce the number of poor people in Bireuen Regency.

This is because when the number of people attending school is high in Bireuen Regency, then from the results of education which create skilled workers who can work or expand jobs reality have an impact on improving the family economy.

2. The Effect of Index An-Nafs on Poverty

From the results of partial test calculations obtained by the value of t count of -0.668589, and table of 1.795 or (0.668589 < 1.795) or significance significance (0.5164 > 0.05). Because the significance value is greater than 0.05 and the t count is smaller than t table, it can be concluded that life expectancy does not significantly influence the level of poverty in Bireuen District, it reflects that the productive age in Bireuen Regency dominates more than with non-productive age reaching the life expectancy threshold. The population aged 70.26 in Bireuen District is still in a minimal amount, therefore they are not a burden to the family.

3. Effect of Al-‘Aql Index on poverty

From the results of partial test calculations obtained by the value of t count of -2.210917, and table of 1.795 or (2.210917 > 1.795) or significance significance (0.0472 < 0.05). The significance value is less than 0.05 and the value of t count < t table, it can be concluded that the birth rate does not affect the level of poverty in Bireuen District.

This is because the impact of crimes such as robbery and theft will result in the loss of one's property. Likewise with criminal cases such as drugs, where the increasing number of drug and drug users in Bireuen Regency will increase wasteful spending, this will reduce the burden and even eliminate major expenses such as household and educational needs.

4. Influence of An-Nasl Index on Poverty

From the results of partial test calculations obtained by the value of t count of -0.336789, and table of 1.795 or (0.336789 < 1.795) or significance (0.7421 > 0.05). Because the significance value is less than 0.05 and the value of t count < t table, it can be concluded that the birth rate does not affect the level of poverty in Bireuen District, it reflects that although high birth rates will not increase the poor in Bireuen District.
5. Effect of Al-Mal Index on the Poverty

From the results of partial test calculations obtained by the value of t count of 0.842267, and ttable of 1.795 or (0.842267 < 1.795) or significance (0.4161 > 0.05). Because the significance value is greater than 0.05 and the calculated t-count is smaller than t table, it is concluded that the per capita expenditure does not affect the poverty level, it reflects that although expenditure per capita remains high, it will not increase the number of poor people. This is because the expenditure that occurs in the population in Bireuen Regency consists of primary expenditure (clothing, food and shelter).

f Test

The F test is conducted to calculate the effect of the overall independent variables on the dependent variable. Testing is done by comparing the value of F count with Ftable. (Sulaiman, 2004: 86). Based on probability values, if the significance value is smaller than 0.05 or 5%, the proposed hypothesis is accepted or said to be significant. If the significance value is greater than 0.05 or 5%, the proposed hypothesis is rejected or not significant.

This can be seen that the results of the F test show that the F count of 3.458620 compared to the F-table of 3.11 with a significance of 0.036302, then F count > F table. The significance value is smaller than 0.05 so it can be concluded that the independent variable which is 0.036302 simultaneously has a significant effect on poverty so the proposed hypothesis is accepted as the truth.

5. CONCLUSIONS AND SUGGESTION

Conclusion

1. The ad-dien index with an indicator of crime rates has a significant negative effect on the level of poverty, it reflects that the higher the value of the crime rate, it will increase the number of poor people.

2. The index of an-nafs with life expectancy indicators does not have a significant effect on the level of poverty, it reflects that the higher the life expectancy rate, it will not increase the number of poor people.

3. Index al-aql with indicators of average length of school has a significant and negative effect on the level of poverty, this reflects that the higher the level of a person goes to school, the lower the number of poor people in Bireuen Regency.

4. Index an-nasl with the birth rate indicator does not affect the poverty level, it reflects that high birth rates will not increase the number of poor people.

5. The al-maal index with indicators of per capita expenditure does not affect the poverty level, reflecting that even though per capita expenditure is high, it will not increase the number of poor people.

Suggestion

1. Bireuen District Government must be able to reduce crime rates because it can increase the number of poverty, This can increase community income and prevent people from committing crimes for welfare reasons.

2. Every government expenditure in the health sector needs to be increased to improve public services so that people's life expectancy increases and infant mortality decreases.

3. It is necessary to review the development of education so that school participation increases.

4. The Bireuen District Government needs to review and re-evaluate the program to increase people's income and control the inflation so that the per capita expenditure of the population does not effect much.
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