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Men's premarital migration and marriage payments: Evidence from Indonesia

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Men's premarital migration and marriage payments: Evidence from Indonesia[1]

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Résumé

Le paiement coutumier d'un prix de la mariée pour légitimer l'union de deux personnes est répandu dans les pays en développement. Alors que la littérature économique a largement étudié les implications d'une telle pratique sur le bien-être des femmes, les conséquences de l'exigence d'un tel paiement sur le comportement prémarital des hommes sont peu documentées. Dans cet article, nous évaluons les effets de cette pratique sur les décisions de migrations internes des hommes en âge de se marier. Pour cela, nous exploitons une expérience quasi-naturelle, un programme de construction d'écoles en Indonésie (INPRES), et nous nous appuyons sur les enjeux déjà documentés de ce programme qui sont une hausse de l'éducation des filles uniquement au sein des groupes ethniques pratiquant un tel paiement, liée au fait que leurs parents anticipent un paiement à recevoir à l'occasion de leur mariage plus élevé. En combinant des jeux de données de sources variées, anthropologiques, administratives et issues d'enquêtes individuelles, pour mesurer l'effet d'intérêt, nous estimons un modèle en triple différence. Nous montrons qu'à la suite du programme, les hommes dont le groupe ethnique pratique traditionnellement le paiement du prix de la mariée, et qui sont donc exposés à des attentes en termes de prix à payer plus élevées, sont plus susceptibles de migrer vers des zones économiquement plus attractives. Nous n'observons pas un tel comportement pour les hommes de groupes ethniques ne requérant pas le paiement d'un prix à l'occasion du mariage. Suivant notre interprétation, les hommes migrent pour accumuler des ressources à destination afin de répondre aux attentes des parents de leur districts d'origine et se marier localement. Nous montrons également que cette migration est principalement le fait des hommes les moins favorisés sur leur marché matrimonial d'origine (les derniers nés d'une fratrie ou ceux issus de classes sociales inférieures). L'ensemble de nos résultats suggère que l'interaction entre les normes matrimoniales et les politiques publiques peut entraîner des conséquences inattendues, telles que l'augmentation de la migration prémaritale des hommes.

Mots-clefs : migration, marché du mariage, normes culturelles, Indonésie, transferts matrimoniaux

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Men's premarital migration and marriage payments: Evidence from Indonesia*

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Abstract

Bride price customs are widespread in many developing countries. While the economic literature has widely investigated the implications of such transfers on women's welfare, little is known about their consequences on men's premarital behavior. In this paper, we exploit a quasi-natural experiment of a school-building program in Indonesia (INPRES) to investigate the relationship between marriage norms and the internal migrations of young men in age to marry. Based on empirical and theoretical settings of the literature, we rely on the effects of the INPRES program on girls' education and the parents' expectations on their daughters' bride price. Combining anthropological, administrative, and individual-based datasets, we implement a triple-difference approach. We find that men with bride price customs were more likely to migrate to areas more economically attractive than their district of origin. In contrast, no evidence exists of such behavior for men from ethnic groups without marriage payments. We interpret these results as evidence for the fact that men migrate to accumulate resources at destination to meet the parents' bride price expectations and marry at home. We also highlight that these migration strategies are implemented by the less advantaged males in their origin marriage market (latter-borns or from lower social class). These findings suggest that the interaction between marital norms and policies can result in unintended consequences, such as increasing premarital migration.

Keywords: migration, marriage market, cultural norms, Indonesia, marriage payments

JEL: I15, J1, J12, O15, Z10

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1 Introduction

Traditionally used to legitimize marriages, the customs of marriage payment persist in many developing countries, with transfers often reaching several annual household incomes (Anderson, 2007). The bride price, paid by the groom to the bride's family at the time of the union, is a widespread practice in sub-Saharan Africa or Asia, such as in Thailand or Indonesia. For men in age to marry, paying a bride price may represent an additional constraint in the marriage market where assortative matting is based on their own or their family's characteristics (Fafchamps and Quisumbing, 2005; Anukriti and Dasgupta, 2017). In Nigeria, Rexer (2022) shows that when this practice is associated with polygamy, it can generate violence and conflict made by males who can not afford the bride price.[1] This extreme response to local marriage conditions calls into question the strategies used by men to overcome social and family constraints associated with bride price practices. These strategies potentially include behaviors before marriage, such as selling productive assets or migration, with long-lasting effects on men and their families. While a large part of the literature has focused on the impact and role of the bride price practice on women's well-being (e.g., Platteau and Gaspart, 2007; Corno et al., 2020; Hotte and Lambert, 2023), there is little empirical evidence on the relationship with men' premarital behaviors.

In this paper, we exploit the quasi-natural experiment of a school-building program in Indonesia (INPRES) to assess the effects of marriage market changes on male premarital migration. As a result of the program, girls from ethnic groups that practice bride price became more educated than girls from other ethnic groups with no bride price custom because of their parents' expectations of a higher bride price indexed on education (Ashraf et al., 2020). In the Indonesian context, where celibacy and inter-ethnic marriage are highly stigmatized, their potential husbands were facing an unexpected increase in the bride price requirements and were pushed to find solutions to mitigate their new budget constraints. Therefore, we use this setting to identify the causal evidence of these changes on their likelihood of migrating out of their district of origin to accumulate resources for marrying.
Indonesia is also a well-suited case study where both communities, with bride price and non-bride price customs, lived alongside together. By distinguishing between those who belong to ethnic groups that practice bride price and those who do not, and between those exposed to the INPRES program and those who do not, this framework allows us to run a triple-difference model that provides causal evidence of internal male migration.

As a main result, we find that exposed men who belong to bride price ethnic groups were more likely to migrate before their marriage. Conversely, for men from non-bride price communities, we do not find any effect on migration relative to their control cohort. In addition, this differential effect is driven by migration to more economically attractive districts, indicating that grooms mostly migrated to accumulate economic resources to finance the marriage cost at home. Exploring further the drivers of such migration patterns, we find that men who are most disadvantaged in their marriage market due to social and household budget constraints are at the root of our results: latter-sons and those with a low social status. Both groups are

[1] In the political science literature, some scholars also depicted a relationship between the bride price inflation and local conflict (Hudson and Matfess, 2017; Johnston, 2023).

more likely than others to be excluded from the marriage market as the cost of marriage rises. This last result is consistent with the interpretation of the financing constraints of the marriage market as being at the heart of the migration decision.

Our paper contributes to different strands of the economic literature. This paper first belongs to the literature analyzing the relationship between migration and marriage. Following the seminal work of Luke et al. (2004) and of Rosenzweig and Stark (1989), several recent papers have exploited quasi-experimental settings to examine the intricate relationships between marriage and migration decisions. Amirapu et al. (2022) exploit a bridge construction in Bangladesh to proxy a decline in the economic cost of migration to evaluate the extent to which independent female migration is constrained by traditional gender norms. They show that following the construction, marital migration increases but not independent economic migration. Exploiting unusual variations of weather characteristics in Malawi, Becerra-Valbuena and Millock (2021) show that men and women migrate to cope with negative agricultural income shocks, although for different (self-reported) motives (women for marriage reasons, and men for work-related reasons). In India, Bau et al. (2023) show that the dowry custom provides enough liquidity to enable migration of men by relaxing the family financing constraints. Moreover, in response to a reduction in migration cost, men in dowry areas are more likely to migrate than others. Our work is closely related to these three last papers. We exploit a quasi-natural experiment in Indonesia, expected to increase marriage cost for men in bride price ethnic groups, to assess the relationships between marriage, culture and migration.

Second, we contribute to a growing literature about the role and implications of marriage payments on the behavior of market entrants. A large part of the current research focuses on the implications on women's welfare (Hotte and Lambert, 2023), showing negative impacts on women's independence (Kaye et al., 2005), an increase in domestic violence and on the risk of divorce (Gaspart and Platteau, 2010), or the prevalence of female genital cutting (Khalifa, 2022). Using estimates across Sub-Saharan countries, Corno et al. (2020) show that parents smooth consumption and hasten their daughters' entry into the marriage market when they face adverse income shocks. This is further confirmed by simulations for Tanzania in Corno and Voena (2023). Similarly, Chort et al. (2022) document that Turkish women born in districts where bride price is prevalent were married earlier when they faced droughts between 12 and 14. In Indonesia, Ashraf et al. (2020) provide theoretical and empirical evidence that parents are incentivized to educate their daughters in the expectation to receive a higher bride price at the marriage time. All these recent papers report how marriage social norms interact with parents' preferences, leading to marriage market changes. One step further, we benefit from this setting to provide evidence of the link between bride price custom and men's migration to afford the bride price.

Third, our paper echoes the literature on the importance of norms and cultures in shaping social and economic interactions. For developing countries, culture and social norms are central to analyzing the underlying mechanisms of development (Baland et al., 2020) and have a long-lasting relationship with gender inequalities (Jayachandran, 2015). Considering the role of culture also provides evidence that family institutions can be affected heterogeneously by the same policies in the same contexts (Bau and Fernández, 2023). Variations of norms across groups might exacerbate or lead to unexpected and heterogeneous effects of programs (Bau,

2021; Dahl et al., 2022; Moscona and Seck, 2021). Our paper extends this literature by showing how bride price norms interact with policies and have unexpected consequences for men's premarital and migration behavior.

The outline of the paper proceeds as follows. Section 2 provides background information on the Indonesian marriage market, the school-building program INPRES, and our conceptual framework on males' migrations. Section 3 presents how we combine household surveys with administrative and ethnographic datasets to perform our analyses. Section 4 details our empirical strategy, while main and heterogeneity results are presented in Section 5. Then in Section 6, we assess of the empirical settings and discuss our findings. Finally, Section 7 draws the concluding remarks.

2 The Indonesia context

2.1 The marriage market

In Indonesia, marital arrangements are governed by a set of social and legal norms that have been remarkably stable over time, suggesting that the country is an ideal setting to investigate the effect of policy change in interaction with marriage-related norms on individual behaviors.[2]

Traditionally, marriage is necessary to establish a family unit. There are also strong beliefs about the right age for marriage (Himawan et al., 2018). In addition, singlehood is highly stigmatized (Jennaway, 2000; Jones, 2005; Situmorang, 2007).[3] Besides, marriages are primarily endogamous, i.e., occurring between individuals belonging to the same ethnic group (Utomo and McDonald, 2021). Due to the ethnic groups' location, the marriage market is thus relatively local, i.e., between individuals from the same district.[4] As in many developing countries, marriage is associated with marital payments, often required to legitimize the union in the eyes of the community. In the context of Indonesia, the practice of bride price payment is widespread, although its frequency varies between ethnic groups (Ashraf et al., 2020).

2.2 The Sekolah Dasar INPRES Program

The school-building program In the 1970s, the Indonesian government introduced several measures to develop the country's economy through Five-Year Development Plans (*Repelita*) implemented by the Indonesian Ministry of National Development Planning (*Bappenas*). After the oil boom in 1973, the government wanted to reduce regional inequalities. To do so, "presidential instructions" to decentralize were included in the development plans. Increasing the education supply was one of the program components, under the name *Sekolah Dasar INPRES*, leading to the construction of more than 60,000 primary schools

[2]The Marriage Act dates back to 1974 and has been amended only recently to raise the legal age at first marriage (in 2019). Girls can be married with parental permission from 16 to 19 to be in line with the age for boys, also 19. The age of marriage for both women and men without parental permission is 21. This change was partly introduced to fight against child marriage, prevalent in the country (Jones, 2001). Marriage is also governed by a set of traditional and religious rules derived from the *Adat* customs and Islamic laws (Nisa et al., 2016; Buttenheim and Nobles, 2009).

[3]Across all IFLS samples, 96.5 percent of men over 30 and 95.1 percent of women over 25 have ever been married. This confirms the universality of marriage.

[4]Using the IFLS data in Indonesia, we find that only 12.47 percent of marriages were inter-district before 1950.

between 1973 and 1979. Numerically, it represents, on average, the construction of two schools for 1,000 children per district. The newly built structures could accommodate about 120 students and required recruiting new teachers. As explained in Duflo (2001), each district has been allocated a certain number of new infrastructures depending on the pre-program level of education. Thus, the INPRES intensity is inversely proportional to the number of children of primary school age enrolled in 1972. Before the program, Indonesia had 63,000 primary schools with an enrollment rate of around 70 percent of children of primary school age. The number of schools almost doubled in 1978, making INPRES one of the most extensive school-building programs. Illustrated in Figure 1, the districts' endowment for new schools was heterogeneous across the territory. At the end of the 1980s, the primary school enrollment rate rose to 85 percent (Akresh et al., 2023).

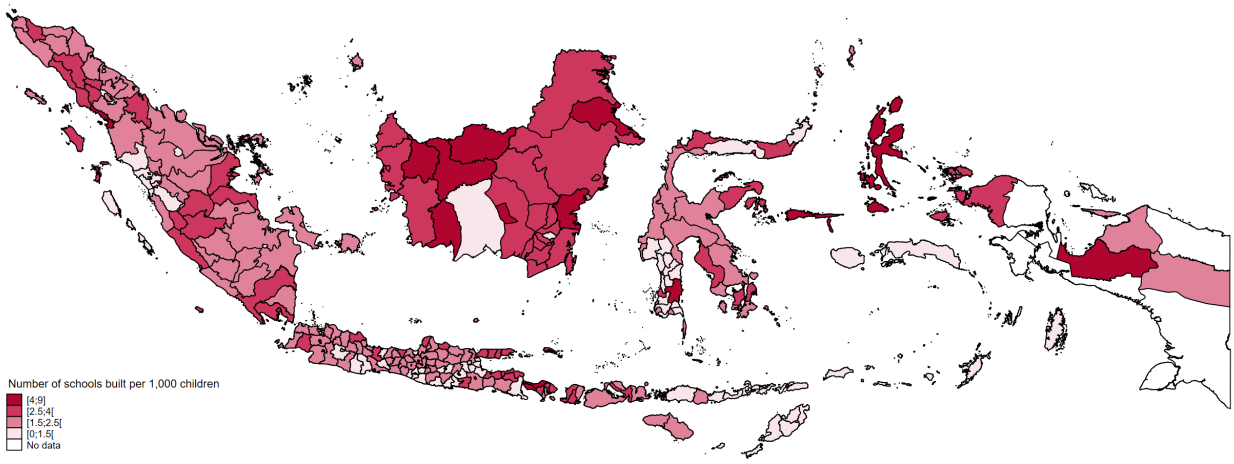

Figure 1: School construction per district (INPRES Intensity)

Sources: Authors' elaboration using geo-information from the 1990 Indonesian Census and administrative data shared by Esther Duflo.

INPRES and educational achievements Massive primary school construction programs have largely been studied both for their direct and intergenerational impacts (e.g., Handa, 2002; Kazianga et al., 2013). For Indonesia, a seminal paper from Duflo (2001) shows that INPRES positively impacted the share of boys completing primary education. Moreover, for treated individuals, it increased formal labor force participation (Duflo, 2004). Mazumder et al. (2019) also documents positive intergenerational effects on child education. Along the same line, child development was positively impacted by the mothers' exposure to the program (Hasan et al., 2020). Furthermore, Akresh et al. (2023) also finds a positive effect on the education of children of exposed men and women.[5]

While the literature shows a positive effect of the program on men's education, the impact on women's education is less clear, suggesting that there are gender differences in the implications of INPRES. Using the quasi-natural experiment setting of INPRES, Ashraf et al. (2020) provides causal evidence about het-

[5]Other implications of the INPRES program have been studied, such as structural change on the agricultural sector (Karachiwalla and Palloni, 2019), conflicts (Rohner and Saia, 2019), local governance (Martinez-Bravo, 2017), or religiosity (Bazzi et al., 2020).

erogeneous impacts for girls depending on the marriage-related norms of their ethnic group. Based on a theoretical model with parental anticipations, it finds that daughters belonging to ethnic groups practicing bride prices are more likely to complete the primary level of education than daughters belonging to other ethnic groups. The authors empirically demonstrate that the amount of bride price is positively correlated with the bride's primary education. By increasing the potential bride price received, the program generated divergent incentives for parents depending on the marital customs of the ethnic group they belong to.

2.3 Conceptual framework

In this paper, we extend the literature on the INPRES program by exploiting this quasi-natural experiment to assess the effects of marriage market changes on male premarital migration. The result obtained by Ashraf et al. (2020) implies that the cohort of men who were expected to marry treated girls from the bride price groups faced an unexpected increase in the bride price requirements and, thus, in their cost of marriage.[6] We are interested in understanding the effect of such a change on the behavior of this specific cohort of men in a context where marital status plays a key-role in determining one's social position.

In this paper, we hypothesize that the men who are the potential suitors for girls exposed to the program migrate in the short term to relatively wealthier districts. This migration pattern aims to accumulate resources in order to alleviate their credit constraints and marry a woman from their district of origin with a minimum delay. An auxiliary hypothesis derives from the fact that some groups of men are more affected than others by the marriage market changes, those who are expected to be the most budget-constrained. We identify two groups of men who are particularly exposed to budget constraints: first, later-born sons, and second, men from lower social backgrounds.[7] Then, those men are the most likely to migrate. These hypotheses are based on the major assumption that parents of treated girls did not anticipate the possible local erosion of the pool of grooms-to-be. Otherwise, they might have decided not to educate their daughter and not to demand a higher bride price.[8]

We do not rule out alternative adaptative behaviors for men exposed. The segmentation of the marriage market and the social stigma associated with celibacy make the likelihood of remaining single or marrying a woman from a non-bride price ethnic group highly unlikely. But men might try to attract women from a district where the level of the bride price is relatively lower or marry divorced or widowed women (with a lower bride price requirement). These alternative strategies are discussed later in the paper (Section 6). Importantly, the cohort of men we are interested in are too old to be affected by the program itself, given their age range as potential suitors for girls exposed to the program.[9]. Thus, increased labor market opportunities

[6] It is important to note that, in our framework, men are assumed to seek means to meet parents' expectations of receiving a higher bride price to compensate for the investment they made in their daughter's education. Realized payments can align with expected payments (because men succeed in meeting the expectations), or they may diverge (e.g., downward, because men fail to meet the expectations and parents want nonetheless to marry their daughter). Realized payments are thus endogenous to men's decisions. Note also that we do not have data on the bride price men were expected to pay.

[7] See the discussion in sub-section 5.2 to motivate the definition of these two groups of individuals.

[8] However, it has been shown by Ashraf et al. (2020) that INPRES had a positive and significant impact on the probability of achieving primary education for girls belonging to ethnic groups with bride price custom.

[9] We define the cohort of exposed men relying on the age difference between spouses; the sample definition is described in Section 3.3

due to a higher level of education cannot be a means of alleviating credit constraints.

3 Data and sample

In order to study premarital patterns of migration related to ethnic customs, we rely on several sources of information: data from the Indonesian Family Life Survey, anthropological information from the Ethnographic Atlas (Murdock, 1967) and administrative data on INPRES. Then, we describe how we draw our sample of interest for our empirical analyses.

3.1 Indonesian Family Life Survey

The Indonesian Family Life Survey (IFLS) is a widely multi-topic household data source conducted by RAND in collaboration with Lembaga Demografi and the University of Indonesia. Implemented in 1993, the first survey aimed to interview 7,224 households spread across 13 provinces of Indonesia (representing 83 percent of the total population at that time). The four subsequent surveys sought to follow respondents from the initial sample in 1997, 2000, 2007, and 2014. Individuals are tracked independently from households' dissolution, households' split, or the formation of new households (Frankenberg et al., 2003).[10] All individuals residing with respondents from the original sample are included, even if they arrived as new members or formed a new household with a former surveyed person. The last survey (2014) contains information about 15,921 households. In total, IFLSs collected detailed information on 83,786 individuals in Indonesia. In 2012, the IFLS was extended to the easternmost areas of Indonesia. This initiative resulted in the Indonesia Family Life Survey East (IFLS EAST), sampling 2,547 households.[11]
In this paper, we combine IFLSs and IFLS EAST data to obtain a database covering all Indonesian provinces.

Migration history and INPRES intensity All individuals aged 15 and over during one survey report their place of birth, their place of residence at the age of 12, and a complete list of all their locations up to the survey date. This questionnaire section is included in every IFLSs and IFLS EAST. For panel respondents, it allows taking into account changes of residence occurring between surveys and individuals reaching their 15th birthday over the waves. The respondents declare the destination place (at the district level for internal displacements) and the arrival time. We use the administrative division that prevailed at the time of INPRES implementation to define the residence districts.[12] This allows us to associate each district with the intensity of the school-building program. As previous papers assessing the impact of this program (e.g. Duflo, 2001; Mazumder et al., 2019; Ashraf et al., 2020; Akresh et al., 2023), we define local intensity as the number of schools built for 1,000 students at the district level between 1973 and 1979.

[10] The individual tracking was very efficient and led to a low attrition rate at the individual level (Strauss and Witoelar, 2019).
[11] SurveyMETER conducted the IFLS EAST on behalf of TNP2K (National Team for the Acceleration of Poverty Reduction), PRSF (Poverty Reduction Support Facility), and the AusAID (Australian Aid). The data collection and questionnaires were the same as for the IFLSs.
[12] The places of residence reported by individuals are coded according to the administrative classification prevailing at the time of the survey. Between 1999 and 2015, the Regional Autonomy Law (under President Soeharto) led to several reforms in regional governance. Before the reform, Indonesia was divided into 26 provinces and 299 districts. Since 2015, there have been 34 provinces sub-divided into 514 second-order levels (districts and important municipalities). As in Mazumder et al. (2019), we redraw the equivalent of district codes in 1993 to define residence places after the reform to obtain a stable classification.

First marriage The IFLSs and IFLS EAST gather the entire marital history of individuals over 15. The respondents report the marital situation and background information for each marriage, such as the marriage date. If the marriage is dissolved at the time of the survey, the ending date and the reason (divorce or death) are declared. As for migration history, this questionnaire section is administered during each IFLSs to account for marital status evolution and the integration of new respondents. As we study issues related to entry into the marriage market, we focus on the individuals' first marriage. For each survey, all married household members declare whether their spouse is a household member. If so, the survey records the identifier of the spouse among the household members. This information allows us to identify first co-resident spouses.[13]

3.2 Ethnographic Atlas

The respondent's ethnicity is documented from the third IFLS (including the IFLS EAST). We matched the self-reported ethnicity with the corresponding ancestral ethnic groups using a language-based matching following the Ethnologue: Languages of the World (Gordon, 2009), compiled in the database used in Giuliano and Nunn (2018). For each past ethnic group, we rely on the Ethnographic Atlas (Murdock, 1967) to determine marital customs. In our setting, we define bride price as substantial wealth transfers from the groom's family to the bride's family at the time of the marriage.[14] Therefore, for each respondent who reported an ethnic group, we can characterize his or her traditional bride price practice. Bride prices are customary for 12 out of 22 present ethnic groups (recorded in the surveys), corresponding to 7 over 14 ancestral groups.[15] In total, 22.41 percent of the respondents with information on ethnicity belong to ethnic groups with bride price customs.

3.3 Sample definition

According to studies measuring the impact of the INPRES on primary education, individuals born between 1968 and 1972 formed the first cohort to benefit from the program, as they were between 2 and 6 years old in 1974 (Duflo, 2001; Ashraf et al., 2020).

This cohort is often compared to individuals who were already beyond school age at the time of the school construction, aged 12 and older (born between 1950 and 1962). We refer to women of primary age during the INPRES implementation as c_1^w, while the control cohort of women is denoted as c_0^w. On average, women married for the first time at about 18 years old, with an average age difference of approximately five years with their husbands.[16]

We leverage this age difference between spouses to identify the cohort of men exposed to local marriage market changes resulting from women's (as outlined in Section 2.3). Figure 2 provides a visual representation of the various cohorts utilized in both existing literature and our analyses. The cohort denoted as c_1^m includes

[13] For the current or the last marriage, individuals also report the marriage payments (bride price and gift at the time of the wedding). However, this information is unreliable at local and ethnic levels because of the lack of representativeness and recall biases (Ananta et al., 2015).

[14] In this framework, "bride price token" or "bride price services" are not considered as "bride price" since they are mostly symbolic and are not affected by an increase in the brides' education.

[15] The Appendix Table A1 presents the classification of the bride price custom according to ancestral ethnic group matched with the individual declaration about ethnicity.

[16] This age difference is determined based on subsamples of co-resident couples during the IFLSs and IFLS EAST surveys.

men who are five years older than women born in 1972, hence born in 1967 at the latest. To maintain consistency, we use the same five-year difference to define the upper and lower bounds of the cohort of men likely to marry non-treated women, labeled as c_0^m, encompassing those born between 1945 and 1957. Given that approximately 80 percent of men in this cohort fall within the range of 1 to 11 years older than their wives, we extend the bracket for the exposed cohort of men to include those born from 1961.[17]

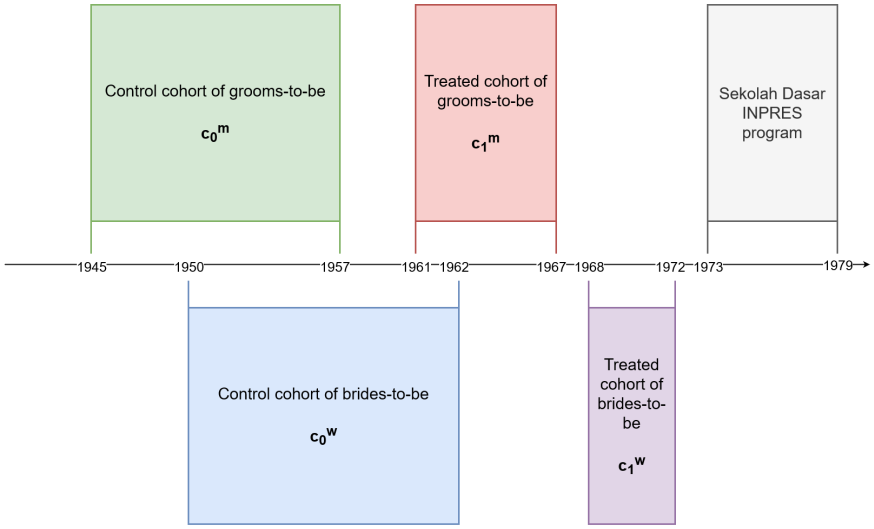

Figure 2: Definition of the cohorts

Notes: c_1^w is the cohort of exposed women to the program and c_0^w the control group, as defined in Ashraf et al. (2020); our cohort of exposed men is noticed c_1^m while the control group is c_0^m.

Restricting our sample to men born before 1968 allows us to focus on individuals who are not directly exposed to the school-building program but who should marry women benefiting from it. Thus, the cohort c_1^m is only indirectly impacted by INPRES through brides' education. However, in the framework of Duflo (2001), men aged 7 to 12 (born between 1963 and 1968) at the time of the school building program might partially benefit from INPRES (starting school late or repeating a year). Using the same empirical framework applied to our cohorts c_1^m and c_0^m, we do not find any evidence that the program affected their probability to achieve the primary level (see Appendix Table A2).[18]

After matching our sample with ancestral ethnic customs, we miss information for 15.74 percent of individuals. Among these cases, 43.6 percent were not interviewed during IFLS 3,4,5, and IFLS East surveys, 45.2 percent did not declare an ethnic group, and for the remaining 11.2 percent, we do not find a correspondence between the current ethnic group and the ancestral marital customs.

Table 1 provides descriptive statistics on men by ethnic custom and cohorts. For those belonging to ethnic groups with bride price customs, the quasi totality of men married regardless of the cohort. For men without the custom, the rate of married decreases by about two percentage points over time, but it is still almost

[17] We consider the unexposed male cohort as a reference to limit the program's potential effects on the age of marriage.

[18] To address concerns regarding the potential dual impact of INPRES on men born after 1962—both through a partial direct effect and an indirect effect via changes in the marriage market— we run our empirical framework on a such subsample and find any effect. Results are available upon request.

Table 1: Description of the sample according to the bride price custom and the cohort

	Bride price custom			No bride price custom				
	(1)	(2)	(1)-(2)	(3)	(4)	(3)-(4)	(1)-(3)	(2)-(4)
	c_0^m	c_1^m		c_0^m	c_1^m			
Married	0.980	0.972	0.008	0.993	0.975	0.019***	-0.013**	-0.003
	(0.006)	(0.008)	(0.010)	(0.002)	(0.004)	(0.005)	(0.005)	(0.009)
$Intensity_d$	2.145	2.166	-0.021	1.955	1.949	0.006	0.190***	0.217***
	(0.063)	(0.062)	(0.089)	(0.021)	(0.022)	(0.031)	(0.052)	(0.054)
Co-reside with first wife	0.845	0.906	-0.061***	0.813	0.895	-0.082***	0.032	0.011
	(0.017)	(0.015)	(0.023)	(0.010)	(0.008)	(0.013)	(0.021)	(0.018)
First wife with bride price custom	0.862	0.831	0.031	0.032	0.039	-0.007	0.830***	0.792***
	(0.019)	(0.021)	(0.028)	(0.005)	(0.006)	(0.008)	(0.014)	(0.016)
Observations	461	394	855	1,511	1,419	2,930	1,972	1,813

Note: standard errors in parentheses; * p<0.10, ** p<0.05, *** p<0.01; the sample includes men born in 1945-1957 and 1961-1967 with information about their place of residence at 15; $Intensity_d$ is the number of primary schools built per 1,000 children during the INPRES program in the district of residence at 15; bride price custom of the first wife is defined for men co-residing with her at survey time.

Sources: authors' elaboration on IFLS 1, 2, 3, 4, 5, IFLS EAST, anthropological and administrative data.

universal. For men, we set the age of entry into the marriage market at 15. We consequently define their district of residence at 15 as their local marriage market, characterized by the number of schools built during INPRES, namely $Intensity_i$. The location of ethnic groups has not followed a particular trend over time since we do not observe any difference in the INPRES intensity across cohorts by customs.[19] Nevertheless, in part because of the spatial distribution of ethnic groups, it appears that those with bride price customs are located on average in districts that admit about 0.2 more schools built via INPRES (which is equivalent to only 24 more students enrolled district-wide). Furthermore, regardless of their custom, most men co-resided with their first wives. The co-residence rate with the first wife is lower for men from c_0^m as they are older at the time of the survey; this cohort is more likely to have experienced widowhood or several marriages. As explained in Section 2.1 and observed in Table 1, marriages are mostly intra-ethnic in Indonesia, and spouses mainly have the same marital customs.

4 Empirical strategy

Premarital migration proxy Migration histories are reconstructed for all respondents for whom past locations and moves are recorded. In the IFLSs and IFLS EAST, information is collected to determine the exact timing of migration. By matching the date of marriage, we would have been able to identify raw premarital migrations correctly. Nevertheless, such a migration measure might be mechanically affected by the INPRES program and marriage customs. For example, if the probability of migration is the same each year, those who marry later are more likely to migrate before marriage. To assess causal evidence between exposed cohorts and ethnic groups, we use a proxy for migration that is independent of the age variation at first marriage. Therefore, we retain all moves and locations between the ages of 15 and 23. This age range is likely to capture most premarital migration, as 15 is assumed to be the age at which men first enter the marriage market, while 23 is the median age at marriage for men in our sample. In our setting, we expect that men marry at this period at least once to afford the bride price requirements. Thus, we then define a dummy equal to one if the individual migrated to another district at least once during this period.

[19] The national level of intensity is about two newly built schools per 1,000 children at the district level. There is also no significant difference in INPRES intensities across cohorts without differentiating by bride price custom (c_0^m and c_1^m).

This proxy allows us to capture migration behavior independently of INPRES exposure.[20] We refine this measure to capture migration related to marriage funding reasons by distinguishing whether respondents migrated to a district with a lower INPRES intensity than the intensity at the origin. By definition, the INPRES program design targeted the neediest districts according to their level of pupil enrollment in 1972. The primary education level is assumed to correlate with higher local economic development. Thus, districts with fewer new schools (low intensity) were associated with higher pre-program economic development.[21] We also provide estimates for migration to districts with higher intensity levels.

Triple difference estimator We implement a triple-difference framework to test whether men exposed to local marriage changes were more likely to migrate before marriage. Specifically, we implement an empirical setting inspired by Ashraf et al. (2020), where exposed women were (i) in the age cohort affected by the school-building program (named c_1^w in our setting), (ii) from districts with high intensity of school construction, and (iii) belonged to ethnic groups with a bride price custom. We retain these three layers to conduct causal estimates on the subsample of exposed grooms-to-be (c_1^m) in INPRES-treated areas ($Intensity_d$) practicing bride price (BP_e), using the specification as follows:

$$\begin{aligned} Y_{ied} =& \beta_1 I_i^c \times Intensity_d \times BP_e + \beta_2 I_i^c \times Intensity_d \times noBP_e + \\ & \zeta_i^c + \zeta_e + \zeta_d + \zeta_i^c \zeta_e + \zeta_e \zeta_d + \alpha M_i + \epsilon_{ied}. \end{aligned} \tag{4.1}$$

Here, we denote Y_{ied} the inter-district premarital migration for the respondent i, belonging to the ethnic group e and originates from the district d. The outcome is an index dummy equal to one if the respondent migrated at least once between the ages of 15 and 23. To explore the destination of migration, we separately estimate Equation (4.1) using as outcomes dummies for migration to districts with lower intensity compared to i's district of residence at age 15 (d), or to areas with higher program intensity (see the discussion concerning all of these indices below). BP_e is a dummy equal to one when the ethnic group traditionally practices bride price and zero otherwise. Similarly, $noBP_e$ equals one if the ancestral group does not, and zero otherwise. We name I_i^c, the index equal to one if the respondent belongs to the exposed cohort born between 1961 and 1967 (c_1^m), zero otherwise (c_0^m). $Intensity_d$ is a continuous treatment variable representing the number of schools built for 1,000 children at the district level. The triple difference estimator thus allows us to capture the separated effects of marriage market changes on male premarital migration according to marital customs. Therefore, β_1 captures the impact for exposed grooms-to-be with bride price customs while

[20] However, we may include post-marital migration if men who married before the age of 23 changed their district of residence after marriage. This inclusion error is about 11 percent for the unexposed cohort (born between 1945 and 1957) and 11.4 percent for the exposed cohort (born between 1961 and 1967). This inclusion error only accounts for men who married before 23 and did not migrate before their wedding. We might also exclude some migration episodes for those who married after 23 and migrated between the age of 23 and their wedding. In our sample, we found 8.9 percent of unexposed men and 11.7 percent of the exposed cohort in such a case. Finally, our measures allow us to capture most pre-marital migration episodes since almost 80 percent of men who migrated before marriage moved between the ages of 15 and 23.

[21] To support this, we also verify the correlation of the INPRES data on water and sanitation facilities with the INPRES intensity for primary education. As for education, this program was supposed to target areas lagging behind in terms of water and sanitation facilities. We find a negative and significant correlation with the school construction program intensity, meaning that treated areas were also relatively less equipped with public services and infrastructures than the untreated ones.

β_2 is for those who do not traditionally practice.

Equation (4.1) also includes constitutive elements of the interactive terms, $I_i^c \times Intensity_d \times BP_e$ and $I_i^c \times Intensity_d \times noBP_e$. Cohort fixed effects, ζ_i^c, are used either under a dummy equal to one if the respondent belongs to the exposed cohort or with year-of-birth fixed effects that capture the invariant differences between cohorts. We also add district fixed effects, ζ_d, and ethnic group fixed effects, ζ_e, which allow to capture unobserved heterogeneity at the local and ethnic level. We allow ζ_e to vary by cohort, $\zeta_i^c\zeta_e$, and by district of origin, $\zeta_e\zeta_d$. In this way, we consider the temporal and spatial distribution of ethnic groups. Once controlling for cohort, district, and ethnic fixed effects, we capture all unobserved invariant heterogeneity across time, culture, and location as well as their interactions. This is particularly in line with the correlation between the bride price ethnic groups and INPRES-intensity shown in Table 1, purged by the fixed effects. All the information in $Intensity_d$, and its subsequent interactive terms, is absorbed in such a specification.

The triple difference estimator has been widely used in the literature to estimate causal evidence for shocks or programs that have heterogeneously affected exposed groups. This approach is equivalent to the difference between two difference-in-differences. This framework also requires only one parallel trend assumption, in our case, based on the absence of a particular migration pattern between both types of ethnic groups (Olden and Møen, 2022). To test the validity of this common trend, we use placebo specifications estimating Equation (4.1) on older cohorts (results are presented in Section 6). In our setting, the program did not directly affect the exposed cohort. We later discuss some confounding factors related to the indirect effects of the program implementation.

5 Results

5.1 Main Results

Table 2 presents the coefficients β_1 and β_2 estimated through our triple difference framework. We also implement a F-test procedure to check the significance of the difference between our two coefficients of interest. Associated p-values are reported under each specification. We estimate different models, varying the set of control variables. We report findings for our three dependent variables: inter-district migration between the ages of 15 and 23, migration to districts with lower program intensity levels, and migration to districts with higher intensity. Column (5) contains the complete specification with a full set of covariates.[22] Nevertheless, the magnitude and significance of our coefficients are relatively stable across all estimated specifications.

As stated in Section 2.3, men exposed to marriage market changes (c_1^m) with bride price customs were likelier to experience an inter-district migration between 15 and 23 than the previous generation (c_0^m with the same marital customs). The effect is driven by migration towards districts with less INPRES intensity than their district of residence when they were 15. Being exposed to the program increased premarital migration by

[22] We estimate the specifications on 3,785 men in c_0^m and c_1^m. Some observations (30) are omitted because of the limited size of our sample with the inclusion of fixed effects.

Table 2: Impacts on migrations between 15-23

	(1)	(2)	(3)	(4)	(5)
	Dep. var.: Inter-district move				
$I_i^c \times Intensity_d \times BP_e$	0.038**	0.033**	0.038**	0.033**	0.030*
	(0.017)	(0.016)	(0.016)	(0.016)	(0.016)
$I_i^c \times Intensity_d \times noBP_e$	0.021	0.017	0.021	0.017	0.017
	(0.022)	(0.023)	(0.022)	(0.023)	(0.023)
P-value	0.494	0.549	0.503	0.555	0.600
Mean for c_0^m	0.217	0.217	0.217	0.217	0.217
	Dep. var.: Move to district with lower INPRES				
$I_i^c \times Intensity_d \times BP_e$	0.041***	0.044***	0.041***	0.044***	0.043***
	(0.015)	(0.015)	(0.015)	(0.015)	(0.014)
$I_i^c \times Intensity_d \times noBP_e$	-0.003	-0.009	-0.002	-0.008	-0.009
	(0.014)	(0.014)	(0.014)	(0.014)	(0.014)
P-value	0.026	0.008	0.030	0.009	0.010
Mean for c_0^m	0.122	0.122	0.122	0.122	0.122
	Dep. var.: Move to district with higher INPRES				
$I_i^c \times Intensity_d \times BP_e$	0.007	0.003	0.007	0.003	0.003
	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
$I_i^c \times Intensity_d \times noBP_e$	0.005	0.008	0.006	0.008	0.008
	(0.017)	(0.018)	(0.017)	(0.018)	(0.018)
P-value	0.953	0.842	0.957	0.838	0.832
Mean for c_0^m	0.096	0.096	0.096	0.096	0.096
Observations	3,755	3,755	3,755	3,755	3,755
Ethnic group FE	Yes	Yes	Yes	Yes	Yes
Ethnic group FE$\times I_i^c$	Yes	Yes	Yes	Yes	Yes
Ethnic group FE$\times Intensity_d$	Yes	Yes	Yes	Yes	Yes
District at 15 FE	Yes	Yes	Yes	Yes	Yes
District at 15$\times$ Ethnic group FE	No	Yes	No	Yes	Yes
Year of birth FE	No	No	Yes	Yes	Yes
Muslim dummy	No	No	No	No	Yes

Notes: standard errors clustered at the district level in parentheses; * p<0.10, ** p<0.05, *** p<0.01; the sample includes men born in 1945-1957 and 1961-1967 with information about their place of residence at 15; $Intensity_d$ is the number of primary schools built per 1,000 children during the INPRES program in the district of residence at 15.

Sources: authors' elaboration on IFLS 1, 2, 3, 4, 5, IFLS EAST, anthropological and administrative data.

4.3 percentage points. Relative to the previous cohort, the probability of migrating to a less impacted area rose by about 30 percent.[23] We do not find variations in the probability of migrating to districts with higher INPRES intensity than in the district of origin, regardless of the males' marital customs.

The INPRES design was made to target the less educated areas; thus, by extension, districts with fewer newly-built primary schools were more economically attractive at the time of the program's implementation. Consequently, this migration pattern can be interpreted as follows: men needing to meet bride price requirements moved to places where they could more effectively accumulate resources.[24] This non-random

[23]The exposed cohort of men is likely to include individuals who partially benefited from INPRES, born between 1963 and 1967 (Duflo, 2001). If the younger men in our exposed cohort are more educated than those born in 1961 and 1962, they would be more able to meet the increased bride price expectations. This scenario could lead to an underestimation of the effects shown. We made a subsample analysis on both partially treated and untreated by the school-building program. By splitting the exposed cohort, the estimated effects persist but are relatively smaller for the part of the cohort that is partially directly treated. These results are available upon request.

[24]We also tested the robustness of our findings accounting for the district of birth instead of the district at 15 to characterize

migration pattern is specific to men from ethnic groups with bride price payments at marriage.[25] This differential effect suggests that grooms-to-be who traditionally practice bride price adapted their behaviors to the changing conditions of their marriage market. Furthermore, it provides evidence that policies create unexpected consequences through their interaction, even indirectly, with norms.

5.2 Heterogeneity

Our main results show that local marriage market changes induced by the INPRES program have triggered the migration of young single men. If migration is motivated by marriage financing constraints at home, men who are most disadvantaged in their local marriage market should be more likely to migrate. Since bride prices can be challenging to afford, we expect a heterogeneous response of males to the marriage market changes depending on their financial capacities. We now test this auxiliary hypothesis. We identify two groups of men especially exposed to budget tightening: latter-born sons and men from lower social backgrounds.

Birth order The literature has shown that siblings compete for limited resources in their household and that first-born children are often prioritized in accessing resources (De Haan, 2010; Jayachandran and Pande, 2017). Moreover, parents may have different preferences for the marriage of their first-son than for the marriage of their later-born sons.[26] Thus, first-sons are very likely to receive more support to marry (either finding a bride or bearing the cost of marriage), and the latter-sons are disadvantaged relative to their elder. To an extent, this group is likely to face more budget constraints and implement an individual strategy to marry. Therefore, premarital migration could be a solution for latter-sons to overcome the marriage market requisites. Furthermore, depending on the inheritance system, the eldest might inherit from the family land, thus less likely to migrate out of their place of origin.
To investigate the constraints linked to the birth order, we relied on co-resident siblings and respondents' declarations about their non-co-resident siblings.[27] Thus, we built the individual birth rank for a subsample of respondents who answered questions about their non-co-resident siblings (representing 51 percent of our sample of interest). Our main results hold on this selected subsample (see Appendix Table A5).

We distinguish men between first-sons and latter-sons and replicate our empirical analyses on both groups.[28] Based on our preferred specification, results presented in Table 3, Columns (2) and (5), confirm that only latter-sons were more likely to migrate in response to the marriage market changes. Migrating to a district with a higher program intensity is significant for first-sons, but the difference between ethnic groups is not.

the district of origin. Our findings are robust to this definition change and are available upon request. In our sample, about 10 percent of men moved from their district of birth before their 15th birthday (especially migrations with their parents or child fostering).

[25] By removing the ethnic dimension of marriage payments, the difference-in-difference estimates do not provide any effect of the school-building program (see Appendix Table A4).

[26] In a different context, and for women, Vogl (2013) provides evidence that parents emphasize the quality of the marriage for their first daughter more than for their other daughters.

[27] IFLSs and IFLS EAST do not include a direct question on birth order. Moreover, co-residing with siblings is unusual because most men were married and lived in independent households at the time of the survey. A specific module recording information on non-co-resident siblings is only included in IFLS 1 and IFLS EAST.

[28] In our sample, 67.8 percent of the first-sons are also the first-borns among their siblings.

The probability of experiencing a migration between 15 and 23 in a district with a lower program intensity quasi-doubled for latter-sons relative to the previous generation.

Table 3: Impacts on migrations between 15-23 by birth order

	(1)	(2)	(3')	(4)	(5)	(6')
Panel	B: Latter-sons			C: First-sons		
	Dep. var.: Inter-district move					
$I_i^c \times Intensity_d \times BP_e$	0.106***	0.107***	0.041	-0.090	-0.067	-0.072
	(0.038)	(0.040)	(0.050)	(0.066)	(0.072)	(0.071)
$I_i^c \times Intensity_d \times noBP_e$	-0.050	-0.064	-0.053	0.009	0.038	0.047
	(0.044)	(0.044)	(0.038)	(0.059)	(0.060)	(0.057)
P-value	0.009	0.006	0.155	0.284	0.278	0.200
Mean for c_0^m	0.224	0.224	0.189	0.204	0.204	0.170
	Dep. var.: Move to district with lower INPRES					
$I_i^c \times Intensity_d \times BP_e$	0.115***	0.116***	0.037*	-0.002	0.017	0.014
	(0.032)	(0.030)	(0.019)	(0.059)	(0.068)	(0.068)
$I_i^c \times Intensity_d \times noBP_e$	-0.018	-0.030	-0.010	-0.033	-0.023	-0.015
	(0.032)	(0.032)	(0.023)	(0.037)	(0.037)	(0.034)
P-value	0.002	0.001	0.121	0.659	0.597	0.700
Mean for c_0^m	0.130	0.130	0.092	0.112	0.112	0.068
	Dep. var.: Move to district with higher INPRES					
$I_i^c \times Intensity_d \times BP_e$	0.014	0.017	0.005	-0.084*	-0.086*	-0.089*
	(0.027)	(0.026)	(0.025)	(0.047)	(0.050)	(0.050)
$I_i^c \times Intensity_d \times noBP_e$	-0.007	-0.000	-0.007	0.005	0.014	0.019
	(0.033)	(0.035)	(0.033)	(0.051)	(0.051)	(0.050)
P-value	0.639	0.710	0.779	0.211	0.158	0.121
Mean for c_0^m	0.091	0.091	0.085	0.102	0.102	0.100
Observations	1,159	1,159	1,159	704	704	704
Ethnic group FE	Yes	Yes	Yes	Yes	Yes	Yes
Ethnic group FE$\times I_i^c$	Yes	Yes	Yes	Yes	Yes	Yes
Ethnic group FE$\times Intensity_d$	Yes	Yes	Yes	Yes	Yes	Yes
District at 15 FE	Yes	Yes	Yes	Yes	Yes	Yes
District at 15$\times$ Ethnic group FE	No	Yes	Yes	No	Yes	Yes
Year of birth FE	No	Yes	Yes	No	Yes	Yes
Muslim dummy	No	Yes	Yes	No	Yes	Yes

Notes: standard errors clustered at the district level in parentheses; * p<0.10, ** p<0.05, *** p<0.01; the sample includes men born in 1945-1957 and 1961-1967 with information about their place of residence at 15 and birth order; $Intensity_d$ is the number of primary schools built per 1,000 children during the INPRES program in the district of residence at 15; columns (3') and (6') correspond to estimates with dependent variables excluding migrations to Jakarta districts.

Sources: authors' elaboration on IFLS 1, 2, 3, 4, 5, IFLS EAST, anthropological and administrative data.

Social status Individuals from low social backgrounds may be unable to rely on their families to receive help and fund their marriage expenses, i.e., due to limited financial capacities. Their lower social background might also undermine their desirability, excluding them from newly educated brides who expect better marriage matches. After the INPRES implementation, women were getting relatively more educated in highly treated districts; consequently, they might become more selective in the marriage market. Accordingly, men with low social status were more likely to face budget and stigma constraints.

We use the father's education to proxy the individual social status. We draw the father's education based on the recorded information about co-resident members. When respondents are not living with their fathers, we use self-reported information on non-co-resident parents (available in IFLS 1, 5, and IFLS EAST). The subsample includes 85 percent of our main sample, and the main results hold for this restriction (see Ap-

pendix Table A6). Then, we discriminate between sons of primary educated fathers and others. In total, 40.5 percent of men in the subsample have uneducated fathers.[29]

We estimate Equation (4.1) separately for both groups. In Table 4, Columns (2) and (5), our results provide evidence that only the low-status individuals had premarital migrations. Compared to the previous cohort, there is a 2.6-fold increase in the probability of having a migration experience to a district with a lower program intensity relative to the place of origin. We do not observe such an adaptation strategy for those with the highest social status.

Table 4: Impacts on migrations between 15-23 by fathers' education

	(1)	(2)	(3')	(4)	(5)	(6')
Panel	D: Uneducated fathers			E: Educated fathers		
	Dep. var.: Inter-district move					
$I_i^c \times Intensity_d \times BP_e$	0.129**	0.129**	0.081**	-0.014	-0.022	-0.037
	(0.057)	(0.057)	(0.037)	(0.033)	(0.035)	(0.034)
$I_i^c \times Intensity_d \times noBP_e$	0.016	0.012	0.004	-0.016	-0.015	-0.004
	(0.022)	(0.022)	(0.023)	(0.030)	(0.031)	(0.030)
P-value	0.068	0.058	0.080	0.965	0.883	0.440
Mean for c_0^m	0.160	0.160	0.127	0.272	0.272	0.235
	Dep. var.: Move to district with lower INPRES					
$I_i^c \times Intensity_d \times BP_e$	0.136**	0.132**	0.083***	-0.010	-0.001	-0.021
	(0.055)	(0.054)	(0.031)	(0.025)	(0.028)	(0.022)
$I_i^c \times Intensity_d \times noBP_e$	0.001	-0.001	-0.008	-0.018	-0.021	-0.016
	(0.024)	(0.024)	(0.021)	(0.020)	(0.020)	(0.017)
P-value	0.012	0.012	0.005	0.813	0.563	0.842
Mean for c_0^m	0.081	0.081	0.047	0.165	0.165	0.110
	Dep. var.: Move to district with higher INPRES					
$I_i^c \times Intensity_d \times BP_e$	0.009	0.016	0.017	0.006	0.004	-0.001
	(0.019)	(0.020)	(0.020)	(0.024)	(0.027)	(0.026)
$I_i^c \times Intensity_d \times noBP_e$	0.008	0.004	0.004	-0.006	-0.000	-0.000
	(0.022)	(0.022)	(0.022)	(0.023)	(0.024)	(0.021)
P-value	0.968	0.714	0.684	0.751	0.919	0.971
Mean for c_0^m	0.070	0.070	0.068	0.117	0.117	0.114
Observations	1,271	1,271	1,271	1,888	1,888	1,888
Ethnic group FE	Yes	Yes	Yes	Yes	Yes	Yes
Ethnic group FE$\times I_i^c$	Yes	Yes	Yes	Yes	Yes	Yes
Ethnic group FE$\times Intensity_d$	Yes	Yes	Yes	Yes	Yes	Yes
District at 15 FE	Yes	Yes	Yes	Yes	Yes	Yes
District at 15$\times$ Ethnic group FE	No	Yes	Yes	No	Yes	Yes
Year of birth FE	No	Yes	Yes	No	Yes	Yes
Muslim dummy	No	Yes	Yes	No	Yes	Yes

Notes: standard errors clustered at the district level in parentheses; * p<0.10, ** p<0.05, *** p<0.01; the sample includes men born in 1945-1957 and 1961-1967 with information about their place of residence at 15 and father's education; $Intensity_d$ is the number of primary schools built per 1,000 children during the INPRES program in the district of residence at 15; columns (3') and (6') correspond to estimates with dependent variables excluding migrations to Jakarta districts.

Sources: authors' elaboration on IFLS 1, 2, 3, 4, 5, IFLS EAST, anthropological and administrative data.

[29] These groups are not mutually exclusive with our previous definition of latter-sons and can overlap both dimensions. In our sample, 63.3 percent of men with an uneducated father are also latter-sons.

Exclude migrations to Jakarta In 1972, at the time of the school-building program, 18 percent of the Indonesian population lived in urban areas. Twenty years later, the urbanization rate reached 33 percent, with an annual growth of around 5 percent. The main factor of urbanization is due to moves towards the western part of Java island, especially to the capital Jakarta for job opportunities (Van Lottum and Marks, 2012). We replicate our estimates, excluding all the moves between 15 and 23 toward the five districts covering the capital area for both groups of less advantaged grooms-to-be (latter-sons and low-status males). After applying this restriction, our coefficient of interest for the grooms belonging to ethnic groups traditionally practicing bride price (β_1) remains positive and significant for premarital migration toward districts with relatively lower INPRES intensity. More precisely, the effect for latter-sons decreases by 68 percent from the initial one (Table 3 Column (3')), and by 38 percent for males with uneducated fathers (Table 4 Column (3')). Both declines are significant, indicating that our findings are particularly driven by migrations towards the most attractive districts in the country.

Our auxiliary hypothesis is confirmed; this supports that our effect is conditional on access to the household's resources and parental investments. When men face marriage market changes, the most impacted are constrained to adopt risky strategies such as premarital migration.

6 Robustness and discussion

Placebo test To assess the robustness of our triple difference estimator, we test the parallel trend assumption on the unexposed cohorts (Olden and Møen, 2022). In detail, we perform a placebo analysis by assigning men born between 1954 and 1960 to the treated cohort (c_1^m) and those born between 1938 and 1950 to the control cohort (c_0^m).[30] In this way, we verify no systematic migration patterns across ethnic groups and locations. As we explained earlier, the design of the INPRES program inversely targets the less developed areas, and we might suspect that low-treated districts are continuously attractive. Replicating the Equation (4.1) applied to the placebo groups, we show that our interest coefficients are not significant. Moreover, there is no evidence of divergent premarital migration behavior according to the bride price custom (Appendix Table A7). Our placebo analyses suggest that the effects are driven only by the implications of the program and not by structural migration patterns based on marriage norms.

Women education To test the validity of our underlying assumption regarding women's education, we replicated the framework of Ashraf et al. (2020) using our data sources. Our findings are consistent with the literature: high INPRES intensity led to improvement in women's education among those belonging to ethnic groups with bride price custom (see Appendix Table A3). We find a similar magnitude of difference between women belonging to ethnic groups who practice bride price and those who do not. However, due to the limited size of our sample, this difference is not significant. Consequently, we can assume that young single men faced local changes in their marriage market of origin.

[30] As individuals are interviewed between 1993 and 2014, we are concerned about the survivorship of the oldest cohort at the time of the survey. Nevertheless, for the placebo analysis, 1,952 men belong to the oldest cohort (c_0^m), and 1,452 belong to (c_1^m). The cohort sizes are, therefore, similar to those used to perform in our main analysis.

Confounding factors Our main interpretation claims an increase in the men's marriage constraints due to the parents' expectations about the bride price of their marriageable daughters. However, the INPRES program could also impact men's preferences in bride price ethnic groups. Exposed cohorts of males might be concerned by the education level of their potential brides. In that sense, males who seek submissive or not-empowered women can prefer uneducated brides. Other concerns may be related to the potential stigma associated with enrolling girls at school. The program might also change women's valued characteristics in traditional marriage markets by increasing school enrollment. For example, the program could increase the men's perceptions of their potential brides' first intercourse (Teitler and Weiss, 2000). Because the program focused on children of primary school age, the risk of early intercourse at this age remains low.

Migration for marriage We interpret our results as evidence for the fact that migration is motivated by the need to accumulate resources at destination to finance the marriage costs at home. Alternatively, one may argue that migration is motivated by the desire to marry at destination. To our view, this interpretation cannot be the major one, for one main reason. As already indicated, most marriages in Indonesia are ethnically endogamous. Given the spatial distribution of ethnic groups, they are thus local. Therefore, migration for marriage at destination would imply that men favor migration to districts where they could easily meet women from their own ethnic group. Most urbanized districts are probably the most ethnically diverse ones. Yet, as shown earlier, the incentive to migrate reduces once we exclude most urbanized districts from migration destinations.[31]

Other potential mechanisms Our result does not exclude the possibility of alternative adaptative strategies. For instance, some men might prefer increase their labor market participation at home and marry later, once they could accumulate enough resources. Yet, in Appendix Table A8, we do not find that age at marriage increases on average.[32]

Another solution to avoid the increased bride price payment requirements in the local marriage market can be to attract women from other districts (especially those less impacted by the school-building program). To investigate this assumption, we focus on the premarital migration of exposed women for both groups with and without bride price customs. We assume that women's migration for marriage can start at 12, and we study their migration experiences from age 12 to 20.[33] We use two different subsamples: first, the co-resident first wives of ever-sampled men, and second, all women surveyed in the IFLSs and the IFLS EAST.[34] Using the Equation (4.1)'s framework, we show that both women's and wives' patterns of migration are not affected by INPRES (Appendix Table A9 and Table A10). Therefore, we conclude that there is no evidence of such

[31] Besides, migration for marriage at destination would suppose that the parents' requirements to marry their daughters are more easily met at destination than at home. There is no easy way for us to test this condition.

[32] Note that for the subsample of later-sons, who are most likely to migrate, the average age at marriage increases - probably because of the migration experience -, although of only 1 year.

[33] As noted in the literature, particularly in the seminal paper by Field and Ambrus (2008), the women's entry into the marriage market coincides with their first menarche. In Indonesia, child marriage is prevalent, and in 1995, 11.8 percent of women were married before the age of 15 (Jones, 2001). For these reasons, we consider the migration experience between 12 and 20 as the most accurate measure of premarital migration.

[34] The sample of co-resident first wives may be associated with a selection concern related to the survival bias of first marriages. If the first marriages of migrant women are less likely to survive, a selection issue could drive our estimates. That is why we next extend our analyses to all the women.

behaviors to cope with local marriage market changes.

7 Conclusions

In Indonesia, the marriage market is particularly codified. Unions mainly occur in endogamous ethnic environments, and payments at the time of marriage are often used to condition family formation. Using the quasi-experimental variations associated with a schooling program in Indonesia, we show that this marriage norm interacts with public policies generating unexpected consequences.

By exploiting administrative data on the implementation of the INPRES program, we draw on both empirical and theoretical literature concerning bride price to explore the consequences for men's behavior. It has been shown that girls were more educated because they parents expected a higher bride price. Based on the age gap between spouses, we designed an empirical framework where the benefits of the school-building program exclusively accrue to women. At the same time, their pool of potential husbands did not benefit from INPRES. Thus, this cohort of men face changes in their marriage market relative to the previous cohort. Using both groups, we implement a triple-difference approach that takes into account for anthropological norms, the timing and the intensity of school-building at the district level. This empirical approach allows us to isolate the impact of marriage market changes on men's premarital behavior in ethnic groups with bride price customs.

As a result, we document that exposed males' were more likely to migrate out of their district of origin. In detail, this migration pattern targeted areas less exposed to the program, and is only specific to men traditionally practicing bride price. This supports the idea of a migration towards relatively more developed districts. The motivation behind this migration is rooted in the pursuit of enhanced opportunities for resource accumulation to meet the bride price expectations set by parents, emphasizing the economic aspect of marital arrangements. Furthermore, our findings are driven by men who lack financial help, the latter-sons, and those with uneducated fathers. This pattern suggests that individuals facing socio-economic disadvantages are more profoundly affected, primarily due to their limited access to household or parental resources. Consequently, premarital migration emerges as a strategic choice, particularly favored by those could be considered as "marriage market losers", who have more difficulties to deal with marriage market changes.

This article is the first attempt to address the issue of marriage financing through migration. Since our results are heterogeneous according to marital customs, our empirical approach highlights the interaction between marriage market changes and ethnic groups' practices. It also emphasizes the role of norms and cultures in understanding demography and population dynamics. Finally, an avenue for further exploration lies in delving into the marital implications of these premarital behaviors. This involves thoroughly studying their influence on marital outcomes and evaluating the well-being of both individuals and couples.

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Appendix

Table A1: Bride price custom according to ancestral ethnic groups included in the Ethnographic Atlas

Present ethnic groups	Ancestral ethnic groups	Bride price custom
Ambon	Ambones	Yes
Bali	Balinese	No
Batak Nias	Batak	Yes
Aceh	Cham	No
Dayak	Iban	No
Bima-Dompu	Ili-Mandi	Yes
Jawa Madura Sunda	Javanese	No
Komering	Kubu	No
Makassar	Macassare	Yes
Banjar Betaw Kutai Manado	Malays	Yes
Gorontalo	Manobo	Yes
Minang	Minangkab	No
Sasak Sumbawa	Sumbawane	No
Bugis Toraja	Toradja	Yes

Sources: authors' elaboration on IFLS 3, 4, 5, IFLS EAST, and anthropological data.

Table A2: Impact of INPRES on grooms' education

	(1)	(2)	(3)	(4)
	Dep. var.: Achieved primary education			
$I_i^c \times Intensity_d^{birth}$	-0.017	-0.014	-0.018	-0.015
	(0.015)	(0.016)	(0.016)	(0.016)
I_i^c	-0.050	-0.065	-0.003	-0.017
	(0.074)	(0.074)	(0.079)	(0.079)
Mean for c_0^m	0.727	0.727	0.727	0.727
Observations	3,827	3,827	3,827	3,827
Birth district * Ethnic group FE	No	Yes	No	Yes
Year of birth FE	No	No	Yes	Yes

Notes: standard errors in parentheses; * p<0.10, ** p<0.05, *** p<0.01; the sample includes men born in 1945-1957 and 1961-1967 with information about their place of birth and education; $Intensity_d^{birth}$ is the number of primary schools built per 1,000 children during the INPRES program in the district of birth.

Sources: authors' elaboration on IFLS 1, 2, 3, 4, 5, IFLS EAST, anthropological and administrative data.

Table A3: Heterogeneous impact of INPRES on brides' education

	(1)	(2)	(3)	(4)
	Dep. var.: Achieved primary education			
$I_i^c \times Intensity_d^{birth} \times BP_e$	0.091	0.119**	0.092	0.123**
	(0.057)	(0.060)	(0.057)	(0.060)
$I_i^c \times Intensity_d^{birth} \times noBP_e$	0.085**	0.083**	0.085**	0.083**
	(0.033)	(0.033)	(0.033)	(0.033)
P-value	0.933	0.600	0.917	0.564
Mean for c_0^w	0.614	0.614	0.614	0.614
Observations	4,469	4,469	4,469	4,469
Birth district * Ethnic group FE	No	Yes	No	Yes
Year of birth FE	No	No	Yes	Yes

Notes: standard errors in parentheses; * p<0.10, ** p<0.05, *** p<0.01; the sample includes women born in 1950-1962 (I_i^c is equal 0) or in 1968-1972 (I_i^c is equal 1) with information about their place of birth and education; $Intensity_d^{birth}$ is the number of primary schools built per 1,000 children during the INPRES program in the district of birth.

Sources: authors' elaboration on IFLS 1, 2, 3, 4, 5, IFLS EAST, anthropological and administrative data.

Table A4: Impacts on migrations between 15-23 without accounting for marital custom heterogeneity

	(1)	(2)	(3)	(4)	(5)
	Dep. var.: Inter-district move				
$I_i^c \times Intensity_d$	0.024	0.019	0.025	0.020	0.018
	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)
I_i^c	-0.046	-0.022	-0.059	-0.036	0.068
	(0.069)	(0.073)	(0.072)	(0.075)	(0.103)
Mean for c_0^m	0.217	0.217	0.217	0.217	0.217
	Dep. var.: Move to district with lower INPRES				
$I_i^c \times Intensity_d$	0.015	0.013	0.016	0.014	0.013
	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
I_i^c	-0.052	-0.037	-0.058	-0.047	-0.035
	(0.053)	(0.056)	(0.055)	(0.058)	(0.049)
Mean for c_0^m	0.121	0.121	0.121	0.121	0.121
	Dep. var.: Move to district with higher INPRES				
$I_i^c \times Intensity_d$	0.004	0.004	0.004	0.004	0.004
	(0.010)	(0.011)	(0.010)	(0.011)	(0.010)
I_i^c	0.015	0.015	0.011	0.015	0.099*
	(0.038)	(0.040)	(0.040)	(0.042)	(0.052)
Mean for c_0^m	0.096	0.096	0.096	0.096	0.096
Observations	3,755	3,755	3,755	3,755	3,755
Ethnic group FE	Yes	Yes	Yes	Yes	Yes
Ethnic group FE$\times I_i^c$	Yes	Yes	Yes	Yes	Yes
Ethnic group FE$\times Intensity_d$	Yes	Yes	Yes	Yes	Yes
District at 15 FE	Yes	Yes	Yes	Yes	Yes
District at 15$\times$ Ethnic group FE	No	Yes	No	Yes	Yes
Year of birth FE	No	No	Yes	Yes	Yes
Muslim dummy	No	No	No	No	Yes

Notes: standard errors clustered at the district level in parentheses; * p<0.10, ** p<0.05, *** p<0.01; the sample includes men born in 1945-1957 and 1961-1967 with information about their place of residence at 15; $Intensity_d$ is the number of primary schools built per 1,000 children during the INPRES program in the district of residence at 15.

Sources: authors' elaboration on IFLS 1, 2, 3, 4, 5, IFLS EAST, anthropological and administrative data.

Table A5: Impacts on migrations between 15-23, sub-sample with birth order information

	(1)	(2)	(3)	(4)	(5)
	Dep. var.: Inter-district move				
$I_i^c \times Intensity_d \times BP_e$	0.065*	0.077**	0.064*	0.076**	0.076**
	(0.033)	(0.036)	(0.033)	(0.035)	(0.035)
$I_i^c \times Intensity_d \times noBP_e$	-0.007	-0.014	-0.006	-0.014	-0.014
	(0.032)	(0.031)	(0.032)	(0.031)	(0.031)
P-value	0.120	0.061	0.128	0.063	0.064
Mean for c_0^m	0.223	0.223	0.223	0.223	0.223
	Dep. var.: Move to district with lower INPRES				
$I_i^c \times Intensity_d \times BP_e$	0.094***	0.102***	0.093***	0.101***	0.102***
	(0.028)	(0.029)	(0.028)	(0.029)	(0.030)
$I_i^c \times Intensity_d \times noBP_e$	-0.010	-0.019	-0.009	-0.018	-0.018
	(0.025)	(0.024)	(0.025)	(0.024)	(0.024)
P-value	0.004	0.001	0.005	0.001	0.001
Mean for c_0^m	0.131	0.131	0.131	0.131	0.131
	Dep. var.: Move to district with higher INPRES				
$I_i^c \times Intensity_d \times BP_e$	-0.019	-0.008	-0.020	-0.009	-0.010
	(0.025)	(0.027)	(0.025)	(0.026)	(0.027)
$I_i^c \times Intensity_d \times noBP_e$	-0.006	-0.003	-0.005	-0.002	-0.002
	(0.025)	(0.026)	(0.026)	(0.026)	(0.026)
P-value	0.730	0.896	0.696	0.865	0.849
Mean for c_0^m	0.097	0.097	0.097	0.097	0.097
Observations	1,903	1,903	1,903	1,903	1,903
Ethnic group FE	Yes	Yes	Yes	Yes	Yes
Ethnic group FE$\times I_i^c$	Yes	Yes	Yes	Yes	Yes
Ethnic group FE$\times Intensity_d$	Yes	Yes	Yes	Yes	Yes
District at 15 FE	Yes	Yes	Yes	Yes	Yes
District at 15$\times$ Ethnic group FE	No	Yes	No	Yes	Yes
Year of birth FE	No	No	Yes	Yes	Yes
Muslim dummy	No	No	No	No	Yes

Notes: standard errors clustered at the district level in parentheses; * p<0.10, ** p<0.05, *** p<0.01; the sample includes men born in 1945-1957 and 1961-1967 with information about their place of residence at 15 and birth order; $Intensity_d$ is the number of primary schools built per 1,000 children during the INPRES program in the district of residence at 15.

Sources: authors' elaboration on IFLS 1, 2, 3, 4, 5, IFLS EAST, anthropological and administrative data.

Table A6: Impacts on migrations between 15-23, sub-sample with information on fathers' education

	(1)	(2)	(3)	(4)	(5)
	Dep. var.: Inter-district move				
$I_i^c \times Intensity_d \times BP_e$	0.043**	0.041**	0.043**	0.041**	0.038*
	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)
$I_i^c \times Intensity_d \times noBP_e$	0.014	0.009	0.015	0.010	0.009
	(0.022)	(0.023)	(0.022)	(0.023)	(0.022)
P-value	0.255	0.226	0.263	0.233	0.287
Mean $forc_0^m$	0.224	0.224	0.224	0.224	0.224
	Dep. var.: Move to district with lower INPRES				
$I_i^c \times Intensity_d \times BP_e$	0.048**	0.052***	0.048**	0.052***	0.051***
	(0.020)	(0.019)	(0.020)	(0.019)	(0.019)
$I_i^c \times Intensity_d \times noBP_e$	-0.001	-0.009	-0.000	-0.009	-0.009
	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)
P-value	0.044	0.008	0.047	0.009	0.011
Mean for c_0^m	0.129	0.129	0.129	0.129	0.129
	Dep. var.: Move to district with higher INPRES				
$I_i^c \times Intensity_d \times BP_e$	0.004	0.001	0.003	0.001	0.000
	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)
$I_i^c \times Intensity_d \times noBP_e$	0.004	0.008	0.004	0.008	0.007
	(0.016)	(0.017)	(0.016)	(0.017)	(0.017)
P-value	0.992	0.795	0.983	0.791	0.776
Mean for c_0^m	0.097	0.097	0.097	0.097	0.097
Observations	3,196	3,196	3,196	3,196	3,196
Ethnic group FE	Yes	Yes	Yes	Yes	Yes
Ethnic group FE$\times I_i^c$	Yes	Yes	Yes	Yes	Yes
Ethnic group FE$\times Intensity_d$	Yes	Yes	Yes	Yes	Yes
District at 15 FE	Yes	Yes	Yes	Yes	Yes
District at 15$\times$ Ethnic group FE	No	Yes	No	Yes	Yes
Year of birth FE	No	No	Yes	Yes	Yes
Muslim dummy	No	No	No	No	Yes

Notes: standard errors clustered at the district level in parentheses; * p<0.10, ** p<0.05, *** p<0.01; the sample includes men born in 1945-1957 and 1961-1967 with information about their place of residence at 15 and father's education; $Intensity_d$ is the number of primary schools built per 1,000 children during the INPRES program in the district of residence at 15.

Sources: authors' elaboration on IFLS 1, 2, 3, 4, 5, IFLS EAST, anthropological and administrative data.

Table A7: Impacts on migrations between 15-23, placebo test

	(1)	(2)	(3)	(4)	(5)
	Dep. var.: Inter-district move				
$I_i^c \times Intensity_d \times BP_e$	-0.006	-0.009	-0.006	-0.009	-0.009
	(0.019)	(0.019)	(0.019)	(0.019)	(0.019)
$I_i^c \times Intensity_d \times noBP_e$	-0.008	-0.009	-0.007	-0.008	-0.008
	(0.026)	(0.027)	(0.026)	(0.026)	(0.026)
P-value	0.962	0.987	0.978	0.997	0.972
Mean for c_0^m	0.203	0.203	0.203	0.203	0.203
	Dep. var.: Move to district with lower INPRES				
$I_i^c \times Intensity_d \times BP_e$	-0.014	-0.014	-0.014	-0.014	-0.014
	(0.014)	(0.014)	(0.015)	(0.015)	(0.014)
$I_i^c \times Intensity_d \times noBP_e$	0.016	0.019	0.017	0.019	0.020
	(0.018)	(0.018)	(0.018)	(0.018)	(0.018)
P-value	0.240	0.211	0.235	0.210	0.201
Mean for c_0^m	0.113	0.113	0.113	0.113	0.113
	Dep. var.: Move to district with higher INPRES				
$I_i^c \times Intensity_d \times BP_e$	-0.015	-0.017	-0.016	-0.017	-0.018
	(0.015)	(0.015)	(0.015)	(0.015)	(0.016)
$I_i^c \times Intensity_d \times noBP_e$	-0.017	-0.019	-0.016	-0.018	-0.018
	(0.018)	(0.019)	(0.018)	(0.019)	(0.019)
P-value	0.948	0.936	0.995	0.969	0.996
Mean for c_0^m	0.085	0.085	0.085	0.085	0.085
Observations	3,376	3,376	3,376	3,376	3,376
Ethnic group FE	Yes	Yes	Yes	Yes	Yes
Ethnic group FE$\times I_i^c$	Yes	Yes	Yes	Yes	Yes
Ethnic group FE$\times Intensity_d$	Yes	Yes	Yes	Yes	Yes
District at 15 FE	Yes	Yes	Yes	Yes	Yes
District at 15$\times$ Ethnic group FE	No	Yes	No	Yes	Yes
Year of birth FE	No	No	Yes	Yes	Yes
Muslim dummy	No	No	No	No	Yes

Notes: standard errors clustered at the district level in parentheses; * p<0.10, ** p<0.05, *** p<0.01; the sample includes men born in 1938-1950 and 1954-1960 with information about their place of residence at 15; $Intensity_d$ is the number of primary schools built per 1,000 children during the INPRES program in the district of residence at 15.

Sources: authors' elaboration on IFLS 1, 2, 3, 4, 5, IFLS EAST, anthropological and administrative data.

Table A8: Impacts on age at marriage

	(1)	(2)	(3)	(4)	(5)
	Dep. var.: Age at first marriage				
	Panel A: All sampled men				
$I_i^c \times Intensity_d \times BP_e$	-0.450	-0.334	-0.445	-0.328	-0.405
	(0.413)	(0.443)	(0.422)	(0.454)	(0.410)
$I_i^c \times Intensity_d \times noBP_e$	-0.231	-0.243	-0.208	-0.219	-0.243
	(0.260)	(0.272)	(0.256)	(0.267)	(0.265)
P-value	0.682	0.872	0.662	0.850	0.758
Mean for c_0^m	22.976	22.976	22.976	22.976	22.976
Observations	3,645	3,645	3,645	3,645	3,645
	Panel B: Latter-sons				
$I_i^c \times Intensity_d \times BP_e$	1.148*	1.110*	1.165*	1.128*	1.119*
	(0.638)	(0.591)	(0.635)	(0.589)	(0.581)
$I_i^c \times Intensity_d \times noBP_e$	0.646	0.561	0.643	0.555	0.564
	(0.475)	(0.485)	(0.480)	(0.490)	(0.490)
P-value	0.537	0.483	0.522	0.465	0.478
Mean for c_0^m	22.131	22.131	22.131	22.131	22.131
Observations	1,139	1,139	1,139	1,139	1,139
	Panel D: Uneducated fathers				
$I_i^c \times Intensity_d \times BP_e$	0.002	0.042	0.037	0.069	0.067
	(0.582)	(0.590)	(0.588)	(0.591)	(0.591)
$I_i^c \times Intensity_d \times noBP_e$	0.132	0.186	0.069	0.125	0.117
	(0.382)	(0.377)	(0.370)	(0.365)	(0.368)
P-value	0.846	0.831	0.962	0.934	0.941
Mean for c_0^m	21.752	21.752	21.752	21.752	21.752
Observations	1,233	1,233	1,233	1,233	1,233
Ethnic group FE	Yes	Yes	Yes	Yes	Yes
Ethnic group FE$\times I_i^c$	Yes	Yes	Yes	Yes	Yes
Ethnic group FE$\times Intensity_d$	Yes	Yes	Yes	Yes	Yes
District at 15 FE	Yes	Yes	Yes	Yes	Yes
District at 15$\times$ Ethnic group FE	No	Yes	No	Yes	Yes
Year of birth FE	No	No	Yes	Yes	Yes
Muslim dummy	No	No	No	No	Yes

Notes: standard errors clustered at the district level in parentheses; * p<0.10, ** p<0.05, *** p<0.01; the sample includes men born in 1945-1957 and 1961-1967 who married, with information about their place of residence at 15; $Intensity_d$ is the number of primary schools built per 1,000 children during the INPRES program in the district of residence at 15.

Sources: authors' elaboration on IFLS 1, 2, 3, 4, 5, IFLS EAST, anthropological and administrative data.

Table A9: Impacts on migrations between 12-20 for co-resident first wives

	(1)	(2)	(3)	(4)	(5)
	Dep. var.: Inter-district move				
$I_i^c \times Intensity_d^{12} \times BP_e$	-0.001	-0.005	0.000	-0.004	-0.005
	(0.030)	(0.031)	(0.030)	(0.032)	(0.032)
$I_i^c \times Intensity_d^{12} \times noBP_e$	-0.013	-0.024	-0.013	-0.023	-0.023
	(0.020)	(0.021)	(0.020)	(0.021)	(0.021)
P-value	0.720	0.623	0.703	0.633	0.645
Mean for first wives of c_0^m	0.147	0.147	0.147	0.147	0.147
	Dep. var.: Move to district with lower INPRES				
$I_i^c \times Intensity_d^{12} \times BP_e$	-0.001	-0.002	-0.000	-0.002	-0.001
	(0.025)	(0.026)	(0.025)	(0.026)	(0.026)
$I_i^c \times Intensity_d^{12} \times noBP_e$	-0.002	-0.008	-0.001	-0.007	-0.007
	(0.016)	(0.017)	(0.016)	(0.017)	(0.017)
P-value	0.978	0.869	0.976	0.879	0.858
Mean for first wives of c_0^m	0.076	0.076	0.076	0.076	0.076
	Dep. var.: Move to district with higher INPRES				
$I_i^c \times Intensity_d^{12} \times BP_e$	-0.001	-0.004	-0.001	-0.004	-0.004
	(0.014)	(0.015)	(0.014)	(0.015)	(0.016)
$I_i^c \times Intensity_d^{12} \times BP_e$	-0.016	-0.022	-0.016	-0.021	-0.021
	(0.013)	(0.014)	(0.013)	(0.014)	(0.015)
P-value	0.451	0.414	0.447	0.435	0.453
Mean for first wives of c_0^m	0.071	0.071	0.071	0.071	0.071
Observations	2,908	2,908	2,908	2,908	2,908
Ethnic group FE	Yes	Yes	Yes	Yes	Yes
Ethnic group FE$\times I_i^c$	Yes	Yes	Yes	Yes	Yes
Ethnic group FE$\times Intensity_d^{12}$	Yes	Yes	Yes	Yes	Yes
District at 12 FE	Yes	Yes	Yes	Yes	Yes
District at 12$\times$ Ethnic group FE	No	Yes	No	Yes	Yes
Year of birth FE	No	No	Yes	Yes	Yes
Muslim dummy	No	No	No	No	Yes

Notes: standard errors clustered at the district level in parentheses; * p<0.10, ** p<0.05, *** p<0.01; the sample includes the first wives of men born in 1945-1957 and 1961-1967 with information about their place of residence at 12; $Intensity_d^{12}$ is the number of primary schools built per 1,000 children during the INPRES program in the district of residence at 12.

Sources: authors' elaboration on IFLS 1, 2, 3, 4, 5, IFLS EAST, anthropological and administrative data.

Table A10: Impacts on migrations between 12-20 for women

	(1)	(2)	(3)	(4)	(5)
	Dep. var.: Inter-district move				
$I_i^c \times Intensity_d^{12} \times BP_e$	0.036*	0.035*	0.036*	0.034*	0.032
	(0.020)	(0.020)	(0.019)	(0.020)	(0.020)
$I_i^c \times Intensity_d^{12} \times noBP_e$	0.005	0.000	0.003	-0.001	-0.001
	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)
P-value	0.186	0.158	0.169	0.144	0.174
Mean for c_0^w	0.140	0.140	0.140	0.140	0.140
	Dep. var.: Move to district with lower INPRES				
$I_i^c \times Intensity_d^{12} \times BP_e$	0.015	0.015	0.015	0.015	0.014
	(0.016)	(0.016)	(0.016)	(0.016)	(0.016)
$I_i^c \times Intensity_d^{12} \times noBP_e$	-0.002	-0.003	-0.002	-0.004	-0.004
	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
P-value	0.350	0.319	0.347	0.327	0.335
Mean for c_0^w	0.075	0.075	0.075	0.075	0.075
	Dep. var.: Move to district with higher INPRES				
$I_i^c \times Intensity_d^{12} \times BP_e$	0.017	0.015	0.018	0.015	0.013
	(0.012)	(0.013)	(0.013)	(0.013)	(0.013)
$I_i^c \times Intensity_d^{12} \times noBP_e$	0.001	-0.002	0.000	-0.003	-0.003
	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
P-value	0.286	0.327	0.259	0.292	0.349
Mean for c_0^w	0.064	0.064	0.064	0.064	0.064
Observations	4,350	4,350	4,350	4,350	4,350
Ethnic group FE	Yes	Yes	Yes	Yes	Yes
Ethnic group FE$\times I_i^c$	Yes	Yes	Yes	Yes	Yes
Ethnic group FE$\times Intensity_d^{12}$	Yes	Yes	Yes	Yes	Yes
District at 12 FE	Yes	Yes	Yes	Yes	Yes
District at 12$\times$ Ethnic group FE	No	Yes	No	Yes	Yes
Year of birth FE	No	No	Yes	Yes	Yes
Muslim dummy	No	No	No	No	Yes

Notes: standard errors clustered at the district level in parentheses; * p<0.10, ** p<0.05, *** p<0.01; the sample includes women born in 1950-1962 (I_i^c is equal 0) or in 1968-1972 (I_i^c is equal 1) with information about their place of residence at 12; $Intensity_d^{12}$ is the number of primary schools built per 1,000 children during the INPRES program in the district of residence at 12.

Sources: authors' elaboration on IFLS 1, 2, 3, 4, 5, IFLS EAST, anthropological and administrative data.