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This document is an output funded by the UK Department for International Development (DFID) and IZA – Institute of Labor Economics for the benefit of developing countries. The views expressed are not necessarily those of DFID or IZA. GLM-LIC working papers often represent preliminary work and are circulated to encourage discussion.

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**ABSTRACT****The Impact of Refugee Experiences on Education:  
Evidence from Burundi\***

Previous studies suggest that displacement is one of the channels through which conflict impacts schooling outcomes. However, there is scarce evidence on this impact for those who are displaced internationally (i.e. refugees). Using data from Burundi, a country which experienced large scale conflict-led emigration and substantial post-war refugee return, we show that returning refugees are six percentage points more likely to have finished primary school than their contemporaries who never left the country. We conduct several placebo tests to demonstrate that this result is not driven by pre-conflict differences. There is no substantial effect of internal displacement on schooling outcomes.

JEL Classification: F22, D74, I25

Keywords: refugees, education, Africa

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\* This document is an output from a project funded by the UK Department for International Development (DFID) and the Institute for the Study of Labor (IZA) for the benefit of developing countries. The views expressed are not necessarily those of DFID or IZA. We thank Charlie Becker, Tom Bundervoet, Craig Loschmann, participants of the 2015 ASSA meetings, 2015 HDCA Annual Conference, 2015 EISA conference and seminars at Maastricht University and the University of Oxford, for helpful comments and suggestions on previous versions of this paper.

## **1. Introduction**

The number of displaced persons worldwide is currently at its highest level since the Second World War. More than 65 million people around the globe were forcibly displaced in 2015, of which approximately a third (21 million) were displaced internationally (i.e. refugees). The vast majority of refugees reside in neighbouring developing countries (UNHCR, 2016a). The consequences of displacement for those affected are significant, frequently long-lasting and affect multiple aspects of human life. One important aspect that displacement experiences can affect is access to education. Several studies suggest that forced displacement is one of the key channels through which conflict can have a detrimental impact on schooling outcomes (Chamarbagwala and Moran, 2011; Justino et al., 2014; Verwimp and Van Bavel, 2014). Most studies have, however, focused on internally displaced persons (IDPs) while there is scarce evidence on the impact of forced displacement on the education of refugees.

One of the main reasons for the scarcity of evidence on the impact of refugee experiences on schooling is the lack of datasets that include a large sample of individuals who experienced international displacement and their contemporaries who did not, so that the educational outcomes of both groups can be compared. This type of analysis is only possible in countries which experienced a large outflow of refugees and a large inflow of returnees after the end of the conflict. This paper makes use of a nationally representative survey recently conducted by the authors in Burundi, a country which has experienced these two flows. In particular, we explore differences in schooling outcomes between those who were displaced to a neighbouring country and later returned home (i.e. returnees) and those who never left the country during the conflict (i.e. stayees).

Refugee experiences may have negative as well as positive impacts on schooling. For instance, when children are physically fleeing, which may be of greater or lesser duration, they do not have access to education. Before settling in a new location, children frequently end up in a transitory situation where they may not have access to schools. The family could also settle permanently in a remote area with no schools. Moreover, children in displacement are often more likely to become infected with certain diseases (Connolly et al., 2004), experience food shortages (Dharod, 2013) and rely on coping mechanisms such as early marriage, all of which may have a negative impact on education (Oh and van der Stouwe, 2008). Displacement might also be related to greater loss of property and wealth during the conflict (Fransen et al., 2016) and a need for children to get involved in income-generating activities.

On the other hand, refugee experiences could lead to better schooling outcomes compared to those of children who, for various reasons, do not leave their country of origin when conflict erupts. Refugee children have a right to protection and assistance, including the right to a basic education, as stated by the 1951 UN Refugee Convention relating to the Status of Refugees (UNHCR, 1951). Many refugee camps or refugee hosting areas are therefore equipped with primary education facilities, often provided for and/or financed by NGOs or international agencies (UNESCO, 2011). Refugee children also frequently have more access to humanitarian assistance and other sources of support than stayees, particularly when they reside in camps. Children may also end up being hosted in countries that have better education systems than those back in their country of origin. In contrast, their contemporaries in the home country need to rely on their national government to provide services such as education. Many conflict-affected states lack the capacity and/or willingness to provide these services (UNESCO, 2011). Children who stay behind are also more likely to be conscripted and experience higher levels insecurity, two

factors that have been shown to have negative consequences for human capital acquisition (Blattman and Annan, 2010).

Burundi experienced a civil war between 1993 and 2005. The conflict resulted in an estimated 300,000 casualties and an estimated 700,000 refugees (Ngaruku and Nkurunziza 2005). The majority of refugees settled in camps in Northwestern Tanzania (Fransen, 2015). The United Nations High Commissioner for Refugees (UNHCR) supervised and sponsored the schools in refugee camps in Tanzania (Skonhofs, 2010). The education system in Burundi was seriously affected as a result of the war, as national primary enrolment rates plummeted by close to 15% during the conflict (World Bank, 2016). The extent to which refugee schooling outcomes differ from those who never left the country is unknown. Given that the large majority of Burundians displaced by the 1993-2005 conflict have returned home (Harild et al., 2015; Fransen, 2015; Fransen et al., 2016), it is now possible compare the schooling outcomes of returnees with the outcomes of their contemporaries in Burundi.

Given the low levels of schooling in Burundi we focused on primary education and explore differences on the impact of refugee and stayee experiences across different schooling cohorts. In particular, we look at three cohorts. First, we look at those who were above primary schooling age at the start of the war. This cohort serves as a control group as its educational outcomes (i.e. primary education) should not have been affected by the conflict. Second, we look at those who were of primary schooling age during the conflict. This war generation should be the most affected cohort. Finally, we look at those who became of schooling age after the conflict. This cohort provides insights on the impacts of early life experiences on future schooling outcomes.

Our results suggest that, controlling for individual characteristics, conflict exposure and cohort effects, returning refugees are six percentage points more likely to have finished primary school than their contemporaries who never left the country. The result is driven by those individuals who were affected by the war during their schooling years. The results are robust to inclusion of multiple controls for pre-war economic conditions. For the most part, we find no significant effect of internal displacement on schooling outcomes. These findings correspond with reports which suggest that children who were of school age during the conflict and who were displaced internationally had better access to education facilities than those who stayed in Burundi (Integrated Regional Information Network, 2002). We also provide a simple comparison of the schooling outcomes of returnees with those of residents of Kagera, a region of North-western Tanzania (i.e. region that borders Burundi), and there is some suggestive evidence that returnees are better off than their hosts in Tanzania.

The rest of the paper is structured as follows. The next section explains the rights of the displaced to primary school education and discusses the existing evidence. The third section presents the historical background. The next section presents the data and methodology. The fifth section presents the main results of the paper. Section six presents complementary evidence from the survey on experiences while in displacement. Section seven presents a comparison of stayees with the outcomes of Tanzanians from the same schooling cohort. Section eight presents a series of robustness tests, and the last section concludes.

## **2. Displacement and schooling outcomes: rights and previous evidence**

The 1951 Convention Relating to the Status of Refugees establishes the right to primary education for refugees. In particular, the Convention states that host governments should ensure that refugees are given the “same treatment as is accorded to nationals with respect to elementary

education” (UNHCR, 1951). Moreover, UNHCR has a mandate to protect refugees, which includes the provision of education (Waters and LeBlanc, 2005). However, in many cases there is a substantial gap between the legal right to education of refugees and the actual provision of such education (Dryden-Peterson, 2015a). A study conducted on Syrian refugee children who reside in neighbouring countries showed that 80% of them did not attend school in Lebanon in 2013. Similarly, 56% of Syrian school aged children did not attend school in Jordan in that year. School dropout rates and class failure rates were also significantly higher among refugee children as compared to locals (UNICEF, 2015). Insufficient access to education is particularly likely in cases of urban displacement, as many urban schools are already stretched and lack space for new pupils. Often it is also unfeasible to build new schools or expand existing ones in urban areas. UNHCR (2016) estimates that only about half of children refugees worldwide in 2015 had access to primary education.

In the case of IDPs, the responsibility to provide primary education lies with national authorities. As explained by Justino (2011), educational facilities in IDP camps are not very common and the provision of this service “is typically disorganised, when it exists at all.” National authorities are also responsible for providing education for those children who never leave their communities of origin. While these children are not affected by displacement, they suffer from other detrimental consequences of conflict for education, including the destruction of schools, killing and exodus of teachers, household income shocks and decreases in state investments on education.

There is a substantial literature which has explored the overall impacts of conflict on schooling outcomes (Akresh and De Walque, 2008; Chamarbagwala and Moran, 2011; Di Maio and Nandi, 2013; Ichino and Winter-Ebmer, 2004; Lai and Thyne, 2007; Leon, 2012;



Shemyakina, 2011), but just a few studies have explored the specific impact of forced displacement on schooling outcomes. This evidence mostly refers to internal displacement experiences and suggests that these experiences have major negative consequences for schooling outcomes. For instance, Justino et al. (2014) estimate that in Timor Leste experiencing displacement decreased school attendance by 8.5 percentage points. For Burundi, Verwimp and Van Bavel (2014) estimated that the probability of completing primary schooling declines by 2 percentage points for every year spent in a camp. However, Verwimp and Van Bavel (2014) used data from 2002, before the large wave of refugee return to Burundi. That means that they are mostly measuring the negative impact of internal displacement experiences and are not fully capturing the impact of international displacement experiences (more on this in the next section).

### **3. Historical background of Burundi**

Burundi is a small country in the African Great Lakes region that consistently ranks as one of the poorest in the world. The country occupied the 184th place (out of 188) in the Human Development Index in 2014 (United Nations Development Programme, 2015). Gross national income per capita was just USD 270 in 2014, well below the average for sub-Saharan Africa (USD 1,699). The country is also densely populated. It occupied the third place in population density in Africa in 2015 with 435 people per square kilometre of land area (World Bank, 2016), which is much higher than the average for sub-Saharan Africa (42 people per square kilometre). Close to 90% of the population depends on subsistence agriculture but cultivable land is relatively scarce (World Bank, 2015).

There have been historical tensions between Burundi's two main ethnic groups: Hutus and Tutsis. These ethnic tensions are part of a complex and multifaceted power struggle that has led to large scale conflict. In 1993 the events that led to the biggest conflict in Burundi's history

started when Melchior Ndadadye became the first democratically-elected Hutu president of the country. He was assassinated a few months later by Tutsi soldiers. The assassination led to a long civil war that lasted from 1993 to 2005 (Ngaruko and Nkurunziza, 2005). Although there had been previous conflict episodes in Burundi, such as the one in 1972, the scale and intensity of the 1993-2005 conflict set it apart from earlier conflicts. Whereas previous violent episodes were limited to certain provinces, the 1990s war was a countrywide conflict.

Substantial evidence indicates that exposure to conflict in Burundi was random (Uvin, 1999). For instance, Voors et al. (2012) show that the type of violence experienced in Burundi was largely exogenous to household characteristics and local economic conditions. The authors, for example, test whether violence was affected by the likelihood of profit, measured as the possibility of stealing assets (including livestock), and ethnic considerations such as the share of the local vote for the assassinated president. They find no support for these possibilities, which suggests that households had equal chances to be affected by the conflict in Burundi and that targeting of households based on certain household characteristics did not occur.

The war resulted in both internal and international displacement. The evidence suggests that pre-war distance from the border was the main determinant of internal versus international displacement in Burundi. Individuals living in border provinces were more likely to cross international borders when conflict erupted as compared to individuals who resided in the middle of the country (Fransen et al., 2016). Around 700,000 people fled to neighbouring countries, mainly Tanzania, where they settled in refugee camps in the North-western part of the country (Fransen, 2015; Ruiz and Vargas-Silva, 2015, 2016). As shown in Panel A of Figure 1, there was an initial outflow of refugees in 1993 that lessened over the next two years and then continued until the mid-2000s. The population of Burundian refugees in Tanzania peaked in 2002

(540,000).<sup>2</sup> Refugee experiences in Tanzania typically lasted long, with an average duration of 10 years (Fransen et al., 2016).

Living conditions in camps in Tanzania differed across sites, but were generally better than those in Burundi during the war. Still, many refugees experienced serious hardship. Unlike the previous cohorts, such as the 1972 refugees, Burundian refugees fleeing to Tanzania from 1993 onwards were not given land for agricultural activities (Harild et al., 2015). Over time, the Tanzanian government also restricted the movement of refugees to four kilometers from the camps and imposed limitations on the types of economic activities in which refugees could engage (Millner, 2013). Refugees could not legally work outside of camps or own farms in the camp areas. As a result, many of these refugees were fully dependent on the support of international aid for the entire duration of their stay in Tanzania (Harild et al., 2015).

Importantly for this study, primary schools in refugee camps in north-western Tanzania were funded by UNHCR, which paid for teacher salaries (Amnesty International, 2005). It is estimated that around 90% of primary school age children who arrived in Tanzania after 1993 were enrolled in school in 2000 (Jackson, 2000). Qualitative studies suggest that Burundian refugees were highly motivated to send their children to the schools in camps, particularly the Hutus who felt they had been previously discriminated in the Burundian schooling system (Skonhofs, 2010). Moreover, in the past, educated Hutus were one of the main targets of the Tutsi dominated Government and education was often seen as a liability (Nkurunziza and Ngaruko, 2002; Skonhofs, 2010; Verwimp and Van Babel, 2014).

Dryden-Peterson (2015b) explains that Burundians who settled in Tanzania following the 1972 conflict were integrated into the national educational system, using a Tanzanian curriculum

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<sup>2</sup> Note that there were a considerable number of refugees from Burundi in Tanzania before the events of 1993. These refugees were the result of the violence in 1972. These refugees were given land for cultivation and, by all accounts, were self-sufficient (Thomson, 2009).

taught in Kiswahili and English, which are the main languages of Tanzania. The overall goal was to facilitate the integration of these refugees in the host country. However, there was no political will to integrate refugees from the 1993 conflict. Schools in camp areas shifted to a Burundian curriculum taught in Kirundi and French, which are the main languages of Burundi. Hence, while UNHCR supervised the schools, Burundian educators were in charge of developing the education system in the refugee camps (Skonhofs, 2010). The overall goal was to facilitate the return of these refugees to Burundi.

It is estimated that the number of internally displaced reached 800,000 in 1999 (United Nations Office for the Coordination of Humanitarian Affairs, 1999). Internal displacement experiences tended to be short and lasted approximately one year (Verwimp and Van Bavel, 2014). Living conditions in the displacement camps within Burundi were generally poor. The majority of settlements lacked basic services such as clean drinking water and health care facilities (Zeender and McCallin, 2013). Burundi's government was responsible for funding educational facilities in the camps and reports suggest that at least 50% of school-aged internally displaced children did not go to school (Integrated Regional Information Network, 2002).

The Arusha Peace Agreement was signed in August 2000 and led to the end of the conflict a few years later. In 2005, Burundians elected Pierre Nkurunziza, a Hutu, as President of the country, reinforcing the conditions of the peace agreement. Since the end of the conflict Burundi has experienced a large wave of return of its displaced population. Estimates suggest that over 500,000 Burundians have returned from Tanzania since 2000 (Fransen, 2015). This is a considerable number for a country that had a population of only 6.7 million in 2000. As shown in Panel B of Figure 1, the peak return migration for these individuals was 2005. The spikes in 2008 and 2012 reflect the closure of refugee camps by the Tanzanian government. Moreover,

during this period Tanzania stopped the provision of education for Burundians in order to encourage refugees to return home (Dryden-Peterson, 2015b).

[Figure 1]

In 2005, the Burundian Government announced that primary education in public schools would be provided for free from the following academic year. The gross primary enrolment rate increased from 82% in the 2004/05 academic year to 101% in the 2005/06 academic year (Sommeiller and Wodon, 2014). There was a substantial increase in enrolment rates in all provinces of Burundi.

#### **4. Data and methodology**

The survey was conducted across all provinces of Burundi during January to March 2015.<sup>3</sup> A total of 1,500 households were interviewed. The distribution of households across provinces and *sous-collines* (the smallest administrative unit in the country) was based on Burundi's 2008 census. Within each *sous-colline*, 15 households and one community representative were interviewed. Figure 2 shows the distribution of communities/*sous-collines* in the survey across Burundi.

[Figure 2]

Primary schooling age in Burundi ranges from 7 to 12 years of age. We limit the analysis to individuals who became of schooling age in 1973 or later and had 12 years of age in or before 2014. This means that the sample is limited to individuals who were between 13 and 49 years of age in 2015. As shown in Table 1, this results in a sample of 3,975 individuals. Of those 3,975 individuals, a total of 922 individuals belong to the pre-war schooling cohort (born between 1966

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<sup>3</sup> In 2015, over 200,000 people were displaced from Burundi to neighbouring countries (UNHCR, 2016c). This is the first episode of large displacement in the country in over a decade. The displacement is the result of increasing tensions and violence in response to the April 2015 announcement that the president of Burundi was running for a third term in office. Many interpreted a third term in office as a violation of the Arusha peace agreements. The data collection for this article was finalised approximately six weeks before the president's announcement and before this new wave of tensions and displacement.

and 1980), 2,021 belong to the war schooling cohort (born between 1981 and 1997) and 1,032 belong to the post-war schooling cohort (born between 1998 and 2002).

Refugee experiences were recorded at the individual level in the survey. A person was defined as a returnee if the person had moved internationally with the primary purpose of escaping conflict or political persecution and had resided in another country for a consecutive period of at least three months. As also shown in Table 1, 8% of those in the sample are returnees (330 individuals). This share is higher for the pre-war schooling cohort (15%) and smaller for the post-war schooling cohort (2%). Close to 9% of those in the war schooling cohort are returnees.

Table 1 also indicates the share of individuals in each education cohort that finished primary school. First, note that only 15% of those in the pre-war cohort finished primary school. The share is similar for returnees and stayees, suggesting that there was not a strong selection into international displacement based on previous educational outcomes. For the war generation, 35% finished primary school. The number is similar across returnees and stayees. Finally, for the post war generation, returnees have a much higher primary school completion rate. However, it should be noted that the sample of returnees for the post-war generation is small.

In order to study the impact of refugee experiences on schooling outcomes we estimate several variations of the following model:

$$S_i = \alpha_p + \delta W_i + \gamma PW_i + \beta R_i + \theta X_i + \varepsilon_i \quad (1)$$

Where  $S_i$  is a dummy indicating the person completed primary school,  $\alpha_p$  is a dummy for province of birth,  $W_i$  is a dummy indicating that the individual is from the war cohort,  $PW_i$  is a dummy indicating that the individual is from the post war cohort (i.e. pre-war cohort is the control category),  $X_i$  are controls for gender and age. In the baseline estimations  $R_i$  is a dummy

which indicates that the individual is a returnee. We also present estimations using a variable which indicates that the individual was of school age during displacement. The coefficient of interest for our analysis is  $\beta$ .

Please note that all individuals in the sample were born in Burundi and that in 2012 Tanzania repatriated any remaining refugee camp residents to Burundi (Ruiz and Vargas-Silva, 2016). As such, there is no selection issue in terms of staying in Tanzania or returning home. Also, all variables included in the estimation refer to pre-displacement factors and are not affected by refugee experiences. Finally, all estimations are presented with clustered standard errors at the sous-colline level.

The literature on forced migration suggests that, even if random conflict is the main driver of emigration, those individuals from better off families can travel further and select better locations (Van Hear, 2006). In order to address this possibility we also explore the role of pre-war wealth in driving educational differences in our results. For those households who were formed before the start of the war (i.e. 1993) we also have information on pre-war livestock. In order to standardize the livestock across individuals, we use Tropical Livestock Units (TLUs). Following Bundervoet (2009, 2010), who conducted an exploration of the impact of conflict on livestock in Burundi, we use the following units as weights: 1 cow/ox = 1 TLU, 1 sheep = 0.17 TLU, 1 goat = 0.17 TLU, 1 pig = 0.25 TLU and 1 fowl = 0.01 TLU.<sup>4</sup> These units mean, for instance, that four pigs will roughly consume as much as one cow. We only have this information for about half of the households in the sample and this is not a random selection as it denotes the “older” households in the sample. Still, by showing that the results do not change

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<sup>4</sup> TLUs allow animal species of different average size to be compared by a common unit. These measures are based on the typical weight of the animal raised to the power of 0.75 (also known as the metabolic body weight), compared with the equivalent figure for an animal of 250 kg. Please to note that this measure relies on both species being under the same feeding system (which is a reasonable assumption in our case), but does not account for the possibility of different breeds of the same species.

much if we include this variable we can make a stronger case for the robustness of the results to factors related to pre-war conditions.

We also created a variable which controls for the average primary schooling outcome (i.e. primary schooling completion dummy) of those members of the household who are from the pre-war generation. This variable provides an alternative way to control for differences in pre-war conditions. The downside of this variable is that it is only available for households who have members from the pre-war generation.

Table 2 provides descriptive statistics of the independent variables. The sample is slightly more female (53%), a fact that also holds for each of the cohorts. The average age varies per cohort by construction. Households had a pre-war livestock of about 1.7 TLUs and close to 14% of those in the pre-war cohort finished primary school. Finally, as expected, stayees are younger than returnees.

We also show the results separately by schooling cohort as these provide interesting insights. First, the results for the pre-war cohort provide a placebo test for the results regarding refugee experiences. This cohort was over primary school age by the start of the war and we would not expect their schooling outcomes to be affected by future refugee experiences. The lack of an effect in this group would give support for the idea that there are no pre-existing trends that are accounting for differences between returnees and stayees. Second, we would expect the war cohort to account for most of the effect of refugee experiences, as this is the cohort that was seriously affected at a key point in their lives for schooling purposes. The findings for the post-war cohort can shed light on the impacts of fetal and early life shocks on future outcomes (Alderman et al., 2006; Galdo, 2013). Please note that for this last cohort the share of returnees is small. As such, we do not make strong conclusions based on the results for this cohort.



We also make use of the information from the in-depth interviews with the returnees to put the results in the context of experiences abroad and use data from Tanzania to compare the schooling outcomes of returnees to those of Tanzanians from the same schooling cohort. Finally, we show a series of robustness tests, paying particular attention to the control for conflict in the estimation.

## **5. Results**

### *5.1 Baseline*

Table 3 provides the baseline results for the impact of being a returnee on the likelihood of finishing primary school. The results suggest that returnees are six percentage points more likely to have finished primary school than stayees (column 1). The other variables included in the estimation suggest that females tend to have worse educational outcomes, as do older individuals. It is important to keep in mind that we are controlling for schooling cohort in the analysis. As such, the age variable is really capturing age variation within the schooling cohort.

In column 2 we include an interaction between gender and returnee status. Refugee experiences can have gender specific impacts on education. For instance, girls faced a higher risk of harassment and rape during the conflict (Daley, 2008) and this can encourage them to stay at home. The impact of conflict and displacement on household composition and income could also mean that many girls have to stay home and look after other children in the household, or drop out of school because of early marriage. However, as shown in column 2, the interaction of gender and refugee status is insignificant. As such, there does not seem to be a major difference in the impact of refugee experiences across genders.

Finally, in columns 3 and 4 we include the controls for pre-war wealth and schooling outcomes of household members from the pre-war generation. Including these controls increases

the difference in the likelihood of finishing primary school between returnees and stayees to ten percentage points.

### *5.2 Schooling cohort*

In Table 4 we separate the sample by schooling cohort. As explained above, the analysis for the pre-war cohort can be used as a placebo test for pre-war differences between the households of returnees and stayees as this schooling cohort should not be affected by refugee experiences. As shown in columns 1 to 3 of Table 4, the coefficients are indeed insignificant for this cohort. On the other hand, the coefficients are significant and substantially larger for the war cohort. Returnees in this cohort are eight percentage points more likely to have completed primary school, a difference that increases to sixteen and twenty percentage points if we control for pre-war conditions. Finally, columns 7 to 9 present the results for the post-war cohort. Early life experiences could affect future schooling outcomes (Alderman et al., 2006; Galdo, 2013), but we do not find any such evidence in our sample. One potential reason for this is the limited number of returnees that we have for this cohort.

### *5.3 Age at displacement and number of years*

In Table 5, we take a different approach to the schooling cohort analysis and focus on age at displacement. While most accounts suggest that the conflict ended in 2005, it took several more years for many individuals to return home (see Figure 1). The first row in Table 5 presents the results for those who were above school age when they experienced displacement. Again, this could also be seen as a placebo test of differences between returnees and stayees as the refugee experiences of these individuals should not have major implications for their educational outcomes. As shown in Table 5, the impact of refugee experiences is insignificant for this group. In the second row we present the analysis for those who were refugees at some point while they

were of primary school age. The results suggest that these individuals were twelve percentage points more likely to finish primary school than other individuals. If we control for pre-war education of current household members, this difference increases to twenty-eight percentage points. In the third row, we present the analysis for those who returned to Burundi before school age (i.e. before seven years of age). There is no significant impact of refugee experiences for this group. Finally, in the fourth row we focus on the number of years that the person was a refugee while of school age. This variable is equal to zero for all those who were not refugees during school age. The estimates suggest that one additional year as a refugee during school age increases the likelihood of finishing primary school by four percentage points.

#### *5.4 Internal versus international displacement*

One possible concern with the previous analysis is that it ignores internal displacement. The survey collected information on internal displacement experiences defined as spending at least one night away from the home because of displacement. In column 1 of Table 6 we include a variable indicating that the person was an IDP at some point. This sign of the coefficient is negative, but it is not significant. In column 2 of Table 6 we present the results from the same estimation, but excluding those who are returnees from the sample. It is still the case that the IDP variable is insignificant. Next, we include both the IDP and returnee indicators in the estimation. Please note that some individuals experienced both internal and international displacement experiences. The returnee variable is still significant after the inclusion of the IDP variable. In column 4 we include an interaction between gender and IDP status and the interaction is insignificant. Finally, we also conduct the estimations by schooling cohort and include the interaction between gender and IDP status. For the war cohort we find that if we include the interaction with gender, the IDP status variable becomes significant (negative), while the

interaction is positive. This coincides with previous evidence for Burundi (e.g. Verwimp and Van Babel, 2014) that suggests that internal displacement led to worse schooling outcomes, but closed the gender gap in education.<sup>5</sup>

[Table 6]

## **6. Experiences while in displacement**

Table 7 provides information on the schooling experiences of refugees while in displacement. This particular information is only available for one randomly selected returnee per household. While this is a small sample, we still get a good indication of the experiences of different cohorts. First, note that those who were above schooling age when they were displaced and those who return before schooling age did not accumulate much schooling while abroad (average of 0.11 and 0.21 years, respectively). On the other hand, those who were of schooling age accumulated about 1.7 years of education abroad.

Also, and perhaps more importantly, the survey collected information for returnees and IDPs on whether there was a primary school in the community of displacement. The information for IDPs was only collected for those who were adults before displacement (that is, the pre-war generation). As shown in Table 7, 73% of the returnees stated that there was a primary school in their community of residence abroad (mostly camps). As such, we can corroborate the availability of educational facilities for many refugees while in displacement. On the other hand, this was only the case for 55% of the IDPs.

[Table 7]

## **7. Comparison with hosts**

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<sup>5</sup> We also replicated all the results presented in the previous section including the IDP indicator and the results are robust to the inclusion of this variable. Results available from the authors upon request.

In this section we use data from the Kagera Health and Development Survey (KHDS) to explore if the primary school completion rate of Burundian returnees is very different from that of their hosts in Tanzania. Kagera is the most North-western region of Tanzania (see Figure 3). It borders Burundi and was one of the main destinations of Burundian refugees in Tanzania. The KHDS is representative of the population of the region and has been used by multiple papers to explore the consequences of hosting refugees (see Baez, 2011; Maystadt and Verwimp, 2014; Ruiz and Vargas-Silva, 2015, 2016). The last round of the KHDS was conducted in 2010. As such, we can compare the outcomes of residents of Kagera in the same schooling cohort as our “war” generation in Burundi (i.e. primary school age from 1988 to 2009). The KHDS data suggests that only 28% of Kagera residents in that cohort finished primary school, a smaller proportion than the one for the returnees in our sample (36%). While it is not possible to make strong conclusions from this comparison, the finding suggests that returnees could be better off in terms of schooling than both Burundian stayees and residents of North-western Tanzania. It is important to highlight that Kagera is one of the poorest and most remote regions of Tanzania and that primary school completion rates are much higher in other parts of the country.

[Figure 3]

## **8. Robustness**

One of the main concerns about the estimation is whether we are controlling adequately for conflict experiences. If this is not the case, it is possible to argue that the refugee experience indicator reflects the impact of several other factors related to conflict exposure.

In columns 1 to 3 of Table 8 we present the estimations if we control for the number of years in which the individual was of schooling age during the conflict, instead of simply including a dummy for schooling cohort. This change does not affect the main conclusions from

the analysis. It is still the case that returnees have better schooling outcomes than other individuals.

In columns 4 to 6 we account for the fact that the conflict did not affect all provinces at the same time or for the same length of time. We follow the same approach of Verwimp and Van Bavel (2014) to create a variable in which exposure to conflict varies by province and age cohort. They argue that the spatial spread of the conflict was determined by geography and natural endowments. In this case an individual is assumed to be exposed to conflict during school age if he/she had resided in a province that was affected by conflict and was of school age when the province was affected by conflict. Following Verwimp and Van Bavel (2014), we construct the conflict variable using the estimates from Bundervoet (2009) on the percentage of people whose fathers were killed during the initial stage of the conflict (i.e. above and below the median)<sup>6</sup> and Chrétien and Mukuri's (2000) account of the spread of the conflict for the later stages. The results do not change if we use this alternative way of controlling for conflict exposure.

[Table 8]

In Table 9, we test the robustness of the results by employing propensity score matching (PSM) techniques in order to match returnee individuals with a comparable group of stayees. In this case, the treatment (T) is being a returnee. As we explained above, the large majority of refugees from the 1993-2005 conflict returned home before our data collection. Hence, the treatment is essentially being a refugee in the first place, a factor that was largely determined by distance from the border of Tanzania.

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<sup>6</sup> Bundervoet (2009) adjusts the estimates for bias related to households in which all members were killed.

We start by estimating a probit model to predict the likelihood of being a returnee based on age, gender and province of birth, and then we match individuals based on treatment status. Once we check for the balancing properties and common support across the treatment and comparison group, we proceed to use the nearest neighbor estimation matching procedure. With the matching at hand, the difference in the outcome variable is calculated to estimate the average treatment effect of the treated. As shown, in Table 9 the results support the idea that returnees are more likely to have finished primary school than stayees.

[Table 9]

## **9. Conclusion**

In this paper we studied the effects of refugee experiences on education and explored if the educational outcomes of individuals with refugee experiences in Burundi differed from the outcomes of those who did not leave the country during the 1993-2005 civil war. Despite the increasing academic interest on the well-being of displaced populations worldwide, the relationship between displacement experiences and educational outcomes is a relatively underexplored topic and even fewer studies have focused on the consequences of international displacement on education. Our survey was conducted 15 years after the signing of the peace agreement in Burundi and after the return of most former refugees to the country, which enables a long-term perspective on the impacts of displacement on education, including the role of education in displacement camps abroad.

Our findings show that former refugees who returned to Burundi have better schooling outcomes than their contemporaries who never left the country. We find that returning refugees were six percentage points more likely to have finished primary school than those who stayed in Burundi during the conflict. The schooling outcomes of children displaced internally (i.e. within

Burundi) were not significantly different from those of other children. These findings most likely reflect the access that children had to education during the war in Burundi. While children who stayed home were likely to be affected by the negative impacts of conflict on schooling (e.g. destruction of schools, killing and exodus of teachers, child soldiering, household income shocks, higher levels insecurity and decreases in state investments on education), those in neighbouring countries, and particularly those who resided in camps in Tanzania, had access to UNHCR funded schools. We also provide a simple comparison of the schooling outcomes of returnees with those of Tanzanians and there is suggestive evidence that returnees were better off than their hosts in Tanzania; again, probably because of the specific schools that they had access to by virtue of being refugees.

Although the higher likelihood of completing primary school can be seen as a positive side effect of the refugee experience, the reality is that the primary school completion rate for returned refugees was still low (36%). These findings align with current concerns about the access to education of displaced populations during conflict times (UNHCR, 2016b). With the number of displaced populations in the world on the rise, an increasing number of children do not have access to education. The impact of displacement on education is likely to have implications for future labour market outcomes and, more generally, durable peace after the end of conflict. More emphasis is therefore needed on providing primary education to refugees. However, our findings highlight that particularly the children who stay behind when conflict erupts suffer serious gaps in their education, which indicates that there is an additional need for educational support programmes that allow these children to catch-up with those who were not as affected by the war.



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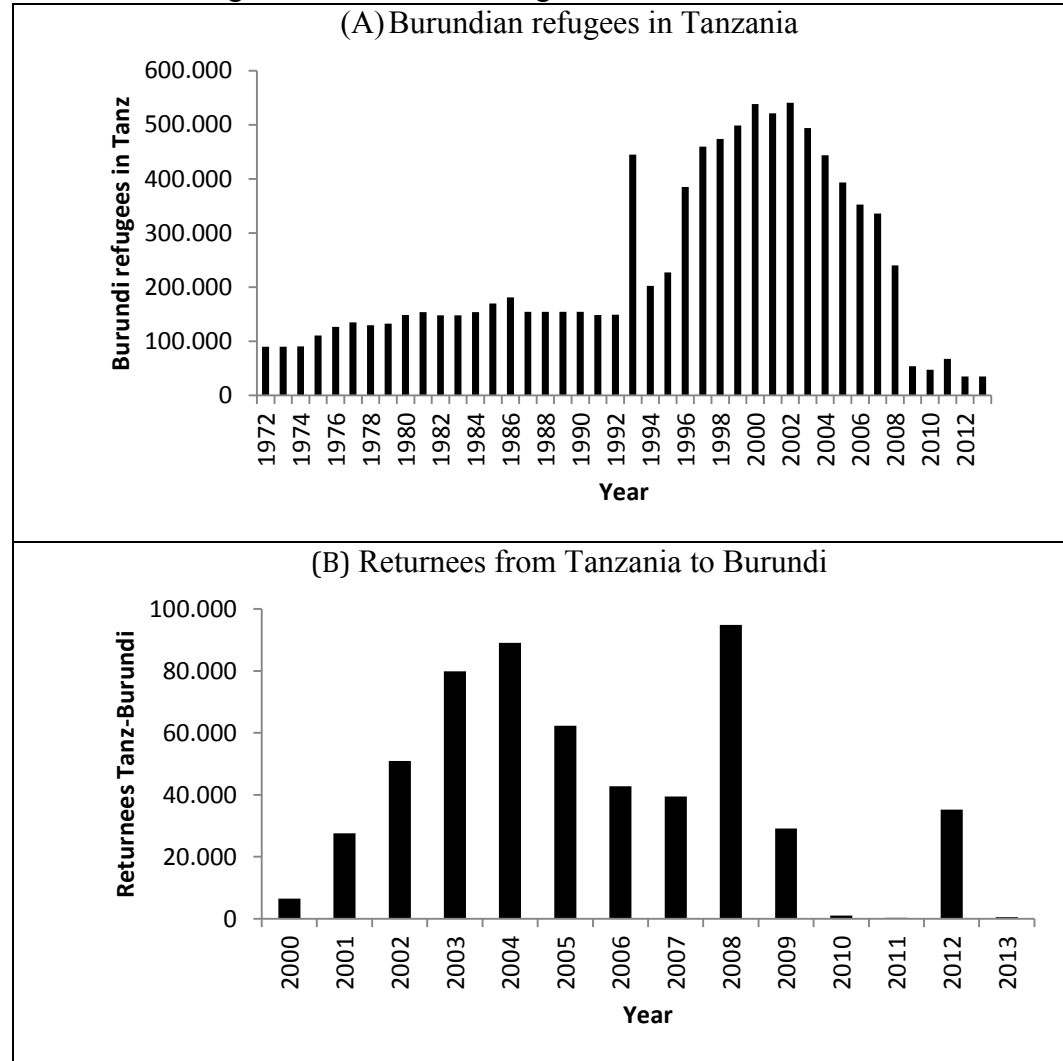
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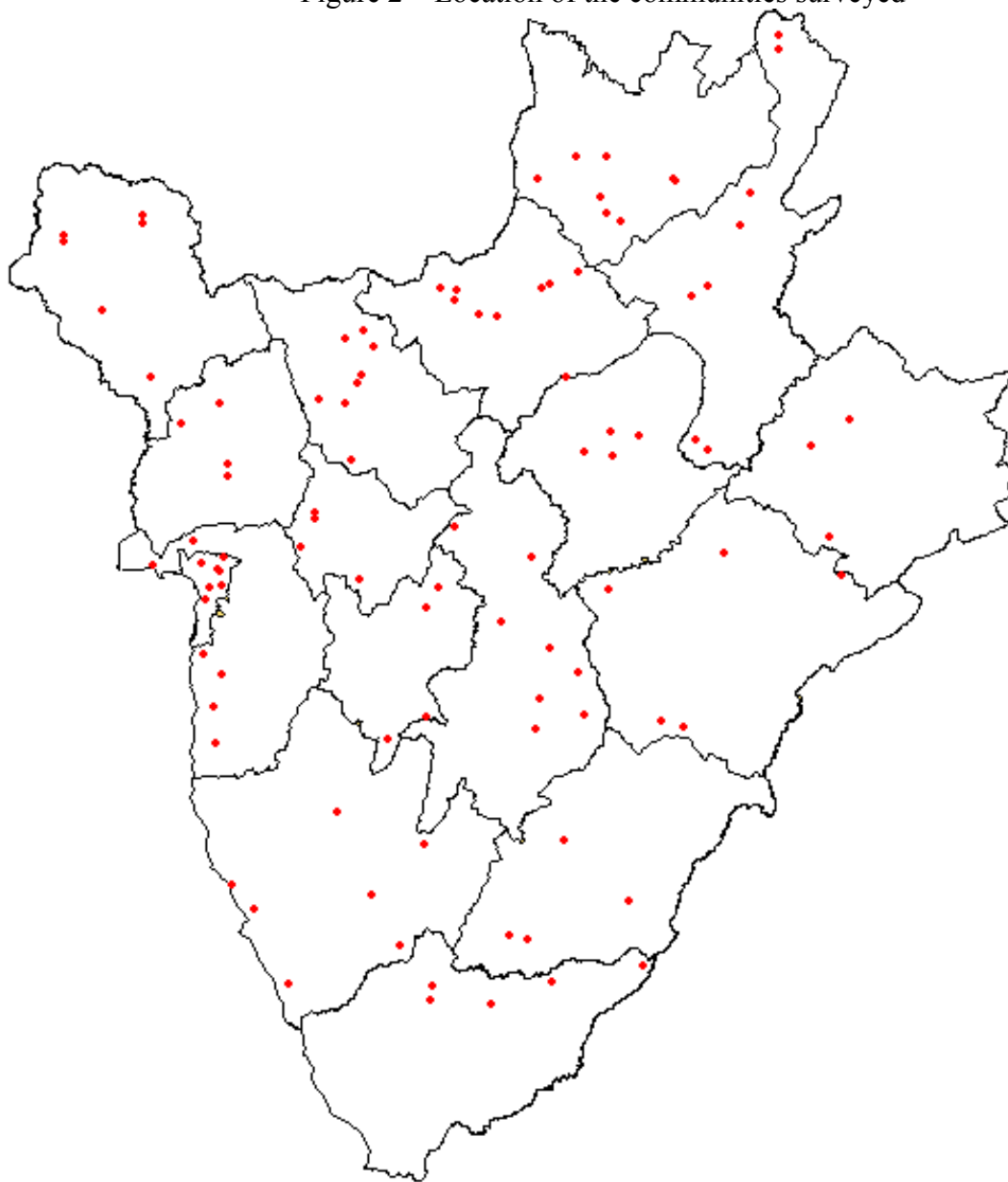
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Figure 1 – Burundian refugees in Tanzania and return



Note: source of data is the UNHCR population statistics.

Figure 2 – Location of the communities surveyed



Note: The data collection for this study took place between January and March 2015 in all 17 provinces of Burundi. The communities sampled were selected according to the demographic weight of these provinces in the 2008 Burundi Census. The Figure above shows the distribution of the communities across Burundi.



Figure 3 – Burundi and vicinity

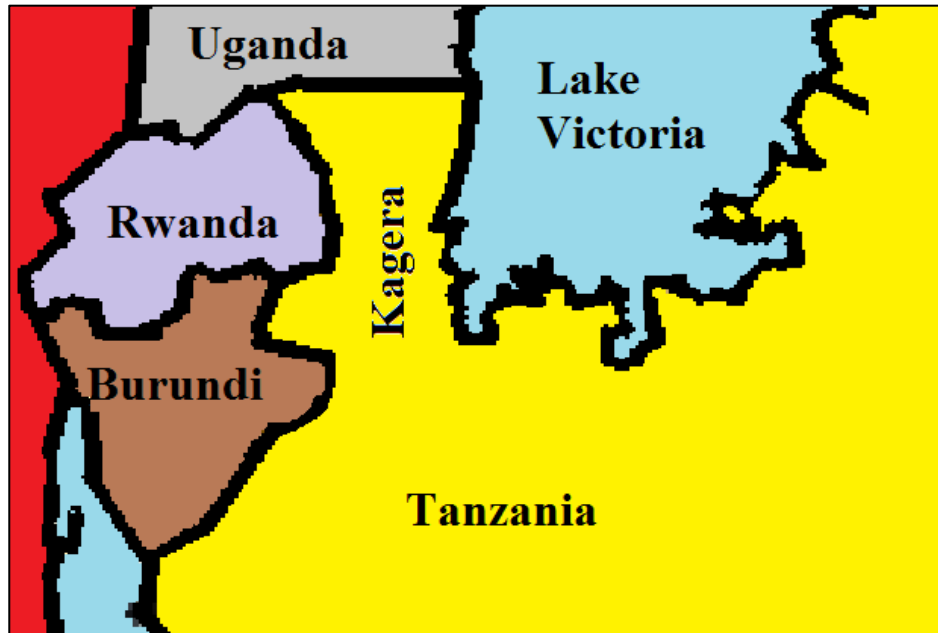


Table 1 – Definition of cohorts, returnee status and education

Cohort	Birth cohort	School cohort	Observations	Returnees	Finish primary school		
					All	Returnees	Stayees
All	1966 – 2002	1973 – 2014	3,975	8.0%	0.30	0.29	0.31
Pre-war	1966 – 1980	1973 – 1992	922	15.0%	0.15	0.16	0.15
War	1981 – 1997	1988 – 2009	2,021	9.0%	0.35	0.36	0.35
Post-war	1998 – 2002	2005 – 2014	1,032	2.0%	0.35	0.53	0.35

Table 2 – Descriptive statistics of control variables

Group	Female	Age	Pre-war wealth	Pre-war education
All	0.53	26.13	1.68	0.14
By schooling cohort				
Pre-war	0.51	41.29	1.62	0.15
War	0.54	24.90	1.67	0.14
Post-war	0.52	14.99	1.72	0.12
By returnee status				
Returnees	0.51	32.0	1.77	0.14
Stayees	0.53	25.6	1.67	0.14

Notes: Pre-war wealth is only available for those households which were formed before 1993. Pre-war education is only available for those households with members from the pre-war generation.

Table 3 – Impact of being a returnee on the likelihood of finishing primary school

Variable	(1)	(2)	(3)	(4)
Returnee	0.06** (2.01)	0.09** (2.27)	0.10** (1.98)	0.10*** (3.03)
Female*Returnee		-0.06 (-1.04)		
Female	-0.03** (-2.28)	-0.03** (-1.99)	0.03 (1.52)	-0.03* (-1.94)
Age	-0.02*** (-11.56)	-0.02*** (-11.58)	-0.02*** (-5.03)	-0.02*** (-7.93)
War cohort	-0.11*** (-3.30)	-0.11*** (-3.26)	0.09 (1.37)	-0.02 (-0.40)
Post-war cohort	-0.29*** (-6.37)	-0.28*** (-6.35)	-0.10 (-1.32)	-0.21*** (-3.98)
Control pre-war wealth			X	
Control pre-war education				X
Observations	3,975	3,975	1,982	2,292

Notes: Pre-war wealth is only available for those households which were formed before 1993. Pre-war education is only available for those households with members from the pre-war generation. t-statistics are presented in parenthesis. \*\* indicates that the coefficient is significant at the 5% level, \*\*\* indicates that the coefficient is significant at the 1% level.

Table 4 – Impact of being a returnee on likelihood of finishing primary school by schooling cohort

Variable	Pre-war cohort			War cohort			Post-war cohort		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Returnee	0.01 (0.31)	0.02 (0.34)	-0.00 (-0.04)	0.08* (1.72)	0.16** (2.25)	0.20*** (3.11)	0.16 (1.23)	0.04 (0.25)	0.14 (0.81)
Female	-0.14*** (-5.81)	-0.10*** (-3.18)	-0.04** (-2.47)	-0.02 (-0.72)	0.09*** (2.73)	0.06 (1.59)	0.04 (1.47)	0.06 (1.54)	0.04 (1.30)
Age	-0.01** (-2.55)	0.00 (0.33)	0.00* (1.94)	-0.03*** (-13.40)	-0.03*** (-7.14)	-0.04*** (-10.09)	0.08*** (8.35)	0.07*** (5.49)	0.09*** (8.11)
Control pre-war wealth		X			X			X	
Control pre-war education			X			X			X
Observations	922	383	922	2,021	957	703	1,032	642	667

Notes: Pre-war wealth is only available for those households which were formed before 1993. Pre-war education is only available for those households with members from the pre-war generation. t-statistics are presented in parenthesis. \* indicates that the coefficient is significant at the 10% level, \*\* indicates that the coefficient is significant at the 5% level and \*\*\* indicates that the coefficient is significant at the 1% level.

Table 5 – Impact of age at displacement and return and years as a refugee on likelihood of finishing primary school

Variable	(1)	(2)	(3)
Refugee above school age	0.01 (0.33)	0.01 (0.19)	0.02 (0.70)
Refugee while school aged	0.12** (2.08)	0.20** (2.56)	0.28*** (3.76)
Returnee before school age	0.07 (0.88)	0.08 (0.82)	0.07 (0.88)
Years refugee while school aged	0.04*** (3.50)	0.05*** (2.91)	0.07*** (4.29)
Control pre-war wealth		X	
Control pre-war education			X
Observations	3,975	1,982	2,292

Notes: Pre-war wealth is only available for those households which were formed before 1993. Pre-war education is only available for those households with members from the pre-war generation. t-statistics are presented in parenthesis. \*\* indicates that the coefficient is significant at the 5% level and \*\*\* indicates that the coefficient is significant at the 1% level. Coefficients are from separate estimations.

Table 6 – Impacts of refugee and IDP experiences on likelihood of finishing primary school

Variable	All			Pre-war cohort		War cohort		Post-war cohort		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Returnee			0.07** (2.09)	0.07** (2.10)	0.00 (0.10)	0.00 (0.09)	0.08* (1.95)	0.08* (1.93)	0.19 (1.48)	0.19 (1.47)
IDP	-0.01 (-0.50)	-0.00 (-0.16)	-0.01 (-0.45)	-0.02 (-0.79)	-0.03 (-1.02)	-0.01 (-0.19)	-0.04 (-1.36)	-0.11*** (-2.98)	0.03 (0.66)	0.06 (1.01)
IDP*Female				0.02 (0.71)		-0.04 (-0.69)		0.14*** (3.10)		-0.06 (-0.73)
Female	-0.03** (-2.18)	-0.03* (-1.80)	-0.03** (-2.14)	-0.04** (-2.05)	-0.13*** (-5.04)	-0.11*** (-2.67)	-0.01 (-0.36)	-0.07** (-2.17)	0.04 (1.54)	0.05* (1.76)
Age	-0.02*** (-10.54)	-0.02*** (-9.60)	-0.02*** (-10.68)	-0.02*** (-10.72)	-0.01*** (-2.85)	-0.01*** (-2.88)	-0.03*** (-10.94)	-0.03*** (-11.06)	0.08*** (9.02)	0.08*** (8.99)
War cohort	-0.09*** (-2.70)	-0.08** (-2.35)	-0.09*** (-2.74)	-0.09*** (-2.75)						
Post-war cohort	-0.28*** (-6.07)	-0.26*** (-5.42)	-0.28*** (-6.05)	-0.28*** (-6.08)						
Excluding returnees		X								
Observations	3,656	3,354	3,656	3,656	845	845	1,812	1,812	999	999

Notes: t-statistics are presented in parenthesis. \* indicates that the coefficient is significant at the 10% level, \*\* indicates that the coefficient is significant at the 5% level and \*\*\* indicates that the coefficient is significant at the 1% level.

Table 7 – Experiences while in displacement

Variable	Years attended school while abroad	Community abroad/of displacement had a primary school (yes = 1)
All refugees	0.41	
Refugee above school age	0.11	0.73
Refugee while school aged	1.68	
Returnee before school age	0.21	
All IDPs		0.55

Notes: Information is only available for one returnee and/or IDP per household. The IDPs interviewed were all adults before displacement.



Table 8 – Impact of being a returnee on likelihood of finishing primary school controlling for years of exposure to conflict while school aged

Variable	(1)	(2)	(3)	(4)	(5)	(6)
Returnee	0.07** (2.12)	0.10** (2.03)	0.10*** (3.12)	0.07** (2.19)	0.10** (1.99)	0.13*** (3.92)
By year of birth	X	X	X			
By year of birth and province				X	X	X
Control pre-war wealth		X			X	
Control pre-war education			X			X
Observations	3,975	1,982	2,292	3,870	1,910	2,240

Notes: Pre-war wealth is only available for those households which were formed before 1993. Pre-war education is only available for those households with members from the pre-war generation. t-statistics are presented in parenthesis. \*\* indicates that the coefficient is significant at the 5% level and \*\*\* indicates that the coefficient is significant at the 1% level.

Table 9 – Average treatment effect of the treated: likelihood of finishing primary school

Treatment	Treated	Control	Difference	t-stat	
				Standard	Bootstrapped
				<u>Nearest Neighbour Estimator</u>	
				2015	
Returnee	0.29	0.20	0.09	2.54**	2.37**
Observations	330	3,645			

Note: \*\* indicates that the coefficient is significant at the 5% level. Estimation includes controls for age, gender and province of birth.