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Forced Displacement, Migration and Pregnancy Risk

Micro-level evidence from Burundi

Migration and forced displacement have become truly global phenomena. While there is a considerable body of research on the relationship between migration and fertility, we lack systematic knowledge on the effects of armed conflict and forced displacement on reproductive behavior. Using unique survey data from Burundi, we compare the reproductive behavior of women who migrated voluntarily with women who were forcibly displaced and with women who never migrated. This policy brief summarizes the findings of a new study that uses micro-data to address one of the key concerns of people who migrate or are forced to flee: how does their migration impact their reproductive behavior?

Brief Points

- There is a lack of systematic knowledge on the effect of forced displacement on reproductive behavior.
- The risk of becoming pregnant increases during flight from armed violence and decreases when women move for voluntary reasons.
- The risk of becoming pregnant is much higher when women have taken up residency in their new migration site, compared to during the process of migration.
- Policies for the prevention of unwanted pregnancies should target women and men when they are in vulnerable circumstances. Such circumstances include having no access to contraception; having little or no access to health services; the danger of rape or transactional sex; and the death of infants, all of which are more prevalent during flight than in residency.

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Introduction

Today, migration and forced displacement have become truly global phenomena. Whereas the largest number of migrants and refugees are hosted in Africa and in the Middle East, European policy-makers do not know how best to manage the recent increase in migration flows from Afghanistan, Syria, and Nigeria, among other countries.

All too often, the plight of the migrants and refugees themselves is lost, and they can end up being considered as part of a 'wave', identified with a registration number and ready to 'burden' the administration of the host country. In an era of intense geo-politics and international disputes over trade as well as over nuclear weapons, the micro-level perspective of migrants and refugees is frequently lost in macro-level aggregates.

This policy brief summarizes the findings of a new study that uses micro-data to address one of the key concerns of people who migrate or have to flee: how does their migration impact their reproductive behavior? While this topic may not be very visible at the macro level, it has a significant impact on the lives of migrants and refugees.

The study was undertaken with access to a database of over 4,500 Burundese women and spans the period of the civil war in Burundi (1993–2005). What is unique about the data is that it includes both complete migration *and* fertility history of all the women since the start of the civil war. This enables the comparison between women who were never displaced, those who migrated voluntarily, and those who were forcibly displaced. In addition, the data also allow the researchers to distinguish between the year(s) in which a woman was actually on the move and the year(s) in which she was residing in her new location.

The policy brief is organized as follows: we start with a presentation of how migration relates to fertility, which is a well-researched domain in the literature. We continue by exploring the links between armed conflict and forced displacement on the one hand, and fertility on the other. This is much more uncharted territory, but the literature has pointed in interesting directions. We then present the country background, the data we are using and our results. We conclude with policy implications of our work.

Migration and Fertility

The literature on migration and fertility has suggested three possible ways in which migration relates to fertility:

- **The selection effect** refers to the tendency for migrants to self-select for individual characteristics that are associated with lower or higher than average fertility compared to non-migrants at the country of origin. In other words, migrants represent a non-random sample in terms of their socio-economic characteristics. Migrants indeed often differ from non-migrants on observable socio-economic characteristics such as education, age at marriage and age at employment, which have an impact on reproductive choices. Selectivity may also occur on the basis of unobserved variables, such as the propensity to postpone childbearing, openness to change or fertility aspirations on the behavioral side and unobserved mother-specific fecundity on the biological side.
- **The disruption effect** in childbearing through spousal separation or a desire to delay childbearing until after the move could also prevail. Such a mechanism would lower the fertility of migrants compared to non-migrants. The impact of disruption would therefore be found in the timing of a woman's fertility and the impact may only last a short duration. The disruption effect has been studied most often in the context of temporary migration. In Tanzania, researchers explored the impact of temporary spousal separation on fertility and concluded that any relationship between migration and fertility is reflected only in cumulative fertility and that disruption was not a major factor driving temporary fertility. A high level of disruption could lead couples to make up for lost fertility by spacing births more closely after migration as well as delaying the age at which childbearing is interrupted. It is necessary, therefore, to distinguish the potential effects of migration on cumulative fertility against those on immediate fertility. Another study found that a residential move reduces the likelihood of childbearing in the year

of occurrence, providing evidence for a disruption effect.

- **Adaptation** to the fertility regimes of the new destination is a third explanation linking migration to fertility. The adaptation theory has its roots in both sociological and economic theories explaining determinants of fertility. Rural women moving to urban areas may adapt to the prevailing social norms of having less children or may find a job thereby increasing the opportunity costs of conception. This may be similar to a situation in an IDP camp where the availability of family planning services may reduce fertility.

Armed Conflict, Forced Displacement and Fertility

Armed conflict can impact fertility in many different ways. First, civil war may affect fertility *negatively* due to the mobilization of militia and other military reserves and the conscription of new recruits. This in turn implies both **delayed marriages and disruption of marital fertility** due to the separation of couples. Violent conflict can also lead to an increase in the age at marriage and to an increase in the proportion of women that never marry. On the one hand, war may cause increased mortality among men, typically unmarried young men. The females born in the same or slightly younger birth cohorts may find it difficult to find a husband as the younger males usually prefer younger brides. In many developing countries, unmarried women occupy non-enviable positions in the household, often the household of a sibling. **Late marriage or single status** may decrease the fertility of these women.

Second, there is the case of women who lost their husbands in the war. At the same time, **during war or in periods of increased insecurity, it is rare that women marry at a young age**. This may be linked to the need to provide labor on the farm or to generate income. If, for example, the husband or the oldest son of the household are recruited in the army or a rebel group, the mother/wife faces the difficulty of managing the household, the farm and potentially other income-generating activities all by herself. Other children and family members may need to stay at the farm to help her. The household may even attempt to recruit new members to replace the loss of male labor.

Third, in war zones, **the psychological stress and strain of carrying out daily activities** may reduce the frequency of marital intercourse. Furthermore, conflict-related stress can have a negative effect on both semen quality and the menstrual cycle, which in turn increases the risk of infertility.

Fourth, conflict may also lead to a temporary **decline in the number of planned births** due to the expected negative impacts of conflict on the economy.

A fifth mechanism linking conflict to reduced fertility is related to the **disruption of commerce and reduced food supply** that may occur during wartime. Moreover, military presence may divert resources away from the civilian population, exacerbating existing food shortage. It is well documented that undernutrition significantly hampers female reproductive ability.

Sixth, **warfare may generate migration and refugee flows**, often resulting in the separation of couples for longer time periods. A number of studies, conducted in Angola, Eritrea, and Ethiopia among others, have documented significant reductions in fertility during conflict. On the other hand, long-lasting armed conflicts could also be expected to have the opposite effect on fertility behavior. Among the more proximate channels linking conflict to increased fertility through temporary migration are shortages in access to family planning and abortion services due to the temporal shutdown of health clinics.

Finally, another mechanism linking conflict exposure to increased fertility throughout displacement is the desire to replace lost children and combatants. In other words, such mortality effects may either arise when the loss of a child causes parents to try to conceive another child, or when broader expectations in society about future mortality cause hoarding. For example, in a study of conflict and fertility in Rwanda, researchers found evidence for a strong *replacement effect*. Researchers refer to the former as **replacement fertility** by individual women and to the latter as **population-rebuilding** in the context of conflict or other disasters with high overall death tolls. Women who undergo violence from militia members may be subject to rape and thus increase the number of children they would otherwise have in the case of no war.

The Civil War in Burundi (1993–2005)

The civil war in Burundi started as a fight over inequality and political power between a Tutsi elite and disenfranchised Hutu. The former occupied all influential positions in government, the administration, army, and in universities. Hutu rebel groups contested that privileged position by arms after the army killed the first democratically elected president in October 1993, only four months after he had taken office.

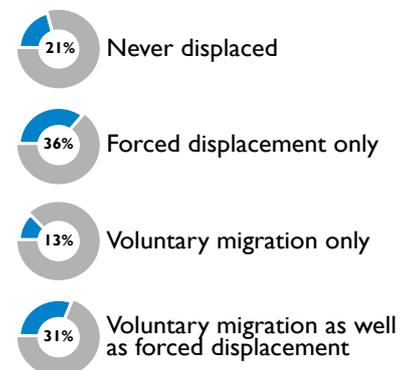
The resulting civil war lasted more than a decade and came with a heavy toll on civilians. It was a low-tech war in which the government army and the rebel groups played hide-and-seek and mounted hit-and-run operations. The rebels were mobile and acted from their base in the Kibera Forest on the borders of the provinces of Bubanza and Kayanza and Cibitoke. This means that, during the course of the war, different areas were attacked at different times as rebels and army moved over the territory. Civilians were widely used as proxy targets, with both sides (rebel groups and the regular army) targeting civilians deemed supportive of the other group. Direct battles between the army and the rebel forces were relatively rare despite the duration of the war. Both sides of the conflict engaged in widespread looting of civilian property and massive human rights violations. Civilians had to flee battle zones, losing wealth and livestock in the process, and were placed in IDP camps under often deplorable conditions. Displaced individuals and families were prone to attacks, deprivation, bad sanitation and housing conditions and malnutrition. In their strategy to avoid open confrontation with the army, rebel groups were very mobile and obliged villagers to supply food and to carry food and weapons over hilly areas with them. They also requested contributions in cash. Upon returning home, displaced people would find their land occupied by neighbors or strangers.

In terms of the fertility regime existing prior to the conflict, it is interesting to observe key findings from the 1987 DHS for Burundi (N=2,777), the data source which provides information on fertility close to the onset of the civil war. We learn that women were on average 19 years old when they first married, an age that also corresponds with the age at which the women had their first intercourse. No less than 88% of the surveyed women report not using any form of contraceptive method, be it traditional

or modern. 44% do not know where they are in the ovulatory cycle and the desired number of children is 5.2. Without any doubt, Burundi at the eve of the civil war can be characterized as a very high fertility country where women do not have control over the number of children they have and do want to have a lot of children.

The Data

Data from the **Enquete Sociale et Demographique de Santé de la Reproduction (ESDSR)** were employed for the analysis. This nationally representative survey was conducted by the United Nations Population Fund to fill in the information gap generated between the end of the civil war and the previously collected census data in 1990, prior to the onset of the conflict. The ESDSR (2002) dataset is designed to be representative of the population at the national level, as well as at the rural, urban



Mean (St.dev.) Min Max

Number of times women forcibly displaced:
1.36 (0.63) 1 6

Number of times women voluntarily migrated:
1.25 (0.54) 1 6

Number of years women resided in forced displacement site (if displaced):
4.97 (2.74) 1 9

Number of years women resided in voluntary migration site (if displaced):
4.62 (2.22) 1 9

Figure 1: Overview of migration/displacement status, Burundian women (born 1952–1988)

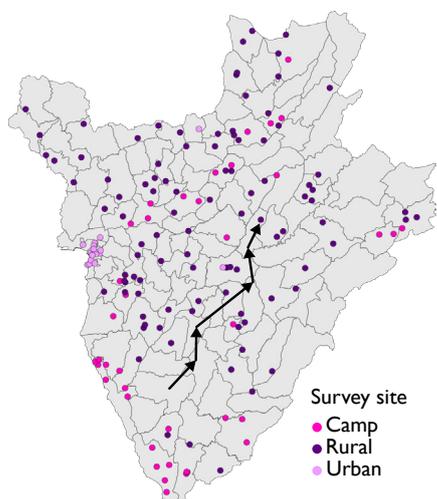


Figure 2: Surveyed sites and example of migration trajectory (authors' own, based on EDS survey, 2002)

and IDP camp level. The survey collected information on 7,119 households, of which 3,181 were located in 40 IDP camps, 2,820 in 100 rural hills and 1,118 in 28 urban locations, with a total of 32,805 persons interviewed. The general information obtained from the individual bulletins for both men and women pertain to *demographic characteristics*, namely year of birth, gender, marital status, year of marriage, year of separation (if any), nationality, religion and *socio-economic characteristics* such as schooling, occupational status, livestock held (number of cows, sheep, chickens) by the household at the time of the survey as well as before the start of the war, and health status, notably whether people survived the conflict, or, if not, their causes of death. In our sample, of the 4,523 women, 21% were never displaced/ never migrated, 35.6% were forcibly displaced at least once, 13% migrated on a voluntary basis at least once, and 30.5% experienced both forced displacement and voluntary migration at least once. The average number of years of forced displacement is almost five years, see Figure 1. 52% of all the surveyed women reported that

they had resided at least once in a camp.

An example of a hypothetical migration/ displacement trajectory of a woman is shown in Figure 2. She is interviewed in one of the 168 survey sites and during the interview she talks about the different places she has resided in during the war, starting from the residence she had before the start of the war. The interviewer also registered the date of arrival and of departure at a given location.

The respondents were also interviewed about their fertility history, including the date each child was born, the gender of the child and whether or not the child is still alive at the time of the interview. The researchers then combined the migration data with the fertility data which allowed them to find out where the women were at the time of each pregnancy.

Analysis and Findings

We estimate the risk of a first pregnancy as well as higher order pregnancies. Next to our variable of interest (the risk of pregnancy), we include age, religion, education level as well as a proxy for pre-war wealth as co-variables in the analysis.

We find that the risk of a first pregnancy increases by 30 to 40% in the year that a woman is forcibly displaced, and that risk remains 20 to 30% higher compared to non-displacement for each year she is in residence in the new site. For voluntary migration we find more extreme results: in the year of migration, the risk of a first pregnancy decreases by 10 to 15% whereas residence in the new site increases the risk by 100%. In the case of higher order births, these results are confirmed for all variables and the magnitude of the coefficients is even a bit larger.

As regards other factors beyond migration, our results correspond with the broader literature on fertility: primary and secondary education reduce

the risk of pregnancy by 5% to 20% respectively, compared to no schooling; being married increases the risk by 20% to 30% compared to being single; equally so for migrating/taking refuge with one's entire household (as compared to travelling alone). And Muslim women have a 40 to 50% higher risk of becoming pregnant.

Implications for Policy

Our research shows that in times of forced displacement, women have a higher risk of becoming pregnant. The risk is higher compared to non-displacement and much higher compared to voluntary migration. In the latter case, women (are able to) plan their pregnancy better, resulting in a much higher pregnancy outcome once they reside in the new destination. This means that forcibly displaced women have a much lower level of control over their reproductive behavior. This is linked to the conditions of their displacement: they can find themselves in a hostile environment, in sudden, unplanned circumstances, with little or no health care, no access to contraception, and potentially exposed to violence, coercion and rape. Agencies and NGOs that strive to reduce the risk of displacement-related pregnancy must therefore create and support measures that assist women to remain in charge of their fertility. This can be achieved through the provision of health services, including reproductive health, to men and women who are on the move, in particular when they are fleeing hostilities. The use of mobile technologies including social media should be leveraged to access vulnerable populations in often inaccessible areas. ■

Further Reading

Verwimp, Philip, Davide Osti & Gudrun Østby (2017) 'Migration, Forced Displacement and Fertility during Civil War: A Survival Analysis', *Working paper No 17-016*, Working Papers CEB from ULB - Université Libre de Bruxelles. Available at: econpapers.repec.org/paper/solwpaper/2013_2f250953.htm

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THE PROJECT

The PRIO Centre on Gender, Peace and Security is a resource hub at PRIO for gender, peace and security studies.

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PRIO

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