Female genital mutilation and migration in Mali.

Do migrants transfer social norms?[*]

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Abstract:

In this paper, we investigate how powerful a mechanism migration is in the transmission of social norms, taking Mali and Female Genital Mutilation (FGM) as a case study. Mali has a strong FGM culture and a long-standing history of migration. We use an original household-level database coupled with census data to analyze the extent to which girls living in villages with high rates of return migrants are less prone to FGM. Malians migrate predominantly to other African countries where female circumcision is uncommon (e.g. Côte d'Ivoire) and to countries where FGM is totally banned (France and other developed countries) and where anti-FGM information campaigns frequently target African migrants. Taking a two-step instrumental variable approach to control for the endogeneity of migration decisions, we show that return migrants have a negative and significant influence on FGM practices. More precisely, we show that this result is driven by the flow of returnees from Côte d'Ivoire more than from other countries. We also show that adults living in villages with return migrants are more in favor of legislation against FGM and that current migrants do not have a significant impact on FGM practices and knowledge.

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1. Introduction

Recent years have witnessed growing interest in the complex relationship between migration and development with a new focus on migration as a vehicle for the transfer of norms.[1] It has been shown that emigration raises the home country population's exposure to different political and social norms and values – directly through contacts with returnees and indirectly through diaspora network contacts – and that it influences the home country's political institutions[2] and fertility norms.

Spilimbergo (2009) is the first author to provide evidence indicative of such a mechanism.[3] Using a panel of countries, he shows that foreign-educated individuals promote democracy in their origin country only if those migrants attended school in democratic countries. In the same vein, Docquier *et al.* (2011) show that skilled emigration has a positive impact on institutional quality in the home country,[4] and Beine and Sekkat (2011) find that migration tends to improve political institutions in the sending country depending on the characteristics of the destination country. Lodigiani and Salomone (2012) show that the share of women in home country parliaments is positively correlated with international migration to countries with higher rates of female political empowerment. Although it is hard to understand by which particular means foreign-educated individuals induce democratic change, these cross-country econometric analyses suggest that migration can be a vehicle for norms.

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[1] Levitt (1998) was the first paper to define the concept of "social remittances".

[2] Emigration can affect political institutions via three other channels: i/ emigration provides people with exit options and a safety net in the form of remittance income, which can lower their incentives to voice on the domestic front and eventually delay democratic reform and political change; ii/ emigrants can voice from abroad and support various political groups and views at home; iii/ given that migration is a non-random process, emigration alters various aspects of the home country population's composition (especially education and ethnicity), which can in turn affect democracy at home.

[3] In this paper, we deliberately restrict the literature review to papers using statistical data to identify the extent to which migration is a vehicle for the transfer of norms.

[4] However, this positive impact is cancelled out for a set of countries when the negative impact of emigration on the stock of human capital is taken into account.

Recent papers investigate this research question using micro and meso data, and some of them try to identify the specific impact of migration on the transfer of norms. Pérez-Armendáriz and Crow (2010) take a national survey in Mexico to show that return migrants display different political behavior to non-migrants and that migration affects political participation and non-migrants' beliefs through contacts with migrants still abroad and through migrant networks (measured by the ratio of migrants in the community's population). Pfutze (2012) analyses Mexican local elections and also provides evidence that high levels of international migration help to improve the quality of democratic institutions. He finds two causal channels through which migration can have this effect: transfer of democratic norms and an income effect in the form of remittances sent by migrants, which undermine the clientelistic relationship between the government and its constituents. Unfortunately, his data cannot make a distinction between these two channels. In the same vein, Chauvet and Mercier (2014) find that the stock of return migrants has a positive impact on participation rates and electoral competitiveness in Mali, which stems mainly from returnees from non-African countries, suggesting a knowledge spillover effect from migrants returning from democratic countries. Using community- and individual-level data, Omar Mahmoud *et al.* (2013) show that emigration in the late 1990s strongly affected political preferences and electoral outcomes in Moldavia and was eventually a factor in bringing down the ruling Communist government. They provide evidence to suggest that the effect works by means of the spread of information and norms from abroad. For instance, they find that the impact of westward migration is stronger in communities where a large share of the population grew up during the Soviet era or has low levels of education. They also investigate individual-level data from opinion polls, which show that individuals in communities with migration flows to Western countries gradually lost confidence in local media and the Communist government over time. Lastly, Batista and Vicente (2011) conduct a voting experiment in Cape Verde and show that

international migration may promote better institutions at home by raising the demand for political accountability. In this, they confirm that migration is a vehicle for democratic norms.

Another strand of the literature looks into the extent to which migrant exposure to their host country's fertility norms changes the fertility behavior of the migrants themselves and those left behind. While many demographic research papers have investigated emigrants' fertility behavior to see how far the receiving countries' fertility norms are assimilated,[5] Bertoli and Marchetta (2013) take individual-level data to analyze whether male Egyptian return migrants from Arab countries (where fertility norms are higher than in Egypt) have significantly more children than non-migrants. However, they are not able to disentangle the income effect induced by remittances from abroad[6] from the transfer of fertility norms influencing preference for a certain number of children. Beine *et al.* (2013) identify two other main channels. First, migration can affect home country fertility by impacting the parents' incentive to invest in education. Migration can reduce fertility rates as it raises the expected rate of return to education. Investment in education reduces the amount of time available for other activities such as raising children. Second, if the children's income is one of the components of the parents' utility, migration also raises the parents' incentive to invest in their children's education, resulting in a negative impact on fertility rates. Controlling for the three other channels through which migration may affect fertility, Beine *et al*. (2013) show that fertility norms are transferred from host to home countries.[7]

As the authors often say themselves, one of the main challenges is to correctly disentangle the transfer of migration-driven norms from other migration effects. Another key analytical

[5] See, for instance, Blau (1992), Khan (1994), Lindstrom and Saucedo (2002), Parrado and Morgan (2008), and Adsera and Ferrer (2013).
[6] Note that the impact of remittances is ambiguous. Although more income can induce a greater desire to have more children, remittances can reduce the parents' need to have a large number of children to take care of them when they are older.
[7] Fargues (2007) focuses on migration from Morocco, Turkey and Egypt. He posits that there is a transfer of fertility norms between the host countries and these countries. However, he doesn't control for alternative channels.

challenge is the non-random selection of migrants with respect to unobservable characteristics, which can also have an impact on fertility decisions and democratic institutions in home countries. For instance, migrants might have open-minded attitudes that correspond to the social and cultural values of their host countries and that can simultaneously explain their migration. The communities from which emigrants come might prefer democratic local institutions for unobservable reasons, which might explain migration to more democratic countries. In this case, the correlation found between migration and more democratic institutions may capture the impact of this confounded factor rather than a causal relationship between migration and local institutions induced by a transfer of democratic norms. This potentially endogenous issue has been addressed by most of the abovementioned papers by means of an instrumental econometric specification, with an exogenous source of variation in the rate of migration (Pfutze, 2012; Beine and Sekkat, 2013; Beine *et al*., 2013; Bertoli and Marchetta, 2013; Chauvet and Mercier, 2014), or a quasi-experimental context that induces an exogenous shock on migration (Omar Mahmoud, 2013). We detail this identification issue in this paper's methodological section.

In this paper, we investigate how powerful a mechanism migration is in the transmission of social norms, taking Mali and Female Genital Mutilation (FGM) as a case study. FGM, more commonly known as female circumcision, is still widespread in Africa.[8] While it is internationally recognized as violence against women and a violation of women's rights, the World Health Organization estimates that between 100 and 130 million girls and women in Africa, Asia and the Middle East have been cut (WHO, 2013). It is practiced in 28 African countries.

[8] These practices include the partial or total removal of the female external genitalia or other injury to the female genital organs.

Mali has a strong FGM culture – with a prevalence rate of more than 70% among women aged 15 to 49 years old[9] - and a long-standing history of migration. Malians migrate predominantly to other African countries where female circumcision is uncommon if not prohibited (e.g. Côte d'Ivoire) or to non-African countries where FGM is totally banned and anti-FGM information campaigns frequently target African migrants. We use an original household-level database coupled with census data to analyze the extent to which girls living in villages with high rates of return migrants are less prone to FGM.

To our knowledge, there has to date been no analysis of the impact of migration on home country FGM practices. We believe this issue to be highly relevant to an investigation of the extent to which migrants transfer social norms in that the other channels that may interfere with this mechanism do not come into play in the case of FGM. For example, the income effect induced by remittances should not have any effect on the parents' decision to cut their daughter. The same holds true for migration's potential impact on education. Parental preference for FGM should be exogenous to this effect. However, the bias induced by non-random selection into (return) migration has to be removed.

Taking a two-step instrumental variable approach to control for the endogeneity of migration decisions, we show that return migrants have a negative and significant influence on FGM practices. More precisely, we show that this result is driven by the flow of returnees from Côte d'Ivoire more than from other countries. We also show that adults living in villages with return migrants are more in favor of legislation against FGM and that current migrants do not have a significant impact on FGM practices and knowledge.

The paper is structured as follows. Section 2 presents the literature on FGM practices in Mali and documents the links between FGM practices and migration. Section 3 presents the

[9] In Djibouti, Egypt, Guinea, Sierra Leone, Somalia and Sudan North prevalence rates among women 15 to 49 years are greater than 90%. They are superior to 70% in Eritrea, Ethiopia, Burkina Faso, Mali and Mauritania (Yoder and Wang, 2013; WHO, 2013).

econometric approach and data we use to identify the impact of return migration on FGM decisions. Results are presented in section 4, Section 5 concludes.

2. Female genital mutilation and migration

FGM in Mali

Mali has one of the highest FGM prevalence rates in the world. It stood at 85.2 % for women aged 15 to 49 years old in 2006. By way of comparison, prevalence rates are 95.8% in Egypt (2005), 95.6% in Guinea (2005), 74.3% in Ethiopia (2005), 75.5% in Burkina Faso (2010), 38.2% in Côte d'Ivoire in 2012 (as opposed to 41.7% in 2005) and 25.7% in Senegal in 2010-11 (28.2% in 2005) (Yoder and Khan, 2008; Yoder and Wang, 2013). However, a slight downturn in prevalence has been observed in Mali, where it stood at 94.0% in 1995-96, and 91.6% in 2001.

The causes of female genital mutilation include a mix of cultural, religious and social factors within families and communities. FGM is actually often seen as a way to prepare girls for adulthood and marriage, tying this practice in with premarital virginity (and marital fidelity thereafter) (Bellas Cabane, 2006). These practices are more prevalent in some ethnic groups. As seen in Figure 1, FGM prevalence is much higher among girls in the Soninke, Malinke, Senoufo and Peulh ethnic groups (over 90%) than among Bobo and Sonraï girls (less than 50%). This diversity of practice across ethnic groups combines with regional prevalence differences. Nearly all the girls living in the Kayes region have been cut, whereas just 52.9% of those from the Mopti region are circumcised (Figure 2). Living in urban areas also reduces the risk of FGM, as the FGM rate is lower in cities than in rural areas (81% and 87% respectively).

[insert Figure 1 and Figure 2 about here]

Even though emblematic Malian feminists have been taking sporadic action against FGM since the 1960s, FGM preventive and information campaigns only really started in Mali in the 1980s and continued to grow in the 1990s and 2000s (Jones *et al*., 1999; Bellas Cabane, 2006; OFPRA, 2008). However, they have proved powerless in the face of the sheer extent of FGM practices. Moreover, despite political will, the lack of specific legislation and human and financial resources to combat FGM form obstacles to the display of individual and collective opposition to female circumcision (OFPRA, 2008).

FGM in receiving countries

To our knowledge, studies on the links between migration and FGM have focused on female circumcision practices among African migrants in their host countries. In France, for instance, the Malian community reportedly practiced FGM in the 1970s, following the wave of migration in the 1960s and family reunification. Gillette-Faye (1998) gave a rough estimate of those concerned at 24,000 women and girls circumcised or at risk of FGM in France in late 1982.[10] She reported that immigrant women wanted to keep the Malian traditions. They believed they would not be able to return to their own country if they accepted some of the rules and practices of host country France, including the ban on circumcision. Keeping the customs was seen as a way of averting a break with the original community and preventing any weakening of ties with the African community living in France. At the time, immigration countries, out of respect for these customs, were silent on the practice of female circumcision inflicted on girls. When Western doctors became aware of the immediate and long-term consequences of FGM, they felt bound by the Hippocratic Oath and fear of alienating an immigrant society that had a great need to trust them so that the girls could be treated in the best possible conditions. In the 1980s, a number of socio-anthropological studies commissioned by the government and

[10] A second estimate in late 1989, at the request of GAMS (Women's Group for the Abolition of Sexual Mutilation), set the number at approximately 27,000 women.

women's associations against female circumcision attempted to identify the problems of female circumcision in France and take action with the families concerned (Porgès, 2000).

The French government's first response was to introduce legislation, whereas the associations chose primarily preventive information campaigns (Winter, 1994 and Guiné and Moreno Fuentes, 2007). France was the first European country to prosecute circumcised girls' parents.[11] Parents and people practicing mutilation risk up to 20 years in prison. In addition, under child protection measures in place, professionals are subject to a reporting obligation (Article 223-6 of the Criminal Code). Yet, and according to a study conducted by OFPRA (2008) in the region of Kayes (the main source region for Malian migrants to France) and Bamako (the capital city), there is nothing to say that migrants from France are less in favor of FGM practices. Some even say that migrants are in favor of this practice since they want to be seen to obey the traditional practices and scale of social values. A survey on a sample of immigrant women in Italy contradicts this view. Farina and Ortensi (2012) report first of all that FGM prevalence is lower among immigrant women than non-migrant women interviewed in the origin countries.[12] Second, immigrant women strongly disagree with the continuation of this practice, suggesting that female migrants have a different attitude to FGM than non-migrants.

In most African countries today, FGM is now debated and fought. Civil society and government bodies have emerged to counter these practices. Some African governments have even passed laws banning female circumcision (Burkina Faso, Côte d'Ivoire, Egypt, Eritrea, Ethiopia, Senegal and Togo). Yet FGM rates are very slow to fall, and this for many reasons. The laws are not coercive or are not enforced (Porges, 2000). Secondly, the repressive laws may have produced the adverse effect of lowering the age at which girls are circumcised on the basis that it is easier to hide this practice from the authorities when the child is young (UNICEF,

[11] FGM is an offence under Article 222 of the Criminal Code on violence and the first prosecution occurred in 1979.

[12] Nevertheless, potential differences in ethnicity and level of education, which might explain the difference in FGM prevalence between immigrants and non-migrants, are not controlled for.

2005). Lastly, awareness campaigns and preventive actions might not have the desired effect due to the pervasiveness of these cultural practices, a lack of resources and the choice of target population and message (Berg and Denison, 2012, 2013).

The prevalence of FGM in Mali and the contrasting results of qualitative studies on the effects of migration on this practice call for a quantitative investigation into the issue.

3. Data and empirical strategy

Empirical strategy

Our exploration of the impacts of migration on FGM practices first estimates a model that takes the following form:

$$E_{i,j,v} = \alpha + \beta Age_i + \gamma X_j + \phi M_j + \tau Z_v + \eta Mig_v + \zeta D_r + \varepsilon_{i,j,v} \qquad (1)$$

Where $E_{i,j,v}$ is a dummy variable equal to one when a girl *i* from a household *j* that lives in village *v*[13] is circumcised and zero if she is not. Age_i is the age of the girl at the time of the survey. This variable is used to capture the potential impact of information campaigns in rural areas in the 2000s on differences of FGM prevalence by age. X_j is a vector of variables that characterize the household head. It includes age, ethnicity, religion, and four dummy variables equal to one if s/he knows that FGM can cause health issues for the girl now, or in adulthood, if s/he has had access in the past to any sources of information on FGM, and if s/he is in favor of a law against FGM. M_j controls for the age and level of education of the girl's mother/carer. Z_v are variables computed at village level: the percentage of Muslims, Christians and Animists, the ethnic distribution of the population, the percentage of literate adults, the proportion of adults working in the agricultural sector, the percentage of female household heads, and a composite

[13] This could be either a village (in rural areas) or a neighborhood in a town or city. For the sake of simplicity, we use the term "village" in the rest of the paper.

index of wealth per capita.[14] We expect to find a negative correlation between level of education (of the household head and the daughter's mother/carer) and the risk of being circumcised. The sign of the correlations between the age of the household head and the daughter's mother/carer is not evident. Actually, they can depend on the variation in national anti-FGM campaigns over time, which may affect the adults' behavior.[15] Ethnicity and religion are used to control for the cultural and potential religious origins of FGM. These variables measured at village level capture potential social pressure and social norm transfers.

Mig_v measures return migration to village v. This variable will then capture the direct impact of migration on FGM among girls in households with returnees together with the impact of returnees among non-migrant households. We hypothesize that the impact of migration should be found mainly through the intensity of return migration rather than current migration. First, we test the impact of the percentage of returnees in the village's population as a whole. The expected sign of this variable is ambiguous. It depends on where returnees come from, if their opinions of FGM have been influenced by their migration experience and if they are willing to transfer these new norms to their family and the rest of the village population. It may be positive if the majority of returnees come from host countries where FGM is not forbidden and negative if the host countries were against FGM. We decompose the Mig_v variable into a number of variables in order to investigate how much difference the destination country makes to the dissemination of norms. Firstly, we make a distinction between returnees from countries where FGM is practiced and the other countries. The first category of countries covers Burkina Faso, Chad, Djibouti, Egypt, Eritrea, Guinea, Equatorial Guinea, Mauritania, Niger and Nigeria. Secondly, for the second group of countries, we distinguish between African countries and other countries to test whether migrants from non-African countries are likely to

[14] This score is an aggregate of indicators of the material that makes up the walls, floor and roof of the housing and the type of toilet it has.
[15] For instance, FGM was condemned by the government during the socialist period (from the 1960s to the end of the 1970s). The FGM debate subsequently waned and the practice was more or less accepted.

be more against FGM. Thirdly, we compute the percentage of returnees from Côte d'Ivoire since this country is the main destination country for Malian migrants.

Lastly, D_r is a vector of dummy variables for the sample's six administrative regions to control for unobservable regional characteristics that might have an influence on the risk of FGM, and, $\varepsilon_{i,j,v}$ is the equation's error term.

To measure the impact of migration on knowledge and social norms concerning FGM, we test a second model of the following form:

$$Y_{j,v} = \alpha + \gamma X_j + \tau Z_v + \eta Mig_v + \zeta D_r + \varepsilon_{j,v} \qquad (2)$$

$Y_{j,v}$ is a vector of different variables measuring the FGM knowledge and opinions of adult *j* living in village *v*:

- $Y_{1:}$ Does adult *j* think that FGM gives girls advantages? (Yes=1)
- $Y_{2:}$ Does adult *j* know that FGM causes health issues for girls? (Yes=1)
- $Y_{3:}$ Does adult *j* know that FGM causes health issues for girls in adulthood? (Yes=1)
- $Y_{4:}$ Has adult *j* ever been informed of the health issues caused by FGM? (Yes=1)
- $Y_{5:}$ Is adult *j* in favor of a law to ban FGM? (Yes=1)

X_j is a vector of variables that characterize the respondent. It includes age, ethnicity, religion, and three dichotomous variables equal to one if s/he is regularly listens to the radio, watches TV or reads a newspaper. Z_v , D_r and Mig_v are the same vectors of variables as in Model 1.

Endogeneity concern

Equations (1) and (2) are first estimated using Ordinary Least Squares. In this setting, the estimated correlation between return migration and FGM variables could be biased by two main endogeneity channels: first, individual-level selection into migration (including the

destination choice) and into return (including the location choice once back in Mali); and second, the existence of unobservable heterogeneity at village level.

Returnees may have specific characteristics that affect their behavior and opinions of FGM independently of the decision to migrate (and return to Mali). The first way to control for this source of bias is to add control variables into the estimation liable to simultaneously explain migration and FGM attitudes, such as ethnic and education variables. However, unobservable characteristics can bias the correlation between migration and FGM variables. For this reason, and in line with the empirical literature on migration, we use an instrumental procedure. In the same vein as Chauvet and Mercier (2014), we instrument returnee variables using three exogenous variables related to the historical background of current migration that are correlated with Malian migration, but not with FGM behavior today. As shown by Gubert (2000), colonization stepped up Malian migration from the Kayes region and especially from the Soninké ethnic group to France. It also scaled up migration to the west coast of Africa and Côte d'Ivoire (mainly from southern Malian regions on the border with this country). The French colonial power actually practiced forced migration to the coast to provide a labor force for the cocoa and coffee plantations. It is also well known that the Soninké people have a tradition of migration that dates back to the pre-colonial period, and that colonization and potential jobs in the trade and building sectors in coastal towns and jobs in France in the industrialization period (1960s and 1970s) drove up the migration flows. To capture this historical origin of Malian migration, we use the distance from each Malian village in our sample to the traditional Soninké migratory route (in keeping with Chauvet and Mercier, 2014), the distance to the nearest colonial town and the distance to the nearest railroad station. The validity of this strategy is based on the fact that the French colonial power never conducted any actions or information campaigns against female circumcision even though they

were aware of the practice (Amselle, 2010).[16] Consequently, these three variables are correlated with migration flows, but are exogenous to FGM prevalence today.

Unobservable heterogeneity at village level is the second potential source of bias. Villages with a larger number of return migrants may have specific unobservable characteristics correlated with their inhabitants' FGM behavior. Unfortunately, we cannot control for this bias. However, the aim of introducing dichotomous variables at regional level (D_r) is to capture this bias, at least partially.

Data

The data used for this study are taken from an individual survey called ENEM-2009 (*Enquête Nationale sur l'Excision au Mali*) on a representative sample of girls aged 0 to 14 years old and adults over 15 years old. The ENEM survey was conducted to gain a thorough understanding of the phenomenon of female circumcision in order to guide new strategies to put an end to FGM in Mali. The survey's detailed brief was to measure the prevalence of FGM among girls aged 0-14 years, assess knowledge of the effects of FGM, and understand attitudes to and perceptions of circumcision. The sample covers 3,858 girls and 4,444 adults sampled from the girls' households. The survey contains questions about the age of the girls when they were circumcised and the method used in addition to the adults' knowledge of the health repercussions of FGM and their attitudes to FGM. Unfortunately, the survey does not provide information on international migration by household members. This makes it impossible to know whether girls belong to a household with return migrants.

These individual data are coupled with the 2009 population census. We compute the socio-demographic characteristics of the interviewees' villages of residence. Among them, we calculate the intensity of return and current migration. As said before, return migration is

[16] The British Empire ran campaigns to ban excision, especially in Kenya in the 1920s and 1930s (Hetherington, 1998; Thomas, 2000, and Boddy, 2007).

measured by a number of indicators, depending on the receiving country, such as the percentage of the total population of individuals who have lived abroad over the past at least six months. We compute current migration as the ratio between the number of resident household individuals who left Mali in the five years before 2009 (since 2004) and the total population across all the villages.[17]

Given some missing variables, we end up with a sample of 3,330 girls from 0 to 14 years-old and 4,029 adults spread out over 75 villages.

4. Results

Baseline results

We first analyze the effect of the percentage of returnees in the total village population on the risk of FGM for girls aged 0 to 14 years old. The OLS estimation for Equation 1 is shown in column (1) of Table 1 and the full results for the control variables are presented in Table A.2 in the appendix. This estimation yields a negative, but not significant coefficient of returnees. In column (6), 2SLS estimation coefficients are presented. The stock of returnees is instrumented by the distance to the traditional Soninké migratory route, distance to the nearest colonial town and distance to the nearest railroad station. The instrumentation results are presented in the bottom part of the table and the first-step regression in Table A.5 in the appendices. The instrumentation tests validate the empirical strategy: the stock of returnees is correlated with the historical distance variables (partial R2 equal to 0.33) and underidentification and weak identification tests do not reject the validity of the instruments. Once returnees are instrumented, their coefficient remains negative but significant. Girls living in villages with return migrants are less likely to be circumcised than others. This result yields when control variables at both household level and village level are included in the estimations, more

[17] This way of measuring current migration may be debatable, but this is the only information available from the 2009 population census.

particularly ethnicity, religion and education variables. This suggests that, *ceteris paribus*, return migrants reduce the prevalence of circumcised girls and that this effect is not driven by the selection at play during the migration and return process.

Second, we investigate whether the destination country makes a difference. The difficulty here is to correctly instrument the different returnee variables. This difficulty prevents us from disaggregating the returnee variable into too many indicators. We first divide the returnees between those who migrate to countries where FGM is prohibited and/or not practiced (countries hereinafter called "non-FGM countries") and those who go to African countries where people are used to circumcising their daughters (called "FGM countries"). OLS results are shown in column (2) and 2SLS results in column (7). When we do not control for potential endogenous bias, return migrants from countries practicing FGM are found to raise the prevalence of circumcision in their home village. The inverse result is found for return migrants from countries where FGM is prohibited, with this variable's coefficient being negative and significant. The 2SLS results are less clear: both coefficients have the right sign, but they are not significant. However, the instrumentation of these two variables is less satisfactory than with the previous case, as shown by the tests in the second part of Table 1. Column (3) shows the results of the OLS estimations when return migrants from non-FGM countries are divided into those from non-African countries and those from African countries. Quite surprisingly, the coefficient for the variable measuring the stock of return migrants from non-African countries is significantly positive (at the 10% level), although the coefficient for returnees from African non-FGM countries is negative and significant. It appears from columns (4) and (5) that the negative impact of return migrants from African countries is driven by migrants from Côte d'Ivoire. Conversely, the positive impact of returnees is driven by migrants from either non-African countries or African countries (except Côte d'Ivoire). When potential bias is controlled for (column (8) of Table 1), the negative coefficient for returnees from Côte d'Ivoire remains negative and significant, whereas the coefficient for returnees from other

countries becomes non-significant, but still positive. Although Côte d'Ivoire is the main destination country for Malian migrants, the country's FGM prevalence rate is relatively low (at just 38.2% for 15-to-49-year-old women in 2012) and FGM is prohibited. The fact that only returnees from Côte d'Ivoire have a significant negative impact on FGM may suggest that what matters in the social norm process is not just the repressive action against those who practice FGM in the host country, but also the fact that migrants lived in an African country where FGM is not the customary habit. Consequently, they are well aware that non-circumcised girls do not suffer from social exclusion problems as this risk is often invoked to justify this practice in the African context. Moreover, more than 69% of female return migrants from Côte d'Ivoire are actually born in this country. It can be assumed that most of them are not circumcised and can more readily convince non-migrant women not to cut their daughters. This is all the more plausible since returnees from Côte d'Ivoire are in the majority among return migrants (more than 50% of returnees come from Côte d'Ivoire, see Table A.1 in the appendices).

Before analyzing the impact of returnee variables on knowledge and social norms, let's comment on the coefficients for the controlled variables shown in Table A.2 in the appendices. Their size and level of significance do not change when different decompositions of the returnee population are tested or when the OLS or 2SLS estimators are used. Table A.2 shows that, *ceterus paribus*, girls from 0 to 6 years old are circumcised less than older girls. Given that the average age of female circumcision is two years old, this result may suggest that the FGM practice is decreasing over time due potentially to the effectiveness of information campaigns against FGM. Being Muslim is significantly and positively associated with the risk of FGM. Few coefficients of the household head's ethnic group[18] are significant. The Malinke and Sonrhai ethnic groups have respectively a positive (negative) effect on FGM (the reference group being the Bambara). Living in the Sikasso, Ségou, Mopti and Bamako regions reduces FGM compared

[18] Ethnic group is measured by the household head's mother tongue.

to the Kayes and Koulikoro regions. The mother's education has no effect on FGM. The same holds true for the variables capturing the fact that household heads are informed about the health consequences of FGM. None are significantly different from zero.[19] On the other hand, fewer girls are circumcised in households whose head is in favor of a law to ban FGM. Looking at the village-level variables, the population's religious composition does not appear to have any significant impact on FGM whereas the shares of some ethnic groups do: mainly Peulh (negatively) and Dogon (positively).[20] The coefficient of the proportion of female household heads is negative, a variable that could be correlated with the current migration rate. Whereas the mothers' education level does not have any impact on FGM, the proportion of literate persons in the village is negatively associated with FGM, albeit not statistically significant in the 2SLS estimations. The same is found for the variable proxying the village wealth level and for the proportion of farmers. All these results are in line with most previous studies on FGM in Mali that underline the importance of ethnic and regional cultural habits and potentially the impact of the level of education on FGM (Bellas Cabane, 2006, and Ouédraogo, 2009).

Table 2 presents the returnee variable coefficients turned up by the estimation of Equation 2. The full results on the control variables are presented in Table A.3 in the appendix. The potential impact of the stock of return migrants (whatever the receiving county) is investigated for five dependant variables describing the opinion of the interviewees: Y_1 - Does s/he think that FGM gives girls advantages? (Yes=1)-, Y_2 - Does s/he know that FGM causes health issues for girls? (Yes=1)-, Y_3 - Does s/he know that FGM causes health issues for girls in adulthood? (Yes=1)-, Y_4 - Has s/he ever been informed of the health issues caused by FGM? (Yes=1)- and Y_5 - Is s/he in favor of a law to ban FGM? (Yes=1). Columns (1a) to (5a) present the OLS results and columns (1b) to (5b) show the 2SLS estimations. First, Table 2 shows that few of the

[19] Similar results are found when these variables are measured for the daughter's mother rather than for the household head.
[20] The Soninke and Tamacheq variables also seem to have a respectively positive and negative impact, but the significance of their coefficients changes with the chosen specification.

coefficients are significant. The stock of returnees appears to have a positive impact on the interviewee's opinions of the positive advantages of FGM (columns (1a) and (1b)) and a positive impact on their desire for a law against FGM. These results hold when 2SLS estimations are conducted to control for potential bias. However, the instrumentation strategy appears to be valid only for Y_5 (opinion on a law against FGM). This then suggests that people living in villages with returnees are in favor of a ban on FGM, irrespective of their own characteristics (age, education, etc.) or the characteristics of the village in which they live.[21]

We then test whether the effect of migrants from Côte d'Ivoire is different from the effect of returnees from other host countries. Table 3 shows the results. Once again, few 2SLS estimation coefficients are significant, whereas more coefficients have the right sign and are significant with the OLS estimators. It appears, first of all, that more people living in villages with returnees from Côte d'Ivoire have received information on FGM (Y_4 variable) and, secondly, that these information transfers imply that these people are actually more aware of the health repercussions of FGM (Y_2 and Y_3 variables). An inverse correlation is found for returnees from other countries. Contact with return migrants from all host countries except Côte d'Ivoire seems to make people less likely to think that FGM is bad for girls (Y_2 and Y_3 variables). Yet, none of these results is robust when we try to take into account a potential endogeneity bias: the 2SLS coefficients are no longer significant (columns (2b), (3b) and (4b)). Table 2's finding of a positive impact of the stock of returnees on opinions in favor of a law against FGM appears to be driven more by migrants from other countries than by those from Côte d'Ivoire. The 2SLS "Ivoirians" coefficient is not significant, whereas the coefficient for the other migrants is positive and significant (variable Y_5, column (5b)). This means that returnees from Côte d'Ivoire manage to convince people from their home village to refrain from

[21] It is worth noting that the adults who attended school are more informed and in favor of a law to ban FGM. Likewise, variables measuring their access to media are, for the most part, also significantly correlated with all these variables describing the interviewee's opinion (cf. Table A.3 in appendices).

circumcising their daughters, but do not manage to persuade them of the advantages of introducing a law against FGM. This result seems to be consistent with the finding that the main factor at work here is that these migrants lived in an African country where the majority of girls are not circumcised.

[insert Table 1, Table 2 and Table 3 about here]

Controlling for current migration

We now test whether current migrants have the same impact on the practice of FGM as return migrants. We suspect that their impact, if any, is lesser. The fact of being a long distance away makes their interrelations with those left behind weaker. In addition, returnees are older than current migrants and therefore hold a higher rank in the social hierarchy, which should make their transfers of norms more effective than those potentially spread by current emigrants. We add a variable to Model 1 defining the proportion of current migrants in the total population of each village together with variables measuring the proportion of return migrants. The results are presented in Table 4. Columns (1) to (5) show the OLS estimations of the effect of both return and current migrants on the risk of FGM with the different disaggregations of the migration variables used in Table 1. In column (6), the 2SLS results are presented solely for the total stocks of return and current migrants. We first observe that the inclusion of current migrants does not change the returnees' impact. The coefficients for these latter variables are very close to those presented in Table 1. Second, as hypothesized, current migrants do not appear to affect FGM practices. The impact of current migrants as a whole is not significant with either OLS estimation or 2SLS estimation. When current migrants are disaggregated into different destination countries, only two coefficients are significant. Emigrants who live in countries where FGM is prohibited appear to raise the prevalence of

FGM in their home village (column (2)). The significance of this result yields only at 10%. Moreover, this result does not hold when emigrants are broken down by their host countries (columns (3) to (5)). However, the results in column (3) show that emigrants who live in non-FGM African countries should have a significant and negative effect on circumcision. Once again, interpretation of these results calls for caution as the estimations do not control for potential bias. Unfortunately, we are not able to control for this endogeneity issue because we do not have enough good instruments when there are too many migration variations. Generally speaking, it can be concluded that current migrants have much less of a potential impact on FGM than return migrants.[22]

Robustness checks

Are the results we find on the impact of return migrants on the risk of female circumcision driven by other characteristics than their host countries? It may well be imagined, for instance, that female migrants might be more likely than males to be against FGM, as might educated migrants. To check the robustness of our previous findings to these hypotheses, we estimate the impact of educated and uneducated returnees[23], and the effect of male and female return migrants. The results are shown in Table 6. Columns (1) and (2) show the OLS coefficients of returnees depending on their educational level and gender composition respectively. Columns (3) and (4) present the 2SLS results. The proportions of educated and uneducated returnees in the village population do not have any statistically significant effect on FGM (col. (1)). These results hold when migration variables are instrumented (col. (3)). The coefficients associated with the shares of male and female returnees in the village population are not significant either (OLS, col. (2) and 2SLS, col. (4)). All of these results seem to confirm that what matters more

[22] Given that current migrant variables can be correlated with the percentage of female household heads in the village, we test the robustness of this result when the latter variable is not included in the specification. It appears that current migrant variables remain statistically non-significant (results available on request from the authors).

[23] Uneducated returnees are those who never attended school.

with respect to the impact of returnees on the risk of FGM is where migrants come from rather than their socio-demographic characteristics.

5. Concluding remarks

This paper investigates how powerful a mechanism migration is in the transmission of social norms, taking Mali and Female Genital Mutilation (FGM) as a case study. We use an original household-level database coupled with census data to analyze the extent to which girls living in villages with high rates of return migrants are less prone to FGM.

Overall, the empirical evidence presented in this paper suggests that girls living in villages with return migrants are less likely to be circumcised than others. This result appears to be mainly driven by the percentage of returnees from Côte d'Ivoire. It suggests that what matters in the social norm process is not just repressive action against those who practice FGM in the host country, but also the fact that migrants have lived in an African country where FGM is not customary and the fact that there have to be enough returnees to be able to influence those who have stayed. We also show that current migrants have much less of a potential impact on FGM than return migrants.

The impact of returnees may be explained first by the change in their own attitude to FGM, which can influence the behavior of stayers, and second by their capacity to convince them to change their FGM practices. The direct effect of migration on returnees' behavior cannot be quantified using the data in this paper, but could be the focus of future research.

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Figure 1: FGM prevalence (0 to 14 years old) and household head ethnicity

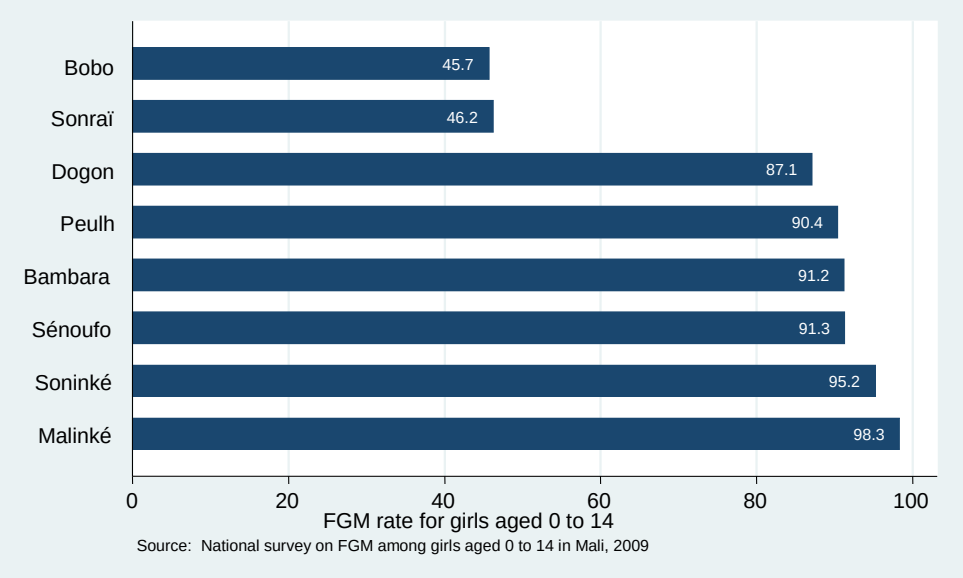

Figure 2: FGM prevalence by region (0 to 14 years old)

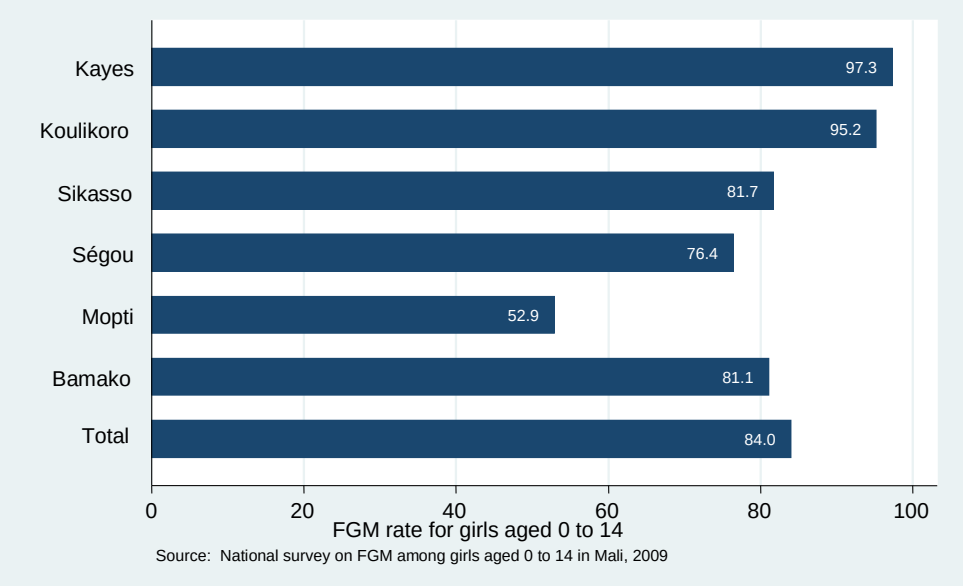

Table 1: Impact of return migration on the risk of FGM

	OLS					2SLS		
Returnees from	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All host countries	-0.323					-2.177**		
	(0.425)					(0.984)		
Countries where FGM is banned or not practiced		-1.645***					-3.373	
		(0.607)					(2.193)	
Countries where FGM is practiced		4.473***	4.827***				2.164	
		(1.680)	(1.656)				(7.679)	
Non-African countries where FGM is banned or not practiced			8.107*	7.212*				
			(4.189)	(4.242)				
African countries where FGM is banned or practiced less than in Mali			-2.185***					
			(0.605)					
African countries except Côte d'Ivoire				1.568**				
				(0.745)				
Côte d'Ivoire				-2.257***	-2.201***			-3.548*
				(0.718)	(0.719)			(2.144)
All countries except Côte d'Ivoire					1.917***			0.178
					(0.695)			(3.327)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	3,330	3,330	3,330	3,330	3,330	3,330	3,330	3,330
R-squared	0.282	0.285	0.287	0.286	0.286	0.276	0.279	0.281
Sargan (*p*-value)						0.7416	0.5793	0.8560
Underidentification test (*p*-value)						0.0081	0.3744	0.0408
Weak identification test (critical values, 10% IV bias)						9.715	0.878	3.112
						(9.08)	(13.43)	(13.43)
Instrumentation for returnees from:								
All host countries Partial R-squared						0.3307		
Countries where FGM is banned or not practiced Partial R-squared							0.3107	
Countries where FGM is practiced Partial R-squared							0.1907	
Côte d'Ivoire Partial R-squared								0.1732
All countries except Côte d'Ivoire Partial R-squared								0.2834

Robust standard errors clustered at cluster level in parentheses. Returnees are the stock of returnee migrants over the population of the village.
Control variables included: girl's age; age, religion, ethnicity of the household head, mother's age and level of education, dichotomous variables indicating whether the household head knows that FGM can cause health issues for the girl now, or in adulthood, whether s/he has been informed about the issues of FGM and whether s/he is in favor of a law against FGM; dummy variables at regional level; shares of each ethnic group in the village population, share of farmers among the working village population over six years old, share of literate over-12s in the population, and a composite index of wealth per capita. Columns (6) to (8) present 2SLS estimations, instrumenting returnee variables by distance to the traditional Soninké migratory route, distance to the nearest colonial town and distance to the nearest railroad station.

Table 2: Impact of return migration on FGM knowledge and attitudes

	Y_1		Y_2		Y_3		Y_4		Y_5	
	OLS	**2SLS**	**OLS**	**2SLS**	**OLS**	**2SLS**	**OLS**	**2SLS**	**OLS**	**2SLS**
Migrants from or living in:	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)	(5a)	(5b)
All host countries	1.285*	3.477**	-0.172	0.772	0.0374	-0.146	0.751	1.845	2.135***	2.791**
	(0.716)	(1.366)	(0.598)	(0.977)	(0.437)	(0.965)	(0.626)	(1.136)	(0.580)	(1.329)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,018	4,018	4,029	4,029	3,990	3,990	4,028	4,028	4,021	4,021
R-squared	0.135	0.132	0.201	0.199	0.213	0.213	0.184	0.183	0.192	0.192
Sargan (*p*-value)		0.0185		0.0549		0.0661		0.8573		0.9569
Underidentification test (*p*-value)		0.0000		0.0097		0.0097		0.0097		0.0096
Weak identification test (critical values, 10%		422.534		10.396		10.441		10.384		10.414
IV bias)		(19.93)		(19.93)		(19.93)		(19.93)		(19.93)
Instrumentation for returnees from:										
All host countries Partial R-squared		0.2487		0.2536		0.2547		0.2533		0.2530

- Y_1: Does s/he think that FGM gives girls advantages? (Yes=1)
- Y_2: Does s/he know that FGM causes health issues for girls? (Yes=1)
- Y_3: Does s/he know that FGM causes health issues for girls in adulthood? (Yes=1)
- Y_4: Has s/he ever been informed of the health issues caused by FGM? (Yes=1)
- Y_5: Is s/he in favor of a law to ban FGM? (Yes=1)

Robust standard errors clustered at the cluster level in parentheses. Returnees are the stock of returnee migrants over the population of the village.
Control variables included: gender, age, religion, ethnicity and level of education of the interviewed adult, dichotomous variables indicating whether the adult listens radio, watches TV and read newspapers; dummy variables at regional level; shares of each ethnic group in the village population, share of farmers among the working village population over six years old, share of literate over-12s in the population, and a composite index of wealth per capita. 2SLS estimations instrument returnee variables by distance to the traditional Soninké migratory route and distance to the nearest railroad station.

Table 3: Impact of return migration from Côte d'Ivoire and other countries on FGM knowledge and attitudes

	Y_1		Y_2		Y_3		Y_4		Y_5	
	OLS	**2SLS**	**OLS**	**2SLS**	**OLS**	**2SLS**	**OLS**	**2SLS**	**OLS**	**2SLS**
Migrants from or living in:	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)	(5a)	(5b)
Côte d'Ivoire	0.643	0.562	2.662***	2.025	1.587**	-1.140	2.331**	-1.948	3.315***	-3.795
	(1.081)	(2.859)	(0.909)	(1.968)	(0.670)	(1.918)	(1.007)	(2.848)	(0.977)	(4.000)
All countries except Côte d'Ivoire	2.122*	7.213	-3.561***	-0.860	-1.813**	1.098	-1.214	6.749	0.715	11.28*
	(1.143)	(4.698)	(1.040)	(2.786)	(0.889)	(2.779)	(1.087)	(4.781)	(0.980)	(6.262)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,018	4,018	4,029	4,029	3,990	3,990	4,028	4,028	4,021	4,021
R-squared	0.136	0.127	0.206	0.204	0.215	0.209	0.185	0.165	0.193	0.147
Sargan (*p*-value)		0.1055		0.0466		0.0735		0.9057		0.9858
Underidentification test (*p*-value)		0.0291		0.0328		0.0320		0.0324		0.0330
Weak identification test (critical values, 10%		3.166		3.093		3.118		3.105		3.085
IV bias)		(13.43)		(13.43)		(13.43)		(13.43)		(13.43)
Instrumentation for returnees from:										
Côte d'Ivoire Partial R-squared		0.3027		0.3040		0.3057		0.3037		0.3039
All countries except Côte d'Ivoire Partial R-squared		0.1484		0.1507		0.1524		0.1506		0.1504

- Y_1: Does s/he think that FGM gives girls advantages? (Yes=1)
- Y_2: Does s/he know that FGM causes health issues for girls? (Yes=1)
- Y_3: Does s/he know that FGM causes health issues for girls in adulthood? (Yes=1)
- Y_4: Has s/he ever been informed of the health issues caused by FGM? (Yes=1)
- Y_5: Is s/he in favor of a law to ban FGM? (Yes=1)

Robust standard errors clustered at the cluster level in parentheses. Returnees are the stock of returnee migrants over the population of the village.
Control variables included: gender, age, religion, ethnicity and level of education of the interviewed adult, dichotomous variables indicating whether the adult listens radio, watches TV and read newspapers; dummy variables at regional level; shares of each ethnic group in the village population, share of farmers among the working village population over six years old, share of literate over-12s in the population, and a composite index of wealth per capita. 2SLS estimations instrument returnee variables by distance to the traditional Soninké migratory route and distance to the nearest railroad station.

Table 4: Impact of return and current migration on the risk of FGM

	OLS										IV	
	(1)		(2)		(3)		(4)		(5)		(6)	
Migrants from or living in:	**Return migrants**	**Current migrants**	**Return migrants**	**Current migrants**	**Return migrants**	**Current migrants**	**Return migrants**	**Current migrants**	**Return migrants**	**Current migrants**	**Return migrants**	**Current migrants**
All host countries	-0.339	0.652									-2.147**	-9.506
	(0.438)	(2.143)									(0.975)	(11.99)
Countries where FGM is banned or not practiced			-2.451***	9.559*								
			(0.745)	(5.223)								
Countries where FGM is practiced			4.874***	-14.41	4.640***	-9.459						
			(1.695)	(12.43)	(1.721)	(12.55)						
Non-Afr. countries where FGM is banned or not pract.					16.67**	8.087	12.09*	-11.58				
					(6.663)	(5.079)	(7.035)	(8.418)				
African countries where FGM is banned or practiced less than in Mali					-3.534***	-20.61***						
					(0.758)	(7.946)						
African countries except Côte d'Ivoire							1.066	4.289				
							(1.049)	(7.697)				
Côte d'Ivoire							-2.741***	0.0588	-2.588***	6.127		
							(0.858)	(4.355)	(0.869)	(7.577)		
All countries except Côte d'Ivoire									1.979***	-0.134		
									(0.705)	(3.593)		
Control variables	Yes		Yes		Yes		Yes		Yes		Yes	
Observations	3,330		3,330		3,330		3,330		3,330		3,330	
R-squared	0.282		0.286		0.289		0.287		0.286		0.269	
Sargan (*p*-value)											0.9305	
Underidentification test (*p*-value)											0.1021	
Weak identification test (critical values, 10% IV bias)											2.124 (13.43)	
Instrumentation for:												
Returnees from all host countries Partial R-squared											0.3307	
Current migrants from all host countries Partial R-squared											0.0638	

Robust standard errors clustered at the cluster level in parentheses. Returnees are the stock of returnee migrants over the population of the village. Current migrants are the number of current emigrants divided by the population of the village. Control variables included: girl's age; age, religion, ethnicity of the household head, mother's age and level of education, dichotomous variables indicating whether the household head knows that FGM can cause health issues for the girl now, or in adulthood, whether s/he has been informed about the issues of FGM and whether s/he is in favor of a law against FGM; dummy variables at regional level; shares of each ethnic group in the village population, share of farmers among the working village population over six years old, share of literate over-12s in the population, and a composite index of wealth per capita. 2SLS estimations (column 6) instrument returnee variables by distance to the traditional Soninké migratory route, distance to the nearest colonial town and distance to the nearest railroad station.

Table 5: Impact of return and current migration on FGM knowledge and attitudes

	Y_1		Y_2		Y_3		Y_4		Y_5	
	OLS	**2SLS**	**OLS**	**2SLS**	**OLS**	**2SLS**	**OLS**	**2SLS**	**OLS**	**2SLS**
	(1a)	(1b)	(2a)	(2b)	(3a)	(3b)	(4a)	(4b)	(5a)	(5b)
Return migrants	1.360*	3.213***	-0.0909	0.990	0.0713	-0.216	0.976	1.367	2.323***	1.959
	(0.750)	(1.247)	(0.633)	(0.907)	(0.431)	(1.271)	(0.658)	(0.980)	(0.617)	(1.602)
Current migrants	-2.443	-28.16*	-2.717	-7.535	-1.117	-18.97	-7.472*	-19.22*	-6.209	-35.04*
	(4.418)	(15.04)	(4.079)	(10.84)	(2.822)	(13.18)	(4.146)	(11.52)	(3.886)	(17.99)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,018	4,018	4,029	4,029	3,990	3,990	4,028	4,028	4,021	4,021
R-squared	0.136	0.116	0.201	0.199	0.213	0.200	0.185	0.182	0.193	0.165
Sargan (*p*-value)		0.1257		0.0633		0.1666		0.4613		0.3009
Underidentification test (*p*-value)		0.0000		0.1206		0.1185		0.1237		0.1249
Weak identification test (critical values, 10%		73.478		2.068		2.092		2.032		2.014
IV bias)		(13.43)		(13.43)		(13.43)		(13.43)		(13.43)
Instrumentation for returnees from:										
Return migrants Partial R-squared		0.2778		0.2816		0.2833		0.2812		0.2814
Current migrants partial R-squared		0.0694		0.0689		0.0700		0.0682		0.0679

- Y_1: Does s/he think that FGM gives girls advantages? (Yes=1)
- Y_2: Does s/he know that FGM causes health issues for girls? (Yes=1)
- Y_3: Does s/he know that FGM causes health issues for girls in adulthood? (Yes=1)
- Y_4: Has s/he ever been informed of the health issues caused by FGM? (Yes=1)
- Y_5: Is s/he in favor of a law to ban FGM? (Yes=1)

Robust standard errors clustered at cluster level in parentheses. Returnees are the stock of returnee migrants over the population of the village.

Control variables included: gender, age, religion, ethnicity and level of education of the interviewed adult, dichotomous variables indicating whether the adult listens to the radio, watches TV and reads newspapers; dummy variables at regional level; shares of each ethnic group in the village population, share of farmers among the working village population over six years old, share of literate over-12s in the population, and a composite index of wealth per capita. 2SLS estimations instrument returnee variables by distance to the traditional Soninké migratory route and distance to the nearest railroad station.

Table 6: Robustness check

	OLS		2SLS	
Returnees	(1)	(2)	(3)	(4)
Educated returnees	-0.514		-6.139	
	(1.564)		(13.86)	
Uneducated returnees	-0.581		-1.610	
	(0.725)		(4.612)	
Male returnees		-0.767		-0.175
		(1.470)		(3.354)
Female returnees		-0.00256		-4.093
		(1.036)		(3.708)
Control variables	Yes	Yes	Yes	Yes
Observations	3,330	3,330	3,330	3,330
R-squared	0.282	0.282	0.274	0.273
Sargan (*p*-value)			0.4982	0.6941
Underidentification test (*p*-value)			0.1877	0.0649
Weak identification test (critical values, 10% IV bias)			1.267 (13.43)	3.500 (13.43)
Instrumentation for returnees:				
Educated returnees Partial R-squared			0.1463	
Uneducated returnees Partial R-squared			0.3197	
Male returnees Partial R-squared				0.4344
Female returnees Partial R-squared				0.2620

Robust standard errors clustered at cluster level in parentheses. Returnees are the stock of returnee migrants over the population of the village.

Control variables included: girl's age; age, religion, ethnicity of the household head, mother's age and level of education, dichotomous variables indicating whether the household head knows that FGM can cause health issues for the girl now or in adulthood, whether s/he has been informed about the issues of FGM and whether s/he is in favor of a law against FGM; dummy variables at regional level; shares of each ethnic group in the village population, share of farmers among the working village population over six years old, share of literate over-12s in the population, and a composite index of wealth per capita. Columns (3) and (4) present 2SLS estimations, instrumenting returnee variables by distance to the traditional Soninké migratory route, distance to the nearest colonial town and distance to the nearest railroad station.

Appendices

Table A.1: Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
0 to 14 girl sample					
Excision	3330	0.763	0.425	0	1
Girl's age	3288	6.788	4.433	0	91
Age of the HH	2912	53.515	15.622	17	99
Religion of the HH					
Muslim	3330	0.811	0.391	0	1
Christian	3330	0.027	0.162	0	1
Animist	3330	0.035	0.183	0	1
Ethnic group of the HH					
Bambara	3330	0.241	0.280	0	0.809
Bobo	3330	0.052	0.222	0	1
Dogon	3330	0.054	0.226	0	1
Malinke	3330	0.039	0.194	0	1
Peulh	3330	0.140	0.347	0	1
Soninke	3330	0.132	0.338	0	1
Sonrhai	3330	0.019	0.137	0	1
Senoufo	3330	0.133	0.340	0	1
Other Ethnic group	3330	0.209	0.406	0	1
Ethnic group missing	3330	0.124	0.330	0	1
Mother has been at school	3330	0.224	0.417	0	1
Does adult *j* know that FGM causes heath issues for girls? (Yes=1)	3330	0.299	0.458	0	1
Does adult *j* know that FGM causes heath issues in adulthood? (Yes=1)	3330	0.173	0.379	0	1
Has adult *j* ever been yet informed of the health issues caused by FGM? (Yes=1)	3330	0.423	0.494	0	1
Is adult *j* in favor of a law to ban FGM? (Yes=1)	3330	0.268	0.443	0	1
Adult sample					
Does adult *j* think that FGM gives girls advantages?	4018	0.579	0.494	0	1
Does adult *j* know that FGM causes heath issues to the girls? (Yes=1)	4008	0.364	0.481	0	1
Does adult *j* know that FGM causes heath issues in adulthood? (Yes=1)	3970	0.217	0.412	0	1
Has adult *j* ever been yet informed of the health issues caused by FGM? (Yes=1)	4006	0.474	0.499	0	1
Is adult *j* in favor of a law that will prohibit FGM? (Yes=1)	3999	0.323	0.468	0	1
Female	4018	0.555	0.497	0	1
Age	4014	39.712	19.449	1	99
Religion					
Muslim	4018	0.922	0.268	0	1
Christian	4018	0.033	0.180	0	1
Animist	4018	.0416	.199	0	1
Ethnic group					
Bobo	4018	0.060	0.237	0	1
Dogon	4018	0.057	0.231	0	1
Malinke	4018	0.043	0.202	0	1
Peulh	4018	0.180	0.384	0	1
Soninke	4018	0.130	0.337	0	1

Table A.1 continued

Variable	Obs	Mean	Std. Dev.	Min	Max
Sonrhai	4018	0.028	0.165	0	1
Senoufo	4018	0.141	0.348	0	1
Other_Ethnie	4018	0.223	0.416	0	1
Ethnic group missing	4018	0.001	0.035	0	1
Adult has been at school	4018	0.271	0.445	0	1
Listen radio	4018	0.874	0.332	0	1
Watch TV	4018	0.671	0.470	0	1
Read newspaper	4018	0.118	0.323	0	1
Variables at the village level					
Muslim	75	0.908	0.212	0.021	1
Christian	75	0.039	0.121	0	0.906
Animist	75	0.048	0.148	0	0.785
Ethnic group					
Bambara	75	0.230	0.284	0	0.809
Malinke	75	0.011	0.046	0	0.402
Peul	75	0.112	0.215	0	0.913
Soninke	75	0.069	0.190	0	0.799
Sonrhai	75	0.028	0.073	0	0.466
Dogon	75	0.055	0.169	0	0.888
Tamacheq	75	0.004	0.009	0	0.052
Senoufo	75	0.106	0.246	0	0.864
Bobo	75	0.075	0.223	0	0.910
Literacy	75	29.312	16.616	1.495	63.185
Farmers	75	23.582	17.978	0	71.893
Female Household head	75	14.159	8.497	1.094	45.753
Index of wealth	75	7.578	1.455	4.094	10.657
Returnees whatever the country of migration	75	0.031	0.023	0	0.116
Returnees from countries without FGM	75	0.022	0.018	0	0.084
Returnees from countries with FGM	75	0.009	0.008	0	0.033
Returnees from non-African countries	75	0.002	0.002	0	0.009
Returnees from African countries without FGM	75	0.020	0.018	0	0.080
Returnees from Côte d'Ivoire	75	0.016	0.015	0	0.059
Returnees except from Côte d'Ivoire	75	0.015	0.015	0	0.093
Distance to the closest colonial town	75	20	10	0	51
Distance to the traditional Soninké migratory route, the	75	117	125	3	523
Distance to the nearest railroad station	75	209	148	0	641

Table A.2: Baseline model

	OLS					2SLS		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Girl's age (ref: 14)								
0	-0.297***	-0.295***	-0.292***	-0.292***	-0.294***	-0.303***	-0.302***	-0.300***
	(0.0484)	(0.0484)	(0.0484)	(0.0485)	(0.0485)	(0.0855)	(0.0851)	(0.0853)
1	-0.289***	-0.286***	-0.285***	-0.290***	-0.290***	-0.290***	-0.287***	-0.291***
	(0.0533)	(0.0527)	(0.0530)	(0.0531)	(0.0528)	(0.0592)	(0.0592)	(0.0586)
2	-0.154***	-0.151***	-0.148***	-0.151***	-0.152***	-0.157***	-0.155***	-0.155***
	(0.0447)	(0.0447)	(0.0452)	(0.0454)	(0.0450)	(0.0532)	(0.0537)	(0.0545)
3	-0.0871**	-0.0846**	-0.0821**	-0.0843**	-0.0853**	-0.0889***	-0.0865***	-0.0869***
	(0.0353)	(0.0354)	(0.0355)	(0.0354)	(0.0354)	(0.0237)	(0.0241)	(0.0238)
4	-0.0874**	-0.0839**	-0.0800**	-0.0841**	-0.0858**	-0.0943**	-0.0911**	-0.0917**
	(0.0382)	(0.0386)	(0.0385)	(0.0381)	(0.0382)	(0.0431)	(0.0427)	(0.0424)
5	-0.0739**	-0.0712**	-0.0689*	-0.0708**	-0.0716**	-0.0782**	-0.0757**	-0.0753**
	(0.0358)	(0.0359)	(0.0358)	(0.0357)	(0.0357)	(0.0343)	(0.0329)	(0.0329)
6	-0.0800*	-0.0781*	-0.0772*	-0.0783*	-0.0786*	-0.0824*	-0.0807*	-0.0807*
	(0.0417)	(0.0417)	(0.0415)	(0.0415)	(0.0417)	(0.0487)	(0.0479)	(0.0479)
7	0.0228	0.0237	0.0257	0.0241	0.0231	0.0179	0.0187	0.0190
	(0.0305)	(0.0306)	(0.0305)	(0.0304)	(0.0304)	(0.0345)	(0.0338)	(0.0335)
8	-0.0257	-0.0215	-0.0183	-0.0218	-0.0231	-0.0297	-0.0259	-0.0267
	(0.0419)	(0.0423)	(0.0422)	(0.0420)	(0.0420)	(0.0412)	(0.0399)	(0.0402)
9	-9.21e-05	0.00116	0.00211	0.00285	0.00262	0.00149	0.00264	0.00368
	(0.0412)	(0.0416)	(0.0411)	(0.0409)	(0.0412)	(0.0412)	(0.0410)	(0.0402)
10	-0.00417	-0.00296	-0.00180	-0.00224	-0.00268	-0.00526	-0.00415	-0.00371
	(0.0326)	(0.0325)	(0.0326)	(0.0325)	(0.0325)	(0.0274)	(0.0266)	(0.0266)
11	0.0124	0.0141	0.0153	0.0158	0.0155	0.00804	0.00954	0.0116
	(0.0407)	(0.0411)	(0.0409)	(0.0406)	(0.0407)	(0.0363)	(0.0361)	(0.0351)
12	0.0509*	0.0514*	0.0517*	0.0515*	0.0514*	0.0507**	0.0512**	0.0512**
	(0.0293)	(0.0295)	(0.0293)	(0.0291)	(0.0292)	(0.0250)	(0.0248)	(0.0245)
13	-0.00150	0.00668	0.00775	0.00178	0.00211	-0.00717	0.000253	-0.00289
	(0.0331)	(0.0330)	(0.0328)	(0.0328)	(0.0330)	(0.0320)	(0.0319)	(0.0313)

Table A.2 continued

	OLS					2SLS		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Age of HH (ref: 15 to 24 years old)								
25 to 49 years old	-0.248***	-0.268***	-0.257***	-0.250***	-0.259***	-0.260**	-0.278**	-0.268**
	(0.0833)	(0.0863)	(0.0868)	(0.0846)	(0.0846)	(0.113)	(0.118)	(0.114)
over 50 years old	-0.275***	-0.297***	-0.285***	-0.281***	-0.291***	-0.292***	-0.312***	-0.303***
	(0.0822)	(0.0852)	(0.0857)	(0.0838)	(0.0837)	(0.111)	(0.118)	(0.113)
missing information	-0.398***	-0.436***	-0.435***	-0.428***	-0.434***	-0.398**	-0.433**	-0.430**
	(0.143)	(0.145)	(0.149)	(0.149)	(0.146)	(0.167)	(0.182)	(0.181)
Religion of the HH (ref: Animist)								
Muslim	0.139**	0.133**	0.125*	0.130**	0.134**	0.132*	0.126	0.128*
	(0.0650)	(0.0653)	(0.0646)	(0.0649)	(0.0653)	(0.0752)	(0.0778)	(0.0773)
Christian	-0.155	-0.150	-0.142	-0.148	-0.152	-0.165	-0.161	-0.161
	(0.112)	(0.112)	(0.111)	(0.111)	(0.111)	(0.158)	(0.160)	(0.158)
Ethnic group of the HH (ref: Bambara)								
Bobo	-0.172	-0.186	-0.204*	-0.192*	-0.185*	-0.162	-0.176	-0.176
	(0.112)	(0.114)	(0.112)	(0.110)	(0.111)	(0.189)	(0.195)	(0.192)
Ethnic group missing	-0.143	-0.180*	-0.173*	-0.156	-0.164	-0.156	-0.189	-0.173
	(0.100)	(0.103)	(0.103)	(0.101)	(0.102)	(0.128)	(0.154)	(0.138)
Dogon	-0.122*	-0.119	-0.119*	-0.112	-0.111	-0.115	-0.112	-0.106
	(0.0724)	(0.0725)	(0.0718)	(0.0716)	(0.0718)	(0.100)	(0.100)	(0.101)
Malinke	0.0795**	0.0783**	0.0695**	0.0688**	0.0731**	0.0929**	0.0918**	0.0847**
	(0.0333)	(0.0334)	(0.0335)	(0.0333)	(0.0332)	(0.0406)	(0.0398)	(0.0392)
Peulh	0.0287	0.0156	0.0163	0.0227	0.0207	0.0383	0.0265	0.0294
	(0.0386)	(0.0387)	(0.0385)	(0.0383)	(0.0385)	(0.0314)	(0.0432)	(0.0370)
Soninke	-0.0134	-0.0284	-0.0349	-0.0150	-0.0125	-0.0125	-0.0259	-0.0118
	(0.0445)	(0.0442)	(0.0444)	(0.0444)	(0.0441)	(0.0384)	(0.0514)	(0.0373)
Sonrhai	-0.139*	-0.152*	-0.148*	-0.145*	-0.149*	-0.148	-0.160*	-0.156*
	(0.0842)	(0.0848)	(0.0853)	(0.0847)	(0.0842)	(0.0934)	(0.0946)	(0.0947)
Senoufo	0.0220	0.00293	0.00496	0.0102	0.00646	0.0202	0.00304	0.00654
	(0.0433)	(0.0435)	(0.0433)	(0.0431)	(0.0432)	(0.0535)	(0.0624)	(0.0591)
Other ethnic group	0.00847	-0.00505	-0.00367	-0.00489	-0.00788	0.0268	0.0146	0.00883
	(0.0347)	(0.0346)	(0.0345)	(0.0347)	(0.0348)	(0.0407)	(0.0511)	(0.0524)

Table A.2 continued

	OLS					2SLS		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Mother's age (ref: 15 to 24 years)								
25 to 49 years old	0.465***	0.464***	0.470***	0.467***	0.463***	0.454**	0.453**	0.454**
	(0.138)	(0.140)	(0.144)	(0.142)	(0.140)	(0.182)	(0.183)	(0.185)
Over 50 years old	0.490***	0.491***	0.499***	0.496***	0.492***	0.485***	0.486***	0.488***
	(0.138)	(0.140)	(0.144)	(0.142)	(0.140)	(0.184)	(0.185)	(0.188)
Missing information	0.512***	0.512***	0.521***	0.519***	0.514***	0.503***	0.503***	0.506***
	(0.138)	(0.139)	(0.143)	(0.142)	(0.140)	(0.174)	(0.175)	(0.178)
Mother has been to school	-0.0157	-0.0206	-0.0188	-0.00887	-0.00980	-0.00928	-0.0137	-0.00509
	(0.0186)	(0.0186)	(0.0185)	(0.0187)	(0.0188)	(0.0218)	(0.0250)	(0.0198)
Does adult *j* know that FGM causes	-0.0534	-0.0475	-0.0460	-0.0460	-0.0458	-0.0559	-0.0506	-0.0486
health issues for girls? (Yes=1)	(0.0325)	(0.0329)	(0.0327)	(0.0323)	(0.0323)	(0.0532)	(0.0537)	(0.0539)
Does adult *j* know that FGM causes health issues in adulthood?	0.0564	0.0526	0.0504	0.0524	0.0530	0.0560	0.0525	0.0530
(Yes=1)	(0.0400)	(0.0403)	(0.0399)	(0.0396)	(0.0398)	(0.0616)	(0.0633)	(0.0629)
Has adult *j* ever been yet informed	0.00144	0.00363	0.00230	0.00449	0.00570	0.00499	0.00690	0.00815
about FGM? (Yes=1)	(0.0219)	(0.0219)	(0.0220)	(0.0220)	(0.0218)	(0.0262)	(0.0272)	(0.0263)
Is adult *j* in favor of a law	-0.0779***	-0.0763***	-0.0709***	-0.0705**	-0.0730***	-0.0699*	-0.0685*	-0.0669*
to ban FGM? (Yes=1)	(0.0278)	(0.0277)	(0.0274)	(0.0274)	(0.0277)	(0.0373)	(0.0370)	(0.0369)
Region (ref: Kayes)								
Koulikoro	-0.0311	0.0172	0.0122	-0.00676	0.00220	-0.101*	-0.0580	-0.0590
	(0.0340)	(0.0343)	(0.0342)	(0.0333)	(0.0338)	(0.0556)	(0.0824)	(0.0632)
Sikasso	-0.224***	-0.159***	-0.165***	-0.164***	-0.151***	-0.224***	-0.165	-0.158
	(0.0386)	(0.0364)	(0.0360)	(0.0399)	(0.0417)	(0.0445)	(0.111)	(0.102)
Segou	-0.167***	-0.139***	-0.160***	-0.155***	-0.140***	-0.203***	-0.179***	-0.173***
	(0.0359)	(0.0362)	(0.0359)	(0.0365)	(0.0369)	(0.0424)	(0.0609)	(0.0563)
Mopti	-0.249***	-0.219***	-0.216***	-0.224***	-0.221***	-0.244***	-0.221**	-0.223**
	(0.0439)	(0.0440)	(0.0441)	(0.0442)	(0.0444)	(0.0792)	(0.100)	(0.0885)
Bamako	-0.195***	-0.149***	-0.176***	-0.178***	-0.157***	-0.219***	-0.179*	-0.181**
	(0.0461)	(0.0449)	(0.0459)	(0.0467)	(0.0457)	(0.0810)	(0.0929)	(0.0847)

Table A.2 continued

	OLS					2SLS		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Variables at village level								
Religion (ref: Animist)								
Muslim	0.0461	0.102	0.0922	0.0353	0.0449	-0.00476	0.0446	0.00238
	(0.155)	(0.156)	(0.155)	(0.152)	(0.152)	(0.273)	(0.264)	(0.247)
Christian	-0.153	-0.0594	-0.115	-0.175	-0.135	-0.276	-0.193	-0.240
	(0.122)	(0.127)	(0.130)	(0.125)	(0.121)	(0.197)	(0.239)	(0.184)
Ethnic group (ref: Bambara)								
Malinke	0.0568	0.0231	-0.0491	-0.0165	0.0176	-0.00899	-0.0401	-0.0334
	(0.113)	(0.114)	(0.105)	(0.104)	(0.111)	(0.168)	(0.158)	(0.142)
Peulh	-0.173***	-0.159***	-0.163***	-0.192***	-0.190***	-0.178*	-0.166*	-0.193**
	(0.0544)	(0.0540)	(0.0537)	(0.0540)	(0.0543)	(0.0963)	(0.0865)	(0.0902)
Soninke	0.0701	0.0825	0.0439	-0.0513	-0.0367	0.165*	0.176**	0.0513
	(0.0521)	(0.0512)	(0.0508)	(0.0574)	(0.0588)	(0.0876)	(0.0831)	(0.177)
Sonrhai	-0.208	-0.184	-0.238	-0.242	-0.211	-0.243	-0.218	-0.236
	(0.163)	(0.163)	(0.165)	(0.165)	(0.164)	(0.303)	(0.292)	(0.307)
Dogon	0.450***	0.434***	0.419***	0.416***	0.420***	0.431***	0.421**	0.411**
	(0.0995)	(0.0994)	(0.0989)	(0.0982)	(0.0984)	(0.159)	(0.164)	(0.172)
Tamacheq	-2.118	-3.260**	-3.207**	-2.403*	-2.555*	-2.044	-3.083	-2.457*
	(1.454)	(1.510)	(1.509)	(1.460)	(1.461)	(1.302)	(2.142)	(1.353)
Senoufo	0.0870	0.0540	0.0548	0.0302	0.0224	-0.000543	-0.0302	-0.0433
	(0.0644)	(0.0637)	(0.0635)	(0.0652)	(0.0649)	(0.0745)	(0.0973)	(0.100)
Bobo	-0.0815	-0.114	-0.0636	-0.101	-0.135	-0.0700	-0.0987	-0.120
	(0.142)	(0.142)	(0.143)	(0.143)	(0.140)	(0.245)	(0.250)	(0.245)
Literacy	-0.00379**	-0.00441**	-0.00466**	-0.00446**	-0.00441**	-0.00218	-0.00276	-0.00304
	(0.00179)	(0.00182)	(0.00181)	(0.00180)	(0.00181)	(0.00322)	(0.00350)	(0.00327)
Farmers	-0.00252**	-0.00200*	-0.00221*	-0.00228**	-0.00208*	-0.00190	-0.00143	-0.00162
	(0.00111)	(0.00111)	(0.00113)	(0.00112)	(0.00109)	(0.00178)	(0.00171)	(0.00170)
Female household head	-0.00387**	-0.00400***	-0.00434***	-0.00358**	-0.00337**	-0.00581***	-0.00592***	-0.00501**
	(0.00153)	(0.00152)	(0.00154)	(0.00154)	(0.00152)	(0.00209)	(0.00200)	(0.00251)
Wealth index	0.0324**	0.0271*	0.0281*	0.0290*	0.0277*	0.0398	0.0352	0.0344
	(0.0153)	(0.0151)	(0.0150)	(0.0150)	(0.0152)	(0.0266)	(0.0264)	(0.0251)

Table A.2 continued

	OLS					2SLS		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Returnees from countries where FGM is practiced								
All host countries	-0.323					-2.177**		
	(0.425)					(0.984)		
Countries where FGM is banned or not practiced		-1.645***					-3.373	
		(0.607)					(2.193)	
Countries where FGM is practiced		4.473***	4.827***				2.164	
		(1.680)	(1.656)				(7.679)	
Non-African countries where FGM is banned or not practiced			8.107*	7.212*				
			(4.189)	(4.242)				
African countries where FGM is banned or practiced less than in Mali			-2.185***					
			(0.605)					
African countries except Côte d'Ivoire				1.568**				
				(0.745)				
Côte d'Ivoire				-2.257***	-2.201***			-3.548*
				(0.718)	(0.719)			(2.144)
All countries except Côte d'Ivoire					1.917***			0.178
					(0.695)			(3.327)
Constant	0.625***	0.618***	0.623***	0.668***	0.667***	0.680*	0.675**	
	(0.231)	(0.232)	(0.234)	(0.232)	(0.231)	(0.349)	(0.340)	
Observations	3,330	3,330	3,330	3,330	3,330	3,330	3,330	3,330
R-squared	0.282	0.285	0.287	0.286	0.286	0.276	0.279	0.281

Robust standard errors clustered at cluster level in parentheses. Returnees are the stock of returnee migrants over the population of the village. 2SLS estimations (columns 6 to 9) instrument returnee variables by distance to the traditional Soninké migratory route, distance to the nearest colonial town and distance to the nearest railroad station.

Table A.3: baseline model on FGM knowledge and attitudes

	OLS					2SLS				
VARIABLES	Y_1	Y_2	Y_3	Y_4	Y_5	Y_1	Y_2	Y_3	Y_4	Y_5
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Gender (ref: male)	0.0319	0.0632***	0.0573***	0.00867	0.0480**	0.0300	0.0626*	0.0575***	0.00790	0.0475**
	(0.0259)	(0.0235)	(0.0184)	(0.0253)	(0.0225)	(0.0259)	(0.0349)	(0.0183)	(0.0169)	(0.0200)
Age of HH (ref: 15 to 24 years old)										
25 to 49 years old	0.0928	0.0416	-0.0607	0.0428	0.0277	0.0986	0.0441	-0.0611	0.0456	0.0293
	(0.0973)	(0.0715)	(0.0815)	(0.0786)	(0.0662)	(0.0959)	(0.0947)	(0.134)	(0.126)	(0.0705)
over 50 years old	0.159*	-0.0247	-0.120	-0.0249	-0.0314	0.160*	-0.0242	-0.120	-0.0245	-0.0311
	(0.0967)	(0.0714)	(0.0816)	(0.0791)	(0.0653)	(0.0952)	(0.0783)	(0.133)	(0.112)	(0.0596)
Missing information										
	-0.0450	-0.0205	-0.107	0.0130	-0.0309	-0.0407	-0.0186	-0.108	0.0152	-0.0296
	(0.0974)	(0.0729)	(0.0826)	(0.0800)	(0.0675)	(0.0959)	(0.0941)	(0.127)	(0.106)	(0.0603)
Religion (ref: Animist)										
Muslim	0.141**	0.0543	0.0429	0.0240	-0.170***	0.149**	0.0576	0.0423	0.0277	-0.168**
	(0.0683)	(0.0673)	(0.0454)	(0.0597)	(0.0611)	(0.0684)	(0.0735)	(0.0450)	(0.0668)	(0.0656)
Christian	-0.199**	0.0392	0.0357	0.147*	0.0422	-0.195**	0.0405	0.0354	0.149	0.0431
	(0.0774)	(0.0987)	(0.0812)	(0.0874)	(0.0875)	(0.0769)	(0.121)	(0.0792)	(0.0907)	(0.0755)
Ethnic group (ref: Bambara)										
Bobo	-0.268***	0.0550	0.154*	-0.0556	0.232**	-0.270***	0.0538	0.154	-0.0569	0.231***
	(0.0844)	(0.0967)	(0.0904)	(0.0965)	(0.0931)	(0.0809)	(0.121)	(0.0978)	(0.146)	(0.0723)
Ethnic group missing	-0.0585	0.0652	0.131	0.403***	-0.156*	-0.0779	0.0633	0.131	0.401***	-0.158
	(0.193)	(0.195)	(0.170)	(0.0714)	(0.0818)	(0.195)	(0.195)	(0.164)	(0.0658)	(0.0960)
Dogon	-0.134	0.0525	0.116*	0.0756	0.0374	-0.128	0.0546	0.115	0.0781	0.0389
	(0.0814)	(0.0738)	(0.0701)	(0.0715)	(0.0782)	(0.0809)	(0.0994)	(0.100)	(0.0786)	(0.140)
Malinke	0.0129	-0.118*	-0.0743	0.0433	-0.0497	0.00502	-0.121**	-0.0737**	0.0394	-0.0520
	(0.0604)	(0.0646)	(0.0496)	(0.0645)	(0.0474)	(0.0607)	(0.0522)	(0.0374)	(0.0528)	(0.0457)
Peulh	-0.0538	-0.0788*	-0.00154	0.0578	0.0503	-0.0616	-0.0821	-0.000884	0.0538	0.0478
	(0.0487)	(0.0458)	(0.0418)	(0.0483)	(0.0456)	(0.0484)	(0.0557)	(0.0420)	(0.0438)	(0.0334)
Soninke	-0.117**	-0.176***	0.0138	-0.0999*	-0.00269	-0.118**	-0.177***	0.0138	-0.100	-0.00279
	(0.0596)	(0.0529)	(0.0484)	(0.0549)	(0.0512)	(0.0597)	(0.0611)	(0.0555)	(0.0811)	(0.0470)
Sonrhai	-0.380***	0.131*	0.213***	0.121	0.209***	-0.372***	0.135	0.212***	0.126	0.212***
	(0.0702)	(0.0749)	(0.0698)	(0.0770)	(0.0751)	(0.0703)	(0.0843)	(0.0392)	(0.0920)	(0.0678)

Table A.3 continued

	OLS					2SLS				
VARIABLES	Y_1	Y_2	Y_3	Y_4	Y_5	Y_1	Y_2	Y_3	Y_4	Y_5
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Senoufo	-0.0450	-0.137**	-0.0379	0.0328	-0.0119	-0.0448	-0.137**	-0.0379	0.0330	-0.0118
	(0.0480)	(0.0555)	(0.0447)	(0.0525)	(0.0485)	(0.0485)	(0.0583)	(0.0531)	(0.0412)	(0.0476)
Other Ethnic group	-0.0117	-0.139***	-0.0478	0.00431	0.0895*	-0.0325	-0.148*	-0.0459	-0.00641	0.0831
	(0.0493)	(0.0507)	(0.0392)	(0.0469)	(0.0484)	(0.0507)	(0.0773)	(0.0571)	(0.0631)	(0.0525)
Education (ref: no school)										
Has been to school	-0.0882**	0.101***	0.108***	0.0992***	0.168***	-0.0922**	0.0990***	0.109***	0.0974***	0.167***
	(0.0365)	(0.0368)	(0.0328)	(0.0373)	(0.0339)	(0.0364)	(0.0368)	(0.0343)	(0.0296)	(0.0329)
Listens to radio (Yes=1)	0.0377	0.0610*	0.0448**	0.123***	0.0318	0.0333	0.0590**	0.0452*	0.120***	0.0304
	(0.0443)	(0.0313)	(0.0196)	(0.0370)	(0.0397)	(0.0441)	(0.0283)	(0.0234)	(0.0364)	(0.0346)
Watches TV (Yes=1)	0.0128	0.0857***	0.0943***	0.142***	0.0468*	0.0146	0.0861***	0.0942***	0.143***	0.0472
	(0.0324)	(0.0258)	(0.0186)	(0.0300)	(0.0258)	(0.0323)	(0.0269)	(0.0191)	(0.0286)	(0.0345)
Reads newspaper	-0.00495	0.162***	0.152***	0.0716	0.0522	-0.00635	0.161***	0.152***	0.0710**	0.0518
(yes=1)	(0.0482)	(0.0461)	(0.0457)	(0.0463)	(0.0482)	(0.0478)	(0.0327)	(0.0329)	(0.0343)	(0.0439)
Region (ref: Kayes)										
Koulikoro	0.190***	0.0297	-0.0896**	0.0272	-0.0545	0.267***	0.0627	-0.0961*	0.0655	-0.0315
	(0.0667)	(0.0542)	(0.0434)	(0.0582)	(0.0491)	(0.0711)	(0.0588)	(0.0555)	(0.0713)	(0.0673)
Sikasso	0.00178	0.273***	0.243***	0.306***	0.241***	-0.00365	0.271***	0.243***	0.303***	0.240***
	(0.0591)	(0.0519)	(0.0433)	(0.0549)	(0.0523)	(0.0597)	(0.0475)	(0.0471)	(0.0475)	(0.0499)
Segou	0.0938	0.176***	0.135***	0.124**	0.274***	0.136**	0.194***	0.131***	0.145**	0.287***
	(0.0616)	(0.0518)	(0.0462)	(0.0558)	(0.0507)	(0.0604)	(0.0477)	(0.0437)	(0.0642)	(0.0699)
Mopti	0.106*	0.202***	0.148***	0.142***	0.204***	0.104*	0.201**	0.148**	0.142	0.204***
	(0.0575)	(0.0504)	(0.0465)	(0.0528)	(0.0511)	(0.0571)	(0.0790)	(0.0712)	(0.118)	(0.0706)
Bamako	0.107	0.0645	0.0685	0.109	0.0291	0.122*	0.0713	0.0671	0.117	0.0339
	(0.0711)	(0.0637)	(0.0574)	(0.0682)	(0.0618)	(0.0692)	(0.0881)	(0.0752)	(0.0816)	(0.0595)
Variables at village level										
Religion (ref: Animist)										
Muslim	0.0708	-0.206	-0.149	0.324*	0.0317	0.125	-0.184	-0.154	0.351	0.0476
	(0.188)	(0.169)	(0.121)	(0.169)	(0.192)	(0.189)	(0.193)	(0.143)	(0.253)	(0.444)
Christian	0.336**	-0.0536	0.0614	0.141	0.195	0.487***	0.0104	0.0489	0.215	0.239
	(0.143)	(0.165)	(0.138)	(0.163)	(0.147)	(0.170)	(0.167)	(0.162)	(0.145)	(0.182)

Table A.3 continued

	OLS					2SLS				
VARIABLES	Y_1	Y_2	Y_3	Y_4	Y_5	Y_1	Y_2	Y_3	Y_4	Y_5
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Ethnic group (ref: Bambara)										
Malinke	0.497***	0.324**	-0.0869	0.335**	0.0970	0.564***	0.352	-0.0924	0.368*	0.117
	(0.181)	(0.165)	(0.138)	(0.169)	(0.151)	(0.184)	(0.234)	(0.193)	(0.218)	(0.156)
Peulh	0.00277	0.0337	0.0380	0.139*	0.0800	0.00159	0.0327	0.0381	0.138	0.0796
	(0.0890)	(0.0766)	(0.0621)	(0.0782)	(0.0753)	(0.0890)	(0.0982)	(0.0878)	(0.111)	(0.0939)
Soninke	-0.0206	0.0685	-0.0245	0.158*	-0.125*	-0.136	0.0190	-0.0149	0.101	-0.159*
	(0.0933)	(0.0794)	(0.0623)	(0.0846)	(0.0735)	(0.118)	(0.0716)	(0.0728)	(0.0882)	(0.0896)
Sonrhai	0.315*	-0.172	-0.473***	0.220	-0.0219	0.379**	-0.145	-0.479*	0.251	-0.00319
	(0.180)	(0.176)	(0.153)	(0.173)	(0.172)	(0.185)	(0.307)	(0.281)	(0.406)	(0.243)
Dogon	0.372***	-0.414***	-0.244**	-0.240**	-0.0839	0.375***	-0.414***	-0.244*	-0.239	-0.0835
	(0.121)	(0.105)	(0.0957)	(0.105)	(0.112)	(0.121)	(0.145)	(0.136)	(0.171)	(0.167)
Tamacheq	2.755*	-5.930***	-3.063***	0.145	-5.359***	2.522*	-6.042***	-3.044***	0.0180	-5.436***
	(1.441)	(1.280)	(1.090)	(1.477)	(1.209)	(1.428)	(1.159)	(1.128)	(1.698)	(1.560)
Senoufo	0.197***	-0.215***	-0.259***	0.0327	-0.129*	0.299***	-0.171*	-0.268**	0.0835	-0.0986
	(0.0753)	(0.0785)	(0.0635)	(0.0786)	(0.0757)	(0.0899)	(0.0941)	(0.107)	(0.117)	(0.132)
Bobo	-0.137	-0.0840	-0.0178	0.240	0.0189	-0.164	-0.0953	-0.0156	0.227	0.0112
	(0.163)	(0.156)	(0.126)	(0.157)	(0.166)	(0.161)	(0.198)	(0.138)	(0.219)	(0.356)
Literacy	-0.00688***	0.00273	-1.04e-05	0.00602***	-5.68e-05	-0.00873***	0.00194	0.000145	0.00510	-0.000609
	(0.00200)	(0.00199)	(0.00181)	(0.00202)	(0.00182)	(0.00225)	(0.00295)	(0.00270)	(0.00320)	(0.00220)
Farmers	0.00200	0.000899	-0.00303***	0.00350**	0.000359	0.00150	0.000664	-0.00299*	0.00323	0.000198
	(0.00166)	(0.00139)	(0.00112)	(0.00152)	(0.00141)	(0.00160)	(0.00191)	(0.00181)	(0.00210)	(0.00145)
Female household head	-1.42e-05	-0.00271	-0.000743	-0.00173	-0.000822	0.00178	-0.00193	-0.000892	-0.000833	-0.000287
	(0.00189)	(0.00173)	(0.00151)	(0.00185)	(0.00177)	(0.00191)	(0.00240)	(0.00226)	(0.00274)	(0.00183)
Wealth index	0.0761***	-0.000109	-0.00228	-0.0350*	0.0158	0.0716***	-0.00228	-0.00187	-0.0375	0.0143
	(0.0220)	(0.0186)	(0.0163)	(0.0190)	(0.0176)	(0.0215)	(0.0242)	(0.0231)	(0.0283)	(0.0217)
Returnees	1.285*	-0.172	0.0374	0.751	2.135***	3.477**	0.772	-0.146	1.845	2.791**
	(0.716)	(0.598)	(0.437)	(0.626)	(0.580)	(1.366)	(0.977)	(0.965)	(1.136)	(1.329)
Constant	-0.244	0.264	0.287*	-0.287	-0.0103	-0.306	0.240	0.292	-0.315	-0.0273
	(0.279)	(0.201)	(0.155)	(0.220)	(0.225)	(0.282)	(0.235)	(0.243)	(0.323)	(0.458)
Observations	4,018	4,029	3,990	4,028	4,021	4,018	4,029	3,990	4,028	4,021
R-squared	0.135	0.201	0.213	0.184	0.192	0.130	0.200	0.213	0.183	0.192

Robust standard errors clustered at cluster level in parentheses. Returnees are the stock of returnee migrants over the population of the village. 2SLS estimations (columns 6 to 10) instrument returnee variables by distance to the traditional Soninké migratory route, distance to the nearest colonial town and distance to the nearest railroad station.

Table A.4 First stage regression, Girl sample

VARIABLES	(1) Returnees	(2) Returnees from Countries where FGM is banned or not practiced	(3) Returnees from countries where FGM is practiced	(4) Returnees from African countries except Côte d'Ivoire	(5) Returnees from Côte d'Ivoire	Emigrants
Distance to the nearest colonial town	0.000492*	0.000520**	-1.64e-05	-9.09e-05	0.000594***	0.000102**
	(0.000276)	(0.000261)	(9.46e-05)	(0.000114)	(0.000217)	(4.67e-05)
Distance to the traditional Soninké migratory route	-0.000540***	-0.000395***	-0.000141***	-0.000230***	-0.000306***	4.69e-06
	(0.000128)	(0.000101)	(3.81e-05)	(7.08e-05)	(9.01e-05)	(2.09e-05)
Distance to the nearest railroad station	0.000376***	0.000295***	8.10e-05***	0.000159***	0.000218***	-1.10e-05
	(7.53e-05)	(6.05e-05)	(2.49e-05)	(5.11e-05)	(5.07e-05)	(1.64e-05)
Observations	3,330	3,330	3,330	3,330	3,330	3,330
R-squared	0.786	0.731	0.806	0.816	0.691	0.713

Robust standard errors clustered at the cluster level in parentheses. Returnees are the stock of returnee migrants over the population of the village. Current migrants are the number of current emigrants divided by the population of the village. Control variables included: girl's age; age, religion, ethnicity of the household head, mother's age and level of education, dichotomous variables indicating whether the household head knows that FGM can cause health issues for the girl now, or in adulthood, whether s/he has been informed about the issues of FGM and whether s/he is in favor of a law against FGM; dummy variables at regional level; shares of each ethnic group in the village population, share of farmers among the working village population over six years old, share of literate over-12s in the population, and a composite index of wealth per capita.

Table A.5 First stage regression, Adult sample

VARIABLES	(1) Returnees	(2) Returnees from African countries except Côte d'Ivoire	(3) Returnees from Côte d'Ivoire
Distance to the nearest colonial town	0.000451	-0.000111	0.000571**
	(0.000294)	(0.000115)	(0.000234)
Distance to the traditional Soninké migratory route	-0.000486***	-0.000219***	-0.000264***
	(0.000133)	(6.68e-05)	(9.67e-05)
Distance to the nearest railroad station	0.000349***	0.000145***	0.000203***
	(7.86e-05)	(4.84e-05)	(5.70e-05)
Observations	4,021	4,021	4,021
R-squared	0.741	0.783	0.649

Robust standard errors clustered at the cluster level in parentheses. Returnees are the stock of returnee migrants over the population of the village.

Control variables included: gender, age, religion, ethnicity and level of education of the interviewed adult, dichotomous variables indicating whether the adult listens radio, watches TV and read newspapers; dummy variables at regional level; shares of each ethnic group in the village population, share of farmers among the working village population over six years old, share of literate over-12s in the population, and a composite index of wealth per capita. 2SLS estimations instrument returnee variables by distance to the traditional Soninké migratory route and distance to the nearest railroad station.