Norms in Transition?
The Relationship between Education and Singlehood

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ABSTRACT

This article examines the role of education in the likelihood of being never married among older adults in Indonesia. Following the Multiple Equilibrium Framework, our paper argues that increasing education imposes a more common trend of singlehood since marriage continues to be a near universal norm in Indonesia. Previous research found that increase in education delays marriage, but few studies have paid attention to the role of education in the decision to stay single. We use Indonesia National Socio-Economic Survey or SUSENAS 2007 and 2017 - two datasets with ten years span - to see whether there has been a change in the effect of education on the probability of permanent singlehood among women and men aged 40-65. The result from the logistic regression confirms a U-shaped relationship between education and singleness propensity. Our key finding is that an additional year of schooling reduces the probability of being single up until senior secondary level, while having education beyond high school increases the probability of being single. Our result implies that traditional norm towards gender role remains strong in Indonesia. We also find that both highly educated women and men have similar likelihood to stay single in this setting.

KEYWORDS: Singlehood | Educational Gradients | Marriage

PREFACE

Singlehood is a growing trend in Asia. In Indonesia, the share of never-married population in the age group 40-65 years increased from 4.26 to 5.3 percent between year 2007 to 2017 (authors' own calculations from SUSENAS 2007 and 2017). Previous studies have shown that the increasing phenomena of singlehood is especially driven by urbanization as well as improvement in women's education and economic participation (Berg-Crossi et al. 2004, Ibrahim and Hassan 2009, Isiugo-Abanihe 2000, Koropeckyj-Cox and Call 2007, Tanturri and Mencarini 2008). Although marriage continues to be a near universal norm in Asia, earlier studies had provided evidence of the increasing likelihood for highly educated women to be single as they postpone marriage to pursue higher levels of education (Benokraitis 1999, Situmorang 2005).

Indonesia is no exception in this increasing trend of singlehood. Despite the persistent prevalence of child-marriage (Badan Pusat Statistik 2020), the proportion of single women at ages 25 to 44 increased gradually from 11.3 % to 12.6%, while the share of single men increased from 2.2% to 2.7% between 2015 (Badan Pusat Statistik 2016) and 2017 (Badan Pusat Statistik 2018). Compared to other Asian countries, Indonesia's singlehood is the lowest and has been increasing the slowest (Himawan, Bambling and Edirippulige 2017).

In this paper, we define education transition as the increasing education attainment among adult population over the last ten years. Indonesia's achievement in improving education is marked by the increasing percentage of adult population with secondary and higher education, from 6.5 to 7.8

percent between year 2007 to 2017 (Badan Pusat Statistik 2016; Badan Pusat Statistik 2018). Instead of stirring the choice to singlehood or unmarried, the educational transition seems to work as to delay the timing of marriage among women (Setyonaluri 2014). Indonesia Demographic and Health Survey (IDHS) 2017 recorded only a steady increase in the median age at first marriage from 17.7 years to 21.8 years between 1991 to 2017 (BKKBN, BPS, Kementerian Kesehatan, & ICF 2017). The median age at first marriage among women with secondary education has been stagnant during the same period and it even had a slight decline from 23.5 years in 2002 to 22.6 years in 2017 (BPS 2017).

This paper examines the correlates of singlehood in Indonesia. It particularly seeks to answer whether having a higher education has a different effect on the likelihood of being never married among individuals aged 40-65 between 2000 and 2017. We argue that education transition within the ten-year period does not have a significant effect to shift in the marriage norm in Indonesia. This will be reflected in the small and relatively u consistent effect of higher education on the probability of never married.

LITERATURE REVIEW

Attitudes and norms toward marriage today has a different meaning as compared to 50 years ago. The increasing trend of singlehood and delayed marriage in Asia indicates the freedom among younger generations to exercise more authority to their major life decisions. However, the decision to marry or not to marry is determined by a range of complex and intertwined factors, including education, aspiration towards labour market participation, and family conditions (Situmorang 2007).

The literature on marriage and family change in Indonesia asserts the importance in the rise of education level in affecting the decision to marry among women (Hull and Hartanto 2009, Singarimbun and Manning 1974). Higher education equips women with more agency, authority, and independence to find partners. Following the hypoth-

esis from Becker's assortative mating argument, well-educated women tend to find their preference or prefer men with the same or higher education level than themselves. Such preference seems to be evident among women in Asia, including Indonesia (Malhotra 1997). However, rising educational attainment among women also increases the delay in marriage and singlehood since women are not able to find men who share the same values, particularly about shared childcare and domestic work (Hull 2002, Quah 1998).

For men, higher education poses as an advantage for finding partners. In Becker's Theory of Marriage (1981), individuals decide to marry if the complementary utility of both partners is higher than each of them. Partners with a higher income potential, reflected by higher education level, will specialize in labor market, while those with lower income potentials will specialize in home production (Becker 1981). Since education equalizes the potential earnings between men and women, this means that higher educated women face a tighter marriage market where they have to compete for men with better potential earnings (Kalmijn 2013).

A substantial number of demographic studies have increasingly focused on the drivers of delayed marriage rather than the correlates of singlehood. However, their findings still provide a useful overview, particularly to understand the role of education in the decision to marry. The majority of studies show that a woman's education has a positive association with age at marriage in both developed and developing countries (Abeynayake, Bomhoff and Lee 2012, Chowdury and Trovato 1994, Shirahase 2000). Education works to decelerate the timing of marriage in two ways: attending higher education has a direct effect in delaying the timing for marriage since it creates a conflicting role for being student and a wife/mother: schooling is time consuming, and it increases the opportunity to join the labour market, which could suspend the marriage timing further on since work and family are incompatible (Bracher and Santow 1998, Smith, Stone and Kahando 2012) . Education, followed by employment, will also extend the time to

find the right partner (Jejeebhoy 1995; Jones 2004).

Studies on the determinants of marriage in Indonesia provide slightly different findings when compared to other countries. Using Asian Marriage Survey 1979-1980, Malhotra (1997) finds that education is significant in delaying marriage only for women in urban areas. Sundaram (2006) finds that both education and participation in labour market increases the odds to marry and concludes that women would enter marriage when they are "socially ready", as determined by their employment status.

According to Situmorang (2005), marriage is still an important institution especially for most women in Indonesia. Unmarried people are often considered "incomplete" even though they have a good career or education. Situmorang (2005) noted that most of never-married women are involuntarily temporary and stable singles. They did not choose to be single and were willing to get married if they found their soul mate.

Marriage is still a universal norm particularly in some large populations of East and South-East Asia, including Indonesia and China (Jones 2005). In urban Indonesia, the dating trends indicate the popular practice of self-choice marriage (85% of respondents) in Greater Jakarta, compared to only 4 percent of respondents who had an arranged marriage (Utomo et al. 2016). They noted that most of young adults with higher education found their spouse based on their educational levels. In addition, as they focus on their education, tertiary educated young adults have longer duration of dating than those with lower levels of education.

Furthermore, higher education does not only affect the age of first marriage by keeping men and women in school longer but it also increases the opportunities to find quality potential spouse (Hull and Hull 1987). This implies that higher education could be a signal of "better" traits in terms of future income of the potential spouse.

The multiple equilibrium framework from Esping-Andersen (2009) and Esping-Andersen and Billari (2015) provide an explanation on the nexus between gender norms, education and decision to marry. Drawing from cross-country comparison of gender role, partnering, fertility as well as marital stability across European countries between 1980-2010, the framework hypothesizes a u-shaped relationship where the degree of egalitarianism of gender norm determines the likelihood of singleness. Higher degree of singlehood is present in a setting where traditional male-breadwinner norm is dominant, particularly when there is no "significant adaptation" to the revolution of women's role. In a situation where gender egalitarianism is pervasive, the likelihood of marriage or partnering is expected to be higher. Under this setting, men are more adaptable to new roles of women as well as more willing to contribute to domestic work. This means that highly educated women face less tighter marriage market since finding partners with similar values is relatively easier.

Gender role attitudes is associated with "educational gradient" to enter unionship (Bellani, Esping-Andersen and Nedoluzhko 2017). For men, the traditional male-breadwinner setting is associated with the decrease in the likelihood of being single for those with higher education and vice versa. For women, conservative gender attitude means that low educated women would face higher economic price while high educated women would face higher social price to remain single. A gradual change in attitudes to gender roles would shift the singleness phenomenon. In the context where the gender norm has started to shift, the progressive achievement of women in education and economic participation are not followed by male's adaptation to domestic sphere. Highly educated women are likely to find marriage less attractive and shall continue to stay single as they expect greater incompatibility between work and mothering. However, when women became less reliant on men's income, low-educated men are likely to benefit and have a lower likelihood to be single permanently. Education gap in singlehood is expected to narrow in the context where gender egalitarianism becomes a norm. Higher educated women as well as low educated men would have better chance of partnering as compared to the traditional settings.

Despite the development and narrowing gender gap in educational achievement, being single is still viewed as not ideal in the prevailing marriage norm in Indonesia. Culture and norms continue to limit singlehood as a life choice for women and men in Indonesia (Himawan, Bambling and Edirippulige 2018b). The label "*Perawan Tua*" or old virgins shows that single women receive a stronger stigmatization as compared to single men who are seen as accomplished and still able to have children. The negative stigma ignites the feeling of inadequacy, poor self-esteem, and inadequate feelings of self-competency. Single women are too selective or self-oriented (Himawan, Bambling and Edirippulige 2018a; Himawan, Bambling and Edirippulige 2018b; Situmorang 2007).

Religion also plays a significant role in shaping the norms towards permanent singlehood. As one of the largest Moslem countries in the world, most of Indonesian society interpret marriage as one of God's demands (Himawan, Bambling and Edirippulige 2018b). This idea implies that marriage is viewed as a religious obligation (Himawan, Bambling and Edirippulige 2018b, Ibrahim and Hassan 2009). The perception will make singles to feel burdened and intimidated especially when they are in their religious community, particularly, when their status is involuntarily single (Himawan, Bambling and Edirippulige 2018b)

In this paper, we argue that the persistent universal norms towards marriage and social stigma towards singleness continue to overshadow the effect of increase in educational achievement to singlehood in Indonesia. Following the multiple equilibrium framework by Esping-Andersen (2009) and Esping-Andersen and Billari (2015), Indonesia's gender norm and attitude has shifted from conservative-traditional male-breadwinner model to a more egalitarian context, but the adaptation of women in the labour market role and men in domestic sphere is still slowly progressing. As a result, having a higher level of education may not increase the probability of singlehood. Unlike other Asian countries, higher education in Indonesia is a mean to delay marriage and a filter for partner selection for women.

DATA AND METHODS

This study uses National Socio-Economic Survey (SUSENAS) 2007 and 2017 to examine whether the effect of education on the probability of being single has changed in two generation between the ten years course. SUSENAS is a nationally representative survey conducted annually by Badan Pusat Statistik (BPS). The survey collects population, health, education, family planning, housing, consumption and expenditure information at both household and individual level. The survey covers 285,904 households and 1,167,019 individuals in 2007, and 300,000 households and 1,132,749 individuals in 2017.

Our unit of analysis are women and men aged 40 to 65. We use 40 years old as a threshold to permanent singlehood as suggested in Retnaningsih (2013) and Dykstra and Poortman (2010). Being 40 is seen as the critical period to the choice of permanent singlehood since the demand to marry is weaken after age 40. Of course, this does not negate the possibility of first marriage beyond the age of 40. Hence our analytical definition of permanent singlehood here should be read with these caveats in mind.

Our regression model follows Bellani, Esping-Andersen and Nedoluzhko (2017) with some modification due to data limitation. We use logistic regression to examine the likelihood of being single.

The dependent variable identifies individuals aged 40-65 who have never married. The dependent variable assumes the value of 0 if the respondent is currently married or ever-married (divorced or widowed) and the value of 1 if otherwise. From SUSENAS 2007, 2.13% out of 274,981 individuals age 40-65 were never married, while in 2017, the proportion slightly increased to 2.65% out of 327,579 individuals at the same age.

We use years of schooling as our main independent variable to represent the education level. We also include the square of years of schooling to see whether there is a turning point in education that drives the probability of singlehood to change. From our sample, the average years of schooling of never-

never-married individuals were 6.55 years in 2007 and 7.76 years in 2017. The mean years of schooling among currently or ever married individuals were slightly lower: 6.44 years in 2007 and 7.64 years in 2017.

We use the following control variables to predict the probability of being in never-married status:

- Demographic: age, sex, and birth order.

- Socioeconomic: employment status (not working, own-account workers, self-employed with unpaid workers, employers or entrepreneurs, employees, casual workers, and unpaid family workers), and per-capita expenditure.

- Geographic: urbanicity (urban or rural), island, and metropolitan cities (1 = metropolitan[See annex 1 for the list of metropolitan cities used in this study.   ] and 0 = non-metropolitan[1] cities).

- Singlehood ratio. We argue that probability of being never married is also affected by the supply of available potential partners. In this study, we measure the singlehood prevalence as the number of never-married population aged 20-65 years divided by the total population in the province. The higher singlehood prevalence is an indicative that an individual may face higher likelihood to stay single as they face a tighter marriage market.

We regress SUSENAS 2007 and 2017 separately rather than having them pooled. Although it measures different generation, both the significance and direction of the education coefficient will provide an indication to the changing norms around marriage. A positive effect of years of schooling on the probability of being in single status means that having a higher education serves as a mean to negotiate the norm to marry and stay in singlehood. On the other hand, a negative coefficient of years of schooling means that having lower education reduces the chance to partnering and be in the singlehood status permanently.

RESULTS AND DISCUSSION

Table 1 presents the percentage of individuals aged 40-65 who have never been married by their demographic, socioeconomic, and geographic characteristics. The average years of schooling among never married individuals in this age group increased by around one between 2007 and 2017. The single population was also slightly older in 2017 as compared to 2007. The share of never married was increased across characteristics between 2007 and 2017. In 2007, the proportion of single men is lower than women, but men outnumbered women in 2017. The share of never married is the highest among those who do not work as well as those from highest quintile of expenditure. Bali and Nusa Tenggara islands surprisingly have the highest share of never married individuals as compared to other islands. Urban areas and metropolitan cities have a higher share of never-married individuals as compared to rural or non-metropolitan cities.

Table 2 presents the marginal effects (dy/dx) for each explanatory variable, which shows how the probability of being never married changed with each one-unit change in the variable.

Table 1:
Means and Proportion of Individuals Aged 40-65 Who Have Never Been Married by Demographic, Socioeconomic, and Geographic Characteristics.

Variable	2007	2017
Mean years of schooling (years)	6.55	7.76
Age (mean)	47.72	48.3

Birth Order (mean)	1.2	1.45
Sex		
Men	1.94	2.82
Women	2.32	2.48
Employment status		
Not working	2.91	3.31
Own-account workers	2.35	2.77
Self-employed with unpaid workers	1.07	1.07
Self-employed with paid workers	1.57	1.48
Employees	2.20	2.89
Unpaid family workers	2.42	3.01
Casual workers	2.19	2.82
Per capita expenditure (Quintiles)		
1st Quintile	1.91	2.99
2nd Quintile	1.93	2.41
3rd Quintile	2.03	2.44
4th Quintile	2.15	2.43
5th Quintile	2.67	3.01
Geography Characteristics	0.00	0.00
Island	0.00	0.00
Sumatera	1.54	2.09
Java	1.52	2.24
Bali & Nusa Tenggara	4.28	4.43
Kalimantan	2.11	2.51
Sulawesi	3.61	4.16
Papua & Maluku	1.75	2.19
Urban/rural	0.00	0.00
Urban	2.62	3.28
Rural	1.84	2.16
Metropolitan city	0.00	0.00
Metropolitan	2.25	2.96
Non-Metropolitan	2.11	2.60

Table 2:

Results of logistic regression of lifelong singlehood in Indonesia

Independent Variables	2007		2017	
	dy/dx	SE	dy/dx	SE
Years of Schooling	-0.0371***	0.0047	-0.0457***	0.004
Years of Schooling2	0.0018***	0.0003	0.0019***	0.0002
Sex (ref: men)	-0.1608***	0.0135	-0.1689***	0.0104
Age	0.0439**	0.0211	0.0597***	0.016
Age2	-0.0005**	0.0002	-0.0006***	0.0002
Birth Order	-0.0345***	0.0124	0.1174***	0.0079
Single Ratio	0.1843	0.3712	0.7208**	0.3538
Employment status (ref: Not working)				
Own-account workers	-0.1030***	0.0213	-0.0882***	0.0159
Self-employed with unpaid workers	-0.1197***	0.0236	-0.1524***	0.0214
Self-employed with paid workers	-0.1280***	0.045	-0.1450***	0.0372
Employees	-0.1313***	0.0199	-0.1305***	0.015
Unpaid family workers	-0.0773***	0.0233	-0.0937***	0.0222
Casual workers	-0.1194**	0.0579	-0.0614***	0.0201
Per capita expenditure (ref: 1st quintile)				
2nd Quintile	0.0226	0.02	-0.0001	0.0148
3rd Quintile	0.0852***	0.0214	0.0504***	0.0157
4th Quintile	0.1027***	0.0224	0.0545***	0.0166
5th Quintile	0.2047***	0.0267	0.1086***	0.0197
Island (ref: Sumatra)				
Java	-0.0944***	0.0192	-0.1181***	0.0153
Bali & Nusa Tenggara	0.1363***	0.0284	0.0575***	0.0219
Kalimantan	0.0541*	0.0308	-0.0228	0.022

Sulawesi	0.1379***	0.0225	0.0296*	0.0173
Papua & Maluku	0.0031	0.0489	-0.0365	0.0271
Urban/rural (ref: rural)	0.0422**	0.0164	0.0597***	0.012
Metropolitan city (ref: non-metropolitan)	0.0124	0.02	0.0219	0.0155
Number of Observation	274981		327579	
Level of significance: ***p<0.01, **p<0.05, *p<0.1				

The result of logistic regression shows that years of schooling is a key predictor for the probability of being single at age 40-65. The effect of years of schooling on the probability of singlehood is negative. Holding all variables at mean level, each additional year of schooling will reduce the probability of being single by 3.7 percent in 2007. The effect of education is larger in 2017, where additional one year of schooling reduce the probability of being single by 4.6 percent. However, the positive marginal effects of years of schooling squared shows a U-shape relationship between years of schooling and probability of singlehood in Indonesia. The net effect of years of schooling shows that after reaching the turning points at 10.3 years of schooling in 2007 and 12 years in 2017, additional schooling increases the probability of never married. This implies that in 2017, the probability of singlehood decreases as people commit to school up to high school level and the percentage will increase thereafter.

In terms of birth order, it has significant impact at 1% significance level with the different sign in 2007 and 2017. In 2007, the model shows that if the birth order of individual increases by one, the probability of singlehood will decrease by 3.5%. This result indicates that people who have birth earlier than their siblings are more likely to be single. It may happen because the first child have to provide financial support to their family and siblings (Ntoimo, Chizomam and Isiugo-Abanihe 2014). This obligation causes them to stay single and focus on their career. Another reason is that higher birth order is related to higher educational attainment

(Botzet, Rohrer and Arslan 2018), which reduces the likelihood of being single.

On the contrary, in 2017, the result shows that if the birth order of an individual increases by one, the probability of singlehood increases by 11.7%. Some studies found that women who have multiple older female siblings tend to marry later due to their family's preference of marrying their daughter based on the birth order (Anukriti and Dasgupta 2017, Field and Ambrus 2008, Malhotra and Tsui 1996, Vogl 2013).

The logistic regression result also shows that nearly all socioeconomic and geographic characteristics play significant role in determining singlehood probability. Being a woman reduces the probability of never married by around 16 percent as compared to men. The predicted probability of being single by years of schooling for men and women shows that the likelihood for being single for women is consistently lower than men (see Figure 1). This supports the proposition that women face a stricter stigmatization for being single as compared to men and it leaves them with no option but to marry (Himawan, Bambling and Edirippulige 2018a, Shostak 1987).

As expected, age is a positive predictor for singlehood, but the age squared shows a negative coefficient. This implies that the likelihood of being single increases as people gets older up until a certain age.

The estimates for employment status show that working in any type of employment reduces the probability of singlehood. In other words, being unemployed is associated with a higher probability to

Figure 1:
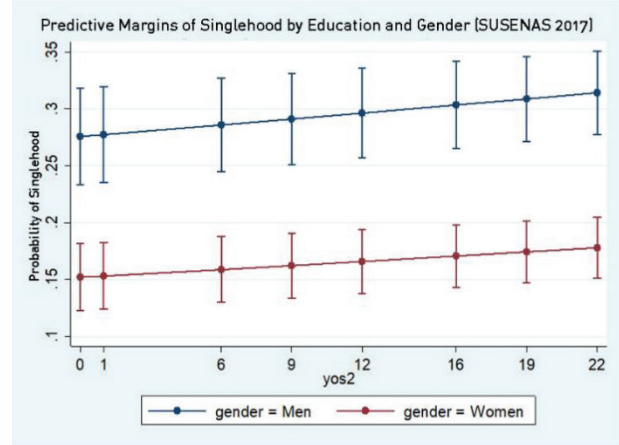Predicted Probabilities of Lifelong Singlehood by Education with 95% Confidence Intervals in Indonesia
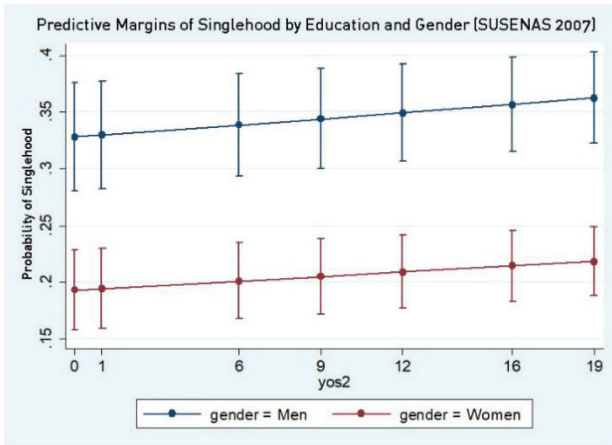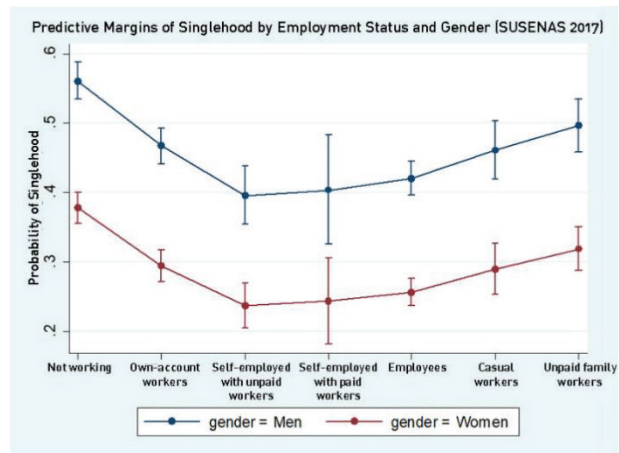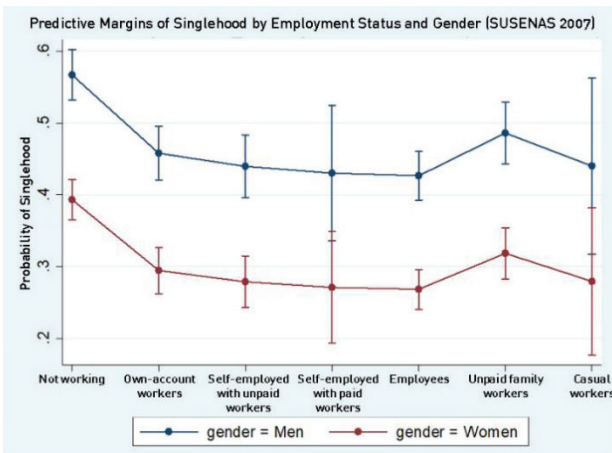

Figure 2:
Predicted Probabilities of Lifelong Singlehood by Employment Status with 95% Confidence Intervals in Indonesia

stay single at age 40 to 65. The predicted probability of being single by employment status in 2007 shows that those who did not work and worked as unpaid workers have the highest likelihood of being single, while those who work as employee or wage workers have the lowest probability of being single. However, the pattern changed in 2017. Although the probability of staying single is still the highest among those who did not work, those who own businesses, either with unpaid or paid workers, have the lowest probability of being single.

The probability of singlehood is strongly determined by economic status (see Figure 2), proxied by per capita expenditures quintiles. Individuals from the richest quintile have the highest probability to be single as compared to those from lower quintiles. Earlier studies have attempted to explain the positive association between economic status and singlehood and their findings suggest that those with better socioeconomic statuses have different aspirations and more likely to focus on working rather than marrying as a path to construct their life (Gordon, Remmler and Kaplan 1994, Situmorang 2005).

Geographical differences also significantly affect the probability of never married. Being in Java reduces the probability to never marry by 9.4 per-

cent, while being in other islands, for instance, Bali and Nusa Tenggara, increases the probability of singlehood. Higher population density and development in Java may explain the result.

Urbanicity presents an expected result, where being in urban areas increases the likelihood of never marry. However, the figures for metropolitan cities are not significant. A follow up analysis (not shown) where we excluded urbanicity from the model and only use a dummy for a metropolitan city found a consistent result of non-significant effect of metropolitan areas. Urban areas are associated with modern lifestyle, norms, and economic opportunities that are in favor of delayed marriage and singlehood option (Himawan, Bambling and Edirippulige 2017).

CONCLUSION

The analysis in this paper suggests that the relationship between education and singlehood follows a U-shaped pattern. Individuals age 40-65 with lower than high school education has a lower probability to marry while those with high school and higher education are more likely to never marry. This effect did not change in ten years span despite a higher proportion of never married in 2017 as compared to 2007.

Following Sundaram (2006), education up to high school level serves as a marker of being "socially ready" to marry both in 2007 and 2017 in Indonesia. However, we found that having higher education beyond high school increases the likelihood being never married among individuals aged 40-65. Having higher education may either provides more authority for individuals to exercise their decision to stay single permanently, or it may raise the expectations and requirements for desired partners (Dykstra and Poortman 2010, Ntoimo, Chizomam and Isiugo-Abanihe 2014, Silva 2000).

Using the multiple equilibrium arguments and our cross-sectional data analyses, the U-shaped relationship between education and probability of singlehood implies the persistence of traditional gender norms and the universality of marriage. For those at

the lower end of the education spectrum l, additional schooling seems to work as a capital to marry, while for highly educated individuals, higher degree of education affect the process of finding partner with similar value. Education, higher than secondary level, not only keep women and men in school longer, but also increases the preference in finding the partners with similar traits and values. Having high education in traditional gender norms settings increases the likelihood of women and men to stay single.

Our findings also show that having higher education poses a positive effect for women and men on the likelihood to never marry. This is different to the findings of Bellani, Esping-Andersen and Nedoluzhko (2017), who found that the level of education is only positively related to singlehood for women; while the more educated a man is the less likely he is to remain single.

Our study examines the correlates of singlehood among adult age 40 to 65 between 2007 and 2017. This age bracket represents a critical period to the study of permanent singlehood as the societal pressure to marry usually weakens after age 40. Our study presents an important step in documenting the correlates of singlehood among these cohorts in Indonesia. The characteristics and the generational experience of these cohorts are distinctively different to young people in Indonesia today. Young adults currently aged 20 – 34 are entering a distinct stage in their life course where their "risks" of marriage and parenthood are at their highest. Further research could explore the ways in which the current generation of young adults navigate marriage, divorce, and singlehood, and how they differ to the experience of earlier cohorts highlighted in our paper.

Our study is not without limitations. Although it aims to examine the relationship between education on the likelihood of never married, the study and its finding cannot conclude whether increase in education in Indonesia, particularly for women, have shifted the norms towards marriage among the highly educated. Moreover, the time span of data used in the study may not generally apply to all period.

NOTES

[1] See annex 1 for the list of metropolitan cities used in this study.

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