

Economic Effect of Covid-19 Pandemic on the Access of Birth Control Service in Health Facilities in Women of Childbearing Aged 15-49 Years

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ABSTRACT

This paper describes the effect of the economic effects of the Covid-19 pandemic on access to birth control services in health facilities for women of childbearing age (WUS) 15-49 in West Java. This type of research is a quantitative description using Bivariate, Multivariate and dichotomic / binary logistic regression analysis. The results of this study indicate that there is no significant effect simultaneously between the effects of pandemic-19 on the use of modern contraceptives and an increase in the number of pregnancies in women of reproductive age (wus) 15-49 years in West Java because the p-value is 0.233 or more. The magnitude of the alpha used is 5% (0.05.) While each variable does not have a significant partial effect on Y in the X model. The sig values are more than 0.05 (alpha) used. This means that the economic effect of the COVID-19 pandemic does not have a significant partial effect on access to family planning services in health facilities for women of childbearing age 15-49 years in West Java. The dependent variable is 33.1% and there are 100% -39% = 66.9 % other factors outside the model that explain the dependent variable in this study.

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INTRODUCTION

Currently, the world is experiencing Corona Virus (Covid-19) pandemic which has infected 200 countries globally, including Indonesia. It is informed that Covid-19 is very easy to spread, so that its transmission is also very fast. Covid-19 is a type of corona virus causing a disease that attacks human breathing through small droplets from the nose or mouth of sufferers, spreading when coughing or sneezing. The droplets falling on surrounding objects are touched by other people, and then the persons touch their eyes, nose or mouth. As the consequence, the virus attacks their body and affects health problems.

Recent research shows that corona virus infection is similar to the Human Immunodeficiency Virus (HIV) (Zehra, Z., Luthra, M., Siddiqui, S. M., Shamsi, A., Gaur, N. A., & Islam, A. 2020). The corona virus has an HIV-like gene mutation which means it has the ability to attack human cells 1,000 times stronger than the SARS Virus (Acute Respiratory Syndrome). The impact of the Covid-19 outbreak greatly affects the susceptibility to pregnancy which is due to a decrease in the number of national birth control service for each type of contraceptive drug (contraceptive). This indicates that fertile age couples, especially women aged 15-49 years who need contraception cannot access contraceptive service at health facility and postpone going to health facilities during Covid-19 if they are not in a critical condition, because of the afraid of Covid-19 infection. In addition, Covid-19 also greatly affects people with weak immune system.

According to the Head of the National Family Planning Coordinating Agency (BKKBN), the use of contraceptives throughout Indonesia during the COVID-19 pandemic, in the period of January-March 2020, decreases by 35-47%, due to many young couples' worried of accessing health facilities in their respective areas. "*Dua anak cukup*" (two children are enough) is the Indonesian government's slogan for the family planning or birth planning program. Initially, these programs and movements were seen as restricting the

reproductive right of society. In fact, the matter of planning the number of children has a significant impact on the development of a country, not just private matters. According to the United Nations, by regulating and controlling the number of births, the economy and family welfare can be stronger. The cumulative benefits are contributing to poverty reduction and having a positive impact on development (Ekawati et al., 2020).

According to Tsholofelo Adelekan et al, 2020 The number of heads of primary healthcare utilization across the province decreased by nearly 500,000 visits after the lockdown period. The demand-driven pattern of family planning utilization declined over the two months prior to the COVID-19 pandemic and further declined during the lockdown. Switching to less effective methods of contraception was noted as a trend over the previous two years. A year-on-year comparison from April 2018 to April 2020 shows a consistent decline in the use of injectable methods and an increase in the use of oral contraceptive pills. The decrease in access to health service facilities in the family planning sector is related to the corona virus pandemic. There are recommendations and campaigns to stay at home, social distancing, physical distancing, and large-scale social restrictions. The Covid pandemic also affects the use of contraceptives for women of childbearing aged 15-49 years in West Java. The use of contraceptives has decreased during the pandemic, due to the concern about accessing health facilities during the Covid pandemic. As the consequence, the number of pregnancy rate in women aged 15-49 years increases. The objectives of this study were: (1) To analyze the characteristics of the use of modern contraceptives for married women in West Java during the Covid 19 Pandemic, (2) To analyze the economic effects of the Covid-19 pandemic on the access to family care service at health facilities for women aged 15-49 years in West Java.

RESEARCH METHODS

This research used quantitative approach. The data used in this study were secondary and primary data obtained from Performance and Accountability Survey Program of 2019 and distributing questionnaires to respondents. Data collection was done by filtering and considering data (clearing data) for fertile women who were married and pregnant aged 15-49 years in West Java from the raw data (data bank) contained in Performance and Accountability Survey Program of 2019 by BKKBN. This study used an inferential analysis with binary logistic/dichotomy regression. The number of respondents in this study were 33 respondents, using the purposive sampling method.

RESULT AND DISCUSSION

Bivariate analysis

Table 1. Percentage of Respondents Aged

Access of Family Planning Service in Health Facility	Access of Family Planning Service in Health Facility							
	No Effect		Rarely Had an Effect		Had an Effect		Had a strong Effect	
	n	%	n	%	n	%	n	%
Age								
15-24	0	0,0	0	0,0	1	4,2	21	87,5
25-34	2	8,3	0	0,0	1	11,1	8	88,9
35-49	0	0,0	0	0,0	2	6,1	29	87,9

Based on the table 1, it can be seen that the percentage of respondents aged 25-34 years answered that there was no effect of family planning services in health facilities, which was of 8.3 percent; there was an effect in the amount of 11.1 percent; and there was strong effect in the amount of 88.9 percent. Meanwhile, the percentage of respondents aged 35-49 years answered that there was an effect of 6.1 percent of family planning services at health facilities, and strong effect in the amount of 87.9 percent. Therefore, it can be concluded that the majority of respondents answering (25-49 years) said that there was a very significant effect on family planning services in health facilities.

Based on the table 2, it can be seen that the percentage of respondents with recent education

was below or equal to junior high school (primary school, junior high school) answered that the access of family planning service in health facilities had an effect was 100 percent. Meanwhile, the percentage of respondents whose recent education was above junior high school (senior high school, Diploma/Associate Degree/Bachelor) answered that the access of family planning services in health facilities had no effect, had an effect, and had strong effect were of 8 percent, 8 percent and 84 percent, respectively. Therefore, it can be concluded that the majority of respondents answering based on recent education (\leq junior high school and $>$ junior high school) said that there was a very significant effect on family planning services in health facilities.

Table 2. Percentage of Respondents with Recent Education

Variables	Access to Family Training Services at Health Facilities							
	No Effect		Rarely		Effect		Very Strong Effect	
	n	%	n	%	n	%	n	%
Recent Education of Pregnant Women								
\leq Junior High School	0	0,0	0	0,0	0	40,0	28	100,0
$>$ Junior High School	2	8,0	0	0,0	2	8,0	21	84,0

Table 3. Percentage of Respondents with Working Status

Variables	Access to Family Training Services at Health Facilities							
	No Effect		Rarely		Effect		Very Strong Effect	
	n	%	n	%	n	%	n	%
Working Status of Pregnant Women								
Assistant	0	0,0	0	0,0	0	0,0	2	100,0
Lecturer	0	0,0	0	0,0	0	0,0	1	100,0
Housewife	0	0,0	0	0,0	2	10,0	18	90,0
Trader	0	0,0	0	0,0	0	0,0	5	100,0
Private Employee	2	40,0	0	0,0	0	0,0	3	60,0

Based on the table 3, it can be seen that the percentage of respondents with working status, namely household assistants, lecturers, and traders answered that there was an effect on the access of family planning service in health facilities was 100 percent. The percentage of

respondents who worked as private employees answered that there was no effect on the access of family planning services at health facilities was 40 percent, while the respondents answering that there was strong effect was of 60 percent. The percentage of respondents playing role as housewives answered that there was an effect on the access of family planning services in health facilities was of 10 percent, while the respondents answering that there was a strong effect was of 90 percent. Therefore, it can be concluded that the majority of respondents who answered based on their work status (household assistants, lecturers, domestic workers, traders, and private employees) revealed that there was a very significant effect on family planning services in health facilities.

Table 4. Percentage of Respondents whose Jobs were at level 2 and 4

Variables	Access to Family Training Services at Health Facilities							
	No Effect		Rarely		Effect		Very Strong Effect	
	n	%	n	%	n	%	n	%
Wealth Index								
1	0	0	0	0,0	0	0	0	0
2	0	0	0	0,0	0	0	11	100
3	2	12,5	0	0,0	2	12,5	12	75
4	0	0	0	0,0	0	0	6	100

Based on the table 4, it can be seen that the percentage of respondents whose jobs were at level 2 and 4 answered that the presence of family planning service access in health facilities with a very significant effect was of 100 percent. Meanwhile, the percentage of respondents whose wealth index was at level 3 answered that there had rare effect, an effect, and strong effect on the access of family planning service in health facilities was of 12.5 percent, 12.5 percent, and 75 percent, respectively. Therefore, it can be concluded that the majority of respondents who answered based on the wealth index (levels 2-4) said that there was a very significant effect on family planning services in health facilities.

Based on the table 5, it can be seen that the

percentages of respondents related to the effect of family planning service access in health facilities on respondents' answers related to exposure to family planning and Covid-19 information from television, radio, and print media, i. e. had no effect, had an effect, and had a strong effect were of 6.1 percent, 6.1 percent, and 87.9 percent, respectively. Therefore, it can be concluded that the majority of respondents who answered based on exposure to family planning and covid-19 information from television, radio, and print media revealed that there was a very significant effect on family planning services in health facilities.

Table 5. Percentages of respondents related to the effect of family planning service access in health facilities on respondents' answers related to exposure to family planning and Covid-19 information

Variables	Access to Family Training Services at Health Facilities							
	No Effect		Rarely		Effect		Very Strong Effect	
	n	%	n	%	n	%	n	%
Exposure to Family Planning and Covid-19 Information								
Yes	2	6,1	0	0,0	2	6,1	29	87,9
No	0	0,0	0	0,0	0	0,0	0	0,0

Table 6. Respondents Related to the Effect of family planning services in health facilities on respondents' answers regarding the implementation of large-scale social restriction and lockdown system

Variables	Access to Family Training Services at Health Facilities							
	No Effect		Rarely		Effect		Very Strong Effect	
	n	%	n	%	n	%	n	%
Implementation of large-scale social restriction and lockdown system								
Yes	2	6,1	0	0,0	2	6,1	29	87,9
No	0	0,0	0	0,0	0	0,0	0	0,0

Based on the table 6, it can be seen that the percentages of respondents related to the effect of family planning services in health facilities on respondents' answers regarding the implementation of large-scale social restriction and lockdown system, namely had no effect, had an effect, and had strong effect were of 6.1 percent, 6.1 percent, and 87.9 percent, respectively. Therefore, it can be concluded that

the majority of respondents who answered based on the implementation of large-scale social restriction and lockdown system revealed that there was a very significant effect of covid-19 on family planning services in health facilities.

Table 7. Percentages of Respondents Related to the Effect of Family Planning Services in Health Facilities on Respondents' Answers Related to the Economic Effects of the COVID-19 Pandemic

Variables	Access to Family Training Services at Health Facilities							
	No Effect		Rarely		Effect		Very Strong Effect	
	n	%	n	%	n	%	n	%
Economic Effects of the COVID-19 Pandemic								
Yes	2	6,1	0	0,0	2	6,1	29	87,9
No	0	0,0	0	0,0	0	0,0	0	0,0

Based on the table 7, it can be seen that the percentages of respondents related to the effect of family planning services in health facilities on respondents' answers related to the economic effects of the Covid-19 pandemic, namely had no effect, had an effect, had strong effect were of 6.1 percent, 6.1 percent, and 87.9 percent, respectively. Therefore, it can be concluded that the majority of respondents who answered based on the economic effect of the Covid-19 pandemic revealed that there was a very strong effect on family planning services in health facilities.

Multivariate Analysis

Based on the results of the analysis using the dichotomy/binary logistic method, the following results were obtained:

Table 8. Case Processing Summary

Case Processing Summary			
Unweighted Cases ^a		N	Percent
Selected Cases	Included in Analysis	33	100,0
	Missing Cases	0	.0
	Total	33	100,0
Unselected Cases		0	.0
Total		33	100,0

a. If weight is in effect, see classification table for the total number of cases.

Based on the finding from Table 8, it can be seen

that the number of samples was 33 respondents, all of whom were pregnant women with children 3 or over aged 15-49 years in Bandung, West Java. The results of running using SPSS showed that there were no missing cases.

Table 9. Iteration History

Iteration History ^{a,b,c}			Coefficients
Iteration		-2 Log likelihood	Constant
Step 0	1	17.531	1.758
	2	15.267	2.447
	3	15.092	2.707
	4	15.090	2.740
	5	15.090	2.741

a. Constat is included in the model.
 b. Initial -2 Log Likelihood : 15,090
 c. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Based on the finding from Table 9, from the results of the logistic regression output analysis conducted at SPSS, it can be seen that the iteration value was 15.090. This shows that when the independent variable was not included in the model, with N equalled to 33 in order to get a value of -2 Log likelihood of 15.09. In this case, the degree of freedom was $N - 1 = 33 - 1 = 32$, then chi-square at the table (χ^2) of $DF = 32$ with the probability of 0.05 resulted in 43,775, meaning that the model fitted to the data. This explanation can be seen with Table X2 in Table 20. It reveals that there was 15.090, which means that this value was smaller the calculated X^2 , $43,775 \geq 15,090$. This information affected to the decision to accept H_0 . There was an economic effect of the Covid-19 pandemic on the access of family planning services in health facilities for women of childbearing aged 15 - 49 years in West Java.

Based on the finding from table 10, it can be seen that the number of respondents who answered that there was no access to family planning services in health facilities was 2 people, while those who answered that there were family planning services at health facilities were 31 respondents from a total sample of 93.9 percent.

Table 10. Classification Results Table
Classification Table ^{a,b}

Observed		Askes Pelayanan KB di FasKes		Percentage Correct	
		.00	1,00		
Step 0	Askes Pelayanan KB di	.00	0	2	.0
	FasKes	1,00	0	31	100,0
Overall Percentage					93,9

a. Constant is included in the model.
b. The cut value is .500

Table 11. Omnibus Tests of Model Coefficients
Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	4,276	3	.233
	Block	4,276	3	.233
	Model	4,276	3	.233

The results of Table 11 shows that the Chi-square value (X²) was 4.276 with DF = 3 (number of independent variables was 3), which equalled to 7.815, or with a significance of 0.05, meaning that it accepted H₀. Therefore, it can be said that the addition of independent variables could not have a significant effect on the model. In other words, the model was said to have no fit. It can be said that, there was no simultaneous effect of the independent variables on the dependent variable, namely rejecting H₁ or accepting H₀. This means that there was no simultaneous significant economic effect of Covid-19 pandemic economy on the access of family planning services in health facilities for women of childbearing aged 15 - 49 years in West Java because the p-value was of 0.233 or greater than the alpha used, which was 5% (0.05).

Table 12. Model Summary
Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	10.813 ^a	.122	.331

a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.

The results of Table 12 show that the ability of the independent variables in explaining the dependent variable, using the value of Cox &

Snell R Square and Nagelkerke R Square. These values are also called the Pseudo R-square value, or in linear regression (OLS) it is better known as the R-Square value.

The Nagelkerke R Square value was 0.331 or 33.1% and the Cox & Snell R Square value was 0.122. These values shows that the ability of the independent variables in explaining the dependent variable was 33.1%, then there were 100% -33.1% = 66.9% other factors outside the model explaining the dependent variable.

Table 13. Hosmer and Lemeshow Test (Goodness of Fit Test)
Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	.000	0	.

The results of Table 13 show that the Goodness of Fit Test was a test determining whether the model formed was correct or not. It is said to be appropriate if there was no significant difference between the model and its observation value. The chi-square table value for DF 1 (independent variable), at a significance level of 0.05 (5%), was 3,841. Because the Chi-square Hosmer and Lemeshow value on the test was 0,000 or smaller than the Chi-Square on the table, which was 3,841. As the consequence, it accepted H₀, meaning that the model was acceptable because there was no significant difference between the model and its observation value.

Table 14 shows that all independent variables had P-Value values above or more than 0.05 (5%), meaning that each variable did not have a significant partial effect on Y in model X.

Table 14. The Result of Partial Test
Variables in the Equation

		B	S.E	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
								Lower	Upper
Step 1 ^a	PI by U	-19,593	40192,972	.000	1	1,000	.000	.000	.
	SB by U	19,593	50129,441	.000	1	1,000	323094933,3	.000	.
	IK by U	-19,593	28420,719	.000	1	.999	.000	.000	.
	Constant	21,203	9473,574	.000	1	.998	1615474727		

a. Variable(s) entered on step 1 : P I * U, I K * U.

value used was more than 0.05 (alpha). This means that the economic effect of the COVID-19 pandemic did not have a significant partial effect on access of family planning services in health facilities for women of childbearing aged 15-49 years in West Java.

There was a model obtained from the analysis of logistic biner regression above, as the following:

$$\ln\left(\frac{\pi}{1-\pi}\right) = 21,203 - 19,593 \text{ Recent Education} + 19,593 \text{ Working Status} - 19,539 \text{ Wealth Index}$$

This Research conducted was to determine the economic effects of the Covid-19 pandemic on access to family planning services in health facilities for women aged 15-49 years. The research was conducted in the Bandung City area during the Covid-19 pandemic. The study was conducted by accidentally selecting samples and respondents as many as 33 pregnant women aged 15-59 years. In addition, based on the results of research conducted on the description of pregnant women 15-49 years of age regarding the Covid -19 economic pandemic on access to family planning in health facilities, most of the effects are very significant, but after testing it turns out that there is no significant effect simultaneously or partially. . So it can be said that the existence of the Covid-19 economic epidemic will not affect access to family planning services in health facilities for women of childbearing age (WUS) 15-49 years in West Java.

The age variable does not significantly influence the use of access to family planning services in

health facilities. In addition, however, most mothers aged 35-49 years stated that the use of access to family planning services in health facilities had a very significant effect during the Covid-19 pandemic. Because many do not dare (afraid of being hit by Covid-19) to visit a health facility to carry out an inspection of family planning service facilities. Meanwhile education also does not have a significant effect on the use of access to family planning services in health facilities. In addition, most mothers whose last education was SMA, D1 / D2 / D3, D4 / S1, S2, and S3 stated that the use of access to family planning services in health facilities had a very significant effect during the Covid-19 pandemic.

The results of the study found that work had a significant effect on the use of access to family planning services in health facilities. In addition, most mothers who have a work status as housewives (IRT) stated that the use of access to family planning services in health facilities had a very significant effect during the Covid-19 pandemic. In addition, the wealth index does not have a significant effect on the use of access to family planning services in health facilities. In addition, most mothers who a third wealth index (3) had stated that the use of access to family planning services in health facilities had a very significant effect during the Covid-19 pandemic.

Based on the research results, information exposure does not have a significant effect on the use of access to family planning services in health facilities. In addition, most mothers who were exposed to information stated that the use

of access to family planning services in health facilities had a very significant effect during the Covid-19 pandemic. (Ariestanti et al., 2020) Ariestanti et al (2020) found that pregnant women who did family planning checks during the Covid 19 pandemic who did not routinely do 26.7%, Routine was 73.3%) meaning, there are still many pregnant women aged 14-49 years who regularly visit health facilities KB. The implementation of PSBB has a significant effect on the use of access to family planning services in health facilities. In addition, most mothers who received the implementation of the PSBB stated that the use of access to family planning services in health facilities had a very significant effect during the Covid-19 pandemic. This research is in line with research conducted by (Sari, 2020) which states that the impact of the COVID-19 pandemic that has hit has made family planning services slightly hampered due to restrictions on service hours.

CONCLUSION

There was no significant effect simultaneously between the Covid-19 pandemic on the use of modern contraceptives and an increase in the number of pregnancy of women of childbearing aged 15-49 years in West Java because the p-value was 0.001 or greater than the used alpha value, which was 5% (0.05). Each variable did not have a significant partial effect on Y in the model. X1 (the use of modern contraceptives) had a sig value of 1,000, X2 (an increase in the

number of pregnancy) had a significance value of 1,000. These used sig values were greater than 0.05 (alpha).

Therefore, the use of modern contraceptives and the increasing number of pregnancy did not have a significant partial effect on the Covid-19 pandemic in women of childbearing aged 15-49 years in West Java. The Nagelkerke R Square value was 0.331 or 33.1% and the Cox & Snell R Square value was 0.112, showing that the ability of the independent variables to explain the dependent variable was 33.1%, whereas there were $100\% - 39\% = 66.9\%$ other factors outside the model explaining the dependent variable.

The COVID-19 pandemic has made the path to achieving universal access to sexual and reproductive health care services by 2030, including family planning, increasingly uncertain. Once the disruption caused by COVID-19 is resolved, there is the possibility of using contraception—and therefore SDG indicator—can return to the level before the disturbance relatively quickly. For short-term users of the method, assuming that the method requires frequent resupply, the health system can in principle recover to pre-COVID-19 levels in a short time, once service activities are fully resumed. However, for long-term methods, there may be a longer period to catch up on services not provided during the COVID-19 disruption.

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