Analysis of Factors Affecting Fertility in Riau Province in 2010-2017

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Article Info	Abstract
Received : 2019-05-04 Accepted : 2020-01-11 Published : 2020-01-28	Demographic transition refers to the declining of birth and death rates and is followed by a reduction in population growth rates. This demographic change is caused by demographic factors (birth, death and migration) and non-demographic factors (social and economic). Fertility is an important factor in population control which refers to the demographic transition. As fertility in control, it is expected to solve population problems. Riau Province has a relatively low rate of fertility reduction from other provinces in Sumatra. This study aims to look at the effect of per capita GRDP, the number of working women and poverty on fertility in regencies / cities in Riau Province. This study uses secondary data with data from 12 districts / cities in Riau Province in 2010 - 2017. This study has independent variables namely per capita GRDP, the number of working women and the number of poverty people. The analysis technique used is panel data regression which is a combination of time series data and cross section. Based on the results of research carried out per capita GRDP, the numbers of working women and poverty together have a significant effect on fertility in Riau Province. And partially per capita GRDP and the number of working women have a significant effect on fertility in Riau Province. This shows that in fertility control, these factors need to be included in fertility control in Riau Province.
Key words: fertility, per capita GRDP, woman working, poverty	

Introduction

One of the main indicators in controlling population numbers is fertility. Population control aims to balance population growth and economic growth so that community welfare can be improved. One of the benefits of controlling the number of births is a bonus demographic, which is an economic benefit that has the potential to be obtained by a country because the proportion of the productive population is more compared to the unproductive (Heryanah, 2015). According to Mantra (2003) fertility is influenced by several factors that are distinguished by demographic factors and non-demographic factors. Demographic factors such as the structure or composition of age, marital status, age of first marriage, and the proportion of the married people. Non-demographic factors such as economic conditions of the population, level of education, improvement in women's status, urbanization and industrialization. These factors can have a direct or indirect effect on fertility (Vita, 2017).

According to Liebenstein (in Sri, 2010) having children can be seen from two economic aspects, namely the utility and costs that must be spent to grow and care for the child. Child's utility is in giving satisfaction to the behavior of parents who can provide economic transfers or can assist in production activities. Children can also be a source that can help the life of parents in the future (investment). Meanwhile, spending on growing child is the cost of ownership of the child. If there is an increase in income, the aspirations of parents to have children will change. Parents want children to have better quality. This means that the costs of growing and caring for children are also increasing. In addition, modern parents with sufficient income are no longer dependent on children's donations. Economically, this results in decreased demand for children and decreases fertility. The modernity of a society can be seen from the openness to information

and public acceptance of technological advancements in this case according to Statistics (BPS) in Riau Province having an increase in the percentage of people who own and control cellular phones which amounted to 34.59% in 2009 and increased to 62.1% in 2015. In other word it can be said that the people in Riau Province were more modern than the previous year.

Source: Health Profile of Riau Province, 2018

Figure 1 Graph of the Number of live Birth in Riau Province in 2013 – 2017

From figure 1 it can be seen that the number of children born alive in Riau Province has a tendency to increase from 2013 to 2017. Despite having a decline in 2016 yet increasing in 2017. This can illustrate that the population in Riau Province is still growing and can be seen from the tendency of childbirth in the picture.

One of the fertility theories suggests that income level has a role in deciding to have children, in accordance with Liebenstein's theory which stated that if there is an increase in income, the aspirations of parents to have children will change. Parents want children who have better quality. Economically, this results in decreased demand for children and decreases fertility. From figure 2, we can see the per capita GRDP in Riau Province in 2013 to 2017. The per capita GRDP is used because it can be a reference to the prosperity and welfare of the people in an area (BPS, 2015).

Source: BPS Statistics, Riau in Number, 2018

Figure 2. Graph of Riau Province Per Capita GRDP (Real) Graph 2013 - 2017 without Petroleum and Gas (in millions of rupiah)

Figure 2 shows the increase in per capita GRDP in Riau Province. There is a tendency to increase per capita GRDP from 2013 to 2017. Based on the graph of the number of live birth described earlier, the number of children born in Riau Province also had an increasing trend from 2013 to 2017. The increase in birth rates was also followed by increasing per capita GRDP Riau Province in the same year. It is expected that with increasing per capita GRDP, there will be a decline in fertility in Riau Province. Because per capita GRDP illustrates the level of prosperity of a society, so if per capita GRDP increases, the welfare of the community also increases which will reduce fertility because the community will try to improve the quality of children and ultimately reduce the number of births in accordance with Liebenstein's fertility theory which stated that community income will reduce fertility rates.

But things happened differently from the tendency of the number of children born and the amount of per capita GDP in Riau Province in 2013 to 2017 which both increased. This is contrary to the theory explained by Liebenstein that increasing income will reduce the amount of fertility. Whether these differences are also influenced by factors other than income because Easterlin (in Agus, 2016) also suggested that the demand for children was partly determined by the characteristics of individual backgrounds such as religion, education, place of residence, and kind or type of family. Every family has fertility norms and attitudes which are motivated by the above characteristics.

In addition to economic and social factors, women also have a role in deciding between having children or participating in work. In decision making women must be able to predict the consequences of having or choosing to join the labor market. Opportunities and obstacles in choosing to have children or to work are institutional settings (family policy), structural (barriers to the labor market, flexibility of work arrangements) and the economy (living standards) and culture (gender norms that apply in society). So that when childbirth has a negative impact on women's careers, women who set high scores on labor force participation will tend to have fewer children than women who are more concerned with family. (Matysiak, 2011). Apart from the role of women in work, poverty in an area also has an influence on fertility. Poverty is the inability to fulfill basic needs such as food, clothing, education and health (BPS, 2015). Poverty is one of the main challenges in overcoming population numbers. Because poverty is usually accompanied by low access to social services and health including reproductive health and family planning, so that people who have low income (poor) make it difficult for them to get access to health and contraceptives that are useful for reducing fertility.

Based on the background described above, the purpose of this study was to analyze and provide empirical evidence regarding the effect of per capita GRDP, the number of women working and poverty on fertility in Riau Province in 2010-2017.

Literature Review

Theoretical basis

Fertility Theory

Fertility or rate of birth is one of the factors that influence population growth. According to Mantra (2003) fertility is influenced by several factors that are distinguished by demographic factors and non-demographic factors. Demographic factors such as the structure or composition of age, marital status, age of first marriage, and the proportion of the population who are married. Non-demographic factors such as the economic condition of the population, education level, improvement of women's status, urbanization and industrialization can affect fertility directly and indirectly (Vita, 2017).

In developing countries children are seen as investments, namely as additional energy to cultivate the land, or to rely on, or as old age savings. Thus, the determination of family fertility or "the level of children demand" is a rational form of economic choice for consumers (in this case the family). The choice of increasing the number of children is obtained by sacrificing the

choice of other goods, where the decision is ultimately the substitution effect and income effect, the number of children desired is positively influenced by family income, *ceteris paribus*. On the other hand, the number of children desired will be negatively related to the cost of raising children and the strong desire to own other items. (Todaro, 2000)

Per capita GRDP

Per capita GRDP is an illustration and the average income received by each population for one year in a region. This statistic data is one of the indicators that can be used to measure the level of prosperity of a region. Per capita GDP is derived from the share between GRDP with the number of residents in the middle of the year concerned. So the magnitude of the per capita GRDP is strongly influenced by the two variables above. (BPS, 2015)

Bery, Bosworth & Panagariya (2007) stated that economic growth plays a major role in driving a decline in fertility and improvement in women's education. In some countries that have more developed economies tend to have lower fertility rates than poorer and less developed countries.

Developing countries are characterized as countries that have production of the dominant agricultural sector. Todaro (2006) states that a country engaged in the agricultural sector as a traditional society with a low level of productivity and low income. With such low income levels, there are few households invest in education and decide to have many children.

Working women

Matysiak (2011) stated that women have a role in deciding the number of children or participating in work, but also face certain obstacles in choosing the most preferred option. In decision making women must be able to predict the consequences of giving birth or choose to join the labor market. The socio-demographic approach focuses on the ability of women to combine childbirth and strive to work, which is determined by the complex of social institutions and economic in a particular society. According to this perspective, women's work is inversely proportional to fertility, due to the contradictions estimated between women's work and their reproductive roles (Shockaert, 2005).

Poverty

Poverty according to the BPS (2015) is a situation where an individual or a group of people are unable to fulfill their basic needs, such as food, clothing, shelter, education, and health which are considered as minimum requirements and have certain standards. Whereas Poverty according to the World Bank is a situation where an individual or group does not have a choice or opportunity to improve the level of their lives in order to lead a healthy and better life according to living standards, to reach dignity and be respected by their fellow human beings. The standard poverty rate ratio set by the World Bank is \$ 2 / day.

Poverty that occurs in a community can hinder access in terms of health and education. Poverty occurs in many traditional households in the agricultural sector. Households engaged in agriculture have a greater need for a large number of workers with low costs so that increasing fertility in the poorer population is also driven by a lack of benefits provided by the state so that the poor increase their fertility as a means of insurance and security on the old days (Aassve, 2005).

Poverty that occurs in the community also influences the marriage of women. Reasons for poverty can motivate parents to marry off their children to reduce the burden on the family. The tendency of young marriage to occur in people who live in rural areas. This is due to the lack of access to education to the limited employment opportunities in the countryside. Besides economic factors, educational factors and living factors, local cultural factors also affect the low age of first marriage in women (Vita, 2017).

Poverty causes reduced access to health. This causes difficulties in obtaining contraceptives to regulate births. And low-income people also believe that having many children can change their lives in their old days by relying on their children. (Merrick, 2002).

Previous Research

In the GRDP growth of a region there are several sectors such as agriculture and industry. When the agricultural production sector increases, there will be an increase in labor demand in the agricultural sector. This will lead to reduced birth rates in rural areas. High agricultural productivity implies an increase in per capita income of farmers, which increases the opportunity cost of having children. So that the high production in the agricultural sector will reduce the number of births. Whereas in the industrial sector, the existence of industrialization increases the cost of raising children. Therefore, households prefer to improve the number of children rather than the quantity of children, causing a decrease in fertility. Further more, industrialization also has increased women's time opportunity cost rather than the men's. Because raising children is an intensive process of women's time, this will further reduce the incentives for childbirth. (Zakaria, 2016).

The socio-demographic approach focuses on the ability of women to combine childbirth and strive to work, which is determined by the complexity of social institutions and economic in certain societies. According to this perspective, women's work is inversely proportional to fertility, due to the estimated conflict between women's work and roles in their reproductive (Shockaert, 2005).

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Development Hypotheses

Fertility and GDP per capita

Economic growth plays a major role in driving a decline in the birth rate and improvement of women's education. In some countries that have more developed economies tend to have lower fertility rates than poorer and less developed countries (Bery, Bosworth & Panagariya, 2007).

A country that is engaged in the agricultural sector as a traditional society with a low level of productivity with low income. With this low level of income, many households invest little in education and decide to have many children in large numbers (Todaro, 2006).

Ha1: GRDP per capita has an effect on fertility

Fertility and Working Women

Women have a role in deciding the number of children or participating in work, but also face certain obstacles in choosing the most preferred option. In decision making women must be able to predict the consequences of giving birth or choose to join the labor market (Matysiak, 2011).

The socio-demographic approach focuses on the ability of women to combine childbirth and strive to work, which is determined by the complex of social institutions and economic in a particular society. According to this perspective, women's work is inversely proportional to fertility, due to the contradictions estimated between women's work and their reproductive roles (Shockaert, 2005).

Ha2: Working Women has an effect on fertility

Fertility and Poverty

Poverty according to the BPS (2015) is a situation where an individual or a group of people are unable to fulfill their basic needs, such as food, clothing, shelter, education, and health which are considered as minimum requirements and have certain standards

Aassve (2005) states that poverty that occurs in a community can hinder access in terms of health and education. Poverty often occurs in traditional households in the agricultural sector. Households engaged in agriculture have a greater need for a large number of workers at low costs, thereby increasing fertility in the poor.

Ha3: Poverty has an effect on fertility

Based on the explanation above, a research model can be drawn as follows:

Source: Developed by the authors, 2018

Research Methods

Data

The type of data used in this study is secondary data, namely data that has been compiled regularly and in the form of reports that have been published by the BPS and the Department of Health which is panel data from 12 districts and cities in Riau Province from 2010 to 2017.

Operational Definition of Variables

- 1) Fertility (Fert) is the number of children born alive in regencies and cities in Riau Province.
- 2) Per capita GRDP is the one without oil and gas with the 2010 base year in regencies and cities in Riau Province.
- 3) The number of working women (Wo) is the number of women aged 15 years and over who are working in districts and cities in Riau Province.
- 4) Poverty (Pov) is the population below the poverty line with BPS standards in regencies and cities in Riau Province.

Data Analysis

This study data analysis used panel regression analysis with EViews 9 program. Panel data is a combination of time series data and cross section. Regression analysis is a study of the dependence of a dependent variable on one or more other variables namely explanatory variables. These advantages are as follows:

- 1) Panel data has a higher degree of heterogeneity. This is because the data involves several individuals at some time.
- 2) Data panels are able to provide more informative data, which is more varied, and has a low level of collaboration. This is because it combines time series data and cross section data.
- 3) Panel data is suitable for dynamic change studies because panel data is basically repeated cross section data (series).
- 4) Data panels are capable of detecting and measuring unobservable effects with time series data or cross section data.
- 5) Panel data is able to learn more complex behavior models.

Based on the balance of the data, panel data can be divided into two, namely

- 1) Balanced panel data is used if each cross section unit has the same time series.

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- 2) Unbalanced panel is used if each unit cross section does not have the same number of time series. (Suliyanto, 2011)

In the data panel regression there are models that must be estimated in advance. The model in data panel regression is the common effects model (CEM), fixed effects model (FEM) and random effects model (REM). After the estimation test is carried out, a statistical test is will be carried out, namely:

- Coefficient of Determination (R^2) is used to determine the contribution of detailed variables (per capita GRDP, working women, and poverty) to the dependent variable (fertility) by looking at the results of the adjusted R square in the output model. Determination coefficient values range from 0 - 1.
- F test (simultaneous), simultaneous test shows that there is an influence of independent variables / predictors on the dependent variable / response simultaneously. The expected condition is to accept the hypothesis alternative (H_a). The H_a is accepted if the significance value is smaller than alpha 5% (0.050).
- t test (partial), partial test shows whether each independent variable can influence the dependent variable. The hypothesis alternative (H_a) in the t test is the expected condition is a significant value smaller than alpha 5% (0.050) or 10% (0.10).

Results and Discussion

Results

Model Specifications Test

In the panel regression the model specification test is used to determine the best model. The tests performed are Chow Test, LM Test and Hausman Test.

The Chow test is done to choose between the common effect model and the fixed effect model. Decisions are made based on the fulfillment of one of the statements below:

- Accepting H_0 if the Chow Test has a probability of $> \alpha$ 5% (0.05)
- Accepting H_1 if Test Chow alpha probability value $< 5\%$ (0.05)

If the test results show that the H_0 model is accepted, LM testing is performed to test the common effect model and random effect model. If H_1 is accepted, the Hausman test will be carried out. The Hausman test is to test between the fixed effect model and the random effect model.

Table 1. Chow Test

Effect Test	Prob
Cross section Chi Square	0,0000

Source: *Eviews 9 Processed Data*

From the results of the Chow test, the probability value is 0.0000. So it can be concluded that the probability value is $0.0000 < 0.05$ then H_1 is accepted. Furthermore, a test with the Hausman Test was conducted to refer to the fixed effect model and the random effect model.

The Hausman test is carried out if the test results in the chow test accept H_1 , Hausman Test used to choose between fixed effect model and random effect model. Decisions are made based on the fulfillment of one of the statements below:

- Accepting H_0 if the Hausman Test has a probability value $> \alpha$ 5% (0.05)
- Accepting H_1 if the Hausman Test has a probability value $< \alpha$ 5% (0.05)

If H_0 is accepted then the random effect model is used but if H_1 is accepted then the fixed effect model is used.

Table 2. Hausman Test

Hausman Test	Prob
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Cross section Chi Square	0,0000
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Source: Eviews 9 Processed Data

From the Hausman test, the Hausman Test value is $0,000 < 0,05$ then H1 is accepted, so the most appropriate model is the fixed effect model.

Statistic test

Coefficient of Determination (R^2)

The coefficient of determination (R^2) aims to find out how far the variation of the independent variable can explain well or how much it contributes to the variation of the dependent variable. Based on the calculation of the Adjusted R-squared in table 3 the number is 0.983106. The coefficient of determination (R^2) is 98.31%, this indicates that the independent variable is able to contribute to explain the dependent variable at 98.31%, while the remaining 1.69% is explained by other variables not included in the model.

Table 3. Statistic test results

F Test	
R-squared	0,985595
Adjusted R-squared	0,983106
F-statistic	395,8720
Prob(F-statistic)	0,000000

Source: Eviews 9 Processed Data

Simultaneous Test (Test F)

Based on the results of the analysis of table 3, the calculated F value is 395.8720 and the probability of F is 0.000000. In the 5% significance level, the F test is declared significant. So it can be concluded that all independent variables together have a significant effect on the dependent variable. Per capita GRDP, the number of women working, and poverty together have a significant effect on fertility.

Partial Test (t Test)

This test was conducted to determine the effect of each independent variable (Per capita GRDP, the number of working women, and poverty) on the dependent variable (fertility). If the p-value value smaller than significant level of 5% or 10%, it can be concluded there is a significant effect of each independent variable on the dependent variable. The partial test results (t test) can be seen from Table 4 as follows.

Table 4. t-test result

Variable	Coefficient	t-Statistic	Prob.
C	1.729657	3.972667	0.0002
PDRB	0.018546	2.126877	0.0365
Wo	0.031524	1.708669	0.0913
Pov	0.091129	0.819774	0.4148

Source: Eviews 9 Processed Data

Effect of GDP per capita (GRDP) on fertility

The results of the analysis show that the GDP per capita variable has a t-count of 2.126877 and a probability of 0.0365. In a significant level of 95% ($\alpha = 5\%$), the variable per capita per capita GRDP significantly influences fertility in Riau Province. The Regression coefficient of 0.018 shows that Perkapita GRDP has a positive effect on fertility in Riau Province.

Effect of the Number of Women Working (Wo) on Fertility

The results of the analysis show that the variable number of working women has a t-count of 1.708669 and a probability of 0.0913. In the 90% ($\alpha = 10\%$) significance level the number of

women working individually significantly influences fertility. Regression coefficient of 0.031 indicates that the number of working women has a positive effect on fertility in Riau Province.

Effect of Poverty (Pov) on Fertility

The results of the analysis show that the variable number of poverty has a t-count of 0.819774 and a probability of 0.4148. In the significance level of 5% and 10% the variable number of poverty individually does not significantly affect fertility in Riau Province. Based on the results of panel data regression, the following equations are obtained:

$$\ln \text{Fert} = 1,729 + 0,018 \ln \text{PDRB} + 0,031 \ln \text{Wo} + 0,091 \ln \text{Pov}$$

Discussion

Constants

From the results of the specification tests that have been done, the fixed effect model is the best model to use. From the model, each constant in each district and city is obtained. The constant explains the magnitude of fertility if the explanatory variables (per capita GRDP, the number of working women and poverty) are at zero. The constants in the output obtained have a positive relationship which means that there is additional fertility (live births) and negative relationships (infant mortality). In the fixed effect model, it is known that there are 6 regions (Bengkalis, Indragiri Hilir, Rokan Hulu, Rokan Hilir, Kampar and Pekanbaru) which have a constant with a positive relationship and 6 regions (Meranti, Kuansing, Pelalawan, Dumai, Indragiri Hulu and Siak) which has a constant with a negative relationship to fertility.

Table 5. Constant, number of population and district/city health access in Riau Province in 2017

No	District/City	Constant	Population	Hospital	Maternity Hospital
1	Kep. Meranti	-0,887793	183.297	1	1
2	Kuansing	-0,445456	321.216	2	2
3	Pelalawan	-0,241578	438.788	4	13
4	Dumai	-0,194305	297.638	3	4
5	Indragiri Hulu	-0,186544	425.897	3	10
6	Siak	-0,024207	465.414	1	16
Average		-	-	2	8
7	Bengkalis	0,088467	559.081	7	33
8	Indragiri Hilir	0,217146	722.234	4	5
9	Rokan Hulu	0,221487	641.208	5	35
10	Rokan Hilir	0,247120	678.663	5	7
11	Kampar	0,422467	832.387	6	26
12	Pekanbaru	0,783196	1.091.088	29	134
Average		-	-	9	40

Sumber: Eviews 9 Processed based on the data of the Health Profile of Riau Province, 2018

Table 5 describes the size of constants in each district and city in Riau Province. There are 6 regions that have a constant with a positive relationship and 6 regions that have a constant with a negative relationship to fertility. This can be explained that one of the factors that affect the amount of fertility is the number of population, in table 5 it can be seen that regions with negative constants have a lower population (smaller than five hundred thousand people) than regions with positively related constants (greater than five hundred thousand people) so that the large population will also increase fertility in an area. Existing fertility in an area must also be supported by adequate health access, in table 5 the number of hospitals and the number of maternity houses in the regency / city of Riau Province in 2017 can be seen. Areas with negative constants have lower access to health than regions with positive constants, it can be seen from the average hospital located in areas with negative constants are 2 hospitals while the regions with

positive constants with an average of 9 hospitals and it also followed with the average number of maternity hospitals where the regions with negative constants have an average of 8 maternity hospitals while regions with positive constants have an average of 40 maternity hospitals. So it can be concluded that the magnitude of fertility in an area is influenced by demographic factors, namely the number of residents and also supported with access to adequate health.

The effect of Per Capita GRDP on Fertility

Per capita GRDP has a significant positive effect with a significance level of 95% ($\alpha = 5\%$) on fertility in Riau Province. The 0.018 coefficient value explains that if Perkapita GRDP increases by 1%, the fertility amount will increase by 0.018% assuming other variables (number of women working and poverty) are static. This influence is caused by the Riau Province GRDP dominated by agriculture, forestry and fisheries. According to the BPS report in 2016 – 2017, the Riau Province GRDP was dominated by the agriculture, forestry and fisheries sectors by contributing 30% of the total GRDP in Riau Province. It shows that the economy in Riau Province is still dominated by the agricultural sector, forestry, and fisheries. This is inseparable from the many natural resources that exist in Riau Province. The sector of agriculture is identical to the community with low productivity and low income. Many low income households invest little in education and decide to have many children. Families with a little human capital tend to have children in large numbers (Croix, Doepke & Matthias, 2003). In developing countries children are seen as investments, namely as additional energy to cultivating land, or as a place to rely on their life, or as old age savings. Thus, the determination of family fertility or 'the level of demand for children' is a rational form of economic choice for consumers (in this case the family). The choice of increasing the number of children is obtained by sacrificing the choice of other goods, where the decision ultimately has a substitution effect and income effect, the desired number of children is positively influenced by family income, *ceteris paribus* (Todaro, 2000). This happened because the condition of the community was still in the pre-modernization stage (an agrarian society which still considered children as investment and production factors) (Mohammad Saleh, 2004).

The effect of Women Working on Fertility

The number of working women has a significant positive effect with a significance level of 90% ($\alpha = 10\%$) on fertility in Riau Province. The coefficient value of 0.031 values explains that if the number of working women increases by 1%, the number of fertility will increase by 0.031%. With the assumption that other variables (per capita GRDP and the number of poor people) are static, this influence is caused by women having a role in deciding to have children or enter the labor market. Seen from the main jobs of women working in Riau Province, there are many in the agriculture, forestry and fisheries sectors where in 2016 the number of women working was 33 percent and in 2017 it was 27 percent of the total women working in various sectors in Riau Province. Given the fact that the agriculture sector with a low level of income and education are identical, women try to enter the labor market with the aim of increasing their household income. This can also be seen from the highest education completed by female workers in Riau Province which is dominated by workers with no education / not yet had attended school till elementary school's graduates. In 2016 there was around 37.5 percent and in 2017 there was 37 percent of women working with education who had not / had never attended school until graduating from elementary school, this certainly could cause working women unable to compete to get better jobs and income. With this low level of income, many households invest little in education and decide to increase the number of children. Families with little human capital tend to have children in large numbers (Croix and Doepke, 2003). According to Indonesia's Demographic and Health Survey (SDKI) women's education is one of the factors affecting the number of births. The level of education is closely related to changes in attitudes, behaviors, perspective, and social status in a community whose level of education will affect the age of the first marriage, which in turn affects fertility. Women with lower levels of education generally have a lower first marriage age

and will ultimately affect the number of children born which will increase (Nanik, 2017). This is supported by the low level of education of women working in Riau Province who are dominated by no education / never attended school till elementary school's graduates, causing fertility to increase.

The effect of Poverty on Fertility

The number of poor people has no significant effect on fertility with a significance level of 95% ($\alpha = 5\%$) or the significance of 90% ($\alpha = 10\%$). This insignificant influence can be explained that the number of poverty is mostly in rural areas. Chrisaniani (2005) states that the poor have one of the characteristics of being in the countryside. This is also supported by BPS data where 2016 and 2017 around 60 percent of the population in Riau Province is in rural areas. Many poor people also live in rural areas where the number of poor people in Riau in 2017 amounted to 496,390 people or 7.41 percent of the population of Riau with 6.55 percent in urban areas and 7.99 in rural areas and in 2016 there were 501,590 thousand poor people or 7.67 percent of the population of Riau with details of 6.38 percent in urban areas and 8.51 in rural areas. According to Soekanto (1998) prominent characteristics in rural communities are: (1) the life of the community is religious; (2) the division of labor is not clear, and (3) the way of thinking of villagers is more social than urban people who are more economical and rational. The village community is also known as a community that maintains existing culture and customs. Baudin (2010) also explained the cultural influence of birth in a study entitled "A Role For Cultural Transmission In Fertility Transitions". The transition from fertility changes is the result of technological advances in the industrial sector resulting in limitations in having children from traditional to modern society. But if traditional societies are still attached to their culture, it will result in no changes in this transition and they will try to maintain their culture.

Conclusions and Suggestions

Conclusions

Based on the results of research and discussion, it can be concluded that:

- 1) Per capita GDP has a significant positive effect with a significance level of 95% ($\alpha = 5\%$) on fertility in Riau Province in 2010 - 2017.
- 2) The number of working women has a significant positive effect with a significance level of 90% ($\alpha = 10\%$) on fertility in Riau Province in 2010 - 2017.
- 3) The number of poverty has no significant effect on fertility in Riau Province in 2010 - 2017

Suggestions

Based on the results of the analysis and conclusions described earlier, the suggestions that can be put forward are as follows:

- 1) The importance of making diversified output, especially in the agricultural sector which can produce high added value to agricultural output. It can be done by involving technology in the production process so that it can increase the added value of the output and also ultimately improve the welfare of the community, especially in the agricultural sector.
- 2) The need of training for women workers, especially those who have a low level of education, is useful for enhancing capabilities that can later improve the welfare of the workers themselves. With the increase in welfare, it is expected to improve the quality of children of female workers.
- 3) For the local government, it is expected to be able to provide motivation and assistance both physically and non-physically, such as in the field of population to carry out ongoing socialization. Especially the ease of accessing health facilities for disadvantaged families such as the ease of having contraception and providing access to education for human resources so that it can have a good impact on the economy.

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