

## Gender Discrimination on Child Marriage in Indonesia: A Quantitative Research Using Bootstrap Approach

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### Abstract

*The main objective of this study is to analyze gender discrimination in child marriage in Indonesia. The discrimination is based on early marriage, namely Indonesian youth aged 20-24 years who have been married before the age of 19 years. There are two main factors used, namely gender and age groups. The age group represents the age at first marriage for Indonesian youth who are categorized as early marriage, namely the group aged less than 15 years and aged in the group 16-18 years. This study applies a bootstrap approach to the analysis of variance (ANOVA) due to the failure of the initial assumption tests on the original data. The analysis results show there are significant differences between male and female youth in the percentage of child marriage cases. Gender inequality is indicated based on the finding that young women are found to be four times more vulnerable to being trapped in child marriage than boys. In addition, the results of the analysis also indicate that young women are easier to get trapped in child marriage practices for both age groups. Furthermore, the results of the analysis also indicate that young women are more prone to be involved in child marriage when they are in the 16-18 year group.*

**Keywords:** *gender discrimination, child marriage, bootstrapping, ANOVA*

### Abstrak

Tujuan utama dari penelitian ini adalah menganalisis diskriminasi gender pada pernikahan anak di Indonesia. Diskriminasi tersebut berdasarkan pada pernikahan dini, yaitu pemuda Indonesia yang berusia 20-24 tahun yang telah menikah sebelum usia 19 tahun. Ada dua faktor utama yang digunakan, yaitu kelompok gender dan kelompok usia. Kelompok usia mewakili usia pernikahan pertama pemuda Indonesia yang dikategorikan menikah secara dini, yaitu kelompok usia kurang dari 15 tahun dan pemuda yang berusia dalam kelompok 16-18 tahun. Penelitian ini menerapkan pendekatan bootstrap pada *analysis of variance* (ANOVA) karena kegagalan pada uji asumsi awal pada data asli. Hasil analisis mengemukakan bahwa ada perbedaan signifikan dari pemuda laki-laki dan pemuda perempuan pada persentase kasus pernikahan anak. Ketidakadilan gender diindikasikan dengan temuan bahwa pemuda perempuan diketahui lebih rentan empat kali lebih besar untuk terjebak dalam pernikahan anak dibandingkan laki-laki. Selain itu, hasil analisis juga menyatakan bahwa pemuda perempuan lebih mudah terjebak dalam praktek-praktek pernikahan anak untuk kedua kelompok umur tersebut. Kemudian, kedua kelompok umur

pernikahan pertama pemuda juga diketahui memiliki perbedaan yang signifikan pada persentase pernikahan anak.

**Kata Kunci:** diskriminasi gender, pernikahan anak, bootstrap, ANOVA

## **INTRODUCTION**

Child marriage is still a crucial problem not only in Indonesia but also in other countries, especially in developing countries. UNICEF (2020) defines child marriage as a formal marriage or an informal bond before the age of 18. Meanwhile, the Indonesian Marriage Law Number 16 of 2019 states that the age limit for marriage for Indonesian citizens; both male and female, is 19 years. This new law is an amendment from the Marriage Law No.1 of 1974, which suggests there is gender discrimination in the age limit of marriage. Maisyal (2016) states that marriage law in Indonesia contains gender bias. Based on the old Marriage Law No.1 of 1974, there is a difference in the age limit for marriage for Indonesian youth, where the age limits are 16 and 19 years old for girls and boys, respectively. The amendment is mandated by the Constitutional Court (*Mahkamah Konstitusi*-MK) is one of the Indonesian government's efforts to reduce the number of child marriages. The practice of child marriage is believed to have a very bad impact on both partners. However, many studies report that this practice has a more adverse impact on young women (See Kidman, 2017; Setiyawan, 2019; Rumble et al, 2018; Arthur et al, 2018).

Setiyawan (2019) states that the construction of early marriage creates discrimination against young women, namely wives. The forms of discrimination include stereotypes, subordination, marginalization, double burden, and violence. The first form of discrimination relates to the assumption that women (wives) are weaker so that they need protection and mercy from men (husbands). The subordination aspect reflects women (wives) as domestic workers who are required to have domestic household abilities such as cooking and taking care of the household. Besides, they are also required to always look attractive and play the role of male servants sexually. The aspect of marginalization illustrates the position of women (wives) who are always below men therefore their opinions and aspirations are often ignored (Miswoni, 2016; Pakasi, 2019; Setiyawan, 2019).

Gender discrimination in the form of double burden is closely related to the demand for women (wives) to help their husbands financially, especially when their

economic conditions are considered not yet well-established. However, at the same time, they are still required to fulfill their obligation to do various kinds of domestic work as well as educate their children properly. Furthermore, the violence aspect of gender discrimination in child marriage includes physical and emotional violence. In addition, sexual violence or often referred to as marital rape also often appear in the practices of early marriage (Miswoni, 2016; Pakasi, 2019; Setiyawan, 2019).

The Ministry of Women's Empowerment and Child Protection (*Kementerian Pemberdayaan Perempuan dan Perlindungan Anak-KemenPPA*, 2020) states that the practice of child marriage is a type of human rights violation. All children have rights that must be respected, where these rights are part of human rights itself. The vulnerable position of young women in child marriage has been reported by many studies. Jensen & Thornton (2003) state that young women in developing countries are still the subject of child marriage, where they have very low bargaining power. They have very limited or no choice at all when it comes to when they get married or whom they will marry. The family or parents have determined or arranged their marriage without seeking prior consent. Munawara, Yasak, & Dewi (2015) mention that young women do not have the right to refuse or give consideration because their position is only to be elected, appointed, and married. The weak position of young women in child marriage is emphatically illustrated by Mikhail (2002), who states that child marriage is similar to child prostitution. Both are forms of sexual exploitation that take away children's rights to be able to develop their reproductive health properly. Both practices are also reported to be closely associated with the loss of children's freedom and consent, which is often neglected. Besides, both of them also often involve economic transactions.

Besides, the practice of child marriage also causes young women vulnerable to becoming victims of manipulation and exploitation. Manipulating the age of children is a common practice in many regions in Indonesia. Miswoni (2016) states that the practice of matchmaking involving girls often leads to early marriage, which is common in Madura. Then, to be legally married according to the law, they do not hesitate to manipulate the ages of their children. Unfortunately, all decisions are taken usually do not involve young women. This statement is also supported by Setiyawan (2019), which reports the manipulation of a child's age is often carried out by families to get constitutional recognition. Physical, emotional, and sexual exploitation of young women is also often

practiced by husbands (or families) in early marriages (Mikhail, 2002; Miswoni, 2016; Pakasi, 2019; Setiyawan, 2019).

Globally, the United Nations Population Fund (2014) states that 34% of young women aged 20-24 years are married before the age of 18. Meanwhile, 12% of them are known to have married before the age of 15. The report also reveals that South Asia and sub-Saharan Africa are areas with a high prevalence rate of child marriage. In Indonesia, UNICEF (2020) reports that West Sulawesi has the highest prevalence of child marriage, which is 19.43%. This report is reinforced by Statistics Indonesia (Badan Pusat Statistik-BPS, 2020) which also reports that the three provinces with the highest prevalence rates of child marriage are West Sulawesi, Central Sulawesi, and Southeast Sulawesi. Meanwhile, West Java has the highest absolute figure, which approximately is 273.300 cases of child marriage.

The report published by BPS (2020) also states that the child marriage cases for the last 10 years have only experienced a small decline which can be said to be insignificant, namely by 3.5 percentage points. The report also states that 20 out of 34 provinces in Indonesia have a child marriage prevalence rate above the national average. These figures are alarming because the majority of provinces in Indonesia (59%) face child marriage problems. Figure 1 shows the trend of the percentage of young women aged 20-24 years who were married before the age of 18 for the period 2008-2018 based on data published by BPS (2020).

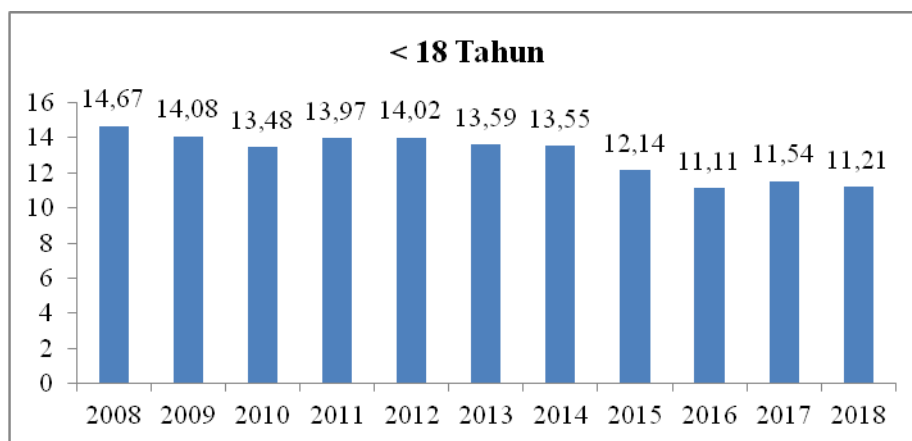


Figure 1. Trends in Age of First Marriage before 18 Years  
(Source: BPS, 2020)

From Figure 1, it can be seen that although there is a decrease in the percentage of young women who are married before the age of 18 years, the decline looks sloping. The stagnant decline in child marriage cases requires serious attention from all parties. Indonesian youth, as the next generation, should obtain all their rights to develop their potentials and not be trapped in the practice of early marriage which causes their movement to be limited. To prevent children from being involved in cases of early marriage, a comprehensive and structured plan is needed. Thus, the prevalence rate of child marriage in Indonesia may decrease significantly.

The main objective of this study is to analyze the existence of discrimination in child marriage, which is based on the effect of gender differences on child marriage cases in Indonesia. Besides, the influence of age at first marriage for Indonesian youth is also analyzed. Thus, there are two factors used in this study in analyzing the percentage of youth involved in child marriage, namely gender ( $X_1$ ) and the age group of Indonesian youths' first marriage ( $X_2$ ). The first factor is used to determine the effect of gender differences on the percentage of Indonesian youth who engage in child marriage, which is married before the age of 19. The second factor is applied to analyze child marriage in Indonesia based on the two age groups of the first marriage. Besides, the interactions between the two factors are also analyzed to carry out an in-depth analysis of gender discrimination in child marriage. In order to obtain empirical results, this study uses secondary data on Indonesian Youth Statistics in 2018. The Analysis of Variance (ANOVA) method based on the bootstrap approach is used to obtain the estimation results with better accuracy. In addition, this approach also provides a statistically reliable hypothetical decision. There are three hypothesis testing in this study, namely:

#### Hypothesis 1

*H0: There is no significant effect of gender differences on child marriage*

*H1: There is a significant effect of gender differences on child marriage*

#### Hypothesis 2

*H0: There is no significant effect of the age group of first marriage on child marriage*

*H1: There is a significant effect of the age group of first marriage on child marriage*

### Hypothesis 3

*H0: There is no significant effect of the interaction between gender and age group on child marriage*

*H1: There is a significant effect of the interaction between gender and age group on child marriage*

Research related to gender discrimination based on child marriage using an empirical quantitative approach is important to be carried out because it is able to provide a clear picture of data-based child marriage in Indonesia. Besides, the results of this study provide a scientific basis for making decisions and policies carried out by the government and parties concerned with child marriage in Indonesia. Furthermore, this study is also able to fill the gap in the scientific literature on gender discrimination, in which the majority of the studies using the same theme using qualitative approaches.

## **RESULTS AND DISCUSSION**

### **Results**

This study focuses on gender discrimination based on child marriage. This study uses secondary data from the 2018 Indonesian Youth Statistics published by Statistics Indonesia. The report is based on collaboration from several institutions, namely BPS, the National Development Planning Agency (*Badan Perencanaan Pembangunan Nasional-Bappenas*), UNICEF, and the Center on Child Protection and Wellbeing at Universitas Indonesia (*Pusat Kajian dan Advokasi Perlindungan dan Kualitas Hidup Anak Universitas Indonesia-PUSKAPA*) in the context of preventing child marriage in Indonesia. The report is also based on the 2008-2018 National Socio-Economic Surveys (*Survei Sosial Ekonomi Nasional-SUSENAS*) and the 2015 Inter-Censal Population Surveys (*Survei Penduduk Antar Sensus-SUPAS*) Projection. The report presents data on the age at first marriage of Indonesian youth aged 20-24 years. Other than that, the report includes data from cases of child marriage in all provinces in Indonesia so that the results of this study can represent a comprehensive picture of child marriage in Indonesia.

The dependent variable (Y) used in this study is the percentage of Indonesian youth who have married before the age of 19 years. It is the age limit for Indonesian citizens who are allowed to legally marry under the Marriage Law No. 6 of 2019. Hence, Indonesian youths who marry before that age are carrying out the practice of child marriage or often known as early marriage. Meanwhile, this study uses two independent variables (X), namely

gender ( $X_1$ ) and age group ( $X_2$ ). The gender group represents Indonesian youth; boys and girls groups, who are involved in child marriage. The age group consists of two groups, which represent the age of early marriage, namely those under 15 years old and the 16-18 years age group. The selection of these two age groups is also based on the Marriage Law Number 16 of 2019 which states that the age limit for marriage for Indonesian citizens is 19 years, for both boys and girls.

Table 1 shows the distribution of samples for all groups, namely gender and age groups.

Table 1. Frequency of Each Group

Group	Category	N
Gender	Male	68
	Female	68
Age group	less than 15 years	68
	16 - 18 years	68

From table 1 it is clear that the samples used in this study are evenly distributed for the two groups, where each category contains 68 samples. It is important to note that the samples in this study are all provinces in Indonesia. Thus, because there are 34 provinces in Indonesia, there are 136 sample data for each group. Because each group has two categories then each category includes 68 sample data.

It is important to carry out some statistical tests on the data used in statistical analysis to be able to determine the most appropriate statistical method (Mahmudah, 2020). This study applies several statistical tests to determine the characteristics of the data to be analyzed, namely a scatter plot to observe the patterns of the data, normality test, and homogeneity test. Figure 2 shows data patterns based on the scatter plot to detect extreme data, which are usually called outliers.

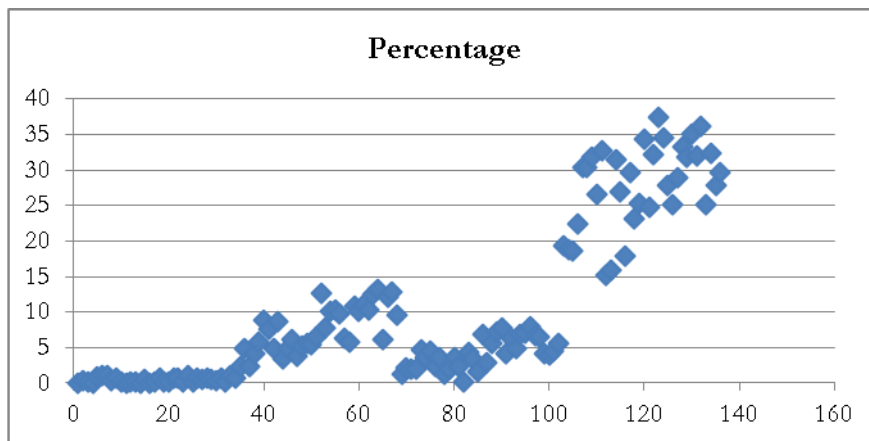


Figure 2. Scatter Plot

According to the data pattern in Figure 2, it can be seen that the data used in this study contain outliers that can be seen clearly. Many observed values are extreme because they are far from the data set. The extreme values are known to be either too small values or too large values compared to the data set. These values are also believed to reduce the accuracy of the analysis results (Alma, 2011; Fox & Weisberg, 2011; Mahmudah, Suhartono, & Rohayana, 2018). Statistical analysis is able to provide valid and accurate results when the data used are free of outliers. Thus, these outliers must be controlled so that their effect does not reduce the accuracy of the final decisions of previously made hypotheses.

Furthermore, this study applies the Kolmogorov-Smirnov test to detect the distribution of secondary data on the percentage of Indonesian youth involved in early marriage in 2018. The result of the normality test suggests that the data used are not normally distributed as shown in Table 2.

Table 2. Normality Test

		Percentage
N		136
Normal Parameters	Mean	10.05
	Std. Deviation	11.18
Most Extreme Differences	Absolute	0.22
	Positive	0.22
	Negative	-0.18
Test Statistic		0.22
Asymp. Sig. (2-tailed)		0.00

From table 2 it is apparent that the normality test on the original data provides an asymptotic significance value for the two-way test of 0.00, it is less than 0.05. However, the Kolmogorov-Smirnov test requires a *p*-value greater than 0.05 for normally distributed data (Mahmudah, 2020). Thus, the result indicates that the data used in this study are not normally distributed. Consequently, a parametric statistical approach is not allowed and it is recommended to use a nonparametric approach.

Table 3 shows the results of the homogeneity test using Levene's test of equality of error variances. This test was conducted to determine the characteristics of the data related to the variation in the percentage of Indonesian youth involved in early marriage in 2018.

Table 3. Homogeneity Tests

<i>F</i>	df1	df2	<i>Sig.</i>
34.428	3	132	0.00

The results of the analysis of the homogeneity test in Table 3 produce a significant value of 0.00 which is less than 0.05. The result indicates that the variance between groups is not significantly different. It should be noted that the traditional ANOVA using a parametric approach requires homogeneous variance between groups. Thus, the homogeneity test results also do not suggest using a parametric approach in statistical analysis.

Based on the assumption tests on the data used in this study, statistical analysis using a parametric approach is not recommended because of the failure of assumption tests. The imposition of a parametric statistical approach in such cases may provide misleading analytical results. Thus, an alternative approach is needed to deal with the assumption test problems on the data used in this study. Bootstrapping is a nonparametric approach that can be used when there is a failure in the assumption test in the parametric approach (Efron, 1979; Efron & Tibshirani, 1993). This study applies a bootstrap approach to ANOVA to obtain the estimation results that are free from the influence of outliers. Because the bootstrap is a nonparametric approach, there is no need to perform assumption tests on the data. Thus, bootstrapped ANOVA provides analysis results that are free from the influence of outliers while providing a better level of accuracy.

Table 4 shows the tests of between-subjects effects of analysis of variance with two independent variables (factors), namely the gender and the age groups. The results are obtained based on a bootstrap approach to two-way ANOVA with 1000 samples replication.

Table 4. Tests of Between-Subjects Effects

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	15176.21	3	5058.74	393.29	0.00
Intercept	13735.13	1	13735.13	1067.83	0.00
Gender	4845.25	1	4845.25	376.69	0.00
Age	8068.68	1	8068.68	627.30	0.00
Gender *age	2262.28	1	2262.28	175.88	0.00
Error	1697.87	132	12.863		
Total	30609.21	136			
Corrected Total	16874.07	135			

a. R Squared = 0.899 (Adjusted R Squared = 0.897)

Table 4 is the most important table from the estimation results using ANOVA, which suggests whether there is a significant impact of the independent variables (factors) on the selected dependent variable (Y). In other words, the table also indicates the existence of a significant difference between the groups. The results of the analysis in table 4 indicate that the effect of all independent variables simultaneously, namely gender, age group, and the interaction between gender and age groups (Gender \* Age) on the percentage of Indonesian youth who are involved in early marriage is known to be valid based on the significance value. Based on table 4, it is clear that the results of the analysis provide a significance value (*p*-value) equal to 0.00, which is less than 0.05. Thus, gender differences are known to have a positive and statistically significant effect on early marriage in Indonesia. The age group at first marriage also has a positive and statistically significant impact on early marriage. Then, the interaction between these two factors (Gender \* Age) also has a positive and statistically significant effect on early marriage in Indonesia.

Table 5 shows the results of the ANOVA for bootstrapped confidence intervals for the estimated marginal means.

Table 5. Bootstrap Results for Each Variable

Variables	Mean	Std. Error	95% Confidence Interval	Bootstrap for Mean
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				Low	Up	Bias	Std. Error	95% Confidence Interval		
								Low	Up	
Gender	Male	4.08	0.44	3.22	4.94	0.02	0.28	3.54	4.67	
	Female	16.02	0.44	15.16	16.88	0.02	0.57	14.92	17.09	
Age Group	less than 15 years	2.35	0.44	1.49	3.21	0.01	0.18	1.99	2.71	
	16 - 18 years	17.75	0.44	16.89	18.61	0.04	.61	16.61	18.96	
Gender * Age	<i>Male</i>									
		less than 15 years	0.46	0.62	-0.76	1.67	-0.00	0.06	0.34	0.57
		16 - 18 years	7.70	0.62	6.49	8.92	0.03	0.56	6.60	8.91
	<i>Female</i>									
	less than 15 years	4.24	0.62	3.02	5.45	0.00	0.37	3.54	4.96	
	16 - 18 years	27.80	0.62	26.58	29.02	0.04	1.06	25.69	29.90	

Table 5 shows that based on the 1000 bootstrap samples, it is known that the bootstrap approach to ANOVA gives excellent results. This approach can produce very small values of estimation bias while providing a fairly small standard error value. In addition, Table 5 also suggests that the analysis results provide a fairly narrow confidence interval.

### Discussion

In order to analyze gender inequality based on child marriage, this study focuses on analyzing the impact of the gender and age group at first marriage on the percentage of Indonesian youth involved in child marriage. In other words, the average difference between young men and young women involved in child marriage is analyzed. Besides, this study also analyzes the average difference in the age group for Indonesian youth first marriage. There are two categories of the first marriage age group, namely the age group under 15 years and the age group between 16-18 years. By interacting with the two factors used, a more in-depth analysis can be carried out on gender discrimination in child marriage.

In general, the results of the analysis suggest that a nonparametric-based bootstrap approach produces better analytical results to investigate gender inequality based on child marriage in Indonesia. This can be seen based on the small values of the estimation bias and the standard error. It is well known that a small standard error implies better

estimation accuracy. Thus, it is safe to conclude that a bootstrap approach to ANOVA is more appropriate for analyzing the influence of gender and age groups on the percentage of Indonesian youth involved in early marriage. These results provide valid and reliable analysis results statistically even though some initial tests on the data used have failed.

### ***The Effect of Gender Differences on Early Marriage in Indonesia***

The existence of gender discrimination in early marriage is based on the effect of gender differences on the percentage of Indonesian youth who are involved in child marriage. The analysis results for hypothesis 1 that have been made previously indicate to reject  $H_0$ . From table 5 it can be seen that the statistical  $F$  value for the gender variable is 376.69 when the significance value is equal to 0.00. Then, this independent variable also produces a positive Type III Sum of Squares value, which is equal to 4845.25. These results suggest that gender differences are known to have a positive and statistically significant effect on the percentage of Indonesian youth who are involved in early marriage. These results also indicate a significant difference between the groups of young girls and boys who are trapped in early marriage. Based on table 5, it is known that the average percentage of young men who have married before the age of 19 is 4.08. Meanwhile, the average percentage for young women is 16.02. These figures reveal a very clear disparity, with young women being 4 times more likely to be involved in child marriage than young men. Thus, these results also indicate that young women are more vulnerable to being trapped in child marriage.

This result is consistent with previous studies, where women (wives) are worse affected by the practices of child marriage. UNICEF (2020) reports that the prevalence of child marriage for boys is known to be one-sixth of girls globally. BPS (2020) reports that 1 of 9 women aged 20-24 years in Indonesia are involved in child marriage, where they have been married before the age of 18 years. The report also states that children who are vulnerable to being trapped in child marriage include girls, children who live in poor families, children who live in rural areas and have low education.

Kohno et al. (2020) report that although child marriage violates human rights, it is still widely practiced. Then, the study also reports that although young men and young women are both involved in child marriage, young women are more affected by the practice. Pakasi (2019) also states that women are more vulnerable to being trapped in child

marriage. The study reports that a relatively high number of women are involved in child marriage, where around 26% of women are known to have been married before the age of 18. Furthermore, Gastón, Misunas, & Cappa (2019) also mention that the availability of data on child marriage involving girls is better than data on child marriage to boys. Also, many studies have reported discrimination against women (wives) in early marriage families in Indonesia (see Hidayana et al., 2016; Miswoni, 2016; Setiyawan, 2019; Rumble et al., 2018).

Indonesian youth statistics for 2018 published by the Central Statistics Agency (2018) also indicate that imbalances can also be seen from other descriptions. For example, the highest and lowest percentage of Indonesian youth trapped in child marriage for each province in Indonesia indicate disadvantages for young girls. The highest percentage of young men who are trapped in early marriage is 13.19% (West Sulawesi). Meanwhile, the highest percentage of young women who are trapped in early marriage is 37.36% (Central Kalimantan). These figures indicate a difference of 3 times in the same category for young men. Then, looking at deeper data analysis, it is known that there are several provinces in Indonesia where the percentage of young men involved in early marriage is 0, namely Aceh, DKI Jakarta, and DI Yogyakarta. In the same group category, not one province is found to have a percentage of 0 for young women. This also indicates that the practice of child marriage involving young women is prevalent in all provinces in Indonesia

### ***The Influence of Age Group of First Marriage on Early Marriage***

This study uses two age groups that represent the first marriage performed by Indonesian youth, namely the age group less than 15 years old and the age group between 16-18 years. Based on the results of the analysis in table 5 it indicates reject H0 for both hypothesis 2 and hypothesis 3. The factors of age group and the interaction between gender and age group (Gender\*age) provide a similar *p*-value, which equals to 0.00. Then, table 5 also shows that the *F* statistical values for these factors are known to be 627.30 and 175.88, respectively. Meanwhile, the values of Type III Sum of Squares are known to be 8068.68 and 2262.28 for the age group and the interaction of gender and age group (Gender\*age), respectively. These results indicate that the age group at first marriage for Indonesian youth is also known to have a positive and statistically significant effect on the percentage of early marriage. Then, the interaction between gender and age group (Gender

Age) is also known to have a similar result, namely a positive and statistically significant impact.

The results of the analysis indicate a difference in the average of the two age groups. Based on table 5, it is known that the average percentage of Indonesian youth who are involved in child marriage for the age group less than 15 years is about 2.35%. Meanwhile, the average percentage of Indonesian youth who are involved in child marriage for the age group between 16-18 years is around 17.75%. These figures indicate a striking difference between the two groups, where child marriage is more common in the 16-18 year age group. In other words, Indonesian youth are more vulnerable to being trapped in child marriage when they are in the 16-18 year age group. Then, the analysis results also reveal that approximately 20.10% of Indonesian youth have married for the first time before the legal age, which is 19 years old.

Furthermore, Based on table 5, it is also found that young women are more prone to being involved in child marriage in both age groups, which are less than 15 years and the age group between 16-18 years. Based on the interaction factor of gender and age group (Gender\*Age) it can be seen clearly that the averages percentage of first marriage among Indonesian youth in the age group less than 15 years is 0.46% and 4.24% for young men and young women, respectively. These figures show that young women are 9 times more likely to be trapped in child marriage even when they are not yet 15 years old. Then, for the 16-18 years age group, it is known that the percentage of first marriage among young men is 7.70%. Meanwhile, its percentage for young women is generated at 27.80%. These results also indicate that young women are 4 times more prone to being trapped in child marriage in the 16-18 year age group category.

Thus, based on the age group of the first marriage, young women who are in the 16-18 years age group are seven times more prone to be involved in cases of early marriage than those who are less than 15 years old. Besides, the results of the analysis also indicate that young men in the 16-18 years age group are also known to be more vulnerable to being trapped in early marriage than those in the age group less than 15 years.

These results are also consistent with the results of previous studies. A research conducted by Djamilah & Kartikawati (2014) indicates that the higher age group of first marriage is more involved in cases of early marriage than the age group of fewer than 15 years. First marriage involving young women aged less than 15 years is 2.6%. Meanwhile,

23.9% of young women have their first marriages when they are between 15-19 years old. The Ministry of Health of the Republic of Indonesia (2013) also reports that around 26% of young women are known to have married before they turn 18 years. Using an empirical approach, Rumble et al (2018) also report differences in youth involvement in child marriage by age group. The report states there are 6% of young women are married before the age of 16 years and 17% of them are married before the age of 18 years. Then, the report on child marriage published by BPS (2020) also suggests that Indonesian youth, both young men and young women, are more involved in child marriage in the 16-18 year age group category. The report states there are more than one million women aged 20-24 whose first marriage is less than 18 years old (1.2 million people). Meanwhile, there were 61.3 thousands young women aged 20-24 years who have their first marriage before the age of 15.

Overall, the results of the analysis indicate the existence of gender-based injustice in child marriage cases in Indonesia. Young women are known to be more vulnerable to being involved in child marriages, where there is a significant statistical difference between the percentage of Indonesian youth who married before the age of 19. Besides, it is also found that young women are more involved in child marriage cases for the two first marriage age groups used, which are less than 15 years and the 16-18 years age group.

In Indonesia, there are still many parents who practice early marriage for their children even though it is known to have a negative effects. Djamilah & Kartikawati (2014) report several factors that influence the practice of child marriage are poverty, lack of understanding of reproductive health, traditions, customs and religions, and matchmaking. Hidayatulloh et al (2018) state that religion, culture, economy, and the leniency of the law cause the existence of child marriages in Indonesia. Various negative stereotypes from society towards girls are also reported to be the cause of child marriage cases in various regions in Indonesia. One of the most well-known social stereotypes in Indonesia is the assumption that an unmarried 17 year old woman is often referred to as an old maid (see Djamilah & Kartikawati, 2014; Munawara, Yasak, & Dewi, 2015; Hidayana et al., 2016; Miswoni, 2016; Hidayatulloh et al, 2018; Setiyawan, 2019).

Unfortunately, most families in Indonesia object when their daughters are referred to as old maids. Therefore, they did not hesitate to marry off their daughters at an early age. Also, there is a local culture that states that women are not allowed to refuse proposals may

cause the difficulty of the Indonesian government in empowering women, especially in freeing girls from the practice of child marriage. Because these practices hamper the development of young women in all aspects; physical, emotional and social. Their human rights have been violated therefore their options and opportunities are limited. However, the 1945 Constitution of the Republic of Indonesia mandates that every child has the right to live, to grow, and to develop and at the same time are entitled to protection from violence and discrimination. Thus, girls have the same rights as boys. However, due to the practice of child marriage, young women (wives) become objects of oppression and discrimination. Their rights have been limited or even deprived, especially the right to education and freedom. They are not even given the choice of determining their life partner.

## **CONCLUSION**

This study analyzes gender inequality based on the perspective of child marriage in Indonesia using a bootstrapped nonparametric approach to the two-way ANOVA. The bootstrap approach is applied to face problems in the basic assumption tests. To analyze gender discrimination in child marriage, this study focuses on the impact of gender and age group on Indonesian youth when they first married based on 2018 Indonesian youth statistics.

The results of the analysis show that the bootstrapped ANOVA approach can provide results with better accuracy so that it is appropriate to be applied to analyze the impact of the gender and age groups on Indonesian youths' first marriage. Overall, the analysis reveals that there is gender discrimination in child marriage in Indonesia. The results indicate a positive and significant influence of gender and age groups on the percentage of Indonesian youth who have married before the age of 19, which is the age limit for marriage for Indonesian citizen based on the Marriage Law Number 6 of 2019. The results of the analysis also reveal there is a statistically significant difference between male and female youth who are trapped in child marriage. It is found that young women are more prone to be trapped in child marriage cases than young men. Besides, the results also show that for the two age groups, which are less than 15 years old and the 16-18 year age group, it is also known that young women have more opportunities to be involved in child marriage cases.

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