Report Cards: Parental Preferences, Information and School Choice in Haiti

Michael Borger  
*Bridgespan Group*

Gregory Elacqua  
*Inter-American Development Bank*

Isabel Jacas  
*United Nations Economics Commission for Latin America and Caribbean*

Christopher Neilson  
*Yale University*

Anne Sofie Westh Olsen  
*Novo Nordisk*

---

Follow this and additional works at: [https://elischolar.library.yale.edu/egcenter-discussion-paper-series](https://elischolar.library.yale.edu/egcenter-discussion-paper-series)

Part of the Growth and Development Commons

---

**Recommended Citation**


This Discussion Paper is brought to you for free and open access by the Economic Growth Center at EliScholar – A Digital Platform for Scholarly Publishing at Yale. It has been accepted for inclusion in Discussion Papers by an authorized administrator of EliScholar – A Digital Platform for Scholarly Publishing at Yale. For more information, please contact elischolar@yale.edu.
Report Cards: Parental Preferences, Information and School Choice in Haiti

Michael Borger, Gregory Elacqua, Isabel Jacas, Christopher Neilson, Anne Sofie Westh Olsen

May 27, 2024

†Christopher Neilson christopher.neilson@yale.edu Yale University.
Michael Borger (Bridgespan Group), Gregory Elacqua (Inter-American Development Bank), Isabel Jacas (ECLAC), Christopher Neilson (Yale University), Anne Sofie Westh Olsen (Novo Nordisk).
The authors wish to thank the Rolland St. Pierre who coordinated the data collection in the field, as well as the enumerators and field surveyors that made this research in Haiti possible. We would also like to thank the parents, teachers, principals, and students that participated in the study. The authors wish to thank Manuela Cardona and Sergio Arango for their excellent research assistance.
Highlights

- Survey data from parents in Haiti on school preferences reveal demand for quality schools but significant information asymmetries.

- RCT evidence indicates information provision can improve student outcomes in poor education markets.

Abstract

This paper studies school choice and information frictions in Haiti. Through a randomized control trial, we assess the impact of disclosing school-level test score information on learning outcomes, prices, and market shares. We find evidence that in markets where information was disclosed, students attending private schools increased test scores. The results also suggest private schools with higher baseline test scores increased their market share as well as their fees when the disclosure policy is implemented. While prices and test scores were not significantly correlated in the baseline survey, they exhibited a significant and positive correlation in treatment markets after information disclosure. These results underscore the potential of information provision to enhance market efficiency and improve children’s welfare in context such as Haiti.

Keywords: private schooling, information asymmetries, school choice, economic development, Haiti.
1 Introduction

This paper studies how parents in rural Haiti make school choice decisions and analyzes the aggregate impact of information disclosure of school test scores on equilibrium market outcomes. We use a randomized control trial to study the aggregate policy effects of a feasible disclosure policy in the context of the poorest country in the Western Hemisphere, where education markets are highly unregulated and private schools have a large market share (World Bank Group, 2019).

First we measure student learning outcomes by administering tests in schools across multiple education markets in Haiti. Second, we collect survey data to examine how parents in these markets gather and filter information to make enrollment decisions that match their preferences and perceptions. Our descriptive analysis reveals that families value school academic quality as well as other inputs related to infrastructure and safety. Very poor families go to great lengths paying relatively large fees and walking long distances to attend schools they believe are better. However, we document that parents are also notably uninformed about school characteristics in the Haitian setting, consistent with evidence from other developed and developing country settings.

Providing information about alternative schools to individual families can be a cost effective way to increase learning outcomes by encouraging families to choose more effective schools. Small scale RCTs have provided evidence that information provision can indeed shift families individual school choices towards more effective schools in both developing and developed country settings and lead to increased learning outcomes for these students. However, while information provision can shift individual family choices, it can also have equilibrium effects through the supply side reaction to changes in demand, as well as other potential mechanisms.

To capture the aggregate effect of information provision in the Haitian context, in this paper we implement a market-level randomized controlled trial (RCT), disclosing school-level test score results in a subset of communities and not others. We use the change in available information to evaluate whether this new information leads to

---

2See for example Hastings and Weinstein (2008) for the US and Allende et al. (2019) for Chile, Ainsworth et al. (2023). The Literature Review section describes several other studies that find similar results.

3See Andrabi et al. (2017), and Allende et al. (2019) for equilibrium effects of demand and supply adjustments in schooling markets.
different choices by families, schools, and overall market-level outcomes. The design closely follows Andrabi et al. (2017), where information about schools was disclosed in a random subset of small villages in Pakistan.

We find evidence of large and significant effects of providing information on school learning outcomes. Our evidence suggests that student learning outcomes increased in treated markets, but only at private schools. High scoring public and private schools at baseline saw an increase in their market share and private schools with higher test scores increased their prices. This is consistent with information leading to an increase in demand at high scoring schools.

Our paper offers several contributions by looking at the poorest country in the Western Hemisphere. We collect and analyze novel data on parental preferences for better schools in a place where data was previously nonexistent and where household resources are extremely limited. Additionally, we examine the relationship between prices, school quality, and corresponding market shares in a setting where information on school quality is insufficient or absent. Our randomized controlled trial allows us to track school demand and supply and consequently assess the dynamics of the Haitian educational market.

We contribute to a growing body of evidence showing that information about school characteristics can change individual school choice decisions, close socioeconomic gaps in access to quality schooling and increase learning outcomes for individual families.\textsuperscript{4} However, there is little RCT evidence of the aggregate policy effects of information and disclosure policy, which is a feasible and cost effective policy that could be implemented in both developed and developing countries. To our knowledge Andrabi et al. (2017) is the only other study providing RCT evidence on the aggregate level effects of information provision in developing country. Their setting is the context of small villages in Pakistan that are in many ways very similar to education markets studied in Haiti. That study found that the supply side reaction at the market-level was the important driver of increased learning outcomes. The results in this study are consistent with this evidence, pointing to the importance of the equilibrium reaction of the supply side as a key driver of improvement when information is disclosed. One notable difference is that in this study, high scoring schools increased their market share and prices showing increased demand and a direct link to demand side sorting in addition to supply side adjustment. In general, our results corroborate the importance of the supply side as well as the potential benefits of this type of policy implemented at scale.

\textsuperscript{4}See for example Hastings and Weinstein (2008) and Campos (2023).
2 Literature Review

In developing country context, urban education markets are typically characterized by a significant participation of affordable-private schooling options regardless of whether subsidies like vouchers are provided or not (The Economist, 2015; Elacqua et al., 2018). For market competition to drive improvements in academic achievement at the market level, it follows that parents need to demand school academic quality and that second, they can ascertain a school’s quality.

Most literature on school choice and information provision policies has been limited to developed countries. In a paper about North Carolina’s public education system, Hastings and Weinstein (2008) investigated how receiving information about schools increases the fraction of parents who choose to enroll their children in high-performing schools. Attending these higher-scoring schools also improved student test scores. School choice then reinforces greater academic achievement, although the impact, they noted, was greatest when schools were relatively close to students’ homes and when parents were both informed and seeking quality education for their children. Newer evidence extends these results to show the provision of information on value added also has effects on school choice. For example Campos (2023) shows evidence that information about test score value added can shift school choice decisions in the context of Los Angeles. Ainsworth et al. (2023) shows similar evidence for a middle income country context where school choices also respond to information about value added.

The literature from developing countries has found generally consistent results where families care about a variety of things including academic quality but in general are uninformed and usually face a very heterogeneous set of alternatives. For example, Ajayi et al. (2020) documents that families in Ghana lack critical information about their school choice options and that information provision did not significantly improve outcomes for students. Allende et al. (2019) provide information about test scores to families of public PreK students in Chile through a randomized controlled trial. That study found effects of information on school choice decisions where parents moved toward elementary schools with higher average test scores, higher value added, and higher prices. Importantly these students later had higher learning outcomes five years later, thus replicating the results found from the literature in developed countries where the effects of providing metrics on student performance and school quality, can lead to increased learning outcomes.
With increasing evidence that parents in developing countries broadly prefer better and higher performing schools but are generally uniformed, we would expect that policies providing information would have aggregate effects that could differ from the results found in small scale RCTs like Hastings and Weinstein (2008) and Allende et al. (2019). Tanzania’s implementation of a 2013 accountability program where objective metrics were shared with parents (Cilliers et al., 2020). In this instance, the government launched a program that would publish country and district-specific school rankings, finding evidence that suggests that accountability improved learning outcomes for the worst performing schools and suggesting that pressures resulting from new information may drive school improvement. Using a natural experiment in Brazil, Camargo et al 2014 provide evidence that information provision policies can shift behavior. That study looked at how divulging test score information on Brazil’s national secondary educational exam impacted school performance and composition. They found that test scores improved in private schools, and they attribute that to be likely because of market pressures (Camargo et al., 2014). In the context of Chile, Mizala and Urquiola (2013) show evidence that school academic achievement awards given by the government in Chile did not seem to correlate with higher demand from families while Allende (2022) and Cuesta et al. (2020) show evidence that test score report cards indeed shifted demand.

In a seminal paper examining Pakistani primary schools, Andrabi et al. (2017) studied the aggregate effects of information provision being the first to answer the question of equilibrium effects of information provision. The study found that when providing schools and parents with information on student achievement, test scores for low-performing schools improved and private school fees fell at expensive schools. Lacking the opportunity to randomize at scale Allende et al. (2019) use a model to extrapolate from a successful small scale RCT to quantify the effects of implementing at scale and find congestion effects and increasing prices can dampen the effects of the at scale policy but in all simulations finds positive equilibrium policy effects on learning outcomes and lower SES gaps.

Our paper adds to this literature by examining the aggregate effects of test score information disclosure on rural Haitian communities. To the best of our knowledge, this RCT is the first of its kind to be attempted and successfully completed in the Americas and unique in providing information on school choice in Haiti.
3 Haiti and its Educational Context

Haiti’s position as the poorest country in the Western hemisphere, understood in terms of gross domestic product (GDP) per capita, is reflected in its educational sector. Roadblocks to learning are prevalent and have persisted across decades. The past years have been equally, if not more, troubling with government changes and external shocks hampering educational investments and reifying systemic and structural inequalities.

The education system operates within a setting of absolute and relative poverty. According to the World Bank, the 2019 average GDP per capita for the country was approximately USD 754.6 dollars (World Bank Group, 2019). While this is a marked increase from the 1990s and early 2000s, this amount sits significantly below the regional average of approximately USD 8,847.4 dollars for Latin America and the Caribbean (World Bank Group, 2019). Countries with comparable GDPs per capita are Burkina Faso, Chad, and the Gambia. The closest Latin American neighbor is Nicaragua whose GDP per capita is nearly three times greater. In other comprehensive metrics of development, Haiti fares no better.

Expected years of schooling remain low. The country’s Human Development Index was 0.510, ranking it 170th globally and last in the Western hemisphere (United Nations Development Programme, 2019). Over the past three decades, Haiti’s HDI has risen by less than a tenth. That growth is slightly greater when looking at the country’s Education Index. The United Nations Development Programme reported that Haiti has gone from 0.189 in 1980 and 0.285 in 1990 to 0.445 (United Nations Development Programme, 2019). In absolute terms, however, that number translates to an expected 9.5 years of schooling, as opposed to an expected 5.1 years in 1980 and 7.0 years in 1990.

To address the slow increase in access, private schools have emerged as an alternative. These schools are operated largely by non-government employees and rely primarily on non-government funding to maintain their operations. Whereas a majority of countries in Latin America and the Caribbean see a higher proportion of public schools to private schools, often with double the number of public schools, Haiti is an anomaly. Alongside a few other developing countries, Haiti’s school system is largely private (Elacqua et al., 2018).

Undoubtedly Haiti is an extreme and, in many ways, exceptional case, with high growth in the number of private schools (over 14,000) and limited supply of public
schools (fewer than 3,000) especially in rural areas. As shown in Figure 6, since the 1960s, when the private sector took over as the leading provider of education, the number of private schools skyrocketed (Elacqua et al., 2018). This is acutely felt in rural areas where public schools are outmatched by private schools.

Over three of every four children attend private schools (USAID, 2018). This trend has been attributed to the government’s inability to meet demand, both due to insufficient supply of classroom slots and perceived shortcomings in quality of instruction provided (The World Bank, 2017). Since the mid-twentieth century, most schools have been and continue to be private (Elacqua et al., 2018). While public schools can accommodate for more children, they also lack necessary infrastructure and availability. Unsurprisingly, 90 percent of Haitian school buildings are not public, and the private sector now accounts for four out of every five primary schools (The World Bank, 2017).

This disparity is exacerbated by how little the school market is regulated, with private schools receiving subsidies from the government and donations from private benefactors, national and international non-profits, multilateral banks (the World Bank and the Inter-American Development Bank) and other entities that cover many costs. The origins and amounts of school funding are often decentralized and inconsistent, and the school market as a whole operates in a policy context that is distinct from many others in Latin America. For instance, Chile similarly relies on private schools, but has a voucher system and supply-side subsidies that correspond with greater government oversight and regulation.

While private school growth predates external shocks, inequities have only worsened with the 2010 earthquake, which killed over 1,000 teachers and staff from the Ministry of Education and Professional Training (The World Bank, 2017). In some areas, most schools faced either closure or destruction, with affected regions, namely in the West and Southeast, losing approximately 85 percent of schools (The World Bank, 2017).

---

5This is despite an estimated 15 percent of the Haitian government’s annual budget in 2015 being spent on education (USAID, 2018). According to research conducted by the United States Agency for International Development (USAID), over 435 million dollars (USD) were spent annually on education and training through Haiti’s Ministry of National Education and Professional Training, or le Ministere de Education Nationale et de la Formation Professionnelle or MENFP (USAID, 2018); however, the same USAID research notes that education spending has been obscured by accounting ambiguities, changes in sector-wide nomenclature (e.g., the term primary school versus fundamental education), and the presence of external loans and donations to fill deficits.

6To fill gaps, many international governmental and non-governmental donors have entered the market. One estimate suggests that over 200 national and international non-governmental organizations, including churches and foundations, have helped establish schools and funded the construction of facilities for teaching (USAID, 2018).
Coupled with the catastrophic earthquake, systemic and longstanding issues in the Haitian education market only became deeper and more widespread.\textsuperscript{7}

In spite and in part due to pervasive poverty and inequality, many Haitian families have opted to send their children to schools neither run nor funded by the government. The situation worsens as one looks toward rural areas, which are predominantly poor and under-resourced yet contain the largest share of the population and corresponding primary schools. Although many parents cannot afford to send their children to school, it is simultaneously true that many private schools also lack the necessary space to enroll additional children given overwhelming parental demand. In other words, there are not enough schools, whether public or private.

Despite being the least developed country in the Western hemisphere, Haiti is a setting where school choice is the modus operandi. Parents have significant choice over where to send their children to school, even in disadvantaged and remote settings. The educational market is rife with these seeming contradictions, yet there remains an extraordinary and expected dearth of data on how it works. However, this paper seeks to fill some gaps in the literature, centering Haiti as a setting for inquiry given the conditions of poverty and scarce information under which parents must make important decisions.

4 A Market Level Information Intervention

This paper relies on a randomized controlled trial (RCT) designed specifically for Haiti and the country’s education market and a baseline and endline survey are implemented to observe and assess the relationship between information on educational performance and school enrollment.

To ensure appropriate specifications for the RCT, we began by geographically di-
viding a map of rural Haiti into clusters of schools based on the definition of local educational markets. These education market clusters would be closed and unique school markets that would serve as a primary level of analysis. To avoid spillover effects, there were several conditions that an area had to meet to be categorized as a cluster and subsequently fulfill the eligibility criteria for inclusion in the RCT. Each market had to have at least one primary school. All schools had to be within a one-kilometer radius, with all being further than two kilometers from the nearest adjacent cluster. Figure 1 shows the local markets across Haiti in the left panel and the right panel provides an example of a cluster or a market.

Figure 1: Informational Intervention

![Figure 1: Informational Intervention](image)

(a) Clusters in rural areas  
(b) Example cluster

Note: These figures show the geographical distribution of clusters in the rural areas of the country (left) and schools within a cluster (right).

This mapping exercise produced 84 education market clusters, of which 42 were randomly assigned to the treatment group and 42 were assigned to the control group. There were 763 schools in total included at the time the intervention was performed, with 378 schools assigned to the treatment group and 385 schools assigned to the control group. Within each cluster, there was an average of approximately 11 schools while the median number of schools was 8. The cluster with the most schools had 28 in total, while the cluster with the smallest number of schools had 5. The mean cluster size was slightly under kilometers squared while the median cluster size was slightly over 6 kilometers squared, with the largest cluster being over 12.5 kilometers squared and the smallest being under 3 kilometers squared.

---

8See Neilson (2014) for further discussion on defining and calculating urban education markets.
4.1 Baseline Data

Prior to the intervention, we conducted a baseline assessment that began in 2017 and ended in early 2018. This assessment contained three distinct components: a standardized national examination designed for students in their fourth-year of instruction, a survey for parents of students in the sampled schools, and a survey of principals and directors of the sampled schools. This examination evaluates three subjects considered relevant to the education of students in Haiti: Mathematics, French, and Creole. The performance for a school was consequently considered the average student performance on the assessment, with equal consideration for each student and subject. As logistical circumstances warranted, while the examination was intended and constructed for fourth-year students, it was conducted for our purposes with fifth-year students instead; the same iteration of the examination was used for the endline assessment to mirror the baseline procedure and ensure comparability across the results obtained.

The data collected from the baseline assessment includes the test scores of 13,779 fifth-grade students from across 755 schools. However, it should be noted that information from 8 of the original 763 sampled schools could not be recovered.

Concurrent to the national examination, surveys were conducted with parents as well as directors or other figureheads from sampled schools. The data collected from the baseline surveys was for 722 schools. For each school in the survey sample, we spoke with at least one director or equivalent administrator as well as at least three parents. Questions asked pertained to thoughts and communication around school performance, the quality of instruction and facilities, and factors that may be weighed in enrollment decision-making. The parental survey contained questions about how parents collected information regarding school quality prior to search and enrollment. The director survey contained questions about school-specific characteristics such as address and religious or communal affiliation of the institution. From the directors’ responses, we collected information on, among other things, fees parents should anticipate and school infrastructure (e.g., electricity, water access, libraries).

---

9We received approval to use the standardized national examination created by the Haitian Ministry of National Education and Professional Training (MENFP). It was created in consultation with the International Association for the Evaluation of Educational Achievement (IEA) and with assistance from the Haitian Institute of Development in Scientific Education (IHFOSED) with funding from the Inter-American Development Bank.

10See fieldwork memo for more details.
Several variables needed correction due to measurement and documentation errors. Most vitally, we constructed a measurement of total fees charged by the school by summing the following information, as provided by the school directors: general fees and fees for admission and enrollment; tuition; expenses for uniforms, sportswear, and extracurricular or miscellaneous activities; and costs incurred for food and student transportation. The resulting sum was multiplied by the appropriate frequency with which these costs were incurred or expected for each school. Fewer than a dozen schools either had their information corrected or omitted altogether for these reasons. For both private and public schools, the distributions of total fees, standardized test scores, and other characteristics from the baseline can be found in Section 5 under Table 1.

4.2 The Information Intervention

Following the end of the baseline surveys, the RCT was launched. The treatment was given in the assigned clusters. It came in the form of three nudges: more objective and traditional metrics of school performance, workshops with parents of first-year students, and conversations with school directors or other administrators. The metrics on school performance were presented in the form of score cards, which were tested in small pilot settings prior to ensure they were comprehensible for parents with low levels of literacy. These score cards named and ranked schools within a given cluster along with a map of the cluster delineating where corresponding schools were located. Based on the average student test performance in the baseline assessment, a school received between one and five stars. Three stars represented the mean, and each star above or below represented one standard deviation. The price of a school was presented alongside the school’s name, ranking, and test performance. Figure 2 shows an example scorecard.
For the group receiving the treatment, we held scripted workshops in Creole for each school’s parents to present information. We focused on parents with children in their first year as these parents had recently enrolled, considered, and/or were in the process of learning about and testing schools. If the school had more than 15 parents in a school’s class year, we selected 15 to 20 parents at random. If there were fewer than 15 parents in a class year for a given school, we invited all parents. Although the school principal or administrator introduced and closed the workshop, most of the workshop was held without the presence of school officials to guarantee that parents could speak freely about the schools their children attend or would prospectively attend as well as their perceptions of the quality of the instruction and facilities provided. While a workshop was occurring, the principal or administrator was interviewed regarding the management, operations, and pedagogy of the school.\footnote{90 percent of principal interviews were conducted with either the school director or the pedagogical director. Large schools tend to have both. The remaining 10 percent of interviews were conducted with a school founder, owner, or teacher.}

The workshops with parents proceeded in relatively similar fashions across clusters. They began with a general group discussion on what determines and character-
izes good students. Following this discussion, the score cards were presented. Follow-
ing the presentation of scorecards, we presented rates of teacher absenteeism in the
school, explaining the link between test scores and teacher presence. Moreover, scores
were also publicly displayed on the main roads within the 42 treated clusters for a
more widespread dissemination.

Parents were then encouraged to use the information on both test scores and teacher
absenteeism in future conversations, including with school directors and administra-
tors. Specifically, parents were prompted to select three representatives amongst them-
selves to organize a meeting with the school director and contact all parents to inform
them of the location and time of the gathering. These meetings had the intention of
empowering parents in their conversations with directors as they seek to improve the
quality of instruction provided and, in turn, student outcomes. The combination of
new information and the collective nature of this effort would provide parents with
greater bargaining power and voice in approaching directors than if they were to speak
as individuals without support or a frame of reference.

In most instances, the interviews with school directors or administrators were car-
ried out using scripts that were then tailored to each school and cluster as well as the
scorecards and record on teacher absenteeism. Depending on the version used, the
script would describe the relative performance, relative price, or both compared to the
average schools within the cluster. A script was employed for all school director or ad-
ministrator interviews in the treated clusters. The information on performance or price
provided to directors or administrators was consistent with the information provided
to parents.

4.3 Endline Data

In February 2019, approximately a year after the completion of the baseline surveys
and the rollout of the intervention, an endline assessment was conducted. Like with
the baseline assessment, the endline assessment sought to capture educational out-
comes for sampled students as well as parents and school directors’ perceptions re-
garding school quality. To mirror earlier procedure, the endline assessment equiva-
lently consisted of the national assessment for fifth-year students as well as surveys
for parents and school directors.

The endline dataset for test scores contained 12,916 fifth-year students. Of the origi-
inal 755 sampled schools at the baseline period, we could only recover and analyze results from 587 schools, with the addition of 7 schools for which we only have endline data for a total of 594 schools. Due to varied considerations, namely school closure or attrition, 168 schools were thus omitted from the endline assessment. There are no significant differences, however, in the variables of interest.\(^\text{12}\)

The concurrent surveys for school directors were the same as those for the baseline. We asked questions pertinent to the schools’ daily management and facilities, financial operations, pedagogies, and affiliations. The answers provided to these questions could then be compared to the responses from the initial rounds of the baseline assessment. Analogous to the attrition documented in the dataset of test scores, there was a conspicuous dip in the number of schools contained in this dataset. While the attrition itself was expected due to school closures, non-communication from certain schools, and the broader volatility of the educational market, which schools in question would not be included in the endline assessment could not be predicted with the same assurance. To that end, of the original 722 schools sampled, only 516 schools remained and contributed endline information to the school director datasets.\(^\text{13}\) Balance tables in the Appendix, both for the test scores and the surveys to principals show that there are no significant differences between the schools that stayed in the study and those who did not, and we also provide evidence that there is no significant impact of treatment on attrition.

Upon merging the baseline and endline assessments’ data (data used in the subsequent sections), we were also able to correct for outliers, specially on self reported data of fees. This entailed identifying schools where the percentage difference between the total fees calculated from the baseline and endline assessments’ data was below the 5th percentile or over the 95th percentile. A summary of the endline data for clusters, schools and test scores can be found in Table 2.

It is important to note that we do not have parents’ surveys after the intervention. We only have information from parents at the baseline period.

\(^\text{12}\)See Tables A1 and A2 in the appendix.
\(^\text{13}\)See fieldwork memo for more information.
5 Survey Descriptive Statistics of Schools and Families

5.1 Descriptive Statistics of Schools in Haiti

The baseline assessments provided important information from which descriptive observations can be drawn. These were divided between public and private schools, recognizing that approximately half of each group of schools would eventually receive the information provision.

Table 1: Baseline Summary Statistics

<table>
<thead>
<tr>
<th>Panel A. Cluster level</th>
<th>Mean</th>
<th>Median</th>
<th>SD</th>
<th>Obs.</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area (km(^2), within 1km buffer)</td>
<td>5.6</td>
<td>5.1</td>
<td>1.9</td>
<td>84</td>
<td>2.9</td>
<td>12.5</td>
</tr>
<tr>
<td>Avg. Total Fees</td>
<td>6,800</td>
<td>3,695</td>
<td>9,919</td>
<td>84</td>
<td>796</td>
<td>54,860</td>
</tr>
<tr>
<td>Avg. Total Fees (no outliers)</td>
<td>5,702</td>
<td>3,613</td>
<td>8,226</td>
<td>84</td>
<td>705</td>
<td>51,113</td>
</tr>
<tr>
<td>Avg. Total Fees (USD)</td>
<td>111.3</td>
<td>60.5</td>
<td>162.3</td>
<td>84</td>
<td>13.0</td>
<td>898</td>
</tr>
<tr>
<td>Avg. Total Fees (no outliers, USD)</td>
<td>93.3</td>
<td>59.1</td>
<td>134.6</td>
<td>84</td>
<td>11.5</td>
<td>836.5</td>
</tr>
<tr>
<td>Avg. Test Score 5th grade (std)</td>
<td>0.023</td>
<td>-0.039</td>
<td>0.52</td>
<td>84</td>
<td>-1.10</td>
<td>1.52</td>
</tr>
<tr>
<td>Number of Schools</td>
<td>10.9</td>
<td>8</td>
<td>6.44</td>
<td>84</td>
<td>5</td>
<td>28</td>
</tr>
<tr>
<td>Number of Students with Tests</td>
<td>164.0</td>
<td>121</td>
<td>119.2</td>
<td>84</td>
<td>37</td>
<td>620</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Panel B. School level</th>
<th>Mean</th>
<th>Median</th>
<th>SD</th>
<th>Obs.</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public schools</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>0.52</td>
<td>1</td>
<td>0.50</td>
<td>145</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total Fees</td>
<td>4,635.9</td>
<td>550</td>
<td>14,350.9</td>
<td>129</td>
<td>25</td>
<td>136,825</td>
</tr>
<tr>
<td>Total Fees (no outliers)</td>
<td>3,876.1</td>
<td>525</td>
<td>13,900.2</td>
<td>119</td>
<td>25</td>
<td>136,825</td>
</tr>
<tr>
<td>Total Fees (USD)</td>
<td>75.9</td>
<td>9.00</td>
<td>234.9</td>
<td>129</td>
<td>0.41</td>
<td>2,239</td>
</tr>
<tr>
<td>Total Fees (no outliers, USD)</td>
<td>63.4</td>
<td>8.59</td>
<td>227.5</td>
<td>119</td>
<td>0.41</td>
<td>2,239</td>
</tr>
<tr>
<td>Avg. Test Score 5th grade (std)</td>
<td>-0.16</td>
<td>-0.32</td>
<td>0.73</td>
<td>144</td>
<td>-1.53</td>
<td>1.99</td>
</tr>
<tr>
<td>Market Size (N schools)</td>
<td>14.3</td>
<td>12</td>
<td>7.67</td>
<td>129</td>
<td>5</td>
<td>28</td>
</tr>
<tr>
<td>School Market Share (%)</td>
<td>14.8</td>
<td>12.9</td>
<td>10.4</td>
<td>128</td>
<td>0.90</td>
<td>54.5</td>
</tr>
<tr>
<td>Teacher Experience (years)</td>
<td>9.57</td>
<td>9.57</td>
<td>3.62</td>
<td>120</td>
<td>1.50</td>
<td>20</td>
</tr>
<tr>
<td>Walls (%)</td>
<td>53.1</td>
<td>100</td>
<td>50.1</td>
<td>128</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Water Access (%)</td>
<td>76.0</td>
<td>100</td>
<td>42.9</td>
<td>129</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Electricity (%)</td>
<td>25.6</td>
<td>0</td>
<td>43.8</td>
<td>129</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Admission Test (%)</td>
<td>46.1</td>
<td>0</td>
<td>50.0</td>
<td>128</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Parent Interview (%)</td>
<td>90.6</td>
<td>100</td>
<td>29.3</td>
<td>128</td>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>

| Private schools       |          |         |          |      |      |      |
| Treatment             | 0.49     | 0       | 0.50     | 618  | 0    | 1    |
| Total Fees            | 8,446.9  | 3,100   | 25,987.1 | 589  | 1    | 409,150 |
| Total Fees (no outliers) | 7,311.9  | 3,200   | 19,093.8 | 551  | 1    | 337,600 |
| Total Fees (USD)      | 138.2    | 50.7    | 425.3    | 589  | 0.016| 6,696 |
| Total Fees (no outliers, USD) | 119.7    | 52.4    | 312.5    | 551  | 0.016| 5,525 |
| Avg. Test Score 5th grade (std) | 0.045    | -0.14   | 0.89     | 611  | -2.07| 2.81  |
| School Market Share (%) | 11.1     | 8.04    | 9.86     | 584  | 0    | 70.3  |
| Teacher Experience (years) | 8.30     | 7.86    | 3.82     | 548  | 1.50 | 20.5  |
| Walls (%)             | 60.9     | 100     | 48.8     | 585  | 0    | 100  |
| Water Access (%)      | 81.7     | 100     | 38.7     | 590  | 0    | 100  |
| Electricity (%)       | 28.7     | 0       | 45.3     | 585  | 0    | 100  |
| Admission Test (%)    | 47.0     | 0       | 50.0     | 585  | 0    | 100  |
| Parent Interview (%)  | 88.4     | 100     | 32.1     | 585  | 0    | 100  |

Note: This table shows baseline summary statistics for the variables used in the different analyses throughout the paper. Panel A shows statistics at the cluster level, and Panel B shows statistics at the school level, differentiating by public or private schools.
Intuitively, public schools appear cheaper than their private alternatives. For public schools, we calculated an average annual total fee of 75.9 dollars (USD) as opposed to 138.2 dollars (USD) for private schools. Without the aforementioned outliers, the mean total fees for both drop, but the mean total fees for private schools remains almost double the amount paid for public schools.

Figure 3: Distribution of Test Scores and Prices

![Histogram of Log School Fees](image1.png) ![Histogram of Standardized Test Scores](image2.png)

Note: This figure shows a histogram of log school fees (left panel) and median school test scores (right panel). Data comes from the baseline school survey and tests.

Private schools individually have a smaller share of their market. Private schools captured on average 11.1 percent of their respective clusters’ markets, while public schools captured on average 14.8 percent. There are many more private schools than public schools so that in the aggregate the private share in is 75%.

In terms of infrastructure, the survey data indicate that private schools fare better. Whereas 60.9 percent of private schools have walls for security, approximately only half of public schools do, too. Similar pictures emerge with basic utilities. Slightly over three-quarters of public schools have access to water and a fourth have electricity. Conversely, in the private schools sampled, over fourth-fifths have access to water and over a quarter have electricity.

To enroll their children, 90.6 percent of parents in public schools and 88.4 percent in private schools had to go through an interview with a school director or administrator. While 46.1 percent of children eventually enrolled in public schools had to take an
entrance exam, 47.0 percent of children who would later attend private schools had to complete an entrance examination. We did not evaluate the difficulty or length of these exams.

Tables A3 and A4 in the Appendix show pre-treatment balance tables, at the school level and at the student level to weigh school descriptive statistics based on enrollment. Schools in the treatment group had a slightly higher level of average fees, at a 90 percent significance level, and weighted by enrollment, they have higher percentage of schools that use parent interviews for admissions. Controlling for other variables of interest, there is no significant difference at the baseline between control and treatment groups.

For the endline, we were able to collect similar pieces of information as in the baseline. The average annual total fees for public schools and private schools were 132.0 dollars (USD) and 159.1 dollars (USD), respectively. Excluding outliers, those amounts change to 65.6 dollars (USD) and 153.3 dollars (USD). These numbers show an important decrease for the public sector, and a slight decrease for the private sector. Moreover, the infrastructure of public schools did not appear to improve greatly over the years. Both the percentages of public schools with walls and with water access stayed similar, with only 56.8 percent having walls and 77.8 percent having access to water. The percentage of public schools with electricity also remained similar with 29.8 percent. For private schools, the improvements made to facilities were clearer. There was a notable rise in the percentage of schools with walls, moving from 60.9 percent to 70.4 percent. Access to water jumped almost four percentage points while electricity access increased by nearly six percentage points.

To enroll their children in school, approximately between 87 percent and 88 percent of parents had to undergo interviews with school officials, both in public and private schools. Over half of all children had to complete an admissions test for enrollment, with 50.5 percent of children in public schools and 62.8 percent in private schools sitting for an entrance examination. This was a marked increase for public and private schools compared to the baseline.
Table 2: Endline Summary Statistics

<table>
<thead>
<tr>
<th>Panel A. Cluster level</th>
<th>Mean</th>
<th>Median</th>
<th>SD</th>
<th>Obs</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area (km^2, within 1km buffer)</td>
<td>5.6</td>
<td>5.1</td>
<td>1.9</td>
<td>84</td>
<td>2.9</td>
<td>12.5</td>
</tr>
<tr>
<td>Avg. Total Fees</td>
<td>8,267.7</td>
<td>5,150</td>
<td>11,375.5</td>
<td>79</td>
<td>100</td>
<td>91,788.5</td>
</tr>
<tr>
<td>Avg. Total Fees (no outliers)</td>
<td>6,798.7</td>
<td>5,168.8</td>
<td>5,785.3</td>
<td>78</td>
<td>275</td>
<td>30,804.2</td>
</tr>
<tr>
<td>Avg. Total Fees (USD)</td>
<td>143.5</td>
<td>84.4</td>
<td>187.4</td>
<td>79</td>
<td>1.64</td>
<td>1,502.3</td>
</tr>
<tr>
<td>Avg. Total Fees (no outliers, USD)</td>
<td>119.6</td>
<td>84.6</td>
<td>97.3</td>
<td>78</td>
<td>9.00</td>
<td>504.2</td>
</tr>
<tr>
<td>Avg. Test Score 5th grade (std)</td>
<td>-0.024</td>
<td>-0.075</td>
<td>0.53</td>
<td>84</td>
<td>-1.30</td>
<td>1.59</td>
</tr>
<tr>
<td>Number of Schools</td>
<td>10.9</td>
<td>8</td>
<td>6.44</td>
<td>84</td>
<td>5</td>
<td>28</td>
</tr>
<tr>
<td>Number of Students with Tests</td>
<td>153.8</td>
<td>103.5</td>
<td>154.9</td>
<td>84</td>
<td>15</td>
<td>938</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Panel B. School level</th>
<th>Mean</th>
<th>Median</th>
<th>SD</th>
<th>Obs</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public schools</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td>0.52</td>
<td>1</td>
<td>0.50</td>
<td>145</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total Fees</td>
<td>6,623.1</td>
<td>350</td>
<td>35,696.0</td>
<td>95</td>
<td>0</td>
<td>345,680</td>
</tr>
<tr>
<td>Total Fees (no outliers)</td>
<td>3,204.9</td>
<td>350</td>
<td>6,481.4</td>
<td>85</td>
<td>0</td>
<td>41,900</td>
</tr>
<tr>
<td>Total Fees (USD)</td>
<td>132.0</td>
<td>11.3</td>
<td>643.0</td>
<td>78</td>
<td>0.82</td>
<td>5,657.6</td>
</tr>
<tr>
<td>Total Fees (no outliers, USD)</td>
<td>65.6</td>
<td>11.3</td>
<td>115.0</td>
<td>68</td>
<td>0.82</td>
<td>685.8</td>
</tr>
<tr>
<td>Avg. Test Score 5th grade (std)</td>
<td>-0.20</td>
<td>-0.29</td>
<td>0.75</td>
<td>110</td>
<td>-1.71</td>
<td>1.88</td>
</tr>
<tr>
<td>Market Size (N schools)</td>
<td>14.4</td>
<td>13</td>
<td>7.79</td>
<td>95</td>
<td>5</td>
<td>28</td>
</tr>
<tr>
<td>School Market Share (%)</td>
<td>18.4</td>
<td>14.4</td>
<td>13.8</td>
<td>93</td>
<td>1.48</td>
<td>70.3</td>
</tr>
<tr>
<td>Teacher Experience (years)</td>
<td>10.4</td>
<td>9.70</td>
<td>4.13</td>
<td>72</td>
<td>1.50</td>
<td>22.8</td>
</tr>
<tr>
<td>Walls (%)</td>
<td>56.8</td>
<td>100</td>
<td>49.8</td>
<td>95</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Water Access (%)</td>
<td>77.8</td>
<td>100</td>
<td>41.9</td>
<td>72</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Electricity (%)</td>
<td>29.8</td>
<td>0</td>
<td>46.0</td>
<td>94</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Admission Test (%)</td>
<td>50.5</td>
<td>100</td>
<td>50.3</td>
<td>95</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Parent Interview (%)</td>
<td>87.4</td>
<td>100</td>
<td>33.4</td>
<td>95</td>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Private schools</th>
<th>Mean</th>
<th>Median</th>
<th>SD</th>
<th>Obs</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>0.49</td>
<td>0</td>
<td>0.50</td>
<td>618</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total Fees</td>
<td>9,349.3</td>
<td>5,625</td>
<td>14,765.4</td>
<td>421</td>
<td>0</td>
<td>176,800</td>
</tr>
<tr>
<td>Total Fees (no outliers)</td>
<td>8,974.3</td>
<td>5,800</td>
<td>12,172.6</td>
<td>383</td>
<td>0</td>
<td>156,125</td>
</tr>
<tr>
<td>Total Fees (USD)</td>
<td>159.1</td>
<td>98.2</td>
<td>244.4</td>
<td>405</td>
<td>0.41</td>
<td>2,893.6</td>
</tr>
<tr>
<td>Total Fees (no outliers, USD)</td>
<td>153.3</td>
<td>100.7</td>
<td>201.1</td>
<td>367</td>
<td>0.41</td>
<td>2,555.2</td>
</tr>
<tr>
<td>Avg. Test Score 5th grade (std)</td>
<td>0.013</td>
<td>-0.076</td>
<td>0.84</td>
<td>484</td>
<td>-1.93</td>
<td>2.54</td>
</tr>
<tr>
<td>Market Size (N schools)</td>
<td>14.7</td>
<td>13</td>
<td>7.67</td>
<td>421</td>
<td>5</td>
<td>28</td>
</tr>
<tr>
<td>School Market Share (%)</td>
<td>15.0</td>
<td>9.58</td>
<td>15.1</td>
<td>412</td>
<td>0.94</td>
<td>100</td>
</tr>
<tr>
<td>Teacher Experience (years)</td>
<td>8.62</td>
<td>7.50</td>
<td>4.11</td>
<td>321</td>
<td>1.50</td>
<td>25</td>
</tr>
<tr>
<td>Walls (%)</td>
<td>70.4</td>
<td>100</td>
<td>45.7</td>
<td>419</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Water Access (%)</td>
<td>85.8</td>
<td>100</td>
<td>35.0</td>
<td>345</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Electricity (%)</td>
<td>34.8</td>
<td>0</td>
<td>47.7</td>
<td>420</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Admission Test (%)</td>
<td>62.8</td>
<td>100</td>
<td>48.4</td>
<td>417</td>
<td>0</td>
<td>100</td>
</tr>
<tr>
<td>Parent Interview (%)</td>
<td>87.8</td>
<td>100</td>
<td>32.8</td>
<td>418</td>
<td>0</td>
<td>100</td>
</tr>
</tbody>
</table>

Note: This table shows endline summary statistics for the variables used in the different analyses throughout the paper. Panel A shows statistics at the cluster level, and Panel B shows statistics at the school level, differentiating by public or private schools.
5.2 Parental Background, Preferences and Information Sources

Table 3 shows, parents across sampled schools possessed low levels of education, with nearly 50 percent having no or incomplete primary education. Only 56 percent of these parents live above the extreme poverty line (USD 1.25 per day). Importantly, we also registered the characteristics of both households that sent children to private schools and to public schools. It is relevant to distinguish between private and public schools as our analysis will consider price as an observable proxy for information on school quality. Differences across demographic, socioeconomic, and educational lines were apparent. The average age of sampled parents who sent their children to public schools was 39.75 years old, which was slightly higher than the average of 38.81 in private schools. Conversely, the average percentage of female guardianship was slightly higher for sampled parents who sent their children to private schools at 74.4 percent as opposed to 73.6 percent in public schools. We also observed that parents with children enrolled in private schools have relatively higher earnings as well as slightly higher education levels compared to parents in public schools.

Table 3: Parents Descriptives

<table>
<thead>
<tr>
<th>Educational Level</th>
<th>Private Schools</th>
<th>Public Schools</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>None</td>
<td>298</td>
<td>18.52</td>
</tr>
<tr>
<td>Incomplete Primary</td>
<td>466</td>
<td>28.96</td>
</tr>
<tr>
<td>Complete Primary</td>
<td>228</td>
<td>14.17</td>
</tr>
<tr>
<td>Incomplete Secondary</td>
<td>434</td>
<td>26.97</td>
</tr>
<tr>
<td>Complete Secondary</td>
<td>87</td>
<td>5.41</td>
</tr>
<tr>
<td>Incomplete Professional Training</td>
<td>9</td>
<td>0.56</td>
</tr>
<tr>
<td>Complete Professional Training</td>
<td>16</td>
<td>0.99</td>
</tr>
<tr>
<td>Incomplete University</td>
<td>28</td>
<td>1.74</td>
</tr>
<tr>
<td>Complete University</td>
<td>43</td>
<td>2.67</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Monthly Income</th>
<th>Gourdes</th>
<th>USD</th>
<th>Gourdes</th>
<th>USD</th>
<th>Gourdes</th>
<th>USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>5,120</td>
<td>83.81</td>
<td>5,207</td>
<td>85.22</td>
<td>4,728</td>
<td>77.39</td>
</tr>
<tr>
<td>Min</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>P10</td>
<td>50</td>
<td>0.82</td>
<td>10</td>
<td>0.16</td>
<td>250</td>
<td>4.09</td>
</tr>
<tr>
<td>P25</td>
<td>1,000</td>
<td>16.37</td>
<td>1,000</td>
<td>16.37</td>
<td>1,000</td>
<td>16.37</td>
</tr>
<tr>
<td>Median</td>
<td>2,500</td>
<td>40.92</td>
<td>2,500</td>
<td>40.92</td>
<td>2,000</td>
<td>32.73</td>
</tr>
<tr>
<td>P75</td>
<td>5,000</td>
<td>81.83</td>
<td>5,000</td>
<td>81.83</td>
<td>5,000</td>
<td>81.83</td>
</tr>
<tr>
<td>P90</td>
<td>10,000</td>
<td>163.67</td>
<td>10,500</td>
<td>171.84</td>
<td>10,000</td>
<td>163.67</td>
</tr>
<tr>
<td>Max</td>
<td>100,000</td>
<td>1,636.66</td>
<td>100,000</td>
<td>1,636.66</td>
<td>100,000</td>
<td>1,636.66</td>
</tr>
</tbody>
</table>

Age (average) 38.80 38.81 39.75

Female Guardianship (%) 74.28 74.42 73.63

Note: This table shows summary statistics of the characterization of parents surveyed.

When deciding where to send their children to schools, parents usually consider
a host of factors, from the backgrounds and qualifications of teachers and staff to the presence of basic infrastructure and utilities. There is a general assumption that parents would prefer to send their children to the best schools possible within the options available to them. However, there are important first-order questions that need to be addressed. Specifically, when determining what constitutes the best school, we must delineate which factors parents are relying on to make these evaluations, and what sources of information, beyond school location, they are using to both determine the options available to them and further evaluate the quality of potential schools.

The baseline assessment conducted in 2017 and 2018 allowed for the construction of a parental preference dataset from which noteworthy descriptive observations can be made. It is clear that parents have preferences and expectations around where to enroll their children. While these preferences are acted upon with varying degrees of commitment, there are trends in how these preferences are formed at the onset and what they look for as indicators of school quality.

In this context, we can use the survey data collected from parents to aggregate and understand these preferences. Namely, we can examine what characteristics or track records they look for when evaluating schools, which sources of information they deploy and prioritize in their evaluations, and whether these preferences differ a priori by eventual private and public school enrollment. These will in turn enable us to investigate how these preferences can align with, and potentially, be shaped by more objective information on school quality and performance.

As Table 4 displays, when parents were asked to rank what they considered important features of a high-quality school, over 90 percent ranked having good teachers, which is a reasonable proxy for the quality of academic instruction. While having good teachers may not directly correspond with students learning or performing well on standardized examinations, teaching is understandably integral to a school’s operations. The most popular answers aside from good teachers were having good students, consistent and frequent classes, and having decent infrastructure. There are no significant differences in parents’ rankings based on their child’s enrollment, with some minimal relative variation on the margins. For example, we can note that parents with children in public schools appear to place slightly greater emphasis on school infrastructure and having a full school day, while parents with children in private schools place slightly greater emphasis on having good peers, safety, and religious formation.

Across the board, the information parents used to inform their preferences was dictated by their surroundings. As Figure 4 shows, many parents suggested that they
Table 4: Ranking of characteristics of schools’ quality

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Mentions (% from each group)</th>
<th>Total Mentions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good teachers</td>
<td>Private S. 92%</td>
<td>Public S. 91%</td>
</tr>
<tr>
<td>Good students</td>
<td>38%</td>
<td>35%</td>
</tr>
<tr>
<td>Regularity of classes</td>
<td>32%</td>
<td>31%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>28%</td>
<td>30%</td>
</tr>
<tr>
<td>Safety</td>
<td>23%</td>
<td>20%</td>
</tr>
<tr>
<td>Full school day</td>
<td>20%</td>
<td>24%</td>
</tr>
<tr>
<td>What your child learns at school</td>
<td>19%</td>
<td>22%</td>
</tr>
<tr>
<td>Teachers’ attendance</td>
<td>17%</td>
<td>19%</td>
</tr>
<tr>
<td>Religious formation</td>
<td>9%</td>
<td>6%</td>
</tr>
<tr>
<td>Number of students per class</td>
<td>8%</td>
<td>7%</td>
</tr>
<tr>
<td>Socioeconomic level of families</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>English or French classes</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Total number of students</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Private school</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>N total</td>
<td>1,840</td>
<td>440</td>
</tr>
</tbody>
</table>

Note: This table shows the characteristics that parents ranked as features considered important for a high-quality school.

relied on their community to gather insights around schools’ quality. While listening to the school was helpful, parents trusted their networks to understand what a school could offer their children, particularly in comparison to its peers. This included relying on religious groups, neighbors, and other civic associations they are affiliated with. Fewer parents used government or media sources to assess the quality of a school, which was unsurprising in the Haitian context.

Figure 4: Parent information sources about schools

Note: This figure shows the distribution of responses to the question “In general, parents/legal guardians obtain information about schools through various means. What sources did you use to inform yourself about the schools?”
5.3 Test Scores, Schooling Inputs and Total Fees

Besides descriptively observing that parents prefer higher quality schools within their given budget and informational constraints, our research noted the wide range of information sources parents draw on as well as the characteristics they desire and elevate as important.

To that end, using data from the baseline assessments, we test the initial relationship between the test scores for private schools and the total fees parents pay. To quantify school performance, we took the standardized test score of fifth-year students and averaged them at the school level. We also ran the regression with fixed effects by market to account for intra-market variation and shocks. We also incorporated dummy variables on whether the school in question has walls, a library, access to running water, or electricity.

Table 5 captures our output. A one unit increase in average standardized test scores in a private school coincided with a 45.843 increase in the average total fees charged (in USD), as calculated during the baseline assessment. When considering the cluster fixed effects and incorporating controls for non-instructional quality, the coefficient on average test score jumped to 70.148. No significant effect is found in these specifications. When evaluating the same regressions over the logarithm of fees (in Haitian gourdes), we see a significant and positive effect of test scores on fees charged. A one unit increase in the average standardized test scores in a private school coincided with a 17.7 percent increase in fees charged at a 90 percent confidence level. For public schools, as shown in Table A6 in the Appendix, there is no significant effect for any specification.

These results show that, although the coefficients on average test scores are positive, there is minimal evidence of a relationship between fees paid and test scores for fifth-graders in these rural Haitian markets. This suggests that the markets had noisy signals of price regarding school quality.

In light of asymmetries and absolute scarcity of information, the value each school brings to the market has yet to be properly understood. To that end, while the baseline data suggest that parents do value school quality, they lack the information to make informed decisions, which manifests in the absence of a correlation between what parents pay and the actual quality of the school.
Table 5: Fee-Test Score Relationship at Baseline (Private Schools)

<table>
<thead>
<tr>
<th></th>
<th>Fees (USD)</th>
<th>Log(Fees) (Gourdes)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>Avg. Test Score 5th grade (SD)</td>
<td>45.843</td>
<td>70.148</td>
</tr>
<tr>
<td></td>
<td>(32.023)</td>
<td>(52.748)</td>
</tr>
<tr>
<td>Wall (%)</td>
<td>0.314</td>
<td>0.003*</td>
</tr>
<tr>
<td></td>
<td>(0.238)</td>
<td>(0.002)</td>
</tr>
<tr>
<td>Water Access (%)</td>
<td>0.312</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>(0.443)</td>
<td>(0.002)</td>
</tr>
<tr>
<td>Electricity (%)</td>
<td>-0.137</td>
<td>0.002</td>
</tr>
<tr>
<td></td>
<td>(0.329)</td>
<td>(0.002)</td>
</tr>
<tr>
<td>Library (%)</td>
<td>0.054</td>
<td>0.003</td>
</tr>
<tr>
<td></td>
<td>(0.291)</td>
<td>(0.002)</td>
</tr>
<tr>
<td>Constant</td>
<td>118.038***</td>
<td>77.168**</td>
</tr>
<tr>
<td></td>
<td>(14.852)</td>
<td>(35.483)</td>
</tr>
</tbody>
</table>

Market FE ✓ ✓✓
R2 0.017 0.246 0.004 0.352
Observations 545 530 545 530

Note: Standard errors are clustered at the market/cluster level (in parentheses). These results are obtained using averages of schools variables by market. The variables Wall, Water access, Electricity, and Library are dummy variables equal to 1 if the school has that infrastructure (walls around the school, access to water, electricity, and a library). Significance levels * p < .1, ** p < .05, *** p < .01.

6 Empirical Framework

Reducing informational asymmetries and scarcity has the potential to alter the picture described in the previous section. When presented with more and new information, it is conceivable that families can better act on their preferences in what they eventually choose and demand. In the Haitian educational context, for parents assigned to the treatment group that would receive report cards and participate in workshops that communicate school performance, the ability to adjudicate the quality of a school may be consequently more consistent with their stated preferences for higher quality education and improved student outcomes. This happens as they can draw from and rely upon what is understood to be more objective and relevant indicators of school quality. Their evaluations are likely better as a result.

Subsequently, these evaluations equip parents to better assess whether and how these prices coincide with the quality of the service they are paying for. Parents can then take action, including speaking with school administrators as we nudged parents to do, call for measurable improvements in school quality, and potentially enrolling their children in different schools. In the treated group, schools will likely respond to these soft and hard pressures with possible actions such as readjusting their total fees, investing further in instructional quality, expanding the number of enrolled students,
or closing altogether. Greater quantity and quality of information may equip parents
to act more effectively on their preferences, and prices may begin to possess and re-
tain meaning. These markets can become more efficient, outcomes for students, and
schools may improve. These include student test scores, total fees paid, and market
share.

To determine whether this happened after the disclosure policy, we compare the
outcomes of interest across markets that were intervened and those that were not. We
also leverage the baseline to compare each group to itself and to the other group over
time. The randomized control trial specification follows:

\[ Y_{ist} = \alpha + \psi \text{Treat}_{ist} + \theta \text{Private}_{ist} + \phi (\text{Treat}_{ist} \times \text{Private}_{ist}) + \omega_s + \epsilon_{ist} \] (1)

Given that the expected effects will vary depending on whether schools were high
scoring initially or not, we repeat the analysis for all schools and then subset only for
those that were high scoring at baseline. We evaluate these results with student-level
data to weigh all the regressions for schools and market size, based on enrollment.

The variable \( Y_{ist} \) corresponds to the three outcomes (fees, test scores, and market
share) for student \( i \) from the school \( s \) at the time \( t \). \( \text{Treat}_{ist} \) is a dummy variable that
is equal to 1 when the student comes from a school of the treatment group, \( \text{Post}_{ijt} \) is a
dummy variable that is equal to 1 when the student is observed at the endline (post-
treatment), \( \text{Private}_{ist} \) is a dummy variable that is equal to 1 when the student comes
from a private school, \( \omega_s \) is a school-level control for the average baseline characteris-
tics, and \( \epsilon_{ist} \) is a normally distributed error term. Standard errors are clustered at the
market-level. This estimation only considers schools in what we called the “test sam-
ple” or “survey sample” depending on the outcome for schools with data collected in
the principal surveys during the baseline and endline assessments.
7 Market Level Results from the RCT

7.1 Information Disclosure Effects on Test Scores

The analysis presented in Table 6 shows the estimated effect of treatment on test scores. The three specifications present heterogeneous effects for private schools and for high baseline test score schools. The results show that private schools in treated markets improved test scores by 0.22 standard deviations while public schools seem to not have been affected in any significant way. When focusing on higher or lower test scores schools in the baseline we do not find any evidence of heterogeneous effects.

Table 6: Impacts on Students’ Test Scores

<table>
<thead>
<tr>
<th></th>
<th>Treatment</th>
<th>Private</th>
<th>Private x High Q. in market</th>
<th>Treat x Private x High Q. in market</th>
<th>Sch. Mean Baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.15 (0.12)</td>
<td>0.03 (0.10)</td>
<td>-0.02 (0.17)</td>
<td>0.12 (0.22)</td>
<td>0.47*** (0.06)</td>
</tr>
<tr>
<td>Public</td>
<td>-0.06 (0.15)</td>
<td>-0.27 (0.17)</td>
<td>-0.06 (0.15)</td>
<td>0.22* (0.13)</td>
<td>0.48*** (0.06)</td>
</tr>
<tr>
<td>Public schools</td>
<td>-0.06 (0.15)</td>
<td>-0.06 (0.15)</td>
<td>-0.06 (0.15)</td>
<td>0.20 (0.13)</td>
<td>0.47*** (0.07)</td>
</tr>
<tr>
<td>Private schools</td>
<td>0.22* (0.13)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Quality Private</td>
<td>0.20 (0.13)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Quality Private</td>
<td>0.32 (0.25)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline mean</td>
<td>-0.02</td>
<td>-0.02</td>
<td>-0.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R-squared</td>
<td>0.12</td>
<td>0.12</td>
<td>0.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>12799</td>
<td>12799</td>
<td>12799</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
7.2 **Information Disclosure Effects on Market Shares**

In this analysis we see that market shares change significantly in markets with the disclosure intervention. The evidence shows that private schools that were high scoring in the baseline period saw their market share increase by approximately 4%-5%. The appendix presents a complementary panel regression on enrollment that shows similar results where private schools with high baseline scores increase enrollment by 58 students on average.

<table>
<thead>
<tr>
<th>Table 7: Impacts on Market share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Markets</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Private School</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Treatment x Private School</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Public School</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Treatment x Public School</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Private x High Quality in Market</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Treat x Private x High Quality in Market</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Baseline Market share</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Public schools</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Private schools</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Low Quality Private</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>High Quality Private</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Baseline mean</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>R-squared</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
7.3 Information Disclosure Effects on School Fees

We look at the effects of disclosure on school fees at private schools. We find evidence that treated markets see increasing prices for private schools with high test scores at baseline. The evidence that high scoring schools may have systematically increased their prices is consistent with the result that high scoring schools increase market share in treated markets and a can be an indicator that demand increased at the higher scoring schools.

<table>
<thead>
<tr>
<th></th>
<th>Treatment</th>
<th>Treat x High Quality</th>
<th>Treat x High Quality in market</th>
<th>Baseline Fees</th>
<th>Low Quality</th>
<th>High Quality</th>
<th>Baseline mean</th>
<th>R-squared</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>38.69</td>
<td>84.38*</td>
<td>125.20**</td>
<td>0.13*</td>
<td>28.91</td>
<td>113.29*</td>
<td>112.17</td>
<td>0.03</td>
<td>360</td>
</tr>
<tr>
<td></td>
<td>(46.60)</td>
<td>(49.65)</td>
<td>(53.54)</td>
<td>(0.07)</td>
<td>(46.35)</td>
<td>(67.43)</td>
<td>(67.43)</td>
<td>(0.06)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>28.91</td>
<td>113.29*</td>
<td>152.43**</td>
<td>0.13*</td>
<td>27.23</td>
<td>112.17</td>
<td>112.17</td>
<td>0.05</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(46.35)</td>
<td>(67.43)</td>
<td>(73.94)</td>
<td>(0.06)</td>
<td>(45.11)</td>
<td>(73.94)</td>
<td>(73.94)</td>
<td>(0.06)</td>
<td></td>
</tr>
</tbody>
</table>

Table 8: Impacts on Private School Fees
7.4 Correlation Between Prices, Test Scores, and Information

In this section we take the approach of studying whether prices and quality are correlated and if this relationship increases with information disclosure as would be expected. The Table 9 shows the correlation between prices and quality and the accompanying figure presents a visual description of the same relationship before and after the intervention. We find that at baseline, the correlation between prices and test scores overall is weakly positive but not statistically significant in our sample. After the intervention we are able to detect a significant correlation in treatment markets, driven by the sample of private schools. The figure below shows that high scoring schools seemed to have raised prices while lower performing schools decreased their prices. These heterogeneous results are consistent with point estimates from the RCT analysis but are not found to be significant in most specifications.

Figure 5: Disclosure and the Correlation Between Test Scores and Prices

![Figure 5: Disclosure and the Correlation Between Test Scores and Prices](image)

Note: The figures show a scatterplot calculated using the median price reported at each school on the y-axis and the median school test score on the x-axis. The continuous lines are local moving averages. This analysis is at the school level.

Table 9: Gradient Fees - Test scores

<table>
<thead>
<tr>
<th></th>
<th>Log(Fees) Pre</th>
<th>Log(Fees) Post</th>
<th>Log(Fees)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Score</td>
<td>0.052</td>
<td>0.157**</td>
<td>0.038</td>
</tr>
<tr>
<td></td>
<td>(0.068)</td>
<td>(0.068)</td>
<td>(0.068)</td>
</tr>
<tr>
<td>Treat x Score x Post</td>
<td>0.230**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.105)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>7552</td>
<td>8151</td>
<td>15703</td>
</tr>
</tbody>
</table>
8 Conclusion

This paper contributes to a general understanding regarding the role of information in education markets in a developing country context characterized by a large private schooling market share. We produced novel datasets in a country with limited infrastructure for data collection, running both baseline and endline assessments involving thousands of students, parents, and school principals. These were coupled with a market level randomized controlled trial. We use our survey data to describe education markets in Haiti, families school choice preferences and we document the overall lack of information regarding schooling options. The market level information disclosure RCT shows evidence that policies that provide objective metrics on school performance can lead to improvements in student achievement in a cost effective way.

Survey data shows Haitian parents prefer schools with better schooling inputs such as higher quality teachers and infrastructure. Parents in Haiti are willing to pay significant fees to send their children to the schools with higher test scores but have limited information about their schooling options. In the aggregate we find a limited relationship between prices and school test scores in our baseline survey.

Through a randomized control trial, we show evidence that disclosing school-level test score information led to increased learning outcomes for students attending private schools of 0.22 standard deviations. The evidence suggests that schools with lower and higher initial test scores both see test score gains in markets where information is provided.

Results also show that private schools with higher baseline test scores experienced an increase in market share by 4 points and enrollment by 58 students. Evidence suggests private schools in the higher performing group of schools at baseline also increased fees. These results are consistent with information disclosure leading to increased demand at high scoring schools which then lead to higher market shares and higher prices. Interestingly, while prices and test scores were uncorrelated at baseline, the evidence suggests a shift towards a positive correlation in treatment markets post-disclosure. These results underscore the potential of providing information to enhance market efficiency and improve children’s welfare within the Haitian education context.

It is important to mention that this market level RCT has a small sample of villages and the study faced multiple difficulties collecting and measuring data during the fieldwork process in Haiti. The results are estimated with large standard errors and
additional heterogeneity analysis was not able to provide further insights. However, the individual results are consistent with each other and with the hypothesis that education markets in Haiti lack information. Taken together, the combination of results support the hypothesis that education markets in context like Haiti can work better with more information on school characteristics.

Given the low cost of creating and disseminating information, this evidence suggests that reducing information gaps can generate greater equity and efficiency of education systems, particularly in low-income settings with a large private sector. Future research should investigate what mechanisms and what ways of implementing information dissemination as a policy are most effective as well as the longer run effects on market equilibrium outcomes.

References


### Table A1: Attrition Balance Table: Surveys

<table>
<thead>
<tr>
<th>Variable</th>
<th>(1) Non-Attrited</th>
<th></th>
<th>(2) Attrited</th>
<th></th>
<th>T-test Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N/[Clusters]</td>
<td>Mean/SE</td>
<td>N/[Clusters]</td>
<td>Mean/SE</td>
<td>(1)-(2)</td>
</tr>
<tr>
<td>Treatment</td>
<td>516</td>
<td>0.490</td>
<td>206</td>
<td>0.505</td>
<td>0.015</td>
</tr>
<tr>
<td></td>
<td>[79]</td>
<td>(0.068)</td>
<td>[58]</td>
<td>(0.082)</td>
<td></td>
</tr>
<tr>
<td>Avg. Total Fees (no outliers, USD)</td>
<td>465</td>
<td>99.130</td>
<td>205</td>
<td>133.620</td>
<td>-34.490</td>
</tr>
<tr>
<td></td>
<td>[78]</td>
<td>(13.292)</td>
<td>[58]</td>
<td>(31.510)</td>
<td></td>
</tr>
<tr>
<td>Avg. Test Score (std)</td>
<td>508</td>
<td>0.013</td>
<td>206</td>
<td>0.019</td>
<td>0.006</td>
</tr>
<tr>
<td></td>
<td>[79]</td>
<td>(0.058)</td>
<td>[58]</td>
<td>(0.059)</td>
<td></td>
</tr>
<tr>
<td>Treatment x Test Score 1st quartile</td>
<td>516</td>
<td>0.112</td>
<td>206</td>
<td>0.092</td>
<td>0.020</td>
</tr>
<tr>
<td></td>
<td>[79]</td>
<td>(0.020)</td>
<td>[58]</td>
<td>(0.021)</td>
<td></td>
</tr>
<tr>
<td>Market Size (N schools)</td>
<td>516</td>
<td>14.665</td>
<td>206</td>
<td>14.869</td>
<td>-0.204</td>
</tr>
<tr>
<td></td>
<td>[79]</td>
<td>(1.129)</td>
<td>[58]</td>
<td>(1.327)</td>
<td></td>
</tr>
<tr>
<td>Public</td>
<td>516</td>
<td>0.184</td>
<td>206</td>
<td>0.165</td>
<td>0.019</td>
</tr>
<tr>
<td></td>
<td>[79]</td>
<td>(0.020)</td>
<td>[58]</td>
<td>(0.026)</td>
<td></td>
</tr>
<tr>
<td>School’s Market Share (%)</td>
<td>510</td>
<td>11.937</td>
<td>202</td>
<td>11.445</td>
<td>0.492</td>
</tr>
<tr>
<td></td>
<td>[79]</td>
<td>(0.870)</td>
<td>[58]</td>
<td>(1.006)</td>
<td></td>
</tr>
<tr>
<td>Wall (%)</td>
<td>508</td>
<td>59.055</td>
<td>205</td>
<td>60.488</td>
<td>-1.433</td>
</tr>
<tr>
<td></td>
<td>[79]</td>
<td>(3.607)</td>
<td>[58]</td>
<td>(4.886)</td>
<td></td>
</tr>
<tr>
<td>Teacher Experience (years)</td>
<td>481</td>
<td>8.516</td>
<td>187</td>
<td>8.553</td>
<td>0.037</td>
</tr>
<tr>
<td></td>
<td>[79]</td>
<td>(0.215)</td>
<td>[58]</td>
<td>(0.335)</td>
<td></td>
</tr>
<tr>
<td>Parent Interview (%)</td>
<td>511</td>
<td>89.237</td>
<td>202</td>
<td>87.624</td>
<td>1.613</td>
</tr>
<tr>
<td></td>
<td>[79]</td>
<td>(1.632)</td>
<td>[58]</td>
<td>(2.163)</td>
<td></td>
</tr>
<tr>
<td>Admission Test (%)</td>
<td>509</td>
<td>45.776</td>
<td>204</td>
<td>49.510</td>
<td>-3.734</td>
</tr>
<tr>
<td></td>
<td>[79]</td>
<td>(2.954)</td>
<td>[58]</td>
<td>(4.509)</td>
<td></td>
</tr>
</tbody>
</table>

Note: The value displayed for t-tests are the differences in the means across the groups. Standard errors clustered at the market/cluster level. Significance levels * $p < .1$, ** $p < .05$, *** $p < .01$. 
Table A2: Attrition and Treatment

<table>
<thead>
<tr>
<th></th>
<th>Attrition (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>0.012</td>
</tr>
<tr>
<td></td>
<td>(0.034)</td>
</tr>
<tr>
<td>Constant</td>
<td>0.279***</td>
</tr>
<tr>
<td></td>
<td>(0.024)</td>
</tr>
<tr>
<td>R2</td>
<td>0.000</td>
</tr>
<tr>
<td>Observations</td>
<td>722</td>
</tr>
</tbody>
</table>

Note: Standard errors clustered at the market/cluster level. Significance levels * p < .1, ** p < .05, *** p < .01.

Table A3: Baseline Balance Table, School level

<table>
<thead>
<tr>
<th>Variable</th>
<th>(1) Control</th>
<th></th>
<th>(2) Treatment</th>
<th></th>
<th>T-test Difference (1)-(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/[Clusters]</td>
<td>Mean/SE</td>
<td>N/[Clusters]</td>
<td>Mean/SE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avg. Test Score 5th grade (std)</td>
<td>357 [42]</td>
<td>0.020 [0.081]</td>
<td>357 [42]</td>
<td>0.009 [0.053]</td>
<td>0.011</td>
</tr>
<tr>
<td>Public</td>
<td>365 [42]</td>
<td>0.167 [0.026]</td>
<td>357 [42]</td>
<td>0.190 [0.025]</td>
<td>-0.023</td>
</tr>
<tr>
<td>Teacher Experience (years)</td>
<td>332 [42]</td>
<td>8.281 [0.240]</td>
<td>336 [42]</td>
<td>8.769 [0.270]</td>
<td>-0.488</td>
</tr>
</tbody>
</table>

Note: The value displayed for t-tests are the differences in the means across the groups. Standard errors clustered at the market/cluster level. Significance levels * p < .1, ** p < .05, *** p < .01.
Table A4: Baseline Balance Table, Schools at Student level

<table>
<thead>
<tr>
<th>Variable</th>
<th>(1) Control N/[Clusters]</th>
<th>Mean/SE</th>
<th>(2) Treatment N/[Clusters]</th>
<th>Mean/SE</th>
<th>T-test Difference (1)-(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. Total Fees (USD, no outliers)</td>
<td>5965 [42]</td>
<td>86.166</td>
<td>6276 [42]</td>
<td>132.020</td>
<td>-45.854*</td>
</tr>
<tr>
<td>Avg. Test Score 5th grade (std)</td>
<td>6402 [42]</td>
<td>0.028</td>
<td>6756 [42]</td>
<td>-0.014</td>
<td>0.042</td>
</tr>
<tr>
<td>Public</td>
<td>6410 [42]</td>
<td>0.204</td>
<td>6756 [42]</td>
<td>0.218</td>
<td>-0.014</td>
</tr>
<tr>
<td>School’s Market Share (%)</td>
<td>6410 [42]</td>
<td>0.007</td>
<td>6756 [42]</td>
<td>0.006</td>
<td>0.000</td>
</tr>
<tr>
<td>Teacher Experience (years)</td>
<td>5921 [42]</td>
<td>8.706</td>
<td>6334 [42]</td>
<td>9.206</td>
<td>-0.500</td>
</tr>
<tr>
<td>Parent Interview (%)</td>
<td>6375 [42]</td>
<td>87.765</td>
<td>6682 [42]</td>
<td>91.395</td>
<td>-3.630</td>
</tr>
<tr>
<td>Admission Test (%)</td>
<td>6280 [42]</td>
<td>48.599</td>
<td>6713 [42]</td>
<td>49.114</td>
<td>-0.515</td>
</tr>
</tbody>
</table>

Note: The value displayed for t-tests are the differences in the means across the groups. Standard errors clustered at the market/cluster level. Significance levels * $p < .1$, ** $p < .05$, *** $p < .01$. 
<table>
<thead>
<tr>
<th>Variable</th>
<th>(1) Non-Attrited</th>
<th></th>
<th>(2) Attrited</th>
<th></th>
<th>T-test Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N/[Clusters]</td>
<td>Mean/SE</td>
<td>N/[Clusters]</td>
<td>Mean/SE</td>
<td>(1)-(2)</td>
</tr>
<tr>
<td>Treatment</td>
<td>587 [84]</td>
<td>0.503 (0.067)</td>
<td>168 [68]</td>
<td>0.494 (0.075)</td>
<td>0.009</td>
</tr>
<tr>
<td>Avg. Total Fees (no outliers, USD)</td>
<td>543 [84]</td>
<td>116.553 (15.680)</td>
<td>120 [59]</td>
<td>82.161 (14.659)</td>
<td>34.392*</td>
</tr>
<tr>
<td>Avg. Test Score (std)</td>
<td>587 [84]</td>
<td>0.016 (0.051)</td>
<td>168 [68]</td>
<td>-0.024 (0.076)</td>
<td>0.040</td>
</tr>
<tr>
<td>Treatment x Test Score 1st quartile</td>
<td>587 [84]</td>
<td>0.111 (0.021)</td>
<td>168 [68]</td>
<td>0.083 (0.024)</td>
<td>0.027</td>
</tr>
<tr>
<td>Market Size (N schools)</td>
<td>587 [84]</td>
<td>14.867 (1.117)</td>
<td>127 [61]</td>
<td>14.205 (1.401)</td>
<td>0.662</td>
</tr>
<tr>
<td>Public</td>
<td>587 [84]</td>
<td>0.206 (0.017)</td>
<td>168 [68]</td>
<td>0.179 (0.036)</td>
<td>0.028</td>
</tr>
<tr>
<td>School’s Market Share (%)</td>
<td>577 [84]</td>
<td>12.021 (0.852)</td>
<td>127 [61]</td>
<td>10.958 (1.027)</td>
<td>1.064</td>
</tr>
<tr>
<td>Wall (%)</td>
<td>583 [84]</td>
<td>61.921 (3.454)</td>
<td>123 [61]</td>
<td>47.967 (5.465)</td>
<td>13.954***</td>
</tr>
<tr>
<td>Teacher Experience (years)</td>
<td>541 [82]</td>
<td>8.784 (0.199)</td>
<td>120 [60]</td>
<td>7.392 (0.312)</td>
<td>1.393***</td>
</tr>
<tr>
<td>Parent Interview (%)</td>
<td>578 [84]</td>
<td>88.927 (1.558)</td>
<td>127 [61]</td>
<td>87.402 (3.373)</td>
<td>1.526</td>
</tr>
<tr>
<td>Admission Test (%)</td>
<td>578 [84]</td>
<td>47.405 (2.896)</td>
<td>127 [61]</td>
<td>46.457 (4.945)</td>
<td>0.948</td>
</tr>
</tbody>
</table>

Note: The value displayed for t-tests are the differences in the means across the groups. Standard errors clustered at the market/cluster level. Significance levels * $p < .1$, ** $p < .05$, *** $p < .01$. 

34
Table A6: Fee-Test Score Relationship at Baseline (Public Schools)

<table>
<thead>
<tr>
<th></th>
<th>Fees (USD)</th>
<th>Log(Fees) Gourdes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>Avg. Test Score 5th grade (SD)</td>
<td>-15.014</td>
<td>-26.674</td>
</tr>
<tr>
<td></td>
<td>(14.759)</td>
<td>(26.589)</td>
</tr>
<tr>
<td>Wall (%)</td>
<td>-1.698</td>
<td>-0.002</td>
</tr>
<tr>
<td></td>
<td>(2.199)</td>
<td>(0.010)</td>
</tr>
<tr>
<td>Water Access (%)</td>
<td>1.026</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.910)</td>
<td></td>
</tr>
<tr>
<td>Electricity (%)</td>
<td>1.690</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.488)</td>
<td></td>
</tr>
<tr>
<td>Library (%)</td>
<td>-0.593</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.887)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>61.417***</td>
<td>41.744</td>
</tr>
<tr>
<td></td>
<td>(19.713)</td>
<td>(47.650)</td>
</tr>
</tbody>
</table>

Note: Standard errors are clustered at the market/cluster level (in parentheses). These results are obtained using averages of schools variables by market. The variables Wall, Water access, Electricity, and Library are dummy variables equal to 1 if the school has that infrastructure (walls around the school, access to water, electricity, and a library). Significance levels * p < .1, ** p < .05, *** p < .01.

Market FE ✓ ✓
R2 0.002 0.378 0.015 0.570
Observations 118 115 118 115

Figure 6: Number of Public and Private Primary Schools in Haiti by Year

Note: This figure shows the number of public and private primary Schools in Haiti by year (Elacqua et al., 2018), captured from IDB and World Bank estimates using 2002-2003, 2010-2011, and 2013-2014 School Censuses.
Table A7: Impacts on School Enrollment (Panel Analysis)

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>High Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>13</td>
<td>-76</td>
</tr>
<tr>
<td></td>
<td>(32)</td>
<td>(54)</td>
</tr>
<tr>
<td>Post</td>
<td>52</td>
<td>-24</td>
</tr>
<tr>
<td></td>
<td>(34)</td>
<td>(29)</td>
</tr>
<tr>
<td>Treat x Post</td>
<td>-45</td>
<td>57*</td>
</tr>
<tr>
<td></td>
<td>(35)</td>
<td>(33)</td>
</tr>
<tr>
<td>Treat x Post x Private</td>
<td>-12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(132)</td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>-136</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(163)</td>
<td></td>
</tr>
<tr>
<td>Post x Private</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(127)</td>
<td></td>
</tr>
<tr>
<td>Treat x Private</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(169)</td>
<td></td>
</tr>
<tr>
<td>Public schools</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(128)</td>
<td></td>
</tr>
<tr>
<td>Private schools</td>
<td>58*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(33)</td>
<td></td>
</tr>
<tr>
<td>Baseline mean</td>
<td>300</td>
<td>251</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.01</td>
<td>0.02</td>
</tr>
<tr>
<td>N</td>
<td>1032</td>
<td>170</td>
</tr>
<tr>
<td></td>
<td>170</td>
<td></td>
</tr>
</tbody>
</table>
## Author Contributions - Credit author statement

Table A8: Credit author statement

<table>
<thead>
<tr>
<th>Name</th>
<th>Contributions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Michael Borger</td>
<td>Writing, Visualization, Project administration, Investigation.</td>
</tr>
<tr>
<td>Gregory Elacqua</td>
<td>Conceptualization, Methodology, Validation, Writing, Supervision, Project administration, Funding acquisition, Investigation.</td>
</tr>
<tr>
<td>Isabel Jacas</td>
<td>Software, Data Curation, Visualization, Formal analysis.</td>
</tr>
<tr>
<td>Christopher Neilson</td>
<td>Conceptualization, Methodology, Validation, Data Curation, Writing, Supervision, Formal analysis.</td>
</tr>
<tr>
<td>Anne Sofie Westh Olsen</td>
<td>Conceptualization, Writing, Supervision, Project administration, Funding acquisition, Investigation.</td>
</tr>
</tbody>
</table>
Figure 7: Example of a specific score card

Note: This figure shows an example of the score card presented to sampled first-year parents who were assigned to the treatment group.
Supplementary Memo to “Report Cards: Parental Preferences, Information and School Choice in Haiti” 14

May 27, 2024

Intervention chronology

Over the course of five years (from 2016-2021), we conducted a randomized controlled trial in a set of rural neighborhoods in Haiti. It involved an intervention that provides information on test scores and fees for schools to parents as well as other nudges (e.g., workshops for parents in a community) that might affect the dynamics of the Haitian education markets.

We worked with the Ministry of Education (MENFP) and with an implementing partner called L’Institut Haïtien de Formation en Sciences de l’Éducation (IHFOSED) 15, to conduct fieldwork for the baseline assessment, the RCT intervention, and the end-line assessment as well as in the presentation of final results.

While initially planned for three years, the RCT was delayed due to several exogenous circumstances, many of which disproportionately impacted Haiti; these included but were not limited to:

• Numerous political challenges/changes, including controversial elections, social upheaval, and massive protests

• 2016 flooding in the North of the country, which impeded accessibility to some schools

• 2016 Hurricane Mathew, with hundreds of schools damaged and over 450,000 children estimated out of school

---

14Michael Borger (Bridgespan Group), Gregory Elacqua (Inter-American Development Bank), Isabel Jacas (ConsiliumBots), Christopher Neilson (Yale University and ConsiliumBots), Anne Sofie Westh Olsen (Novo Nordisk). The authors wish to thank the Rolland St. Pierre who coordinated the data collection in the field, as well as the research assistants, enumerators and field surveyors that made this research in Haiti possible. We would also like to thank the parents, teachers, principals, and students that participated in the study.

15IHFOSED is a training, consulting and research center in Haiti.
• 2017 Hurricane Irma, with numerous schools suspended for months and instead, used as shelters and temporary housing

• 2017 withdrawal of the UN MINUSTAH mission

• 2020 COVID-19 global pandemic and associated lockdowns

These all caused logistical issues to the fieldwork, which was conducted over five years and in nine stages: with three field interventions to pilot the instruments, five field interventions, and one online intervention due to COVID-19.

We developed the instruments for the surveys from existing relevant questionnaires in the literature and adapted them to the Haitian context. For the parent survey, we used the questionnaire in Elacqua et al. (2006). In the case of the school survey, we used several questionnaires applied in past research projects: i) IEA Questionnaire; ii) Quality Assurance System questionnaire; and iii) Questionnaire used in Andrabi, Das and Khwaja (2015).

1. Baseline assessment:
   (a) 2016: Director and Parent survey development/pilot (Ouest Department) – this included training of enumerators, data entry, etc.
   (b) January-March 2017: Director and Parent survey
   (c) April 2017: 5th grade evaluation

2. Randomized controlled trial:
   (a) Scorecard development/pilot (Delmas, Cayes and Marmelade) - The 13 pilot schools were not included in the 357 treatment schools
   (b) March 2018: Interventions for the treated group (e.g., information provisions, parent-centric nudges, etc.)

3. Endline assessment:
   (a) June 2019: 5th grade evaluation
   (b) June 2019: Endline survey development/pilot (Kenscoff)
   (c) May 2020: Principal survey started online, through a call-center
   (d) May-June 2021: Principal survey (to collect missing data)
Number of schools in each process

- Baseline sample:
  - Principal survey: 722 schools
  - Evaluation: 755 schools, with 13,779 test scores
  - Principal survey and evaluation: 714 schools
  - Parental survey: 746 schools

- Intervention
  - 5,335 parents and 357 principals across treated clusters

- Endline sample
  - Principal survey: 516 schools
  - Evaluation: 594 schools (587 from the original set, with the addition of 7 schools), 12,916 test scores
  - Principal survey and evaluation: 446 schools
  - Parental survey: not possible to conduct at endline due to logistical difficulties

Intervention

5,335 parents and 357 principals took part in the intervention (see pictures below). We interviewed the principal or equivalent school director at the same time that we held the workshops for parents. The principal opened the workshop and closed the workshop but was kept away during the workshop, to avoid them attending and parents feeling intimidated from talking openly.

At least 15 parents attended each workshop. If there were fewer than 15 parents in a class, all the parents of the first-year students were invited. If there were more than 15 parents in a class, 15-20 parents were chosen at random.

In the treated group, parents received a scorecard with the price and test performance of schools in their area, as explained during the workshop. In simultaneous separate meetings, directors received the same scorecard.
The parents were encouraged to select three people to organise a meeting with the director and contact all the parents to tell them when and where to meet for it. At the end of a two-week period in which the parents would review the scorecard we provided to them, they would talk to the director about teacher presence, instructional quality, and school performance.

The aim here was to empower parents to exert influence over the director as a group in order to improve school performance and, ultimately, student learning. It was important to create a group effort given the very low bargaining power parents have in rural Haiti (due to low education levels, low incomes, and comparatively low social standing).

**Explanation for the gradual loss of schools**

Baseline sample: We used GIS data from the 2014-2015 Haitian School Mapping Project and applied the following filters: the school has at least one 1st and 5th cycle primary class. Out of the 915 schools in the original sample file based on data from 2014-2015, 152 schools that were supposed to be sampled were missing when we initiated the fieldwork in 2017. Only 21 clusters had the complete number of schools surveyed (190 schools in total). Additionally, in 41 schools, we were not able to conduct the initial principal survey. Hence our baseline for both Principal Survey and Evaluation was 714 schools.

**Main reason:**

- School closures

For the endline sample, we could recover and analyse evaluation results from students in only 594 schools. Due to varied considerations, mainly school closure, 206 schools were thus omitted from the endline assessment, of which 34 were private and 172 were public.

Such a high number of school closures should be understood in the specific context of the Haitian education system, where 85% of schools were small unlicensed private schools. The 2015-2016 school census showed that the Haitian system served 3,289,626 children in primary school, in 18,551 schools whereof 85% were private schools. 516 schools contributed endline information to the parental and school director datasets. It
should be noted that the attrition on the principal’s survey is notably higher in northern Haiti.

**Other reasons:**

- **Accessibility:**
  - Remote locations only attainable by foot
  - In the Ouest region, specific difficulties were experienced in reaching the island of Gonave.
  - Natural disasters (Hurricane Irma, Hurricane Mathew)
  - Challenging climate and related effects (e.g., floods).

- **Technical challenges:**
  - No internet signal for daily data synchronization during field supervision
  - Charging problem for tablets.

- **Logistical challenges:**
  - Unavailability of parents (e.g., work, other commitments)
  - Inability to reach parents (e.g., changing/not working telephone numbers, migration).
  - Unavailability of principals or school directors
  - Unresponsiveness of principals or school directors.

- **Human capital challenges**
  - Data literacy challenges (e.g., on-the-ground survey responses, data collection, etc).

- **Community-based challenges**
  In some specific cases, directors refused to participate in the endline assessment. For instance:
  - Some parents rejected the information outright

Example: In “Port Salut”, some parents, proud of their schools, reacted in extraordinary fashion, alarming the principal and teachers of the congregational school, rejecting in protest the two-star rating their children’s school received
compared to the four stars a Baptist school received. The focus group could not finish because the parents decided to empty the premises.

“Hi Ronald. If you want to, come and do it. What happened in this focus already opens the way for a religious conflict. Wanting to enlighten the parents’ home causes undesirable tensions. Thank you for understanding the magnitude of the situation”.

• The results led to verbal threats against the research team, and it was discontinued:

Example: On the side of “Limonade”, specifically to BOIS DE LANCE some parents went to the streets of the area to demand the closure of schools that were not performing well. Then, given the dissatisfaction of some directors and teachers, verbal threats were made against members of the research team.

“Adolphe Post from Grande Anse. Good Morning. There is a follow-up to GrandAnse. Principals announced to me that their parents come to meet with them and ask them if the professors come to work. They are tired of us. We made parents involved in school affairs”.