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Understanding Teacher School Choice Preferences: What Matters Most for Teacher Deployment in Sierra Leone?

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Abstract

This exploratory mixed-methods study investigates the factors that shape where teachers want to work in Sierra Leone. We identify five dominant factors: monetary incentives, school conditions, opportunities for professional development and support, school location, and relationships with the school and the community. Importantly, these factors combine to push and pull teachers to different locations. Moreover, the factors interact with individual teacher characteristics such as gender, family status, and experience to influence school choice preferences. This set of factors — and their interaction with certain teacher characteristics — continues to shape preferences as teachers move up the career ladder.

Keywords: Teacher deployment, teacher preferences, Sierra Leone, teacher supply, remote schools

1. Introduction

Over the past decade, governments in low- and middle-income countries have invested heavily in the education workforce to accommodate large enrolment increases. Despite these investments, many children still lack access to qualified, effective teachers. In Sierra Leone, for instance, the pupil-to-qualified-teacher ratio currently sits at 60 to 1 (↑Ministry of Basic & Secondary Education, 2021). This ratio is far higher than the government target of 40 to 1 (↑Ministry of Basic & Senior Secondary Education, 2022).

Importantly, the impact of workforce investments can be inequitable as governments struggle to attract teachers to work in remote locations. In Sierra Leone, the pupil-to-qualified-teacher ratio rises from 44 to 1 in urban centres to 76 to 1 in rural areas (↑Mackintosh et al., 2020). Despite recent government efforts to address this imbalance, up to a fifth of teachers do not take up their assignments in remote schools (↑Mackintosh et al., 2020). In this context, It is not surprising that pupils in urban centres consistently outperform their peers in rural areas (↑Leh Wi Lan, 2021).

To better understand why the inequitable distribution of teachers persists, we investigated the following research question:

What factors shape where teachers want to work in Sierra Leone?

In doing so, we also explored how these factors intersect with teacher characteristics: gender, experience, and qualifications. The literature shows that such factors impact school choice (↑Boyd et al., 2005; ↑Cabrera &

Webbink, 2019; ↑Krieg et al., 2016). Furthermore, we examine if and how these factors shift as teachers progress in their careers. We opted to consider career progression as it is linked to important changes in teacher characteristics such as experience, qualifications, and pay. In Sierra Leone, this framing is particularly relevant, as the majority of school leaders spend significant time as teachers in the classroom. As no existing literature focuses on the relationship between teacher preferences and teacher career progression, this line of inquiry was exploratory in nature.

For this study, we adopted an exploratory mixed-methods approach (↑Creswell & Plano Clark, 2018). In the first phase of the study, we conducted semi-structured interviews and focus group discussions with 54 teachers and school leaders in Bombali and Kenema districts. Based on the outcomes, we undertook an SMS-based survey with over 400 school leaders from across Sierra Leone. The survey explored if and how preferences might shift at the upper end of the teacher career ladder.

This research contributes to the evidence base on teacher school choice preferences for remote areas in low- and middle-income countries. Earlier studies show that the location of a school — proximity to a teacher's hometown and family, distance from previous places of employment, and closeness to medical and banking facilities — can significantly influence where teachers would like to work (↑Ajzenman et al., 2020; ↑Asim et al., 2019; ↑Bertoni et al., 2018; ↑Engel et al., 2014; ↑Luschei & Carnoy, 2010; ↑Tao, 2014). Separately, income levels shape school preferences as teachers may seek employment in areas where they can find a second job or in schools with opportunities for rapid career progression (↑Cummings & Tahirou, 2016; ↑Nugroho & Karamperidou, 2021; ↑Turrent, 2012). Preferences have also been shown to vary according to teacher characteristics, such as gender and experience (↑Boyd et al., 2005; ↑Cabrera & Webbink, 2019; ↑Krieg et al., 2016).

In our setting, however, there is a lack of empirical evidence on teacher school choice preferences. Here, over half of the education workforce does not receive a salary (↑Ministry of Basic and Secondary Education, 2021). At the same time, more than a third of teachers are unqualified (↑Ministry of Basic and Secondary Education, 2021). Separately, Sierra Leone has the sixth-lowest proportion of female teachers across the globe (↑Mackintosh et al., 2020). As such, we explore if and how findings from the global evidence base hold in Sierra Leone.

Situated within EdTech Hub's ongoing support to the Ministry of Basic and Senior Secondary Education in Sierra Leone, this research aims to support

the Government of Sierra Leone in building evidence to inform upcoming teacher deployment reforms.

2. Background and methodology

In Sierra Leone, the Teaching Service Commission (TSC) is responsible for "all matters pertaining to teacher management" including the recruitment and allocation of teachers (↑Teaching Service Commission, 2020: p. 1). Even though the salaries of teachers constitute the largest recurrent item in the education budget, 58% of the workforce is not on the payroll (↑Ministry of Basic and Secondary Education, 2021; ↑Wright, 2017). In this context, the recruitment and allocation of teachers typically involve identifying schools where non-payroll teachers will be formally hired.

Last year, the TSC started by defining the number of teachers allocated per education level and then, the number of teachers allocated to each district (↑Teaching Service Commission, 2021). Within each district, the TSC allocated teachers to schools with the highest pupil-to-teacher ratio until they filled the district quota. Here, teachers were prioritised for a salaried position based on their (a) qualifications; (b) gender; (c) experience; and (d) subject specialism (↑Teaching Service Commission, 2021). Through this process, the TSC aimed to deploy staff to underserved parts of the country and move closer to a 40:1 pupil-to-teacher ratio.

As in many other low-income countries, however, the uneven distribution and limited supply of teachers in Sierra Leone prevent learners in remote areas from accessing quality instruction (↑Asim et al., 2019). To improve this situation, the TSC collaborated with the Education Commission and Fab Inc to outline the following options for teacher allocation at the primary level (↑Mackintosh et al., 2020):

- redistributing teachers within chiefdoms from schools with 'surplus' teachers to schools in need;
- developing a preference matching model to pair schools in need with the most suitable teachers;
- providing direct incentives to those working in remote schools.

Now, the TSC aims to build evidence to identify the most feasible and cost-effective approach to implement at scale.

2.1. Methodology

As highlighted in the introduction, the current literature lacks evidence on teacher school choice preferences in Sierra Leone. As such, we adopted an exploratory mixed-methods design to qualitatively assess the applicability of research from other low- and middle-income countries to Sierra Leone before quantitatively validating our findings on a national scale.

When developing the conceptual framework for our research protocols, we reviewed the literature on teacher retention, absenteeism, and preferences in low- and middle-income countries (↑Vijil et al., 2022). The framework divided preferences along financial and non-financial axes. Here, financial factors focused on payroll status and increased salary while non-financial factors included those related to location, access to health and banking facilities, school conditions, and school management. At the same time, the framework highlighted several teacher characteristics that intersected with these factors, such as gender, family status, qualifications, and payroll status. To accurately assess preferences related to location, protocols were adapted for different settings: urban, peri-urban, and remote.

Prior to conducting this research, we obtained informed consent from all participants. Here, we worked with a Sierra Leonean research organisation to provide written and oral translations of the consent forms.

The following subsections provide a detailed overview of our methodology.

2.1.1. Qualitative research methods

The first phase of the research took place in Bombali district (Northern Province) and Kenema district (Eastern Province). Between 2019 and 2021, Kenema and Bombali were middle-ranking districts in terms of student performance on the West African Senior School Certificate Examination (↑Ministry of Basic and Secondary Education, 2022). The two districts were chosen as they exhibit the highest levels of intra-district variation in the pupil-to-payroll-teacher ratio.

Within each of these districts, we randomly selected six schools based on the following criteria.

Geography: two urban schools, two peri-urban schools, and two remote schools;[1]

[1] For the purpose of this study, we classified urban schools as those in a central town or those within a 5 km radius of a central town; peri-urban schools as those within a 5–20 km

Number of teachers: schools with a minimum of two payroll teachers and two non-payroll teachers;

Gender balance: schools with a mix of male and female teachers.

At the selected schools, we conducted semi-structured interviews and a focus group discussion with the school leader, two payroll teachers, and two non-payroll teachers. As expected, teachers in some of these schools were absent on the day of our visit. We carried out a total of 54 interviews and 11 focus group discussions. Table 1 summarises the profiles of the research participants.

We recorded, translated, and transcribed all interviews and all focus group discussions. After processing this data, we tagged each transcript to highlight school characteristics (e.g., location) and the respondent's background characteristics (e.g., role, gender, payroll status). All transcripts were then coded thematically. Here, we started with a pre-defined code list that we developed deductively from our conceptual framework. During the analysis, we added new codes inductively as we examined the transcripts. Finally, two of the authors reviewed the assigned codes to ensure that they were consistently and logically applied.

radius of a central town; and remote schools as those outside of a 20 km radius of a central town.

Table 1. *A summary of the profiles of research participants*

Teacher characteristics

	Position	Gender		Payroll status		Location			Children	
		Male	Female	Payroll	Non-payroll	Urban	Peri-urban	Remote	Yes	No
Bombali	School leader	3	4	5	2	3	2	2	5	2
	Teacher	8	13	10	11	9	8	4	18	3
Kenema	School leader	4	2	5	1	2	2	2	5	1
	Teacher	12	8	6	14	7	7	6	14	6

2.1.2 Quantitative research methods

In the second phase of research, we investigated if and how preferences shift at the upper end of the teacher career ladder. As noted previously, most school leaders teach regularly in addition to carrying out their school leadership duties. Yet, school leader status tends to be associated with shifts in important characteristics, such as qualification, experience, and remuneration.

We used EduTrac — an SMS-based data collection tool — to run a survey with school leaders in government and government-assisted schools in Sierra Leone. Here, we used a structured survey on four topics: the background characteristics of respondents, distance to school and the nearest town, location preferences, and satisfaction with school location (see Appendix 1 for EduTrac survey questions). Notably, the findings from the first phase of qualitative research informed the survey design.

This survey was sent to 10,038 school leaders from across Sierra Leone in May 2022. To examine whether this sample was representative of the population, we linked our survey to school- and classroom-level data from the 2021 Annual School Census and the 2019 Annual School Census, which was the last year when the government collected comprehensive data on school leaders.[2]

2.1.2.1. Sample characteristics and sample balance

The survey was completed by 447 school leaders from across Sierra Leone. While this low response rate (4.1%) is typical of SMS-based surveys, it raises concerns over sample selection bias. This section describes the characteristics of respondents and compares these characteristics to the national population of school leaders to check for sample balance (see Annex 2 for more detail).

Here, we compared data on the characteristics of our sample to data from the 2019 Annual School Census, which provides complete information on teacher positions for us to identify school leaders.[3] The 2019 Annual School Census (ASC) provided data on a total of 8,879 school leaders. Table 2 presents differences in mean characteristics and tests for statistical significance.

[2] In 2020 and 2021, school leader information was only collected for primary schools.
[3] The 2021 Annual School Census only provides this information for primary school teachers.

Table 2. *Characteristics of school leaders in the survey and population*

	ASC 2019	Survey	Difference		t-statistic
Female	24.5%	21.3%	3.3%		1.575
On payroll	58.1%	77.6%	-19.5%	***	-8.215
Qualifications					
None	13.3%	5.6%	7.8%	***	4.765
TC	42.9%	46.3%	-3.4%		-1.435
HTC	32.3%	39.4%	-7.1%	**	-3.118
Bachelor	9.2%	7.4%	1.8%		1.318
Post-grad/ Master/ PhD	2.3%	1.3%	0.9%		1.303
N	8,879	447			

***p<0.01, **p<0.05, *p<0.1

The majority of respondents were male (78.75%) and on the government payroll (77.6%). Most respondents reported having a Teaching Certificate (TC) qualification (46.3%) or a Higher Teaching Certificate (HTC) qualification (39.4%). At the same time, a high proportion of school leaders (92.4%) reported that they teach for at least one hour per week.

Compared to the overall population, our sample has a similar share of male and female school leaders. However, our sample has a significantly higher proportion of school leaders on the government payroll, a lower proportion of unqualified school leaders, and a higher share of school leaders with a Higher Teaching Certificate qualification.[4] In other words, our sample is biased towards more educated leaders who are on the government payroll. Therefore, in our analysis, we need to consider self-selection bias among respondents when interpreting the quantitative findings.

In our analysis, we compared the mean characteristics of schools where our respondents work to the mean characteristics of the population. Here, we used data from the 2021 Annual School Census. Out of the 447 school leaders in our sample, 39 work in more than one school, which we excluded from this analysis. As such, we focused on the characteristics of 408 schools, which are summarised in Table 3.

[4] A Pearson Chi-squared test of the distribution of teacher qualifications shows significant differences between the distribution of our sample and the population.

Table 3. *Characteristics of schools in survey sample and population*

	School Population	Survey	Difference		t-statistic
School size (average)					
Number of pupils	256.0	300.7	-44.7	***	-3.525
Number of teachers	6.6	7.4	-0.8	**	-2.619
Number of classrooms	5.0	5.3	-0.3		-1.882
Pupil Teacher Ratio	47.4	50.8	-3.4		-1.429
School type					
Pre-primary	16.6%	5.3%	11.3%	***	5.707
Primary	60.7%	79.8%	-19.2%	***	-7.337
Junior secondary	15.8%	13.7%	2.1%		1.065
Senior secondary	6.9%	1.1%	5.8%	***	4.293
School ownership					
Community	12.4%	9.2%	3.2%		1.799
Government	14.6%	18.8%	-4.2%	*	-2.204
Mission/ religious	55.6%	68.3%	-12.7%	***	-4.767
Other	0.1%	0.3%	-0.2%		-0.819
Private	17.2%	3.4%	13.9%	***	6.918
Distance school to HQ (km)					
In town	49.70%	47.90%	1.80%		0.669
Less than 5 km	7.24%	6.44%	0.80%		0.575
5–10 Km	9.74%	11.20%	-1.47%		-0.920
11–20 Km	9.63%	7.84%	1.79%		1.130
21–20 Km	11.95%	12.89%	-0.94%		-0.537
More than 50 Km	11.75%	13.73%	-1.98%		-1.141
N	1,837	408			

***p<0.01, **p<0.05, *p<0.1

School leaders in our sample work in larger schools with an average of 44 more students and marginally more teachers. Moreover, the majority of respondents work in primary schools (79.8%), followed by junior secondary (13.7%), pre-primary (5.3%), and senior secondary (1.1%). Compared to the overall population, our sample has a significantly lower share of school leaders in pre-primary and senior secondary schools and a significantly higher share of school leaders in primary schools.

Notably, the majority of respondents worked in religious or mission schools (68.3%). This proportion is significantly larger than the share of religious or mission schools in the population (55.6%).

Finally, in both the sample and the population, nearly half of the schools are located in the same town as the district headquarters. Here, there are no significant differences between the groups in terms of distance from the school to the headquarters.

While we see some significant differences in the mean characteristics of schools where our respondents work and the mean characteristics of the population, there is no reason to assume that they will affect school choice preferences.

3. Findings

This section summarises our findings from the qualitative and quantitative components of the study.

3.1. Monetary incentives

Monetary incentives appeared to influence teacher preferences strongly. In our qualitative sample, many teachers reported that being put on payroll or receiving a higher salary would encourage them to relocate to a rural area. In Bombali, for instance, a non-payroll teacher emphasised that:

> *"I will not be struggling here and then move to a more remote place with the same struggle, and I don't know anyone there. So, this is what you should first consider: if you're moving a teacher to a new location, they don't know anyone there. It is necessary to have his or her salary running and the basic facilities available. I am willing to move as long as I am on the payroll, even if it is in the far remote communities."*

Separately, teachers asked for other monetary benefits, such as free housing and a hardship allowance. At a time when more than half of teachers do not receive a government salary, monetary incentives are critical for those being asked to relocate, especially to areas where they have no pre-existing connections, as discussed in Section 3.5 on relationships with the community and school.

Importantly, this finding holds as teachers move up the career ladder. In the quantitative component of the study, 85% of school leaders who do not receive a government salary noted that they would be willing to move to a remote area if they were added to the payroll (see Table 4 for the average individual and school level characteristics for school leaders by willingness to move to remote areas).

For many teachers, however, monetary incentives alone are not sufficient. In urban Kenema, for example, a female teacher in the qualitative sample stated:

> "*Let the government put things in place for the female teachers. If they are moving us to another location, let there be allowance because I am moving from my place to another place. I have to feed my children, and I have to take care of them, give them transport, and give them lunch. I will not just go because I'm going to have a PIN [payroll] code. But what is behind that PIN code? If there is no other allowance, I will not go.*"

Here, factors such as accommodation, transport, school conditions, and the well-being of students mediated the attractiveness of a salaried position or a higher wage. More importantly, the above quote illustrates that certain teacher characteristics — gender and family structure — strongly influence whether monetary incentives are sufficient to encourage teachers to relocate.

Similarly, the impact of monetary incentives on school choice preferences appears to vary according to individual characteristics as teachers move up the career ladder. The table below shows the average characteristics of school leaders who would be willing or unwilling to move to a school in a remote area in return for a government salary.

Table 4. *Characteristics of school leaders who would be willing or unwilling to move to a school in a remote area if they were put on payroll*[5]

	Not willing to move	Willing to move	Diff		t-statistic
Individual characteristics					
Female	27.3%	16.2%	11.1%	*	2.253
On payroll	84.4%	77.2%	7.2%		1.375
Qualifications					
None	5.2%	5.6%	-0.4%		-0.142
TC	44.2%	49.2%	-5.0%		-0.786
HTC	41.6%	38.3%	3.3%		0.525
Bachelor/ Master/ PhD	9.1%	6.9%	2.2%		0.647
School characteristics					
School type					

[5] Most variables are categorical and dichotomised except for travel time, pupil-to-teacher ratio, and satisfaction levels.

Pre-primary	7.5%	3.8%	3.7%	1.306
Primary	80.6%	80.8%	-0.2%	-0.043
Junior secondary	10.4%	14.7%	-4.2%	-0.892
Senior secondary	1.5%	0.8%	0.7%	0.572
School ownership				
Community	11.9%	8.3%	3.7%	0.936
Government	11.9%	19.9%	-8.0%	-1.511
Mission/ religious	68.7%	69.2%	-0.5%	-0.081
Other	0.0%	0.4%	-0.4%	-0.501
Private	7.5%	2.3%	5.2% *	2.140
Pupil Teacher Ratio	55.4	50.3	5.1	0.758
Other				
Satisfaction with school (1–10)	6.0	6.0	0.0	-0.050
Travel time to school (min)	30.5	35.4	-4.9	-1.047
Travel time school to town (min)	33.8	42.3	-8.5	-1.633
N	380			

***p<0.01, **p<0.05, *p<0.1

Within individual characteristics, the table shows significant differences in terms of gender. In particular, female school leaders are significantly less likely to move to a more remote location for financial incentives. This aligns with what we heard from teachers in the qualitative sample, indicating that the interaction between gender and monetary incentives might remain constant as teachers progress in their careers.

Outside of government salaries, other monetary incentives also influenced teachers' location preferences. Notably, teachers raised the importance of accessing other income-generating opportunities. In Makeni, for instance, a teacher commented:

> *"A person with a Bachelors can be called to work as a tutor, so he can also earn money from there. It is good for such people to be in a big town because he will be marketing himself. He will attract the attention of NGOs even though he is not on payroll. He will also organise extra classes for pupils that are in examination classes. So, there is an avenue for such people to make money."*

Importantly, many participants believed that non-payroll teachers can better support themselves in urban centres, where they can engage in tutoring and work with non-governmental organisations (NGOs). In contrast, teachers in rural areas only mentioned farming as a potential alternative source of income.

3.2. School conditions

In the qualitative sample, teachers most frequently prioritised school and classroom conditions when considering where to work.[6] For the purpose of this study, school conditions include both the school's physical conditions — access to basic facilities and infrastructure — and the school's working conditions — relationships with other staff, parents, and the community.

For some respondents, the availability of basic amenities — water, toilets, electricity, and solid infrastructure — matters a lot when choosing a school. In this context, a few teachers wanted to relocate to urban areas to access better facilities, more transport options, and a wider range of things to do. A teacher in Bombali, for instance, outlined the difference between the conditions in an urban location and a peri-urban location.

> *"When I was in Makeni, I didn't have difficulty with electricity. Like, I don't have to pay to charge my phone, I don't normally walk long distances because I use a motorbike. But, here, you just have to walk because there are no such facilities."*

Meanwhile, another teacher advised that those with young families should stay in urban centres, where they can find baby food and medicine for common childhood illnesses. In Sierra Leone, the availability of basic infrastructure can influence the willingness of teachers to move to different areas.

Here, teacher characteristics also interact with their preferences around school conditions. In general, non-payroll teachers and female teachers with children may have a greater need to work in schools with good conditions. A teacher from a remote school in Bombali, for instance, reported that:

> *"If you are not on payroll, and you are in the remote area, you have to find food for your kids. Baby food is very expensive, and you hardly get them in the remote areas, so they will have food problems. And, they will not have better medical facilities... they are*

[6] During the qualitative study, teachers were asked to rank the following factors in terms of the impact they have on school preferences: school conditions, school location, and opportunities for professional development and support. Here, teachers did not rank monetary incentives.

> *important for young children because those villages do not have access to pure water."*

Notably, the quantitative survey confirmed that female school leaders are significantly less likely to be willing to move to a remote area even if they were added to the government payroll (see Table 4 for more detail). Like the qualitative results, this finding could be attributed to the perception of remote areas as having poor physical and working conditions. As previously noted, this trend indicates that the preference of female teachers to work in schools with better conditions might remain constant as they move up the career ladder.

However, the majority of teachers ranked relationships within and outside a school as more important than a school's physical conditions. This trend was consistent for male and female teachers and for those in urban, peri-urban, and remote locations. In a remote part of Kenema, for example, a teacher explained that:

> *"It is the good relationship that creates the physical condition because if you have a good relationship with the community, even if there are not good physical conditions, they will bring it."*

Here, strong and established relationships were viewed as a precursor to improved school facilities and infrastructure.

Relationships with students also shaped the school location preference of some teachers. For example, a teacher said that they moved from Freetown to a peri-urban area of Bombali as:

> *"I love teaching in rural areas because I like to impart good knowledge to the pupils. Because most teachers after getting pin codes will move to big towns without doing anything. But again, these kids here deserve a good education also. They want to benefit in the same way others are benefitting in urban areas."*

Notably, two other teachers from the same school shared similar stories, indicating that preference for remote locations can be driven by factors relating to intrinsic motivation, such as a desire to teach underserved communities.

3.3. Opportunities for professional development and support

In the qualitative phase of the study, teachers highlighted the availability of opportunities for training and professional support as an important factor when choosing a school. In doing so, several teachers noted that these opportunities influenced whether they would consider relocating.

Here, the majority of teachers expressed a desire for further in-service training to build their pedagogical skills. More specifically, some teachers emphasised the importance of learning circles and peer support from more experienced teachers. In Makeni, for instance, a teacher explained:

> *"As a newly qualified teacher with no teaching experience — you know when someone is from the university — they have challenges in teaching unless he is met with trained teachers in the school. So they will motivate you and correct your little mistakes that you will be making."*

In this setting, teachers with limited or no experience have the greatest need to be in schools with access to training and professional support. For example, a focus group participant from Bombali described how:

> *"For somebody who is just coming in the classroom, I think he needs some of these things, especially these frequent trainings. You will find it very difficult, especially when you're just from the university, and you don't have such frequent training."*

In turn, participants noted that more experienced teachers may be able to manage better in schools with less support.

Importantly, teachers associated professional development opportunities with rapid career progression. In Makeni, for instance, a teacher stated that they wanted additional training as "the more I will be doing it, the more knowledge I will have". In particular, teachers expressed interest in training that offered certificates with direct ties to their salary. For example, a teacher from Bombali explained:

> *"If they said okay, you went for this training, and you performed well, and you got a certificate, and you have been monitored and confirmed that you are*

> *doing the work: now, they increase your salary. This will inspire the next person to perform well."*

The willingness of teachers to relocate partly depended on the availability of opportunities for professional support that could translate into a salaried position or higher pay.

In this context, the availability of opportunities for training and professional support was less important for those in more senior and established roles. The quantitative phase of the study showed that school leaders identified opportunities for professional development as the least important factor when deciding where to work. At the upper end of the career ladder, school leaders tend to have higher levels of certification and fewer opportunities to participate in training programmes than classroom teachers. As such, school leaders may see training and professional support as less relevant to their career progression and salary status.

3.4. School location

The proximity between a school and a teacher's residence was strongly associated with reported levels of location satisfaction. In our qualitative sample, more than half of interviewed teachers expressed a preference to work at a school close to their home. In a rural part of Bombali, for instance, a teacher stated that "if I am relocated to a distance [sic.] school, I will not be happy."

Importantly, the cost of transport associated with travelling to and from school underpinned this trend. A non-payroll teacher from rural Bombali described how they changed schools to save USD 0.60 in bus and taxi fares each day. In Sierra Leone, the distance to school strongly influenced the willingness of teachers to work in different areas.

Separately, pre-existing family commitments represented another factor that shaped the desire of teachers to stay close to their homes. These commitments included caregiving and providing sustenance. In some cases, teachers prioritised being close to their families over monetary incentives. In Bombali, a teacher explained that:

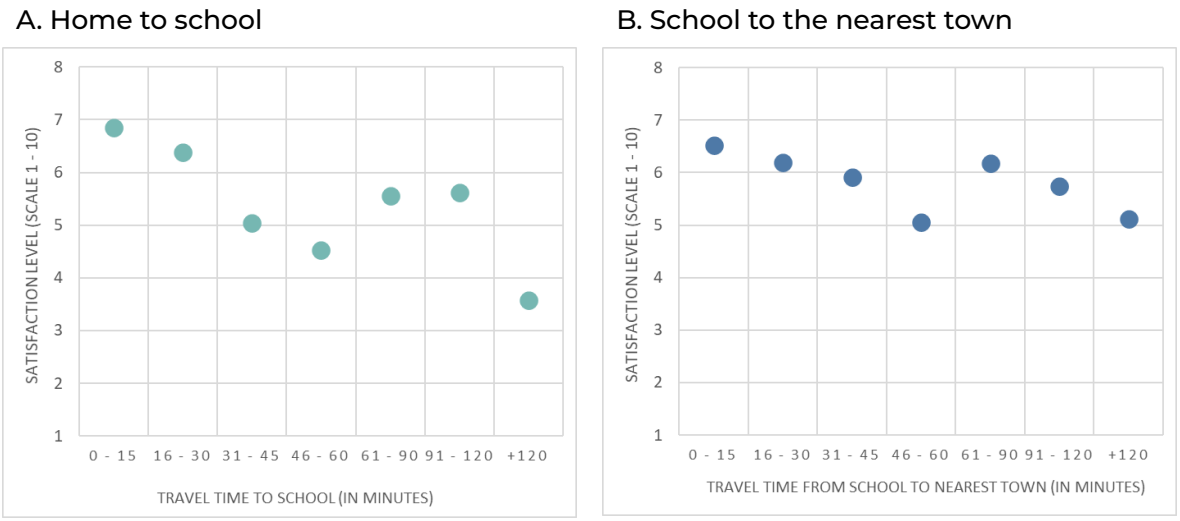
> *"I [would] prefer to stay [in my current location] as I have close contact with my family and I take my children to school. I will not be bored thinking of the salary. I will not be worried with questions like: do my children go to school today?"*

Here, familial duties and responsibilities influenced teacher perceptions of the feasibility of working in certain locations.

In this context, teachers' family commitments interact with their preference for proximity to residence and may indicate that teachers without children or other familial commitments would be more willing to relocate to remote areas. In Kenema, a focus group participant suggested that a teacher with no children could "simply go [to a remote area] because he has no family with him." In line with this perception, teachers highlighted several challenges for those needing to care for children in remote areas, as illustrated in the findings on school conditions. The perceived suitability of teachers to relocate or work in different, particularly remote locations, depends in part on their family structure.

During the quantitative phase of the study, we explored the relationship between distance to school and reported levels of location satisfaction. In doing so, we used a satisfaction-with-school-location measure collected on a 10-point scale.[7] In Figure 1, we plotted the average reported satisfaction levels of school leaders against the distance between the home and the school and the distance between the school and the nearest urban centre.

Figure 1. *Diagrams to show level of school location satisfaction by distance from school to home and from school to the nearest urban centre*



Here, Panel A shows a negative correlation between location satisfaction and travel time to school. The graph indicates that school leaders reported higher levels of satisfaction when they live within 30 minutes of a school. By contrast, reported levels of location satisfaction are lowest when school leaders live more than two hours away from the school. At the upper end

[7] On the scale, 10 means 'very satisfied' and 1 means 'not satisfied'.

of the career ladder, the distance between the school and the household continues to influence where teachers prefer to work.

Panel B shows a negative, albeit weaker, correlation between satisfaction with school location and travel time between the school and the nearest town. This weaker correlation implies that school leaders assign greater weight to living close to school. Importantly, however, more than half of the sample of school leaders worked either within 5 km of or in the same town as the district headquarters (see Table 3).

3.5. Relationships with the community and school

During the first phase of the study, the majority of teachers viewed strong relationships with the community as important when deciding where to work. In rural Kenema, a teacher explained that "if I have peace with the community, I will be happy and that good relationship will make us, the teachers, stay." In several cases, teachers prioritised strong relationships with the community over monetary incentives. A non-payroll teacher at a peri-urban school in Kenama recounted that:

> *"I have been in this school for over 10 years now, and I am used to this school. And I also have a very cordial relationship with the community people and also the children. For any time I am absent from school, they will not be happy. So, I don't want to leave the school now, even if they will put me on payroll."*

Importantly, this sentiment was shared by payroll teachers and non-payroll teachers alike.

Within this group of teachers, some respondents opted to remain at their current school as they felt a sense of duty to their community. A teacher in a peri-urban part of Bombali noted that "I prefer to be in the village as the village people need help, and because I was born in this village, so I prefer to help them." Here, opportunities to support community development seemed to mediate teachers' willingness to relocate.

This sense of duty to the community appeared to stem from a recognition of local workforce constraints. At a remote school in Bombali, for example, a teacher stated that "we are promoting the community because if we leave here there is no other teacher." The decision to continue to work at a school sometimes depended on the availability of other staff. A teacher from a peri-urban area of Bombali reported that:

> *"Even when I am sick, I will still manage to come. So if I leave, how will this school look? I will prefer to stay as long as everything is okay because I want to serve the community. But if there are sufficient teachers, I will go to the school with more facilities."*

At a time when the pupil-to-teacher ratio varies significantly across Sierra Leone, the retention of teachers partly reflects local labour conditions in conjunction with teachers' sense of duty to serve their communities.

In turn, an accommodating community environment encouraged teachers to relocate to more remote areas. After moving to work in a peri-urban part of Bombali, a teacher explained that "if you came from afar and those that you met did not like you, then I don't think you would be able to stay there as teachers." In this context, an accommodating community may provide fresh food, lodging, and encouragement. For instance, another teacher who moved to a peri-urban school in Bombali described how they decided to stay in the region as the community offered free housing to their family.

Beyond the community, the support of school leaders played a major role in retaining staff. This support came in various forms, such as the provision of a monthly allowance and counselling. In Makeni, for example, a non-payroll teacher noted that a regular stipend "is what is encouraging us [non-payroll teachers] to be in the school as things are really difficult." Equally, non-monetary support proved as important for some teachers. A teacher from a remote school in Bombali recalled that the school leader "will not give you money because she does not have [it], but the good talk that she gives you pleases you more than money." Support from school leaders shaped where — and the extent to which — teachers wanted to work.

4. Discussion

In Sierra Leone, the government has struggled to attract teachers to work in remote schools. In this setting, this paper explored what factors influence where teachers want to work and their willingness to relocate, especially to remote areas.

The study drew on existing literature to identify the dominant factors that might shape teacher school choice preferences in Sierra Leone: (1) monetary incentives; (2) school conditions; (3) opportunities for professional development and support; (4) school location; and (5) relationships with the school and the community. Importantly, these factors combine to push and pull teachers to different locations. Schools in

remote areas, for instance, tend to have worse conditions and fewer training opportunities. Moreover, these factors interact with individual teacher characteristics, such as gender, to influence preferences.

Notably, this set of factors — and their interaction with certain teacher characteristics — continues to shape school choice preferences as teachers move up the career ladder. However, some of these factors shift in their relative importance. For example, professional development opportunities have less impact as teachers obtain higher qualifications and gain more experience.

Importantly, the findings suggest that evidence on teacher school choice preferences from other low- and middle-income countries holds in Sierra Leone. For example, the paper validates previous research showing that monetary incentives alone are not enough to encourage teachers to move to remote locations (↑Swai, 2013). Similar to other studies in sub-Saharan Africa and India, the findings also indicate that gender mediates the impact of monetary incentives on teachers' willingness to relocate (↑Fagernäs & Pelkonen, 2012; ↑Gad, 2015; ↑Kamere et al., 2019).

As in other contexts, teachers in Sierra Leone strongly consider the location of a school when deciding where to work. In particular, this research shows that distance to the home and family significantly influences school choice preferences (↑Bertoni et al., 2019). The paper also reinforces prior studies which demonstrate that teachers prioritise areas with basic facilities such as water and electricity (↑Lee et al., 2015; ↑Sisouphanthong et al., 2020).

Surprisingly, the majority of teachers viewed relationships with the school and the community as more important than physical conditions. At a time when more than half of the workforce does not receive a government salary, teachers often rely on colleagues and community members for financial support. Meanwhile, communities play an important role in the upkeep, management, and security of schools, especially in remote areas. Here, the context of Sierra Leone seems to frame the relative importance of different factors influencing school choice preferences.

Separately, this research shows that Sierra Leonean teachers prefer to work in schools with opportunities for accelerated career progression. This paper aligns with the global literature which indicates that meaningful career paths and support for professional development are related to improved teacher retention and motivation (↑Kadzamira, 2006; ↑Quartz et al., 2008). At the same time, this study went further to distinguish between teachers at different stages of their careers to demonstrate that this factor carries less weight for more senior staff.

This paper presents the first empirical evidence on teacher school choice preferences in Sierra Leone. In doing so, this paper indicates that the government should take a systems approach to adjust the wider policy ecosystem — remuneration, career opportunities, and infrastructure planning — to increase the efficiency and equity of the deployment process. To this end, future research should (a) further explore the impact of opportunities for professional development on preferences, as this factor was confounded with monetary incentives in this study, and (b) examine the influence of accounting for teacher preferences on teacher attendance and retention, especially in remote schools.

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Annex 1. EduTrac school leader survey questions

#	Question	Category
	Welcome to MBSSE EduTrac Survey on Teacher Preferences. This survey has 12 questions, please answer all and reply with numbers only. To start, please send '1'	Introduction
1	Please SEND the NEW EMIS CODE NUMBER of the school you are working for (If you don't know, please ask your Head Teacher). REPLY with NUMBER ONLY	School ID
2	Are you 1-Female or 2-Male? 'Please reply with number only'	Gender
3	What teaching qualifications do you have? 1=None, 2=TC, 3=HTC, 4=Any Bachelors in Ed, 5=Any Master's or PhD in ED. 'Please reply with number only'	Qualification
4	Are you on the government payroll? 1=Yes, 0=No 'Please reply with number only'	Payroll
5	If you have the option to be on payroll in another school, would you like to move? 1=Yes, 0=No 'Please reply with number only'	Payroll - allocation
6	How do you travel to school from where you live (the main method if multiple)? 1=Foot/Walking, 2=Car, 3=Bicycle, 4=Okada, 5=Keke, 6=Podapoda	Travel
7	How many minutes does it take you to travel to school from where you live? 'Please reply with number only'	Travel
8	How many minutes would it take you to travel from your school to the nearest town? 'Please reply with number only'	Remoteness
9	Which factor is MOST important for selecting a school? 1=school location, 2= school conditions (water, electricity, etc) 3=training, 4=being close to family	Multiple
10	Which factor is LEAST important for selecting a school? 1=school location, 2= school conditions (water, electricity, etc), 3=training, 4=being close to family	Multiple
11	Would you be willing to work in a school in a more remote area, if you were put on the government payroll (or if you already are on payroll)? 1=Yes 0=No	Remoteness
12	From 1 to 10, being 10 very satisfied and 1 not satisfied: How satisfied are you with the location of your school? 'Please reply with number only'	Satisfaction

Annex 2. School leader sample and population characteristics

		Total				On payroll			
		Population		Sample		Population		Sample	
		N	%	N	%	N	%	N	%
	Total	**8,879**	**100**	**452**	**5.09**	**4,255**	**100**	**347**	**100**
Gender	Male	6,701	75.5	354	78.3	4,013	94.3	270	77.8
	Female	2,178	24.5	97	21.5	1,147	27.0	77	22.2
	Other	0	0.0	1	0.2				
District	Bo	760	8.6	31	6.9	491	11.5	24	6.9
	Bombali	507	5.7	35	7.7	325	7.6	27	7.8
	Bonthe	215	2.4	9	2.0	135	3.2	8	2.3
	Falaba	250	2.8	4	0.9	115	2.7	2	0.6
	Kailahun	470	5.3	27	6.0	325	7.6	22	6.3
	Kambia	433	4.9	43	9.5	316	7.4	30	8.6
	Karene	340	3.8	9	2.0	196	4.6	8	2.3
	Kenema	669	7.5	69	15.3	432	10.2	58	16.7
	Koinadugu	298	3.4	5	1.1	185	4.3	5	1.4
	Kono	593	6.7	38	8.4	312	7.3	25	7.2
	Moyamba	574	6.5	13	2.9	389	9.1	11	3.2
	Port Loko	760	8.6	44	9.7	482	11.3	33	9.5
	Pujehun	293	3.3	19	4.2	235	5.5	16	4.6
	Tonkolili	754	8.5	28	6.2	552	13.0	24	6.9
	Western Area Rural	762	8.6	32	7.1	185	4.3	22	6.3
	Western Area Urban	1,201	13.5	46	10.2	485	11.4	32	9.2
Qualifications	Untrained	1,185	13.3	25	5.5	135	3.2	9	2.6
	TC	3,806	42.9	207	45.8	2,455	57.7	160	46.1
	Bachelor in Ed	2,867	32.3	176	38.9	1,942	45.6	145	41.8
	HTC	819	9.2	33	7.3	503	11.8	28	8.1
	Masters / PhD in Education	202	2.3	6	1.3	125	2.9	5	1.4
Payroll	No	3,719	41.9	104	23.0				
	Yes	5,160	58.1	347	76.8				

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