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Staying Against the Odds: On the Drivers of Teacher Retention in Conflict-Affected Contexts

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Staying Against the Odds: On the Drivers of Teacher Retention in Conflict-Affected Contexts

Abstract

Why do teachers remain in schools affected by prolonged crisis? Using longitudinal data on 1,831 teachers across 124 schools in Niger and the Democratic Republic of the Congo, we examine the drivers of school-level teacher retention over three survey rounds. We find that retention is shaped primarily by local embeddedness, pay, and exposure to violence. Higher salaries are associated with retention, but almost entirely among teachers who have not always lived in the village where they teach. Pay and local embeddedness therefore operate as alternative rather than cumulative retention margins. Local embeddedness is among the strongest correlates of retention, but mainly for male teachers. Exposure to violence is the strongest predictor of exit, with effects roughly twice as large for women as for men. These findings highlight the relational, material and gendered dimensions of teacher retention in conflict-affected settings.

JEL classification

I25, J45, D74, O15

Keywords

Sub-Saharan Africa, job turnover, teacher retention, conflict-affected education, violence exposure, gender

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Introduction

Teacher retention in crisis-affected contexts is an urgent policy concern as education systems confront chronic teacher shortages, high rates of attrition from the profession, and difficulties maintaining a stable teaching workforce (UNESCO & International Task Force on Teachers for Education 2030, 2024). These challenges are compounded in a global context of escalating violent attacks on education (ACLED, 2022; GCPEA, 2024). While the literature has examined teacher retention in more stable contexts, highlighting factors such as salary, working conditions, career prospects, and professional support as important determinants of teachers' decisions to stay or leave the profession (Nguyen et al., 2020), much less is known about these drivers in crisis. A growing body of research on teachers in crisis-affected contexts has emphasized additional factors that shape teacher governance and wellbeing, notably peer and community support (Mendenhall et al., 2024), exposure to violence (De La Fuente Stevens et al., 2025), educational governance (Brandt & Cardozo, 2023), or the social embeddedness of teachers (Marchais et al., 2022). Yet there is limited evidence as to how these factors affect retention in conflict-affected environments. This question provides the starting point for our study.

Importantly, we focus on school-level and not system-level retention. A teacher who transfers to another school remains in the education workforce but still constitutes turnover for the school left behind, potentially disrupting instructional continuity, school-specific knowledge, collegial networks, and relationships with students and communities (Ingersoll, 2001; Ronfeldt et al., 2013; Jabbar & Holme, 2026). These forms of continuity may be particularly consequential in protracted crises, where teachers can provide not only instruction but also relational, psychosocial and communicative continuity for children and communities affected by violence and displacement (Falk et al., 2022; Ibreck et al., 2026; West & Ring, 2015). School retention therefore concerns not only keeping a teaching position filled, but maintaining the organizational and relational continuity through which schools function. This provides the rationale for studying school-level retention even where departing teachers continue teaching elsewhere.

In this paper, we analyse the determinants of school level retention using a detailed longitudinal dataset covering 1,831 teachers across 124 schools, followed over three survey rounds in conflict-affected regions of Niger and the Democratic Republic of the Congo (DRC). 990 teachers were observed (retained) in all three rounds. We operationalise teacher attrition as departure from the school between survey rounds, a measure that captures both teachers who leave the profession and those who transfer to another school. Our analysis shows that retention is associated with a combination of material incentives, social embeddedness, individual characteristics, and exposure to violence – but that the weight of these factors differs markedly across teachers. Higher salaries and stronger local embeddedness are associated with greater retention, yet salaries matter most for non-local teachers, while local embeddedness matters most for men. Among teachers who have not experienced violence, women are more likely than men to remain in post; among those who have, the association reverses sharply, with the retention penalty roughly twice as large for women as for men. Insecurity thus emerges as a central –and gendered– force shaping teachers' professional trajectories in conflict-affected education systems.

This paper is among the first quantitative studies to examine school-level teacher retention longitudinally in settings of protracted crisis (for a related exception, see Bedasso & Mendez Acosta, 2025). The dataset provides a rare source of longitudinal teacher-level evidence from

fragile and conflict-affected contexts, where reliable administrative data on the teaching workforce are limited. The paper observes actual school departure rather than stated intentions to leave and shows how material incentives, local embeddedness, gender and exposure to violence jointly shape the stability of school teaching workforces. In doing so, it bridges research on teacher turnover and organizational stability with research on teacher wellbeing and governance in crisis-affected contexts. More broadly, it shifts the attention from aggregate teacher supply to the conditions under which conflict-affected schools are able to maintain stable teaching teams.

The remainder of the paper is structured as follows. The next section reviews the literature on teacher retention and develops a conceptual framework around material and institutional incentives, social embeddedness, professional support, and exposure to violence. We then introduce the DRC and Niger contexts, describe the longitudinal dataset and our empirical strategy, and present descriptive and regression results on the drivers of retention, before drawing conclusions for policy and future research.

Literature review and conceptual framework

Teacher retention research distinguishes between teachers who remain in the same school, those who move to another school, and those who leave the profession altogether. This distinction is important because transferring teachers remain part of the overall teaching workforce but create staffing instability in the schools they leave (Boe et al. 2008; Ingersoll 2001; Leithwood et al. 2026). Departures disrupt instructional continuity, collegial relationships, organisational knowledge and teacher-student relationships, while generating additional organisational demands (Jabbar & Holme 2026; Ronfeldt et al., 2013; Sorensen and Ladd, 2020). Evidence from South Sudan and Uganda highlights the importance of teacher-student relationships for wellbeing, while research in South Sudan documents teachers' roles in protection, inclusion and everyday peacebuilding (Falk, Shephard & Mendenhall 2022; Ibreck & Robinson 2026).

Research consistently identifies salaries, employment security, career prospects, working conditions, and professional support as important determinants of teachers' decisions to remain in the profession (Bennell & Akyeampong, 2007; Borman & Dowling, 2008; Nguyen et al. 2020). Borman and Dowling (2008), for example, found that organizational characteristics, school composition, resources and teachers' working conditions are significant correlates of attrition, while Nguyen et al. (2020) identify salary, administrative support, working conditions and organizational characteristics among the recurring correlates of teacher turnover. A recent review of 17 reviews similarly concludes that a substantial share of the factors most consequential for retention lies within the school organization and emphasises that these factors interact rather than operate independently (Leithwood et al. 2026). Evidence on these dynamics in low-income and crisis-affected education systems remains much more limited. A particularly relevant exception is Bedasso and Mendez Acosta's (2025) longitudinal analysis of administrative data from conflict-affected Burkina Faso. Crucially, their findings demonstrate why distinguishing school mobility from professional attrition matters: rural and remote schools disproportionately lose teachers through transfers to other schools. They also find higher professional attrition among early-career and female teachers and greater exit from the profession in conflict-affected areas.

In light of these findings, we conceptualise retention as a relational and governance-mediated outcome. Building on cultural political economy approaches (Jessop 2004; Brandt & Lopes Cardozo 2023), we conceptualise school-level teacher retention as jointly shaped by governance arrangements, socio-cultural dynamics, and teachers' capacities to navigate these environments. Four sets of factors are particularly relevant to the present analysis: contractual and professional incentives, social embeddedness, violence and insecurity, and professional support.

Contractual and professional incentives: First, contractual and professional incentives are likely to remain central. Higher and more reliable salaries, greater employment security, and clearer pathways for professional recognition are generally associated with stronger retention, while uncertainty surrounding contracts, deployment, and remuneration tends to drive attrition (Bennell & Akyeampong 2007; Mugizi et al. 2019). These factors are likely to play a role in crisis-affected contexts as well.

Second, the emerging literature on teachers in crisis-affected contexts has highlighted the role of **social embeddedness**. Teachers who are locally embedded through family ties, social networks of peer and community support, are likely to benefit from support, protection, and livelihood opportunities that make remaining in post more viable (Arinaitwe et al. 2020; Brandt 2018; Kabir 2023). Conversely, teachers working outside their linguistic, cultural or social communities are likely to experience greater isolation, less support, and propensity to leave the profession. In polarized societies, this can also lead to violence (Marchais et al., 2025).

Third, **violence and insecurity** affect teachers through threats, attacks, displacement, and trauma, but also indirectly through stress, burnout, and negative effects on their wellbeing. Existing evidence suggests that exposure to violence is associated with lower retention and greater mobility, while trauma-related symptoms are also linked to reduced job satisfaction and motivation (Brandt 2021; De la Fuente et al. 2025; Marchais et al. 2024; Wolf et al. 2015). Some studies also suggest that these effects may be gendered, with female teachers facing distinct security risks and psychological burdens in crisis settings (Bedasso & Mendez Acosta 2025; De la Fuente et al. 2025).

Finally, **professional support** can help sustain retention in crises. Supportive school leadership, positive collegial relationships, mentoring, and opportunities for professional development have all been associated with greater wellbeing, commitment, and professional continuity (Johnson 2006; D'Sa et al. 2023; UNESCO & International Task Force on Teachers for Education 2030, 2024). In contexts where formal support systems are weak, peer networks and collegial support may play particularly important roles.

This framework helps explain the conditions under which teachers are able and willing to remain in the profession despite insecurity and hardship and guides our analysis of teacher retention.

Context and Data

The study focuses on two of sub-Saharan Africa's most crisis-affected education systems: the DRC and Niger. Over the past decade, schools in both countries have operated in contexts marked by protracted insecurity, population displacement, and repeated disruptions to education. In eastern DRC, in the conflict-affected territories of Uvira and Fizi in the province of South Kivu, schools have been affected by armed violence directly targeting education staff

(Marchais et al., 2025), the introduction of free primary education and the combined effect of prolonged school closures during the Covid-19 pandemic, with severe effects on the education system (Falisse et al., 2022). Niger is one of the countries most impacted by climate change (Daoust et al., 2025), and the compounded effect of violent conflict, which directly impacts the region of Diffa (Hamadou Daouda, 2020), and indirectly the region of Zinder, creating insecurity and displacement that have placed sustained pressure on schools, teachers, and learners. Despite these challenges, teachers have remained central to maintaining educational continuity and supporting the resilience of the education system, with severe effects on their wellbeing and mental health (De La Fuente Stevens et al., 2025; Marchais et al., 2022).

Study and sample description

The analysis draws on data collected through the *Building Resilience in Crisis through Education* (BRiCE) research project in the DRC and Niger. The study followed teachers across three survey rounds conducted between 2019 and 2021 in four conflict-affected regions: the territories of Uvira and Fizi in South Kivu, DRC, and the regions of Diffa and Zinder in Niger (Appendix Figure A1). In total, we use data from 1,831 teachers surveyed across 124 schools (932 teachers and 55 schools in the DRC, 899 teachers and 69 schools in Niger). Appendix Table A1 reports the distribution of teacher-survey observations, per number of schools and villages by country, territory/region, and year.¹ Teachers in the sample were on average 38.4 years old ($SD = 11.3$), and 53.2% were women. Most teachers were married (87.5%) and had completed an average of 11.4 years of schooling ($SD = 1.9$). Two-thirds (66.7%) reported having always lived in the village where they taught, while the average share of the teacher's ethnic group in the locality was 38.9%. Around 61.1% of teachers held a permanent state contract (see Appendix Table A2).

Although the dataset was not originally designed to study school-level teacher retention, it offers a valuable opportunity to do so using longitudinal teacher-level data. Rather than treating attrition from the sample as a methodological limitation to be corrected through weighting, bounding or imputation, we treat it as an object of study. Decisions to remain in or leave a school reflect behavioral responses to the constraints, incentives and contextual pressures teachers face.

Teachers observed in one survey round but not in the subsequent round are assumed to have left the school in which they were initially surveyed. This assumption is supported by the project's intensive tracking procedures, through which researchers were instructed to verify that teachers had left the school and, where teachers were temporarily absent, to locate them or return later to conduct the interview.

Teachers who leave the sample may either have exited the profession altogether or transferred to another school. While we cannot distinguish these outcomes, both are substantively important. The first reflects attrition from the education system, while the second captures teacher turnover, itself a major challenge in crisis-affected settings. The sample attrition measure also doesn't distinguish these processes from other reasons for departure, including prolonged illness, retirement, end of career, or death. However, the relatively young age profile of departing teachers, together with the robustness of the results to age controls and analyses restricted to teachers under 55, suggests that ordinary retirement is unlikely to drive the principal patterns observed. Accordingly, retention within the sample provides a credible proxy for retention within

¹ Total numbers exceed the number of unique teachers because most teachers were surveyed across multiple rounds (up to three). Sample sizes remain broadly stable despite sample attrition because the data collection adopted a replacement sample strategy.

the school, the central outcome of interest, and captures realised behaviour rather than self-reported intentions to stay or leave.

Formally, we define retention for teacher i at wave t as:

$$\text{Retention}_{it} = \begin{cases} 1 & \text{if teacher "i" is observed in both wave "t" and "t + 1"} \\ 0 & \text{if teacher "i" is observed in wave "t" but not in "t + 1"} \end{cases}$$

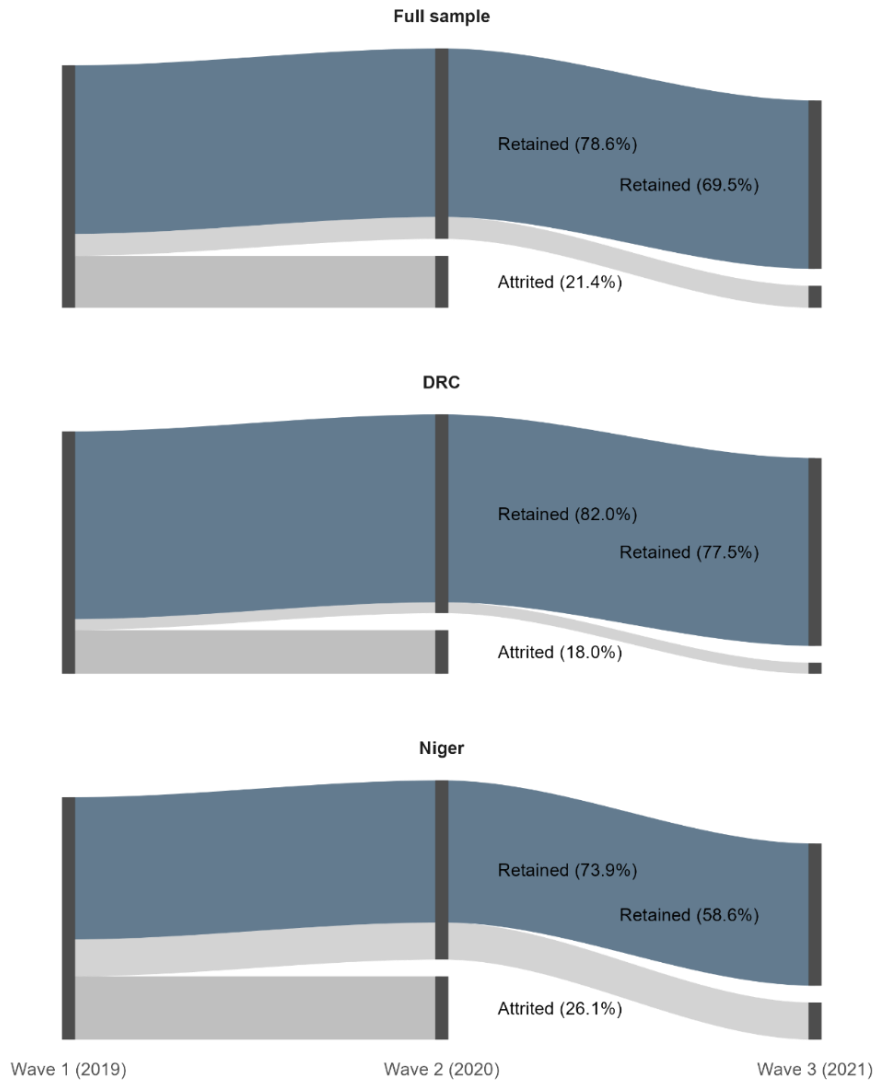
This definition interprets retention as continued participation in the school's observed teaching workforce, while attrition captures its complement. Since retention is only measurable between successive survey rounds, the three survey rounds yield two observable transitions (2019–2020 and 2020–2021).

The results point to substantial attrition. Of the 1,424 teachers surveyed in the 2019 baseline round, 21.4% had left their schools by 2020 and only 69.5% (990 teachers) remained in 2021 (Figure 1). Cumulative attrition is markedly higher in Niger (41.4%) than in the DRC (22.5%). A loss of roughly a third of the teaching workforce over two years places sustained pressure on already fragile education systems and on the continuity of instruction, and motivates our inquiry.

Table A2 provides an initial comparison between retained and departed (attrited) teachers. Several patterns emerge. Retained teachers tend to be older, more likely to have always lived in the village where they teach, and report larger local friendship networks than teachers who subsequently leave the sample. Teachers who leave are also disproportionately female: Women constitute 64.9% of departed teachers but 50.2% of those retained, a gap visible across both transitions (Appendix Figure A2). This difference is not yet interpretable as a gender effect, since gender is correlated with several characteristics that can independently predict retention –age, local embeddedness, salary, and exposure to violence– and the descriptive comparison holds none of them constant. Retained teachers are also more likely to receive higher salaries, hold permanent state employment contracts and report their current school as their preferred posting. Differences in reported support from colleagues and headteachers are comparatively small. By contrast, exposure to violence displays the largest gaps in the table: 64.5% of attrited teachers report ever having been attacked, compared with 22.5% of those retained. These descriptive patterns provide initial support for the paper's focus on material incentives, local embeddedness, and violence exposure as potential drivers of teacher retention in crisis-affected settings, while also highlighting the need for regression analysis to disentangle the conditional relationships between these factors.

Table A3 describes the schools in which teachers work. The sample schools operate in resource-constrained environments, with limited access to electricity (12% of schools) despite relatively widespread access to drinking water and separate sanitation facilities. There is also substantial variation between the two countries. Schools in the DRC are larger on average, with higher student–teacher and student–classroom ratios, while schools in Niger are more likely to have boundary walls, sports facilities, and access to clean water. The security environment remains fragile across both contexts: 16% of schools experienced an attack during the survey year and almost one-third had been attacked at least once during the previous decade. These figures underline the challenging conditions under which teachers work and provide initial evidence of the contextual heterogeneity explored in the analysis.

Figure 1. Teacher retention across survey waves: evidence from the DRC and Niger



Notes: The figure shows the proportion of teachers retained across consecutive survey waves, defined as being observed in the subsequent wave. Flows represent the distribution of teachers across retention paths: those who remain in the sample, those who attrit after the first transition, and those who attrit after the second transition. Panels report results for the full sample and by country.

Empirical Strategy

As previously discussed, the literature on teacher retention identifies several factors that may influence teachers' decisions to remain in the profession. We use this framework to guide our empirical analysis. Specifically, we examine four sets of factors hypothesized to shape retention: **(1)** material and institutional incentives; **(2)** local embeddedness and social ties; **(3)** professional and peer support; and **(4)** exposure to violence. For each dimension, we identify the most accurate proxy measures available in the dataset and use these to examine their association with teacher retention. We estimate a linear probability model using ordinary least squares.

$$\text{Retention}_{i,t} = \alpha + \mathbf{G}'_{it}\delta + \mathbf{C}'_{it}\beta + \mathbf{P}'_{it}\theta + \mathbf{V}'_{it}\lambda + \mathbf{X}'_{it}\gamma + \eta_{it}$$

Where **G** is the vector of material and institutional incentives, **C** the vector of social embeddedness and social ties, **P** the vector of professional and peer support variables, **V** the vector of exposure to violence, and **X** additional controls.

The linear specification provides a transparent way to compare the direction and relative magnitude of associations considered. The model includes year and country fixed effects, and standard errors are clustered at the school level, the primary sampling unit. For each category, the variables used as proxy measures are described below.

The material and institutional incentives vector, **G**, includes the logarithm of teacher's salary, as well as an interaction between salary and the indicator for having always lived in the village, which allows the effect of financial incentives to vary with local embeddedness. It also includes measures of whether the teacher reports a preference to move from their current school (=1 if so), and whether the current posting corresponds to the teacher's preferred placement (=1 if so). We also include a measure of weekly absence, capturing teacher attendance behaviour as an indicator of engagement, motivation and potential strain within the workplace.

The local embeddedness and social ties vector, **C**, includes two main variables: a binary indicator of local embeddedness which is whether the teacher has always lived in the village (=1), and the number of friends the teacher reports having within the village, a common social network variable (entered as reported). We also include an interaction between gender and local embeddedness to allow the retention effect of community attachment to vary between male and female teachers.

The professional and peer support vector, **P**, includes a measure of satisfaction with colleague support (=1 if satisfied) and satisfaction with support from the headteacher (=1 if satisfied), and an indicator for membership in a teacher association (=1 if member).

The exposure to violence and its effects vector, **V**, includes a variable measuring cumulative violence exposure, defined as whether the teacher reports having been personally attacked at any point in their career prior to the survey year. A contemporaneous measure of recent attack was considered but excluded on the grounds that teachers who experienced violence between survey waves and subsequently exited would be unobserved at the following wave, introducing attrition-induced attenuation bias. The cumulative measure is constructed up to and including the survey year. These measures used recall data and trauma informed approaches to data collection, and were used in related work on violence against teachers (De La Fuente Stevens et al., 2025; Marchais et al., 2025). The violence vector includes an interaction between violence exposure and gender, allowing us to examine whether the association between violence exposure and retention varies according to gender.

Finally, **X** includes a standard set of teacher- and household-level controls, including gender, age and its squared term, marital status, and an asset-based index of socioeconomic status. We also control for contextual and school-level characteristics, including the proportion of the teacher's ethnic group in the locality (Diffa, Fizi, Uvira, and Zinder), school size (number of students), the pupil-teacher ratio, and school electrification.

We expect local embeddedness, social ties and professional support to be positively associated with retention. Material and institutional incentives also are anticipated to increase retention, potentially with diminishing returns and heterogeneous effects depending on local

embeddedness. Violence exposure is expected to reduce retention. We hold no strong prior on how the retention effect of embeddedness varies by gender, and treat this interaction as exploratory. The model is estimated across four specifications that vary the observation window, sample composition and fixed-effects structure, described below.

The four specifications in Table A4 vary the observation window, sample composition and fixed effect structure. Columns 1 and 2 restrict attention to the original baseline cohort observed in 2019, using only the 2019–2020 transition. This ensures that all explanatory variables are measured before the retention outcome and that each teacher contributes one observation, eliminating within-teacher serial correlation. The two columns differ in their fixed effects: Column 1 includes a country fixed effect, while Column 2 replaces it with location fixed effects for the four survey regions (Diffa, Fizi, Uvira, and Zinder), absorbing all time-invariant differences across regions, including local labour market conditions and conflict intensity. Columns 3 and 4 pool both transitions (2019–2020 and 2020–2021), for the baseline cohort and the full observed sample respectively; the latter includes teachers added through the replacement procedure (not necessarily new hires, but existing school staff added to the sample). Pooling increases power but, as discussed in the results, induces attenuation in the violence estimates, which we address by treating single-transition estimates as preferred for that coefficient. The stability of estimates across all four specifications, and under progressively tighter geographic fixed effects (Appendix Table A5), supports the robustness of the findings.

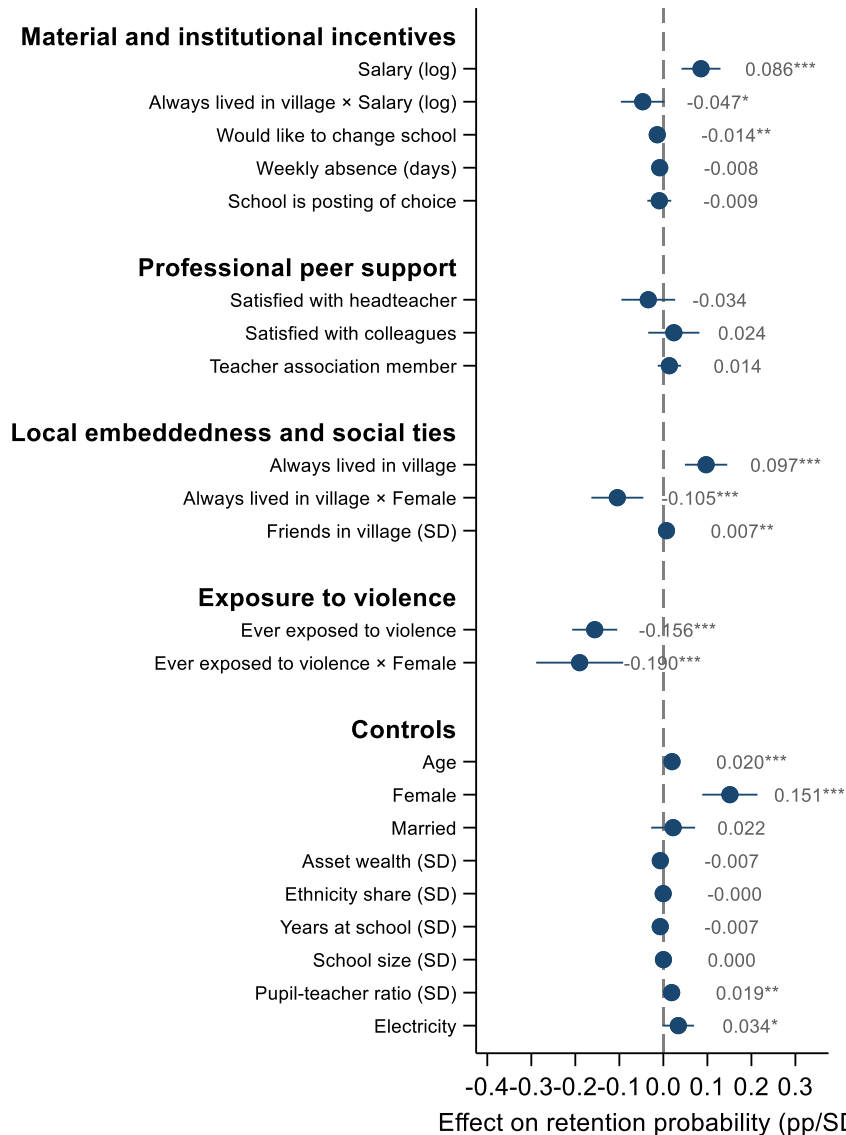
Results

Figure 2 summarises the factors associated with teacher retention in our sample, plotting coefficient estimates from the reference specification (Table A4, column 3: baseline cohort, both transitions, country and year fixed effects), with factors grouped by thematic clusters, corresponding to the hypotheses we explore. Two features stand out. First, the variables most strongly associated with retention are remuneration, local embeddedness and, above all (negatively), exposure to violence. Aside from salary, the more formal levers of the education system –contractual status, headteacher support, posting preferences– show little independent association once these are accounted for. Second, the associations are conditioned by gender. The two largest negative coefficients in the figure are both gender interaction terms, indicating that the retention effects of local embeddedness and of violence operate markedly differently for women than for men. This suggests that the association between gender and retention should not be inferred on the basis of the main effect on its own, but should be interpreted in light of these interaction effects.

Material and institutional incentives. Salary is strongly and consistently associated with retention, but this association is concentrated among teachers who have not always lived in the village where they teach. For these non-local teachers, a doubling of salary is associated with an increase of roughly 6 to 8 percentage points in retention, and this estimate remains remarkably stable across all four specifications. The interaction between salary and local embeddedness is negative and significant throughout. Salary therefore operates primarily as a retention margin for teachers without strong local attachment, while locally embedded teachers are retained at high rates across the salary distribution. Figure 3, Panel A, plots predicted retention across the observed salary range (from the 5th to the 95th percentile) for both groups. Salary is positively associated with retention for locally rooted and non-rooted teachers alike, but the gradient is roughly twice as steep for the latter (right hand panel: 0.085 versus 0.039). The retention gap

between them is widest at the bottom of the distribution and closes towards the top, indicating that remuneration and local embeddedness act as alternative retention margins rather than complementary ones.

Figure 2. The retention profile: what keeps teachers in conflict-affected schools.



*Note: The figure plots coefficient estimates of a linear probability model of teacher retention. The specification corresponds to column 3 of Table A4: the baseline teacher cohort observed over both transitions (N = 2,350), with country and survey-year fixed effects. Markers show point estimates; horizontal bars show 95% confidence intervals. Estimates and significance levels are reported alongside each marker: *** p<0.01, ** p<0.05, * p<0.10. Continuous covariates (asset wealth, the share of teachers from the same ethnicity as the teacher, school size, student-teacher ratio, salary) are standardised, so their coefficients denote the change in retention probability associated with a one-standard-deviation increase; coefficients on binary indicators denote the change relative to the omitted category. The model includes quadratic terms for age, omitted from the figure.*

Two other variables capture proximate behavioural and attitudinal margins. The preference to move from the current school is strongly and negatively associated with retention across all

specifications, consistent with stated mobility intentions translating into realised exits. Weekly absence is negative but not statistically significant, suggesting that while disengagement may matter at the margins, it is not a primary driver in the presence of other controls.

Local embeddedness is among the most robust correlates of retention, but it operates almost entirely through male teachers. For men, having always lived in the village is associated with a 9.3 to 13.1 percentage point increase in the likelihood of school retention, depending on the sample and specification. For women, the interaction between gender and local embeddedness is negative and significant across all four columns (−9.1 to −10.5 percentage points), leaving an embeddedness premium between −0.8 and +3.6 points, statistically indistinguishable from zero. In other words, local embeddedness is strongly associated with retention among men, but not among women, suggesting that the retention value of place-based attachment may be shaped by gendered roles and expectations around teaching.

Lifelong residence is only one form of local attachment. Teachers' social ties within the community point in the same direction, albeit with smaller effect sizes. Indeed, the number of friends reported in the village is positively associated with retention, reaching conventional significance in the pooled columns: ten additional local friendships correspond to a 1.2 to 1.3 percentage point increase in the probability of remaining, indicating that social ties within the community reinforce the effect of embeddedness. The coefficient attenuates under village and school fixed effects, where much of the relevant variation is absorbed (Appendix Table A5).

The gender coefficients require careful interpretation. The coefficient on female is positive and large (12.3 to 15.1 percentage points), but it is conditional on both interactions in which gender appears, and therefore describes women who are neither locally rooted nor exposed to violence. Taking non-local men in the reference specification as the comparison group, local men are 9.7 percentage points more likely to remain, non-local women 15.1 points, and local women 14.3 points. Non-local male teachers are therefore the most exit-prone group in the sample. Local embeddedness substantially narrows this gap for men, whereas women display similar retention rates regardless of whether they are locally rooted. This pattern appears in Figure 3, Panel B, which shows the corresponding marginal effect of embeddedness: large and positive for men and statistically indistinguishable from zero for women.

At first sight, this may appear inconsistent with the descriptive results, which showed higher attrition among women. However, this apparent female retention advantage does not persist once exposure to violence is taken into account. As shown below, the interaction between gender and violence reverses the association, with violence-exposed women becoming substantially less likely to remain in post than exposed men.

Exposure to violence emerges as the strongest predictor of teacher school attrition in the analysis. Teachers who report having been personally attacked are significantly less likely to be retained in every specification, and the estimated coefficients are markedly larger in the first-transition specifications (−28.0 to −28.6 percentage points) than in the pooled models (−15.1 to −15.6). Two mechanisms, both operating in the same direction, imply that the pooled estimates may understate the association. First, exposure is measured in the survey preceding each transition, so teachers attacked between waves who exit before the subsequent survey enter the data as non-retained but unexposed, attenuating the coefficient toward zero. Second, teachers observed in later transitions are survivors of earlier ones. In this sense, teachers most responsive to violence have already exited, and the exposed teachers who remain are disproportionately those who stay despite exposure. We therefore treat the first-transition estimates as our preferred

measure of the magnitude of the association between violence and attrition, and the pooled specifications as a conservative lower bound.

The association is substantially larger for female teachers. The interaction between gender and exposure to violence is negative and significant across all four columns (-18.5 to -24.6 percentage points). In column 1, the combined penalty for exposed women reaches -52.6 percentage points, against -28.0 percentage points for men. The pooled estimates in column 3 are smaller for the reasons set out above (-34.6 and -15.6, respectively) but preserve the same ratio: violence is associated with a reduction in retention roughly twice as large for women as for men. Figure 3, Panel C, translates these coefficients into predicted retention levels. This result parallels wider evidence from the same setting that shows women bear disproportionate mental health consequences of exposure to violence (De La Fuente Stevens et al., 2025). These findings point to a distinctive vulnerability of female teachers in conflict-affected schools.

Professional and peer support also matters, with important nuance. Satisfaction with headteacher support, teacher association membership, and posting preference are not significantly associated with retention in any specification. Satisfaction with colleague support is positive and significant in the first-transition specifications but not in the pooled or full sample models. This pattern may partly reflect survivorship selection analogous to the attenuation documented for the violence variable: teachers who exited partly due to weak peer support are absent from subsequent waves, attenuating the estimated coefficient in pooled specifications. Given that other coefficients are broadly stable across columns, however, a definitive resolution is not possible from the available data. These results indicate, however, that the formal and vertical relationships of the education system play a limited independent role in retention once individual and community-level factors are accounted for.

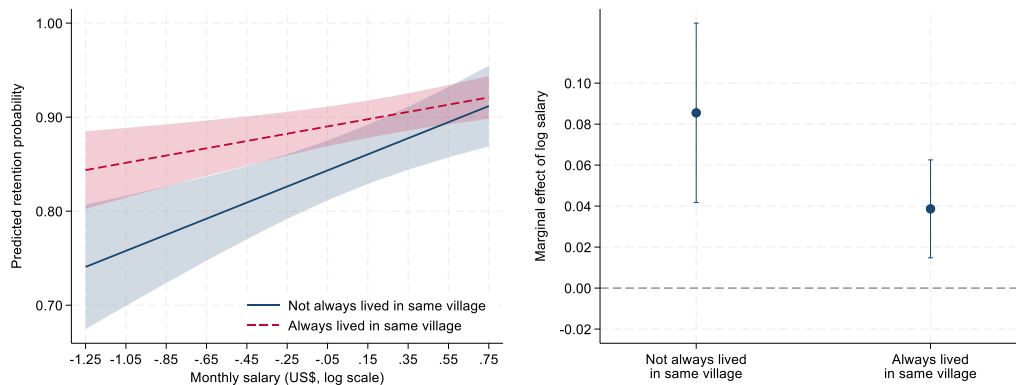
Among remaining variables, retention also varies systematically with age. The positive coefficient on age and the negative coefficient on its square indicate that retention rises with age at a decreasing rate, with younger teachers the most likely to exit. Electrification is positively associated with retention in the baseline and pooled specifications, likely proxying for broader infrastructure quality. School size, pupil-teacher ratios, socioeconomic status, ethnicity share, and marital status show no consistent or significant associations with retention.

The results are robust to unobserved geographic and school-level heterogeneity. Appendix Table A5 re-estimates the reference specification (Table A4, column 3) under progressively tighter geographic fixed effects: region, village, and school. The core results are strikingly stable. Under school fixed effects, which absorb all time-invariant school characteristics, the coefficients central to the analysis are essentially unchanged in magnitude and significance: the salary gradient (0.086 vs. 0.076), the embeddedness premium (0.097 vs. 0.100), its interaction with gender (-0.105 vs. -0.099), while the violence association, if anything, strengthens (-0.156 to -0.184), and its interaction with gender is unchanged (-0.190 vs. -0.182). Coefficients that do attenuate are those identified from variation the fixed effects absorb: electrification and the pupil-teacher ratio, defined at the school level. The teacher fixed-effects specification absorbs the time-invariant characteristics of central interest and offers limited within-teacher variation to identify the remainder (column 5); school fixed effects are therefore the most demanding specification consistent with identifying the full model.²

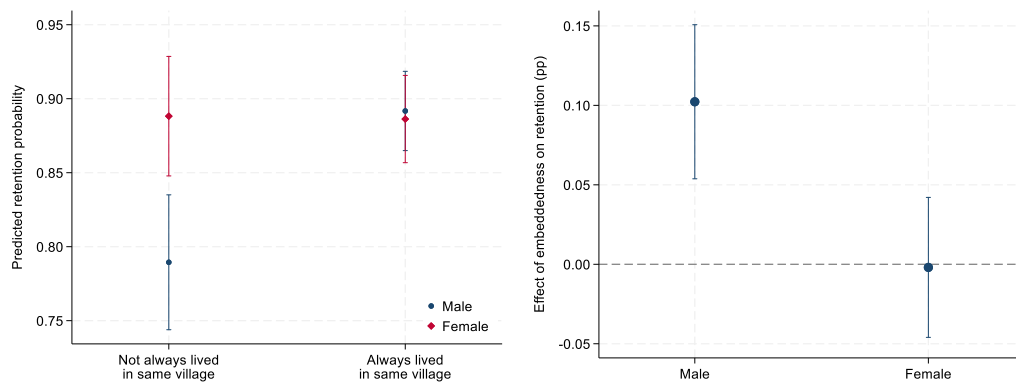
² Column 5 introduces teacher fixed effects. Time-invariant characteristics of central interest, including embeddedness and gender, are absorbed and cannot be estimated. Violence, though formally time-

Figure 3. Teacher retention: predicted probabilities and marginal effects of salary, local embeddedness, and exposure to violence

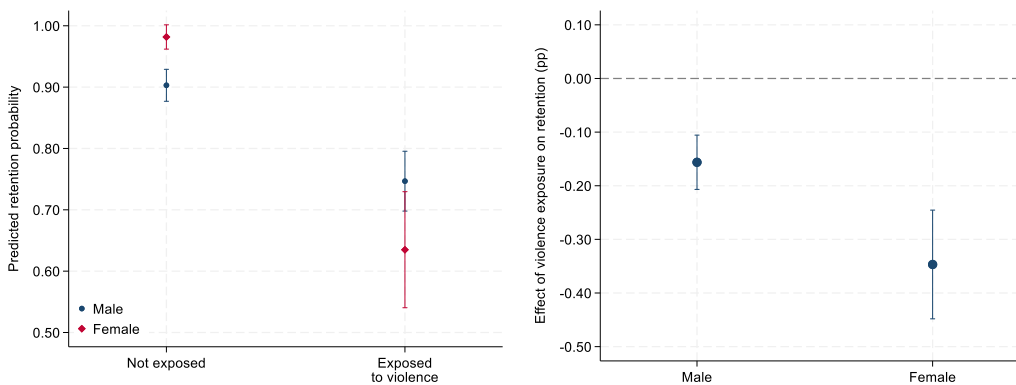
Panel A: Salary and retention, by local embeddedness



Panel B: Local embeddedness and retention, by gender



Panel C: Violence exposure and retention, by gender



Note: The figure plots predicted retention probabilities (left-hand panels) and marginal effects (right-hand panels) from the reference specification (Table A4, column 3: baseline cohort, both transitions, country and year fixed effects; $N = 2,350$). Each panel corresponds to one interaction: [violence $\times$ gender], [embeddedness $\times$ gender], and [salary $\times$ embeddedness]. Predicted probabilities are obtained from a linear probability model with all other covariates held at their sample means; marginal effects are the discrete change in the retention probability with respect to the variable named in each panel, evaluated at the same values. Predictions and marginal effects are evaluated at the means of all other covariates. Shaded areas and capped bars denote 95% confidence intervals based on standard errors clustered at the school level; dashed horizontal lines in the right-hand panels mark zero.

varying, is an absorbing state, so it is identified only from teachers first reporting an attack between waves. Salary and the stated wish to move school retain significance.

Appendix Table A6 reports three further specifications that test the stability of the estimates. The first restricts the sample to teachers under 55, addressing the possibility that departures reflect end-of-career transitions rather than behavioural responses. Departures are in fact concentrated among younger teachers –median age at exit is 33, and only 7.5 per cent of exits involve teachers aged 55 or over– and the principal associations are unchanged in the restricted sample. The second adds contractual type (permanent vs. temporary) and a measure of PTSD to the reference model. Employment status is not significantly associated with retention. The null suggests that, conditional on pay, formal status confers no additional attachment to a given school. PTSD symptoms are likewise not significantly associated with retention, and their inclusion leaves the violence coefficients unchanged, suggesting that exposure predicts departure through channels other than measured trauma symptoms. The third allows the three principal associations to differ by country. Equality is rejected jointly ($p < 0.001$), but the difference is concentrated in the relational and conflict-related margins: the association between pay and retention does not differ across the two countries ($p = 0.97$), while the embeddedness premium ($p = 0.008$) and the violence penalty ($p < 0.001$) do. Material incentives thus operate similarly in both countries, whereas the retention value of local ties and the cost of violence exposure are context-specific.

Overall, the results point to a coherent pattern of school retention. Local embeddedness is among the most consistent predictors of retention for men, while for women it is close to zero. Salary is robust and precisely estimated, but its association is concentrated among teachers without local ties, so that pay and rootedness operate as alternative rather than cumulative supports. Violence is the strongest predictor of exit throughout, and its association with departure is roughly twice as large for women as for men. These associations are not uniform across the two settings: the local embeddedness premium is concentrated in the DRC and close to zero in Niger, while the violence penalty is substantially larger in Niger than in the DRC. The association between pay and retention, by contrast, is statistically indistinguishable across the two countries. Formal institutional factors, including contract type, headteacher support, association membership and posting preferences, show little independent association with retention once individual and community-level characteristics are accounted for.

Conclusion

This paper examined why teachers remain in post in conflict-affected education systems in the DRC and Niger. Using longitudinal data collected over three survey rounds, we analysed the factors associated with school-level teacher retention in contexts characterised by insecurity, displacement and institutional fragility. The findings point to a coherent pattern. Retention is shaped primarily by local embeddedness, pay and exposure to violence. Local attachment is strongly associated with retention among men but not women, while salary matters most for teachers without strong local ties. Violence is consistently associated with exit, particularly among women. These relationships vary across countries: the retention advantage associated with local embeddedness is concentrated in the DRC, whereas the negative association between violence and retention is markedly stronger in Niger. More broadly, the results suggest that school-level teacher retention in crisis settings is jointly shaped by material incentives, community attachment, and insecurity, and that these factors interact in ways that differ across groups of teachers.

These findings are relevant for discussions on school-level teacher retention in conflict-affected contexts. School-level attrition can harm schools by disrupting instructional continuity, collegial

relationships, organisational knowledge, and teacher-student relationships, while also reducing student achievement (Ronfeldt et al., 2013; Sorensen & Ladd, 2020; Jabbar & Holme, 2026). These mechanisms may be particularly consequential in crisis-affected schools, where teachers often perform roles that extend well beyond classroom instruction. Teachers frequently provide continuity, care and support to learners affected by violence and displacement, while locally embedded teachers can draw on community relationships and contextual knowledge to navigate insecurity and social tensions. Our findings therefore underline that conflict undermines education not only by affecting teachers who remain, but also by removing relational and institutional capacities from affected schools.

The findings also carry important implications for policy. On the basis of the results of this analysis, what retains teachers in crisis-affected schools is often outside the direct control of education systems. Social and geographic rootedness appear to act as buffers against the destabilising effects of conflict and displacement, while exposure to violence emerges as the strongest predictor of departure. At the same time, the principal lever directly available to policymakers, salary, is associated with retention, but not uniformly across the workforce. Financial incentives matter most for teachers without strong local ties, while the effects of local embeddedness and violence vary sharply by gender. This suggests that retention policies should move beyond uniform approaches. Efforts to strengthen retention are likely to be most effective when they combine adequate remuneration with measures that support community attachment, strengthen everyday professional relationships, and provide targeted support to teachers exposed to violence, particularly women.

The paper also makes two methodological contributions. First, it highlights the analytical value of missing data in crisis-affected contexts. Statistics on conflict-affected settings are frequently characterised by attrition, mobility, and interruptions to data collection resulting from both population movement and limited data collection capacity. These are often treated as methodological deficiencies, and sample attrition in particular is frequently invoked to dismiss statistical studies conducted in crisis settings. Yet they are also part of the empirical reality that researchers seek to understand. The purpose of research is to describe and analyse reality as it exists. Given that crisis-affected contexts are characterised by mobility and attrition, research methods must adapt to these realities rather than impose standards derived from more stable settings. In this study, we have treated attrition not simply as missing information but as data in itself, using departures from the sample as an indicator of school-level teacher exit. This represents one of several possible avenues for adapting quantitative methodologies to the realities of research in contexts affected by conflict and displacement.

Second, the findings call for a more nuanced interpretation of gender in quantitative analysis. As our results demonstrate, the coefficient on gender alone provides only a partial account of the relationship between sex and retention. Rather than operating as an independent predictor, gender conditions the effects of other variables, notably local embeddedness and exposure to violence. The association between gender and retention therefore depends on the social and institutional contexts in which teachers are situated, producing a more differentiated picture than the main effect suggests. Yet quantitative analyses often continue to treat gender as a standalone explanatory variable, relying on average associations that can obscure important heterogeneity. Our findings suggest the value of approaches that focus on how gender conditions the effect of other determinants of educational outcomes, drawing on insights long emphasised in qualitative research.

The findings show that understanding teacher retention in crisis-affected settings requires moving beyond institutional explanations alone. Teachers remain in schools not simply because of contracts, professional incentives, or administrative arrangements. The interaction between material conditions, social embeddedness and insecurity has a strong explanatory power. This carries implications for policy since dominant margins lie largely beyond the reach of education systems: for instance, schools have very limited capacity to secure themselves against violence. This raises a question our data cannot settle, whether schools can generate forms of belonging that substitute for the local rootedness they cannot confer. The challenge for policy is to retain teachers by creating conditions under which remaining in post is both viable and sustainable.

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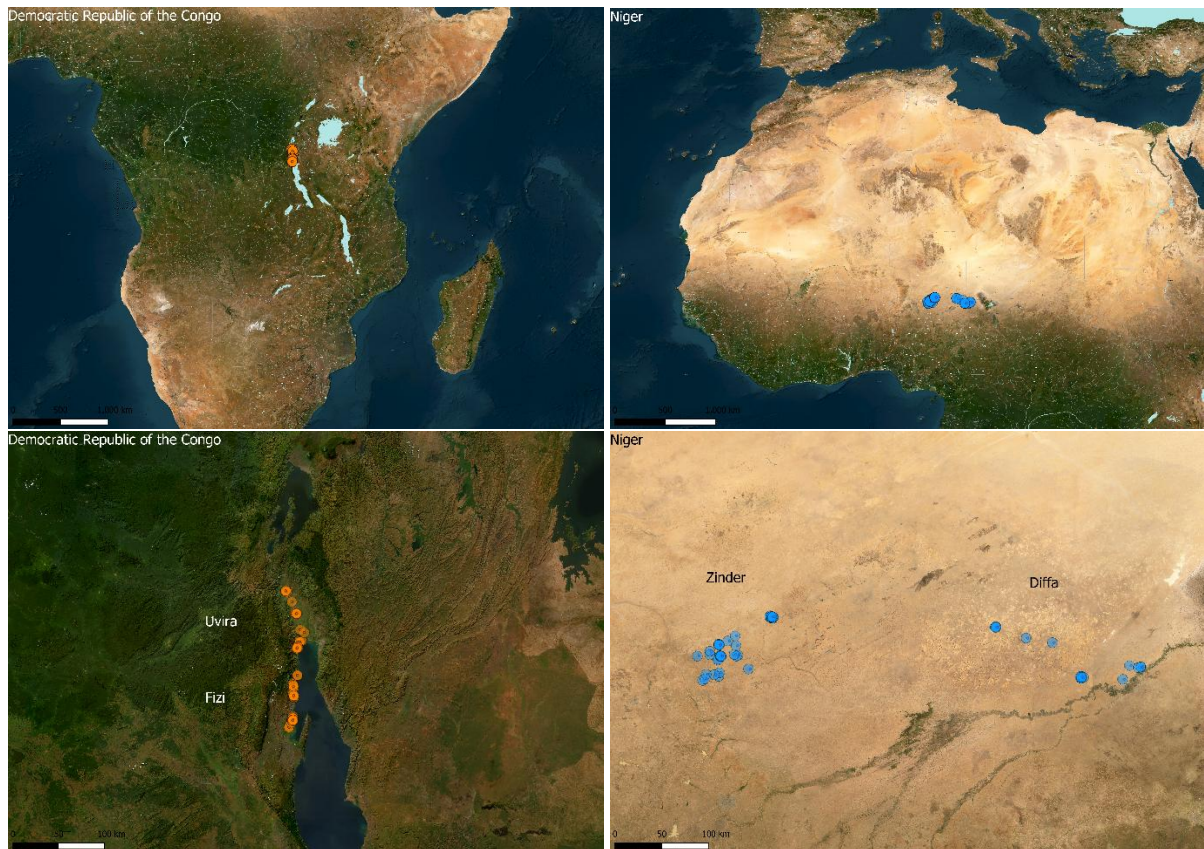
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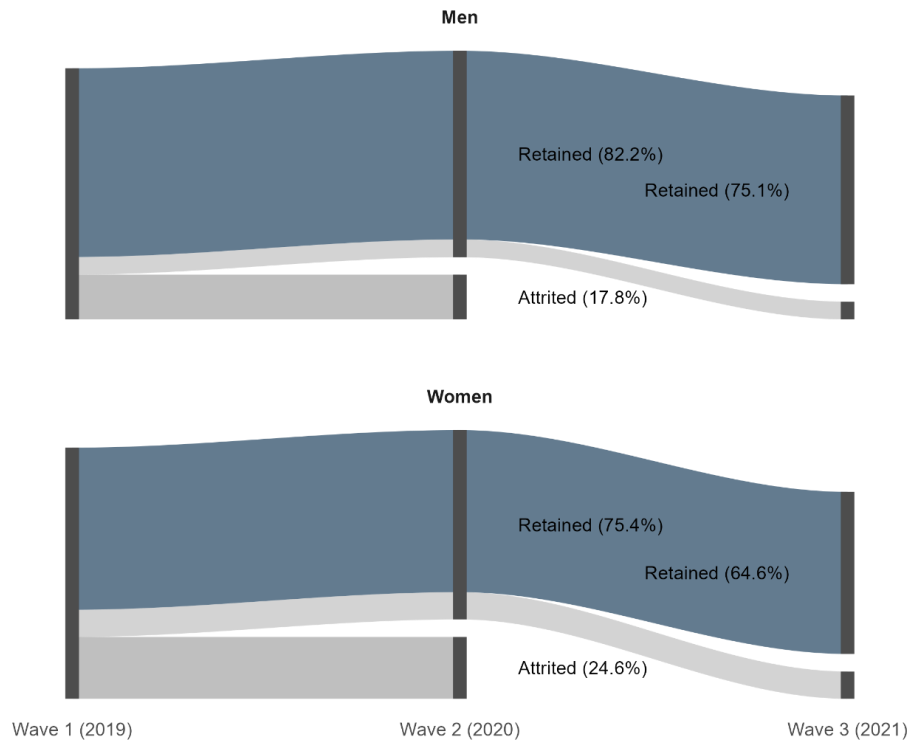
Appendix

Figure A1. DRC and Niger: area of study and school locations



Note: Colours indicate the corresponding regions. Niger (Diffa in red, Zinder in blue) and the Democratic Republic of Congo (Fizi in green, Uvira in orange).

Figure A2. Teacher retention across survey waves: differences by gender



Notes: The figure shows the proportion of teachers retained across consecutive survey waves, defined as being observed in the subsequent wave. Flows represent the distribution of teachers across retention paths: those who remain in the sample, those who attrit after the first transition, and those who attrit after the second transition. Panels report results for male and female teachers.

Table A1. Sample composition (number of teachers, schools, villages) by country, territory/region, and year

Country	Territory/Region	Year	Number of teachers	Number of schools	Number of villages
DRC	Fizi	2019	388	29	9
		2020	361		
		2021	357		
	Uvira	2019	434	26	15
		2020	423		
		2021	409		
Niger	Diffa	2019	193	20	6
		2020	191		
		2021	206		
	Zinder	2019	409	49	19
		2020	396		
		2021	400		
Total		2019	1424	124	49
		2020	1371		
		2021	1372		

Note: The sample covers all teachers employed in surveyed schools. DRC territories correspond to the administrative subdivisions of Fizi and Uvira in South Kivu province. Niger territories correspond to the départements of Diffa and Zinder. Annual variation in the number of teachers reflects entries into and exits from the panel due to recruitment, resignation, and displacement. The number of schools and villages is fixed by sampling design.

Table A2. Descriptive statistics of teachers by retention status

	All teachers		Retained teachers		Attrited teachers		Statistical significance
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	
Age	38.357	11.282	38.655	11.298	35.061	11.154	***
Female	0.532	0.499	0.502	0.500	0.649	0.478	***
Married (=1)	0.875	0.330	0.878	0.327	0.837	0.370	**
Schooling (years)	11.365	1.949	11.405	1.898	10.889	2.500	***
Always lived in village (=1)	0.667	0.471	0.700	0.458	0.490	0.501	***
Electricity in household (=1)	0.573	0.495	0.518	0.500	0.619	0.486	***
Ethnicity share	0.389	0.267	0.383	0.263	0.404	0.276	
Number of friends	3.354	5.749	3.508	6.742	2.873	3.875	*
Satisfied with colleague support	4.123	0.634	4.122	0.642	4.137	0.641	
Satisfied with headmaster support	4.164	0.646	4.177	0.659	4.187	0.677	
School posting of choice (=1)	0.630	0.483	0.659	0.474	0.499	0.501	***
Member of teaching association (=1)	0.325	0.468	0.334	0.472	0.264	0.441	***
Would like to move school	2.556	1.239	2.523	1.231	2.861	1.357	***
Favourable contract (=1)	0.611	0.488	0.655	0.475	0.436	0.496	***
Salary, DRC (standardised)	0.000	1.000	0.076	1.254	-0.107	0.634	*
Salary, Niger (standardised)	0.000	1.000	-0.208	0.900	-0.243	0.708	
Average weekly school absence	0.511	1.232	0.470	1.111	0.490	1.185	
Long term exposure to violence (=1)	0.311	0.463	0.225	0.418	0.645	0.479	***
Exposure to violence in t-1 (=1)	0.120	0.324	0.053	0.223	0.362	0.481	***
PTSD score	27.484	10.082	28.249	10.093	26.369	9.228	***
PTSD > 28	0.411	0.492	0.454	0.498	0.349	0.477	***
PTSD score >44	0.102	0.303	0.105	0.306	0.070	0.255	**

Note: Stars denote significance of t-test on difference between retained and attrited teachers: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Salary standardised within country; full-sample mean and standard deviation equal zero and one by construction. Satisfaction with colleague and headmaster support measured on a 1–5 Likert scale, where 1 = very dissatisfied and 5 = very satisfied.

Table A3. School characteristics: infrastructure, composition, and security, by country

	All schools	DRC	Niger
Separate toilets for teachers and students (=1)	0.86	0.91	0.82
School has boundary wall/fence (=1)	0.61	0.25	0.87
School has electricity (=1)	0.12	0.07	0.15
School has sports area or play area (=1)	0.78	0.69	0.85
Drinking water clean (=1)	0.80	0.65	0.92
Number of ethnicities in school	4.14	7.49	1.56
Average number of teachers	14	16	12
Female-male ratio of teachers	4.18	0.44	7.89
Average number of students	619	882	418
Female-male ratio of students	1.02	1.00	1.03
Average number of classrooms	11.52	13.73	9.82
Student-teacher ratio	46.69	58.76	37.40
Student-classroom ratio	55.11	71.29	42.70
School attacked in survey year (=1)	0.16	0.17	0.14
School attacked in past 10 years (=1)	0.29	0.38	0.16
Observations	124	55	69

Notes: All values are means across schools. Binary variables (indicated by =1) are proportions. The female-male ratios for teachers and students are computed as the ratio of female to male counts. Student-teacher and student-classroom ratios are computed at the school level. Attack variables are defined at the school level: "school attacked in survey year" equals one if an attack was recorded in the current survey wave; "school attacked in past 10 years" equals one if any attack was recorded across up to ten lagged periods. Data are from the BRiCE school survey, waves 2019–2021.

Table A4. Determinants of Teacher Retention in Conflict-Affected Settings: Evidence from DRC and Niger

	(1) First transition (country FE)	(2) First transition (region FE)	(3) Both transitions (baseline teachers)	(4) Both transitions (all teachers)
Age	0.017*** (0.006)	0.018*** (0.006)	0.020*** (0.005)	0.021*** (0.004)
Age^2	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
Married, No=0 Yes=1	0.020 (0.029)	0.011 (0.029)	0.022 (0.025)	0.012 (0.023)
Asset Wealth Index	-0.006 (0.005)	-0.005 (0.005)	-0.004 (0.006)	-0.004 (0.005)
Ethnicity Share	-0.020 (0.028)	-0.023 (0.031)	-0.001 (0.023)	-0.004 (0.025)
School size (number of children -standardised)	-0.011 (0.010)	-0.012 (0.011)	0.000 (0.009)	-0.001 (0.009)
Pupil Teacher Ratio	0.002** (0.001)	0.001* (0.001)	0.001** (0.000)	0.001*** (0.000)
Household has electricity No=0 Yes=1	0.068*** (0.022)	0.074*** (0.023)	0.034* (0.018)	0.029 (0.018)
Teacher would like to change school, No=0 Yes =1	-0.010 (0.006)	-0.010 (0.006)	-0.014** (0.005)	-0.019*** (0.005)
Weekly absence (number of days over last week)	0.001 (0.008)	0.001 (0.008)	-0.008 (0.006)	-0.007 (0.006)
Satisfied with headteacher, No=0 Yes=1	-0.026 (0.032)	-0.030 (0.032)	-0.034 (0.031)	-0.034 (0.030)
Satisfied with colleagues, No=0 Yes=1	0.067** (0.034)	0.063* (0.033)	0.024 (0.029)	0.024 (0.026)
Teacher association member, No=0 Yes=1	0.002 (0.018)	-0.002 (0.018)	0.014 (0.013)	0.018 (0.013)
School is teacher's posting of choice, No=0 Yes=1	-0.026 (0.016)	-0.023 (0.016)	-0.009 (0.014)	-0.002 (0.014)
Log salary	0.105*** (0.030)	0.110*** (0.031)	0.086*** (0.022)	0.090*** (0.020)
Teacher has always lived in village, No=0 Yes=1	0.131*** (0.028)	0.130*** (0.027)	0.097*** (0.024)	0.093*** (0.023)
Teacher has always lived in village x Salary	-0.076** (0.032)	-0.078** (0.033)	-0.047* (0.025)	-0.044** (0.022)
Female =1	0.124*** (0.029)	0.123*** (0.029)	0.151*** (0.032)	0.133*** (0.029)
Teacher has always lived in village x Female	-0.096*** (0.032)	-0.094*** (0.032)	-0.105*** (0.030)	-0.091*** (0.028)
Friends in the village (per 10 friends)	0.007 (0.009)	0.007 (0.009)	0.012** (0.005)	0.013** (0.005)
Teacher "ever" exposed to violence, No=0 Yes=1	-0.280*** (0.033)	-0.286*** (0.032)	-0.156*** (0.026)	-0.151*** (0.024)
Teacher "ever" exposed to violence x Female	-0.246*** (0.052)	-0.240*** (0.052)	-0.190*** (0.050)	-0.185*** (0.047)
Observations	1276	1276	2350	2575
R-squared	0.414	0.418	0.177	0.170

Notes: Columns 1-2: baseline cohort, first transition only. Column 1: country and year FE. Column 2: region x year FE. Column 3: baseline cohort both transitions country FE. Column 4: full sample including replacements country FE. Standard errors clustered at the school level. * p<0.10, ** p<0.05, *** p<0.01. The friends variable is scaled in units of ten friendships, so the coefficient denotes the change in retention probability associated with ten additional local friends. Figure 2 reports the same coefficient in standard-deviation units.

Table A5. Determinants of Teacher Retention in Conflict-Affected Settings: (Robustness by fixed effects)

	(1)	(2)	(3)	(4)	(5)
	Both transitions (baseline teachers)				
	Country FE	Region FE	Village FE	School FE	Teacher FE
Age	0.020*** (0.005)	0.020*** (0.005)	0.019*** (0.005)	0.017*** (0.005)	.
Age^2	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	-0.000*** (0.000)	.
Married, No=0 Yes=1	0.022 (0.025)	0.015 (0.025)	0.016 (0.026)	0.011 (0.027)	0.011 (0.034)
Asset Wealth Index	-0.004 (0.006)	-0.003 (0.006)	0.001 (0.006)	0.001 (0.006)	-0.003 (0.009)
Ethnicity Share	-0.001 (0.023)	0.004 (0.024)	0.027 (0.026)	0.027 (0.027)	-0.133 (0.648)
School size (number of children -standardised)	0.000 (0.009)	0.000 (0.010)	0.014 (0.014)	0.041 (0.026)	0.023 (0.024)
Pupil Teacher Ratio	0.001** (0.000)	0.001* (0.001)	0.001 (0.001)	0.001 (0.001)	0.001 (0.001)
Household has electricity No=0 Yes=1	0.034* (0.018)	0.033* (0.018)	0.024 (0.018)	0.019 (0.019)	0.021 (0.021)
Teacher would like to change school, No=0 Yes =1	-0.014** (0.005)	-0.013** (0.005)	-0.013*** (0.005)	-0.015*** (0.005)	-0.014** (0.007)
Weekly absence (number of days over last week)	-0.008 (0.006)	-0.008 (0.006)	-0.010 (0.006)	-0.008 (0.006)	-0.007 (0.005)
Satisfied with headteacher, No=0 Yes=1	-0.034 (0.031)	-0.036 (0.031)	-0.021 (0.032)	-0.019 (0.031)	0.011 (0.034)
Satisfied with colleagues, No=0 Yes=1	0.024 (0.029)	0.021 (0.029)	0.007 (0.029)	0.003 (0.028)	-0.059** (0.027)
Teacher association member, No=0 Yes=1	0.014 (0.013)	0.011 (0.013)	0.017 (0.013)	0.019 (0.014)	0.024 (0.016)
School is teacher's posting of choice, No=0 Yes=1	-0.009 (0.014)	-0.008 (0.014)	-0.008 (0.014)	-0.003 (0.015)	.
Log salary	0.086*** (0.022)	0.087*** (0.023)	0.085*** (0.021)	0.076*** (0.020)	0.045** (0.020)
Teacher has always lived in village, No=0 Yes=1	0.097*** (0.024)	0.096*** (0.024)	0.103*** (0.024)	0.100*** (0.025)	.
Teacher has always lived in village x Salary	-0.047* (0.025)	-0.047* (0.025)	-0.045* (0.024)	-0.039 (0.024)	-0.010 (0.022)
Female =1	0.151*** (0.032)	0.150*** (0.032)	0.161*** (0.033)	0.151*** (0.033)	.
Teacher has always lived in village x Female	-0.105*** (0.030)	-0.104*** (0.030)	-0.107*** (0.033)	-0.099*** (0.033)	.
Friends in the village (per 10 friends)	0.012** (0.005)	0.012** (0.005)	0.011 (0.007)	0.006 (0.006)	0.007 (0.010)
Teacher "ever" exposed to violence, No=0 Yes=1	-0.156*** (0.026)	-0.161*** (0.026)	-0.171*** (0.025)	-0.184*** (0.025)	0.006 (0.043)
Teacher "ever" exposed to violence x Female	-0.190*** (0.050)	-0.187*** (0.050)	-0.191*** (0.049)	-0.182*** (0.049)	-0.079 (0.097)
Observations	2350	2350	2350	2350	2108
R-squared	0.177	0.179	0.218	0.262	0.551

Note: Baseline cohort, both transitions (baseline-midline and midline-endline). Column 1: year and country FE. Column 2: region (Diffa, Zinder, Uvira and Fizi) and year FE. Column 3: village and year FE. Column 4: school and year FE. Column 5: teacher and year FE. Standard errors (clustered at a school level) in parentheses. * p<0.10, ** p<0.05, *** p<0.01.

Table A6. Determinants of Teacher Retention in Conflict-Affected Settings: (Robustness other specifications)

	(1) Baseline specification	(2) Teachers aged under 55	(3) Additional covariates	(4) Country level interactions
Age	0.020*** (0.005)	0.018** (0.008)	0.020*** (0.004)	0.019*** (0.005)
Age^2	-0.000*** (0.000)	-0.000* (0.000)	-0.000*** (0.000)	-0.000*** (0.000)
Married, No=0 Yes=1	0.022 (0.025)	0.034 (0.025)	0.024 (0.025)	0.028 (0.024)
Asset Wealth Index	-0.004 (0.006)	-0.005 (0.006)	-0.003 (0.006)	-0.003 (0.005)
Ethnicity Share	-0.001 (0.023)	-0.000 (0.025)	0.002 (0.023)	-0.013 (0.022)
School size (number of children -standardised)	0.000 (0.009)	-0.000 (0.011)	-0.002 (0.009)	0.007 (0.009)
Pupil Teacher Ratio	0.001** (0.000)	0.001*** (0.000)	0.001** (0.000)	0.001* (0.000)
Household has electricity No=0 Yes=1	0.034* (0.018)	0.032 (0.020)	0.033* (0.018)	0.037** (0.017)
Teacher would like to change school, No=0 Yes =1	-0.014** (0.005)	-0.016** (0.006)	-0.014*** (0.005)	-0.016*** (0.005)
Weekly absence (number of days over last week)	-0.008 (0.006)	0.001 (0.006)	-0.008 (0.006)	-0.009 (0.006)
Satisfied with headteacher, No=0 Yes=1	-0.034 (0.031)	-0.034 (0.036)	-0.028 (0.031)	-0.036 (0.029)
Satisfied with colleagues, No=0 Yes=1	0.024 (0.029)	0.035 (0.030)	0.024 (0.029)	0.025 (0.028)
Teacher association member, No=0 Yes=1	0.014 (0.013)	0.010 (0.013)	0.014 (0.013)	0.018 (0.013)
School is teacher's posting of choice, No=0 Yes=1	-0.009 (0.014)	-0.022 (0.016)	-0.008 (0.014)	-0.011 (0.014)
Log salary	0.086*** (0.022)	0.083*** (0.022)	0.088*** (0.022)	0.082*** (0.025)
Teacher has always lived in village, No=0 Yes=1	0.097*** (0.024)	0.093*** (0.026)	0.100*** (0.026)	0.133*** (0.026)
Teacher has always lived in village x Salary	-0.047* (0.025)	-0.042* (0.025)	-0.047* (0.025)	-0.043* (0.025)
Female =1	0.151*** (0.032)	0.153*** (0.035)	0.150*** (0.032)	0.074** (0.036)
Teacher has always lived in village x Female	-0.105*** (0.030)	-0.097*** (0.032)	-0.104*** (0.031)	-0.034 (0.041)
Friends in the village (per 10 friends)	0.012** (0.005)	0.016 (0.010)	0.011** (0.005)	0.010** (0.004)
Teacher "ever" exposed to violence, No=0 Yes=1	-0.156*** (0.026)	-0.171*** (0.028)	-0.158*** (0.026)	-0.130*** (0.025)
Teacher "ever" exposed to violence x Female	-0.190*** (0.050)	-0.234*** (0.055)	-0.193*** (0.050)	-0.091* (0.052)
PTSD high=1			0.051 (0.044)	
Teacher has always lived in village x PTSD high=1			-0.013 (0.048)	
Favourable employment status =1			-0.020 (0.020)	
Niger =1	-0.165*** (0.026)	-0.167*** (0.028)	-0.166*** (0.027)	-0.029 (0.041)
Niger =1 x Log salary				0.001 (0.023)
Niger = 1 x Teacher has always lived in village				-0.131*** (0.049)
Niger =1 xTeacher "ever" exposed to violence				-0.357*** (0.096)
Observations	2350	2048	2350	2350
R-squared	0.177	0.198	0.179	0.203

Standard errors in parentheses. Country and year fixed effects throughout. Both transitions. Teachers in baseline. Columns 1: Baseline estimates. Column 2: Teachers under 55 of age only. Column 3: PTSD and contract type. Standard errors clustered at the school level. Column 4: Country interactions. * p<0.10, ** p<0.05, *** p<0.01