Prevalence of Child Marriage and Its Determinants among Young Women in Indonesia

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ABSTRACT

In Indonesia, child marriage (marriage prior to the age of 18 years) has already discussed from various perspectives but little empirical research has been published due to its severe causes and effects that link to them. Through this study, we aim to calculate the prevalence of child marriage using SUSENAS 2010 data as a nationally representative data for Indonesia in 2010. Later on, we use cohort analysis to capture the child marriage profile in Indonesia. Using logistic regression we examine the determinant factor of being child marriage in woman aged 20-24 years old, whose still living with origin household as children. We find several variable that negative and positively affect the possibility of child marriage incidence. We found that child marriage in Indonesia is determined more by social and economic characteristics both within and surrounding the girls. Thus, the policy should focuses on how to create an enabling environment that evolve alternatives to child marriage.

Keywords: child marriage, determinant, cohort analysis.

I. INTRODUCTION

I.1 Trends in Ages of Marriages in Indonesia

Child marriage, or in broader definition early marriage, pretend to be social economic phenomena in many developing countries. Without regarding cultural aspects, economic motives shall be the main driver of early marriage. Around millions of adolescent woman, mostly in South Asia and Sub-Saharan countries, forfeit their freedom into marriage or any other form of union. In modern days, these sad pictures pretend to be unacceptable since in 2001 by the UNICEF, the practice of child marriage was classified as violation of human rights. The issue was no longer about "freedom" of but more accurately about health status and economic impact on a person, especially for woman.

Indonesia, in comparison to other developing countries in Sub-Saharan and South Asia, relatively has a way lower prevalence of child marriage. In recent development, the average age of married are declining no. It Jones and Gubhaju (2008) that there is significant drop in age of married in South East Asia including Indonesia. For instance, Indonesia and India has level of female mean age at married below 20 (Rizky, 2012). In nowadays, India and Indonesia female mean age at married becoming at below 25 years old level. Meanwhile, East Asian Tigers like Japan, Hong Kong, and Korea which started the level below 25 years old in 70's, recently appearing at almost 30 years old.

In Indonesia, using multiple data sources, Jones and Gubhaju (2008) shed light on how people in Indonesia making progress in delaying marriage time. If the causes remain debatable, whether it attributed to improvement in education or better well being in Indonesian families through years, the benefit already arose. Years of schooling for woman in Indonesia increased from 6.91 to 8.83 within four decades (1971-2010). Improved education for women followed by higher labor participation in the same periods. Overall, woman already more engaged to economic activity than in the past

The cultural and religion reasoning can be played some part in child marriage decision. However, the number of child marriage depicts low rate in any place in the world. Child marriage, basically, is not a natural behavior. Even in highly rated as India, the number of child marriage can be far away than less of quarter. Child marriage in terms of cultural and religious consequences, if this true, should be has larger prevalence as other customs already did. In regarding the cultural argument, it seemed to be cultural and religious view played as "permission" rather than "suggestive" role.

The other useful approach to see marriage pattern is by looking at Singulate Means of Age Marriage (SMAM). The concept is pioneered by seminal work of Hanjald (1973). SMAM measured only individual who aged between 15-50 years old on a given time of census data. The calculation in local and region level would be affected by short-term age's variation, migration pattern, and mortality. The rule of thumb is simply the lower SMAM lead to earlier marriage.

In Indonesia, it surprisingly unveiled that the age of marriage was went down. From 1971 to 2010, SMAM Indonesia surely arose. From 1971 to 2010, SMAM hikes from 19.28 to 22.17, meaning Indonesian woman delaying their married about 3 years later in modern days comparing to four decades before. However, surprisingly from 2000 to 2010, SMAM in Indonesia slightly increased. The hypothesis demands that more educated people should

delay the marriage. In Indonesia West Java has the lowest SMAM. In 1971, West Java has the lowest SMAM, 17.78. In contrast, DKI Jakarta has the highest SMAM, recorded at 25.21 in 2000. The number decreased slightly in 2010 at population 15-24 years old cohort. Interestingly, the number of never married woman arose from 1971-2010. As discussed before, SMAM is sensitive to demographic change. The decreasing number of SMAM attributed to decline birth rates in the same year due to successful birth control programs (KB) in Indonesia.

Indeed, the education enrollment picture in Indonesia displayed a positive trend through years, so that we can expect lower SMAM. Delaying marriage can also attributed to regional wealth perspectives. Looking at western and eastern pattern of child marriage, we can see that people in eastern part in Indonesia decided marriage earlier. However, the highest cases of child marriage are still in Java. It seemed to be reasonable if we looked at highlight concentrated poor people in Java Island. From this side, we can argue that child marriage in some extent has relation to economic and education background.

The discussion of child marriage continue to the question why they took marriage decision. As mentioned before, the economic and social status should be laid as the rationale behind. Studies on earlier marriage exposed that family wealth as the main motives of child marriage. Economics motives is the famous explanation if child marriage. In the similar way of thinking, the parents decide to have early brides as the solution of moving out poverty effort.

I.2 The Legal Aspect of Child Marriage in Contemporary Indonesia

According to the Law Number 1, 1974 on Marriage, in Chapter 7, verse 1, a marriage would be acknowledge legally if only female already older than 16 years old (for the man it is 19 years old). In other hand, as comparison, the definition of children as UNICEF recognized is all people under 18 years old. It implies child marriage is all marriage conducted under 18 years old in refers to UNICEF definition. Therefore, the national definition captures less child marriage incidence.

Other issue of starting analyzing child marriage phenomena is not only on definitive effort but also capitulating measurement concept. We understand child marriage was a dynamics phenomena, so that if we looking the data, moreover demographic data, usually we need to isolate the time dynamics to get the prevalence rate. Following the UNICEF (2009), the child marriage prevalence measure on group of women aged from 20 to 24 years old who first married or entered into union before age 18. Some UNICEF report alternatively using percentage of women age 15-19 who are married or union in the given time. However, this measurement will include 19 years old women who excluded from UNICEF's child definition. The second, it may include 15-17 years old woman who possibly shortly after get married.

Referring simply to the definition by UNICEF, we are interested to understand the child marriage phenomena on young woman. The using of UNICEF criteria is to capture larger portrait of child marriage. Thus, in order to have comparability with international experience. The comparability needed to understand the determinants to contribute more on general understanding of child marriage.

Later discussion revealed the importance of measurement as child marriage is a dynamic incidence. Accommodating the issue, cohort analysis approach should help us to understand the problem rigorously. We should ensure that the aspect of lifetime changing can be framed.

Presumably, there are changing patterns in child marriage both profile and triggering factors, before fetching more generalize conclusion.

The importance of age of married in young women is the role of women in social economic activities. The link between education and age married become importance since the education has lengthily discussed as economic driver. However, child marriage also comes with high cost both for the individual or as escalated to upper level, to national perspectives. The first negative impact is education cost. As later the woman decided to get married, essentially they moved out from education. The second negative impact is maternal health problem. From international experiences, maternal problems were the most worrying factor of child marriage. Evidences showed that child marriage led to higher risk of maternal birth. "Pregnancy-related deaths are the leading cause of mortality for 15-19 year old girls (married and unmarried) worldwide" (UNICEF, 2001). The third reason is vulnerability of woman due to both sexual and domestic violence (UNICEF, 2005). Young brides tend to have less bargaining power within the household and may be viewed as the property of their husband.

Our study objectives, as we already discussed, aimed to giving clearer picture of child marriage in Indonesia and what determined it especially from women perspectives. We focused on social and economic factors which can underlay the decision to married at early age. Wealth status, education level background, and external factors somehow are the main causation of child marriage. In order to leap their wealth status or at least helping the origin family wealth status, young woman chose to be married. The decision also highly influenced by limited information of the cost of child marriage which linked to their low education level.

The important thing we pursue is significant change from the policymaker prior to our finding. We expect that Indonesia has better Marriage law who equally met international standard. Besides, the policies related to child marriage also need to be invented.

II. LITERATURE REVIEW

II.1. Previous Empirical Studies and Theoretical Framework

Most of the literatures on child marriage are basically derived from empirical studies concerning for girls in some developing worlds. In terms of gender concern, the practice of child marriage is not as widespread among boys. This may be due to a traditional hypothesis that girls are often being used as an assurance to save the family from financial woes through the practice of child marriage. However, to date, girls become the center of attention in fact much discussions rely on the aspect of consequences. Many of the consequences starting from physical aspects associated with childbirth, status and power in the household, are specific to girls (Jensen and Thornton, 2003). Johnson-Lans and Jones (2011) investigate child marriage among girls in the issue of child preference absenteeism. In the rural customary of India, parental decision plays a larger role in determining marriage, specifically for their daughters. The girl being married has no choice in either whom she marries or the timing of her marriage. Parents use early female marriage for their daughters as a mean to protect family norms because they are forced by the fear of the effect of late marriage for the girl and the family (Sarkar, 2009). Having an older unmarried daughter means a loss of social status as well as additional monetary costs to the family (Johnson-Lans and Jones, 2011).

In terms of geographic concern, countries in Asia and Africa are often appeared as its cope of study because the practice of child marriage among girls is common in such countries. Data from 40 Demographic and Health Surveys around the world reveals that overall 20-50% of women marry or enter a household formation by age 18, and is most prevalent in Sub-Saharan Africa and in South Asia (Singh and Samara, 1996).

Though the universal and early marriage have been a characteristic of almost all of Asia, child marriage is still common in South Asia, but not in South-East Asia, with the exception of some of the Malay populations of Malaysia and Indonesia. Meanwhile, key difference between child marriage pattern in South Asia and South-East Asia resides in the kinship system (Jones, 2010). The system that produces child marriage is a strongly patriarchal and traditional one in which parents arrange marriage. The Hindu system in India emphasized the absorption of the bride into the husband's family, whereas the bilateral kinship systems of most South-East Asia allow much closer association of the bride with her affine, and a pattern whereby the newly married couple more commonly lived first with the bride's parents rather than the husband's parents, before establishing an independent household.

Determinants of child marriage among females are presumably believed as the factors behind female transition to marriage. Several researches are conducted in determining female age at first marriage. Lung Vu (2009) finds that education, place of residence, wealth, current age, region, and ethnicity are significantly related to age at first marriage in Vietnam while Agaba et al (2011) indicates that educational attainment, religion, district of residence, and birth cohort are strong socio-economic determinants of first marriage in Western Uganda. Both of these studies boldly underline the influence of educational attainment of girls in determining their age at first marriage. This finding is also supported by Manda and Meyer (2005) who find that women with higher levels of educational attainment are far more likely to enter marriage at later age than those without any or with little education, given of different model to approach. This confirms that the issue of development, in which the extended education for girls take place, provides a clearer explanation on why child marriage happens mostly in a lower educated girls characteristics (Jones, 2010; Jensen and Thornton, 2003; Singh and Samara, 1996)

Specific studies investigating the determinants of child marriage are conducted mostly in developing countries. In India, Johnson-Lans and Jones (2011) examines the relative importance of economic and social factors in determining the probability of a girl becoming a child bride. The findings reveal that economic factors is way behind social conformity in explaining child marriage as none of economic variables such as household income, poverty status, and land ownership significantly affect the probability of child marriage in rural India. Qualitative study from Ghosh (2011) in West Bengal divides the causes of child marriage based on four different perspectives in a family; fathers, mothers, elders, and daughters. Fathers and elders are found to put poverty as the first order of preference for the cause of child marriage. Findings from qualitative studies on moving out of poverty in Indonesia also revealed that marriage is sometimes used as a way out of poverty (Febriany, 2005; Febriany, 2006). Mothers and daughters put perceptions that marriage is essential and lack of awareness respectively as the first order of reference. Sarkar (2009) uses logistic regression analysis in order to find determinants of early marriage in Bangladesh. His study shows that education, working status, husband's education, and places of resident exert the significant effect on early marriage. In case of Indonesia, Savitridina (1997) indicates that women's education, work status before marriage, husband's education, and current residence are the predictors for early marriage in Java, with education as the strongest one.

Basic theory of girls' transition to marriage are modeled in the theories of economic independence, the local marriage markets, and cultural theories of marriage timing (McLaughlin and Lichter, 1997). Economic independence theories suggest that as women's education and earnings increase they will be less reliant on marriage for economic support and that women with greater economic independence will delay marriage. This supports for an attempt to explain the theory of modernization on changing marriage pattern (Goode, 1963). Goode states that global industrialization has brought the family systems in developing world toward the European norm. People with higher social status tend to get married late since they want to have more freedom during modernization process. They who were born and live in big cities are more likely to marry later than those living in rural area or small town. This hypothesis may be a result of greater diversity in life and little social control in big cities than in rural areas. Second theory, local marriage market, is defined as the availability of possible spouses and how that influences marriage timing. This becomes the basis for marriage market explanations of marital timing. Areas where there is a greater availability of unmarried men, especially men with high levels of education or good jobs, should encourage women's marriage. Lastly, cultural explanations of marriage suggest that family background, attitudes toward women's roles, and beliefs about marriage influence women's decision to marry.

II.2. The Decision to Marry and Social Influence

In Indonesia, discussion of child marriage is still less compared to other countries in Asia. Besides the fact that the practice of child marriage is less common in Indonesia than in South Asian countries, also because the trends of traditional arranged marriage which brings child marriage occurs has been weakening over the decades. In Jones (2010), it reflects at the significant behavioral changes in the hands of parents or older generation and in particular by males of the older generation. Rather than one brought on by revolutionary means, it is seen as a voluntary changes due to its relation on the development. Development includes the development in education, increasing urbanization, and involvement of women in the market sector outside the household, among other things--which in a common perception are often referred to in the local dialect as "changing times" or in Bahasa Indonesia, *perubahan zaman*.

Despite the increase over time in age at marriage, the fact remains that early marriage among girls still occurs in Indonesia. It is interesting that the provinces of Java, which used to be in the list of provinces with lower age at marriage, are not as conspicuous as they used to be (Jones and Gubhaju, 2010). The example is West Java province, which used to have the lowest age at marriage of all, but has now been surpassed by a number of other provinces. One might speculate that this is because of the separate province Banten from West Java. However, since early marriage in Banten is less common than in the rest of West Java, the reason therefore stretching in the pattern of lower age at marriage among West Java population. There are two important elements influencing the pattern of population, the first one is the impact of cosmopolitan factors such as a more mixed population from different cultures and ethnics, greater contact with foreigners, high exposure to mass media, higher average education level, and a wider opportunities for women in the market sector. The second one is because of the surge movement of large numbers of citizens from metropolitan city, Jakarta, into the suburban areas which lie side to side with Jakarta. Most of the suburban areas are included in the provinces of West Java or Banten.

The remarkable developments in education, increasing urbanization, and involvement of women in economic activities outside the household may not result only to the falling of child marriage in Indonesia, but also to the pattern of marriage decision among girls. Parents who are the ones considered as the decision maker, may no longer be a single factor. Characteristics of parents are still decisive but other indicators including the characteristics of daughters or individuals who were married as a child and socio-economic indicators inside as well as outside the family may give a greater impact to the girls' decision to marry.

We do not use parental decision as a single source of factor like countries of India did simply because the socio atmosphere of marriage in India and Indonesia differed. In India, it has been known that child marriage appears as the activity of parents arrange marriage for their daughters with the same level of caste spouses (Johnson-Lans and Jones, 2011). Since the ones who often gather socially in the same caste level group are parents, so that parents play a larger role in determining the practice of child marriage in India. Spouses should not come from the same village but the Hindu system of caste level forces the marriage market in India will be only matched if they come from the same level of caste. In fact, this is not similar to happen in Indonesia. Though that parents still remains to arrange marriage, but there is no exact rules that have been traditionally constructed in Indonesia whether the spouses should come from the same strata or not. This is also forced by the fact that there is no clear division of strata in Indonesia like India has.

Therefore, we still put parental decision as a possible factor of child marriage since the daughters have limited information and authority in determines what is best for her life. The agency problem occurs in this scheme is explained as parents make decisions for their daughters about when and whom to marry but they do not fully internalize the costs of those decisions. For instance, if parents choose to decide a marriage of a pre-adolescent girl without considering how such a marriage will affect her current or future well being, they may select a lower age of marriage. This will create parents to gather more information in determining what is best for her daughter's life or what is best for the family or the combination of both daughter's life and the family.

To estimate the determinants, we assume that parental decision is both constrained or rooted by a number of factors which vary across households and villages, including the characteristics of the daughter itself and surrounding influences nearby households (i.e. the proportion of child marriage within village and the availability of spouses) that turn to be an accumulated factors of the decision to marry.

The inclusion of social influence variable, as defined as the proportion of child marriage within village, captures the potential effect of village-specific norms which relate to the custom of child marriage. Social influence is more likely to affect individuals when they have few information sources. Parents observe the marriage decision for their daughters and consider this information when making decisions about the timing of their own daughter's marriage. We therefore predict that the probability of a girl becoming married below the age 18 years old is positively correlated with the prevalence of child marriage among girls in the same village.

III. DATA AND METHODOLOGY

III.1 Data

To answer the question about the determinant factors of prevalence of child marriage, this study use The National Socioeconomic Survey (SUSENAS) provided by Center Board of Statistic (BPS). SUSENAS is annual socioeconomic survey that conducted by BPS.. SUSENAS 2010 cover 293,715 households that spread in 33 provinces in Indonesia.

This study use SUSENAS 2010 raw data as our main data source and then we extract variables that will be used in child marriage analysis. We define child marriage as UNICEF reference that define child marriage as a marriage are conducted by man or woman under 18 years old. Then, we restrict our samples only in child marriage by women. We exclude child marriage by men because it prevalence is too small.

In regression model analysis, we also restrict our analysis by age group. UNICEF has two standard age groups that usually used to analysis prevalence of child marriage. The first age group is 15-19 years old and the second one is 20-24 years old. We decide to used 20-24 years old group as our based line in analysis. We did not choose 15-19 years old group because it has two main weakness. The first one is that it measurement will include 19 years old child that actually did not include in UNICEF's child definition. The second is that this age group has possibility to exclude 15-17 years old woman shortly get married. After restricting our samples according pervious criteria total observation that are included in our analysis are 468,770persons.

III.2 Methodology

This study use Logistic Regression (Logit) to find keys determinant of prevalence of child marriage. Logit is estimation method which accommodates the use of qualitative value as dependent variable. We assume that even there are another method to analyze qualitative value as dependent variable in a regression model like probit, we keep use logit as our method. Logit and Probit has the same method and there are no compelling reason to use logit or probit to analyze this problem. In practice, most of researcher use logit in their study because logit is simpler mathematical aspect than probit (Green, 1990).

This study define prevalence of child marriage as categorized variable, 1 if the there is prevalence of child marriage and 0 otherwise. The Logit Model that used in this study given by:

$$logit(p) = ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + .. + \beta_n X_n$$

Where X_1, X_2 and X_n are determinant variables are household head age, household head education level, household economic status, household head job status, household literacy, household electricity, household cooking method, number of schooling child in house, respectively and p denote the probability of prevalence of child marriage.The following is brief description of characteristic of variables used in the analysis:

No	Variables Name	Description	Classification
1	child_marr	Prevalence of Child Marriage	1 -> Child Marriage, 0 -> No
2	ln_exp_cap	Log natural of Per capita Expenditure	Continous
3	h_pcfloor	Per capita Floor Area	Continous
4	i_internet	Access to open informatio	1-> Yes , 0 - >No
5	i_nethp	Access to internet through mobile phone	1-> Yes , 0 - >No
6	I_warnet	Access to internet through internet cafe	1-> Yes , 0 - >No
7	h_hhagr	Household Head Jobs: Agriculture	1 -> Agriculture, 0 -> Other
8	h_hhind	Household Head Jobs: Industry	1 -> Industry, 0 -> Other
9	h_hhage	Household Head Age	Continous
10	h_hmale	Household Head: Man	1 -> Other, 0 -> Male
11	h_hhsd	Latest Educ. Attainment: SD	1 -> HH Head is SD, 0 -> Other
12	h_hhsmp	Latest Educ. Attainment: SLTP	1 -> HH Head is SLTP, 0 -> Other
13	h_hhsma	Latest Educ. Attainment: SLTA	1 -> HH Head is SLTA, 0 -> Other
14	h_nchildsd	Number of Children, SD	Continous
15	h_nchildsmp	Number of Children, SLTP	Continous
16	h_nchildsma	Number of Children, SLTA	Continous
17	h_nchilddip1_s3	Number of Children, D1 - S3	Continous
18	h_lighting1	Type of Electricity: PLN and Non PLN	1 -> Electric PLN - Non PLN, 0 -> Other
19	h_fcook1	Type of Fuel for Cooking	1 -> Gas/LPG, 0 -> Other
	h_healthcare	Recipients of healthcare program	1-> Yes , 0 - >No
20	e_childmarr	Proportion of 10 Years Old and Over Women who Marriage in Village	Continous
21	e_rjk	Sex Ratio	Continous

III.3 Limitation of Study

Several limitations in this study needed to concern are the following:

1. We do not use the variable of religion and ethnicity as the determinants of child marriage since there is no available data in SUSENAS 2010 that covers these aspects. Otherwise, we only use the variable of proportion of people who marry at the age below 18 years old in the village level to reflect the influence of social custom surrounding the individuals.

2. Since we only focus to the individuals whose relationship with the household head is daughter and daughter's in law, the analysis is only focus to the individuals who were married at the age below 18 years old and still live with their parents. This also means that we do not include the characteristics of husband in the model. This is because there is no available data that can provide us to trace the child brides who live with their husband. But this limitation is helped by the characteristic of child marriage in

Indonesia that most of the bride who marry at the age below 18 years old still live with their parents after the marriage for some years before then living with their husband.

IV. ANALYSIS

IV.1. The Incidence of Child Marriage

We begin our analysis by providing the distributio figure of child marriage across Indonesia. Figure 4.1 display the distribution of woman aged above 10 years, who had child marriage based on SUSENAS 2010. The number of child marriage undeniably concentrated in Java, southern and northern part of Sumatera, and South Sulawesi. As the most populated, yet the main island of Indonesia, Java show two face of center of development. It is a center of growth but also has the largest poor population in numbers in Indonesia. From the total about 96 million woman who had child marriage, 59% of them lived in Java. In Sumatera, we have 21% and the rest its distributed quite equally. respectively from highest to lowest, on Sulawesi, Kalimantan, Bali, and the least numbers in Maluku and Papua.

Figure 4.1 The Map of the incidence of child marriage in woman group

Total
- 40,229 - 105,927
- 105,928 - 207,949
- 207,950 - 434,314
- 434,315 - 5,443,295

The practice of child marriage is alleged to happen more in rural than in urban area due to the different understanding on child marriage between these two places of residence. In rural areas, child marriage can be considered as one form of legacy from the older generation and this has been forced traditionally by the social custom whereby the child marriage takes its place. This turns out to be the case when marry as a child is quite common in rural society, given by the educational background.

SUSENAS 2010 data reveal that 64.2 per cent of female population aged 10 years above who ever married at the age below 18 years old reside in the rural area. Based on the age group, 78.4 per cent of girls aged 10-14 years old who married early live in the area categorized as rural (Figure 4.2). As the figure also illustrates, 71.0 per cent of female population aged 15-18 years old married as a child and live in rural area while for the age group 20-24 years old the number is 70.2 per cent. Child marriage in rural area also occurs at the age group 25-29 years old and 29 years above with the percentage of 70.4 and 62.6 per cent respectively.

Figure 4.2. Distribution of Child Marriage and Comparison Among Age Groups

Child marriage, place of residence, among female population aged >10 years old, 2010
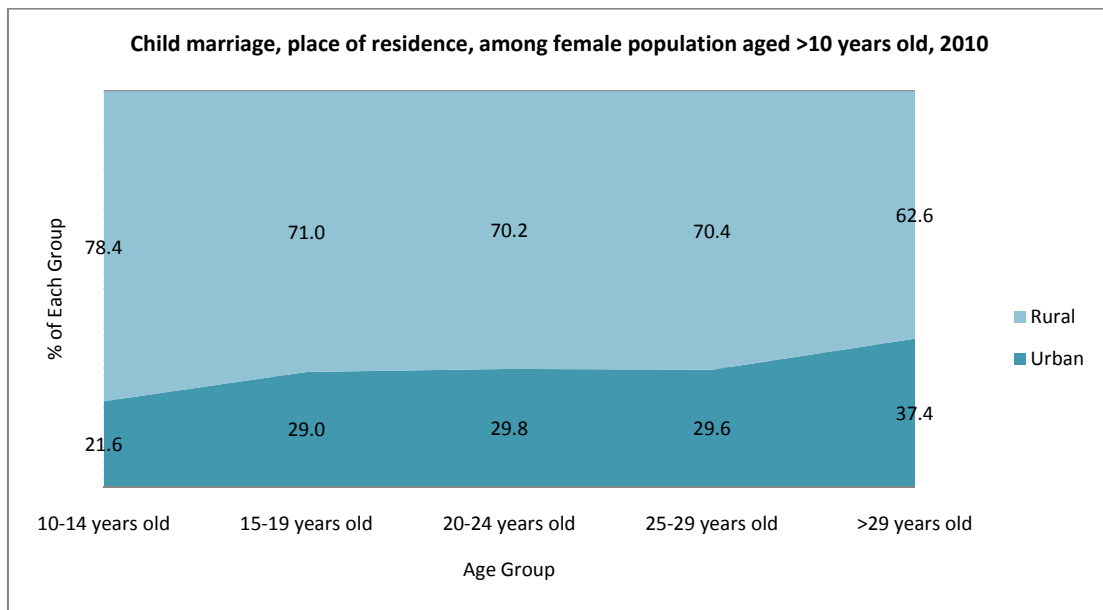
Source: SUSENAS 2010

While the overall percentage of child marriage in rural area for each age group always show a larger number than groups in urban area, interesting fact lies in the distribution for each age group between these two places of residence. There is a tendency that the percentage of child marriage in rural area decreases as the age rising. The figure of child marriage in this lower age group is not valid for the age groups in urban area. However, this can be meant also that most of child marriage in rural area happens at a younger age, meaning that the vulnerability of children in rural to the practice of child marriage is still higher, compared to children reside in urban area.

As Lung Vu (2009) states that poor people in Vietnam tend to get married earlier than people in middle and rich class, as well as some qualitative studies from Ghosh (2011) and Febriany (2005) and Febriany (2006) find that marriage is sometimes used as a mean to get out from poverty, we try to put economic condition as to observe the characteristics of child marriage. However, the cross tab analysis between child marriage and poor status using SUSENAS 2010 data show that 85.2 per cent of female population aged 10 years above who ever married as a child categorized as non-poor while the rest 14.8 per cent are poor.

Figure 4.3

.4%
0.2%

s old
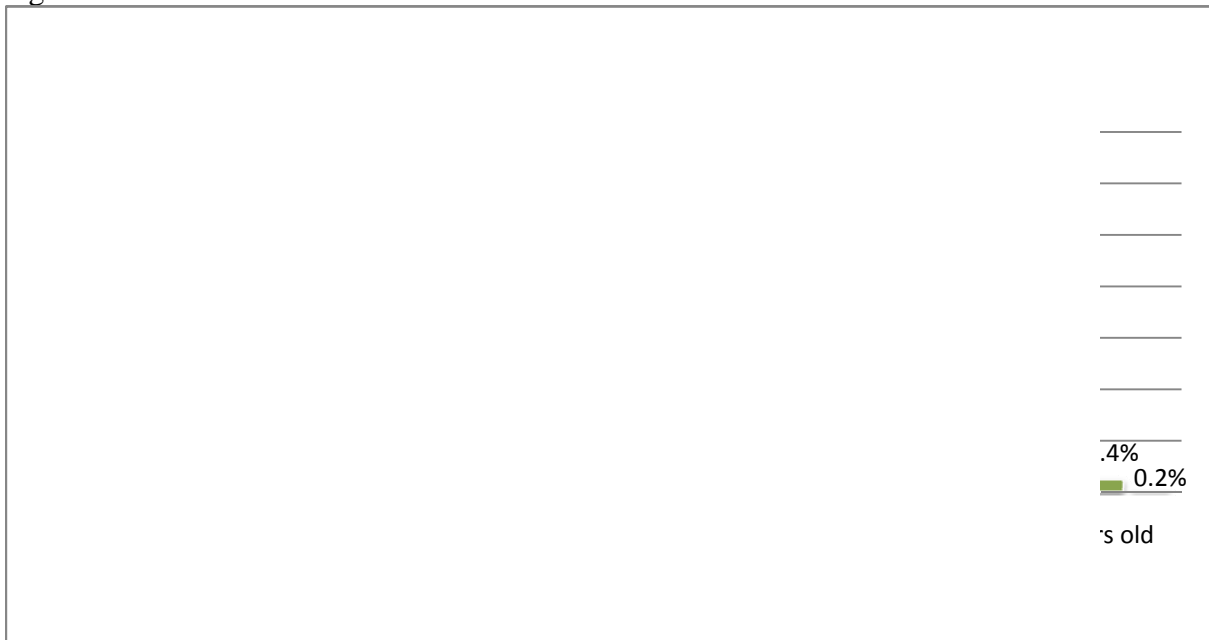
Another issue that related to child marriage is the lack of proper education. Due to their early marriage they lose their chance to afford better education. This issue not only related to child marriage condition but also will effect on their household health condition. WHO (2010) remark that health and education can go hand in hand specifically for women. for instance, a woman who have well-educated tend to have more attention to health care. Then they will become a better mother in the future, it is because they have more awareness of being healthy than less-educated woman.

Figure 4.3 explain child marriage women education level within age group divided into five level of education; Primary School, Junior High School, Senior High School, and Higher Education in 2010. Overall child marriage woman has low education level. Most of child marriage women attain primary and junior high school only. Among child marriage women that are 10-14 years old, 90.4% women attain primary and junior high school only. The percentage of child marriage women that attain primary and junior high school only within 15-19 years old group are 88.1% women, 20-24 years old groups are 89.1% women, 25-29 years old group are 91.1%, and >29 years old group are 72.8%.

Figure 4.4 Source of Energy in Child Marriage Figure 4.5 Source of Light in Child Marriage
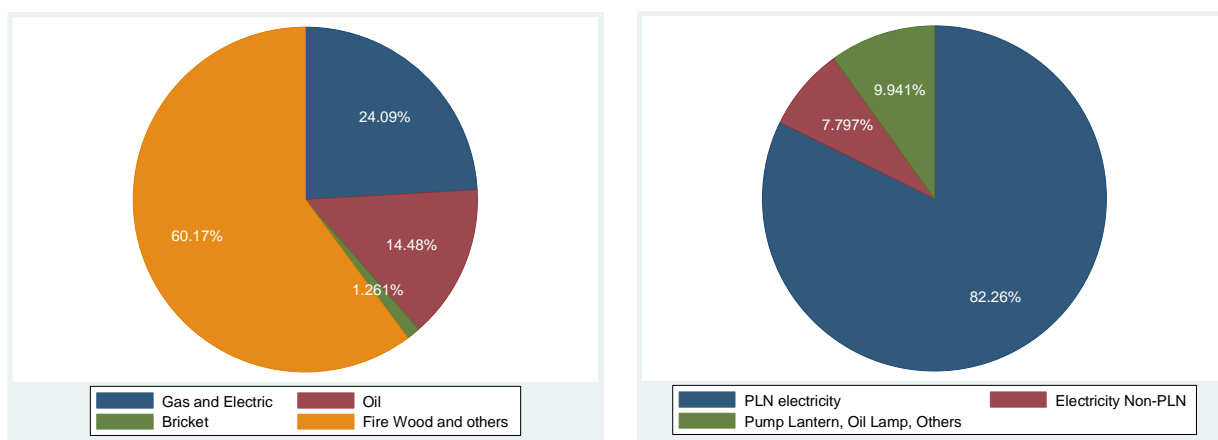Household   Household

Figure 4.4 and Figure 4.5 show us the household conditions of child marriage. From Figure 4.4, we know that 60.1% of child marriage household using firewood as the main fuel/energy source. It followed by gas and electric, oil, and bricket. The characteristic that shown interestingly represent the characteristic of typical poor household in Indonesia. The second figure show us the source of light of child marriage household. Around 82.26% of the household enjoy electricity from PLN (state-owned enterprise) as the main source of light. About 9.9% use pump lantern, oil lamp, and others as source of light. The rest are use electricity off-PLN as the source. The profile revealed that electricity is no problem to the households. However, electricity from PLN usage also describe the productivity of households since it strongly affect their off-day activity and technology mastery. Approximately 10% of child marriage household do not have access to electricity which would limit their productive activity.

IV.2 Child Marriage of Wealth Status

Figure 4.6 Welfare Status of Female Population Who Ever Married at the Age Below 18
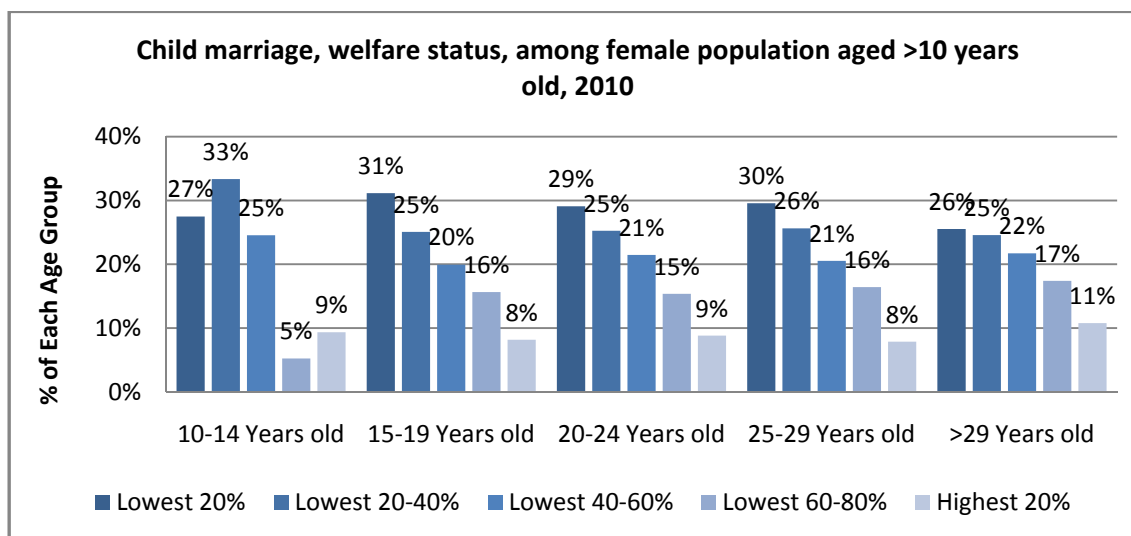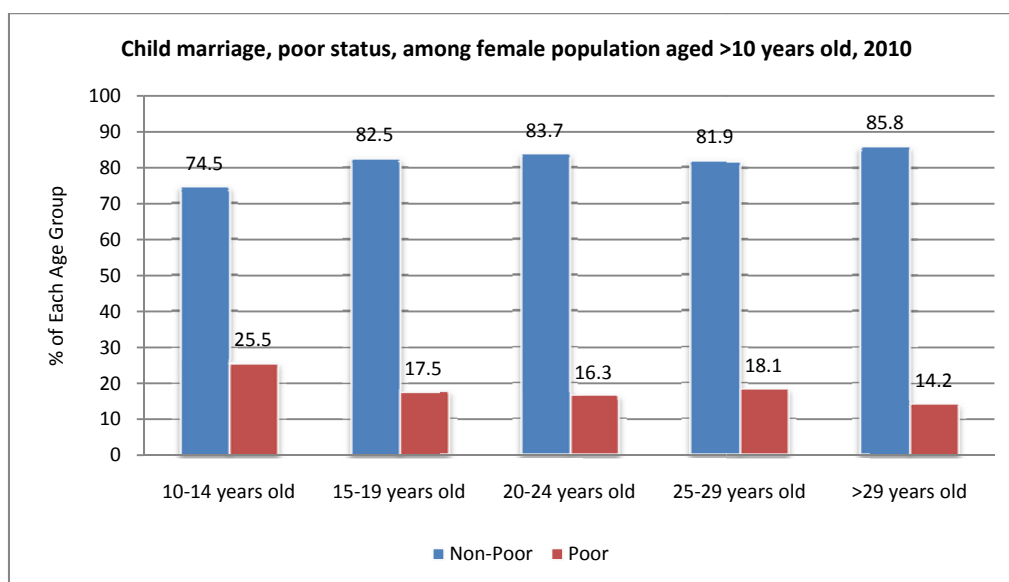

Source: SUSENAS 2010

One of issue that rise from prevalence of child marriage is they live in poverty. Child marriage especially by women has tendency to limited their economic capacity so they can afford better life. Figure 4.6 provide explanation of child marriage women economic condition within age groups and divide into five welfare status; lowest 20%, lowest 20%-40%, lowest 40%-60%, lowest 60-80%, and highest 20%. Lowest 20% and lowest 20%-40% welfare status are categorized as the lowest status and it reflect poor economic condition.

Figure 4.6 shows that most of child marriage women live in poor economic condition. Among child marriage women in 10-14 years old group, only 39% women live in upper three welfare status. The 61% child marriage women in this age group live two lower welfare status. In the 15-19 years old group, child marriage women who live in three upper welfare status are 56% women and 44% other live two other welfare status. Interestingly, the three age group tend to have similar trend. It can be seen from their three upper welfare status 0-24 years old around 46%, 25-29 years old about 45% and >29 years old just over 50%.

Figure 4.7. Welfare Status of Female Population Who Ever Married at the Age Below 18

Source: SUSENAS 2010

Figure 4.7 gives a greater explanation on the distribution of child marriage within age groups and the allotment of each age group into two categories; non-poor and poor status. Among child brides who were 10-14 years old in 2010, 74.5 per cent of them were categorized as non-poor. Only 25.5 per cent of them were coming from poor families. 82.5 per cent and 83.7 per cent of female population in the age group 15-19 years old and 20-24 years old respectively who ever married at the age below 18 years old are categorized as non-poor. In the age group of 25-29 years old, non-poor status is possessed by the 81.9 per cent of females at that range. Finally, for the age group 29 years above, 85.8 per cent of them experience child marriage and are categorized as not poor.

Higher difference of percentage of non-poor and poor status all over the age groups mean that child marriage is not only occur in the poor family. We cannot find whether this higher difference of percentage presumably believed as the impact of child marriage because then we need to observe the economic condition before child marriage takes its place.

IV.3 The Dynamics of Child Marriage

After looking to the current condition of child marriage in several age group, we are interested to see the intergenerational differences in child marriage households. We approach this problem by comparing broader age cohorts. We classify the group into ten years lag per each. Using a decade lagged age group we expected to obtain the dynamics aspect of being child marriage. This effort also useful to be proxy of seeing the impact of having child marriage in the future.

Table 4.2 Proportion of Young Woman Categorized as Poor, 2010

| Age Group | Categorized as Poor (%) | |
	Not Child Marriage	Child Marriage
<18	0.15	0.23
18-27	0.14	0.21
28-37	0.13	0.20
38-47	0.13	0.17
48-57	0.12	0.16
58 >	0.15	0.20

Source: SUSENAS 2010

Table 4.2 depicts the poverty rate of each cohorts regarding to marriage status. The poverty rate is defined as the proportion of people who classified as poor, using per capita expenditure basis on official national poverty line at districts level, represent to each age groups. In overall, we see that most people who had child marriage do not categorized as poor households. About 80% of woman are non-poor households. However, in non child marriages group, later we mention as adult marriage, we find similar relation. Poverty incidence is smaller also in each cohorts. . In adult marriage group we obtain similar poverty rate with national poverty rate. It support previous indication that poor status is not the main reason to become child brides. In the same way it show weak relationship between poverty and decision on married.

Nevertheless, we cannot neglect, if there is significant difference of poverty incidence between adult marriage group and child marriage group. At any cohorts, the poverty rate of people who had early marriages always higher than adult marriages group. For instances, in age group of below 18 years old, we have 15% of young women categorized as poor in adult marriage group, yet in child marriage group we have 23%. The difference signal, even though poverty is not the main driver of child marriage, the child marriage phenomena related to the wealth status.

The gap of poverty rate within each age group also vary between groups. The youngest age group shows larger difference of poverty rate between adult and child marriage. The poverty rate is about 50% higher at child marriage group. The difference between cohorts refers us to intergenerational aspect of early marriage. It imply that whether today's child marriage and past child marriage resulting on higher poverty rate possibility. Age cohorts is also important to see, so that we can shed light on the evolution of wealth status after doing child marriages. From the table, we argue that there is small significant change of wealth status overtime. It implies child marriage would easily lift up the prosperity of its brides. But , we still can see there is declining pattern of poverty rate as the age group getting older.

From the numbers, we learn at two important issues of child marriage. First, the decision of marriage supposed to be driven by initial wealth condition. If we see in youngest cohorts, we can conclude that more poor people decide to have earlier marriage. However, as a second findings, we can see the benefits of early marriages is unsure, as the motivation of early marriage is to lift up their livelihood.

Table 4.3. Education Status of Woman who had Child Marriage

Age Group	Elementary School		Junior High School		Senior High School	
	Total	%	Total	%	Total	%
<18 years old	880	1%	164	1%	93	1%
19-28 years old	7,517	12%	2,011	17%	1,262	13%
29-38 years old	12,770	21%	3,141	27%	2,399	25%
39-48 years old	14,739	24%	2,215	19%	1,770	19%
49-58 years old	12,014	20%	1,744	15%	1,420	15%
>59 years old	12,577	21%	2,234	19%	2,473	26%
Total	*60,497*	*100%*	*11,509*	*100%*	*9,416*	*100%*

Source: SUSENAS 2010

Table 4.3 above provides information about the condition of child marriage woman last education attendant in 2010. Overall, most of child marriage woman last education attendant are in elementary school level. The number of child marriage women who are in elementary school level are 60,497 women and this number decreases along with the increasing of level education. The number of child marriage women who are in junior high school level decreases by 81% (11,509 women) and for senior high school level decreases by 18% (9,416%).

Distribution of child marriage last education attendant by age groups show that child marriage woman who are in <18 years old group tend to be the lowest than other age groups. The number of child marriage woman who are in <18 years old group are 880 women for elementary school, 164 women for junior high school and 93 women for senior high school. In other side, the largest age groups in elementary school is 39-48 years old group with 14,793 women (24%), for junior high school is 29-38 years old group with 3,141 women (27%) and for senior high school the largest one is >59 years old group with 2,473 women (26%).

Table 4.4 Highest Education Level of Household Head

Age Group	Primary School	Junior Secondary School	Senior Secondary School	Higher Education
<18	0.33	0.43	0.22	0.02
18-27	0.33	0.41	0.24	0.02
28-37	0.34	0.35	0.26	0.05
38-47	0.36	0.27	0.31	0.07
48-57	0.57	0.14	0.22	0.08
58 >	0.51	0.25	0.16	0.09
Total	0.34	0.38	0.25	0.03

Source: SUSENAS 2010

Table 4.4 depict household head education related to child marriage for each age groups. Interestingly, we find different pattern on younger cohort and older cohort. People who had child marriage recently, mostly has slightly higher education level parents than older cohorts. In under 37 years old group, parents tends to have junior high school certificate. However, the proportion of parents with elementary certificate and junior high school certificate seemingly balanced. In older cohorts, above 50% parents only had elementary school certificate. The differences can be attributed to better education enrollment in Indonesia since 90's. People are easier nowadays to have education up to 9 years education.

Overall, lower education of household head lean to larger child marriage incidence. Lower education imply lower information and opportunities for parents for not let their children to early marriages. The simplistic reason that using marriages as a way out of poverty, partly understand with the cost of being child marriage.

IV.4 Estimation Result

The next effort of our study is to reveal the determinant of being a child marriage. Our strategy is using logistic regression model to obtain what factors that would lead a woman to decide to become child bride. We select several variable that capture individual aspect, household aspects, and social aspect. We believe, as a children, the decision of married would largely influenced by households characteristics. The household characteristics would capture both household heads profile and household physical characteristics. To examine social aspect, we use the prevalence of child marriage at village level and sex ratio in the same level. The idea is there is a tendency of being child marriage when there is more child marriage in the surroundings. It also came up as the proxy of cultural influence. The sex ratio try to explain if there is supply driven relationship, if there is more man would lead to more child marriage. As individual aspect, we use information exposure aspect rather than education attainment. First, we have variable that describe whether the young woman have more access to information. Second, we use variable which also represent other side of information which also has negative impact like internet from personal phone.

We restrict our cross sectional analysis to woman who had child marriage but still living with their parents as a child. Because we used only one period of time, we need to make sure that we would analyze the household origin effect on the decision to be married. The next challenge is defining which woman that we could analyze. Following the definition of child marriage prevalence we use woman aged 20-24. We isolates only on 20-24 age group because two reasons. First, if we include woman before 20, as our definition of child marriage, we would possibly miss the potential brides who presumably become child marriage in next period. Second, if we include woman after 24, most of the are separated away from household origins. Even though some of them have "children" status, the characteristics of household would possibly changed overtime. We also include the second group as comparison to the selected group. Overall, there is small different between first group and second group. However, later we would focus only to the first group,

Table 4.5 Logistic Regression Result

Independent Variable	Woman aged 20-24 with family status "children"	Woman aged 10-24 with family status "children"
ln_exp_cap	-0.157***	-0.119*
	-2.88	-1.65
i_internet	-1.566***	-1.099***
	-5.26	-2.9
i_nethp	0.505*	0.633*
	1.73	1.67
i_netwarnet	-0.343	0.496
	-1.42	1.55
h_pcfloor	-0.028***	-0.026***
	-8.74	-6.36
h_hhagr	-0.059	-0.045
	-1.15	-0.66
h_hhind	0.008	0.001
	0.11	0.01
h_hhage	0.007***	-0.022***
	2.92	-7.16
h_hhsd	-0.145***	-0.123*
	-3.01	-1.88
h_hhsmp	-0.106	-0.138
	-1.34	-1.32
h_hhsma	-0.161*	-0.100
	-1.75	-0.84
h_hhdip1_s3	-0.152	-0.278
	-0.86	-1.31
h_nchildsd	0.197**	0.224***
	7.4	6.23
h_nchildsmp	-0.114***	0.106
	-2.29	1.61
h_nchildsma	-0.284***	0.243***
	-4.9	3.16
h_nchilddi~3	-0.635***	-0.266***
	-6.08	-2.19
h_lighting1	0.035	-0.276***
	0.46	-2.62
h_fcook1	-0.283***	-0.314***
	-4.75	-3.92
h_fcook2	-0.006	0.003
	-0.09	0.03
h_healthcare	-0.136***	-0.218***
	-2.81	-3.33

e_childmarr	4.883***	4.978***
	33.95	24.33
e_rjk	0.134	0.125
	1.24	0.86
_cons	-1.089	0.926
	-1.55	1

*** significance at 1% level
** significance at 5% level
* significance at 10% level

The estimation confirms our hypothesis on the role of wealth status to child marriage decision. The household status or characteristics seems to be the major determinant of brides decision. The rising expenditure per capita proved to be responsible in decreasing the possibility of child marriage incidence. The wealth status also indicated by looking household head access to source of energy. The possession into gas and electricity as source of energy as proxy to wealth status of the households have negative correlation to the possicility of woman being a child brides.

The individual characteristics appear to be important as a driver. The information exposure variable confirm negative relationship to the incidence of child marriage. As the woman have better information access the tendency to be child brides decrease. However, the possession of internet through mobile phone positively related to the possibility of being child marriage. This variable indicates negative impact of irresponsible usage of technology which mislead the user into negative information.

Household head characteristics largely influence the decision of child marriage. For the beginning, the age of household heads negatively affects the child marriage incidence. As the household head gets older, her or she tends to delay the marriage of their children. The education status of households also significantly matters. Households with primary school education negatively reduce the child marriage. The other significant variable is household heads who earn senior high school degree, which also negatively related to child marriage. Other education level of a household heads only have weak relationship. However, we have negative relationship which are have larger impact alongside higher education

We found that working sectors of household heads are not related to the child marriage decision. It working status that lately emerges matter to child marriage. Households head who works on informal sectors inclined to bring their children into early marriages. The findings represent the role of wealth status into child marriages, since we knows that informal sector offers less than formal sectors in common cases in Indonesia.

Besides the household heads characteristics, the characteristics of the households background alone also significantly affect the decision of child marriage. The child marriage also related to numbers of household members enrolled to certain education level. As the number of household member in primary school's age increase, the probability of being young brides also increase. reversely, an increase on children enrolled in higher education decrease the probability of early marriages. It explain two things. First, the higher numbers of household member on higher education represent higher economically productive member who can help the household heads. Second, it also related to better informed household member since they have higher education siblings.

We also examined possible external factors of child marriages using several variables. First, we use the prevalence of woman who had early marriage on village level as a proxy of environment impact on marriage decision. The result provide a positive relationship between the prevalence of woman married early and the probability of an individual do the same thing. It also can indicates the importance of custom in society that led personal decisions. Second, we use the number of adult male as another environment impact. From our estimation, the availability of adult male do not related to the possibility of being child brides. Last, the external factors come from government aid. The healthcare insurance have negative impact to the possibility of being child marriage. Household with access to healthcare programs tend to influence the young woman household members to have child marriage

The main variable in this model is expenditure per capita. We are not using poor status at the same time because of reverse causality possibility. However, we tried also using the poor status, replacing the expenditure per capita, and found poverty status has positive relation to the possibility of young woman becoming child brides. The other set of variables has no big difference in terms of the direction sign. The result is not shown on the table above.

V. CONCLUSION

V.1 Conclusion

Through this study, we aim to calculate the prevalence of child marriage using SUSENAS 2010 data as a nationally representative data for Indonesia in 2010 and the result shows that the prevalence of child marriage in Indonesia is 13.5 per cent. This number comes from the calculation of female population aged 20-24 years old who indicated that they were married or in union before the age of 18 per total number of women aged 20-24 years old.

In this study, we use age cohort 20-24 years as the measurement of child marriage based on two reasons.[1] Firstly, the percentage of girls aged 15-19 who are married or in union at any given time includes girls who are 18 and 19 and they are no longer children (according to the definition of children based on the international accepted definition). Secondly, if we use an indicator based on the age cohort 15-19, this includes girls aged 15, 16, and 17 who are classified as single, but who could eventually marry or enter into a union before the age of 18. In terms of these limitations, we use age cohort 20-24 as the object of study to analyze child marriage because we assume that it is not affected by these limitations and a more accurately estimates the real extent of child marriage.

However, in order to give a bigger picture of the prevalence of child marriage in Indonesia which considers several numbers of age cohort, we also present a calculation of the prevalence of child marriage for the other each age cohorts. The prevalence of child marriage for the other each age cohorts is 0.09 per cent for the age cohort 10-14 years old, 7.3 per cent for the age cohort 15-19 years old, and 28.5 per cent for the age cohort 29 years and above. The increasing percentage of child marriage prevalence as the age cohort raises is due to the fact that the practice of child marriage is decreasing over time but again, this is limited to the composition of female population who were in those age cohorts in 2010.

Other than the prevalence of child marriage, we also aim to find the determinants of child marriage in Indonesia. Based on previous studies regarding child marriage in several countries, we modeled that the determinants of child marriage in Indonesia is also influenced by three aspects. The three aspects are the condition of individuals, households, and society.

Using logistic regression, we find that there is a negative correlation between child marriage and income per capita, exposure to the media through the internet, floor per capita, education of household head, number of children in a family who are in high school and higher education, source of a family to cooking, and access to the free healthcare. We find also that there are positive correlation between child marriage and the use of internet through cellular phone, age of household head, number of children in a family who are in elementary school,

V.2 Policy Implication

The presence of law on marriage in Indonesia has been proven to be no impact at all. It has been statistically confirmed that although the law restricts girls to marry below 16 years old, the fact unveils that many still marry below that age. Even more to the definition of child marriage based on UNICEF concern (below 18 years old), the prevalence is outnumbering on the surface. This means that the decision of girls to marry does not necessarily include the

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[1] This measurement is also used by UNFPA Ghana (2012) in the published report of *Marrying Too Young: End Child Marriage* as the measurement to analyze child marriage.

legal aspect of marriage. Child marriage in Indonesia is determined more by social and economic characteristics both within and surrounding the girls. Thus, the policy should focuses on how to create an enabling environment that evolve alternatives to child marriage.

As the findings of this study reveal that some elements of the three aspects of children's lives, particularly girls, significantly related to the prevalence of child marriage among females in Indonesia, we aim to suggest that the policy must be made in the frame of these aspects. Policies need to reach into the individuals, households, and communities because child marriage is not determined by a single source of factor. One might say that increasing school enrollment of women and girls can contribute to a postponement of the age at marriage among them, but this can only affect if there is a greater presence of school in the society and the understanding of the family on the importance of education. Therefore, forcing people to school per se will not prize the problem of child marriage unraveled.

Yet, there is no one size fits all policy. The upcoming policies then must be developed from the view point of each purpose. It should be kept in mind that child marriage comprises a part of social tradition and the absence of knowledge on the problem of child marriage. For that reason, the strategy needs to be continuous and extensive. In order to make it continuous and extensive, policies consist of preventive and protective action strategies is needed. Both of them constitutes a set of strategies that is not only aimed to reduce the prevalence of child marriage, but also to maintain its prevalence.

The preventive and protective action strategies of individuals must be started through an understanding that child marriage is perceived as 'their problem'. This is then should be maintained by parents through a condition of a stable family life (material and non-material) and supported by the key stakeholders in the community to resist the prevailing social forces. Finally, it is also critical to have a top-down action from government in providing a strong social and economic foundation. This can be done through a larger package of social and economic policies that promote marital, educational aspirations, and needs of low-income families.

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