



Barriers for the Rural Poor on the Road to College:

New Evidence from REAP

REAP Brief #107



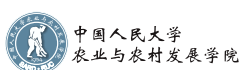
<http://reap.stanford.edu>

www.reapchina.org

Core Members



Affiliates





Introduction

Going to college might be the most life-changing opportunity for students from poor rural areas in China. Not only do most college graduates find a job soon after they graduate, for the average graduate wages rise sharply in the first few years after graduation. A college degree can easily propel a poor student into the middle class.

The good news is opportunities to go to college and earn a degree have increased dramatically in China. There are now more than five times more students enrolled in college compared to a decade ago.

But are students from poor rural China benefiting from the increased opportunities to go to college?

The official national average rate of matriculation to college after secondary school is 31 percent. Unfortunately, published statistics do not provide information on college enrollment rates by urban and rural (or by rich and poor) categories. It's hard to use these statistics to do a systematic analysis of the barriers to education—especially for those from poor rural areas.



So REAP set out to answer two questions:

- 1.) What is the specific share of students from poor rural areas that are able to go to college?
- 2.) If the share is low, what are the barriers keeping rural students from progressing through the education system from grade 1 to college?

Cranking out the Number

To calculate the actual percentage of rural students who go to college, we looked at how many students dropped out of school from elementary school all the way up to college.

China has made great achievements in rural education over the past decade—especially in compulsory education, which strives to keep students in school until 9th grade. In the past five years, the national government has invested a lot of resources to make grades 1 to 9 almost free. This effort—and other factors—has improved China’s record in providing compulsory education significantly.

Therefore, it is not surprising that by the late 2000s, more than 90% of elementary school students in rural China graduated and went on to attend middle school. In middle school, the most recently available data says 20% are dropping out, but with compulsory education there is reason to believe this number is now lower. While these drop out rates are highly concentrated in poorer, rural areas, the performance in matriculation and promotion is much improved.

However, compulsory education ends after middle school, so high schools are incredibly expensive. Also, all students are required to pass a standardized exam in order to enroll. For these reasons, **less than 30% of rural middle school students end up in high school**. The number for those from poor rural areas is almost certainly much lower.

Even fewer go on from high school to college. How many? In fact, it is difficult to find a number that corresponds closely to students from poor rural areas. To answer this question, recently, REAP conducted a survey on high school students in Shaanxi Province. We surveyed the students on several different aspects of their educational performance, family life and the value of their household’s assets. Using the information collected, we identified 592 students, out of the total sample of 1,177 students, as coming from poor rural families.

Of these students, we found out that 7.4% drop out of high school, and only 20% of students from poor, rural areas matriculated after high school to first, second and third tier colleges.



Based on the numbers in the literature and our survey data, we calculated how many rural Chinese kids who start elementary school end up in college. **We were shocked by our results - as few as 1.3% of rural poor students end up in college!**

China’s Greatest Gap

While there is always a lot of concern in China about the 3 to 1 gap between urban and rural income, in fact, the higher education gap is much wider. How wide is China’s GREATEST GAP? The national average college enrollment rate is 31%. However, in large metropolitan areas like Beijing and Shanghai, 47% of students who start elementary school will end up going to first, second or third-tier colleges. In comparison, as few as 1.3% rural poor students will attend first, second, or third-tier universities. In other words, the rate of college attendance is more than 35 times higher for those born in Beijing, Tianjin or Shanghai than the students born in a poor rural area.



China's lucky few.

©Photos courtesy of P H Yang; ©Photography: Bixing Yang

Barrier At The Gates Of College ?

From the matriculation figures above, clearly, there are barriers that are keeping the rural poor out. The question is, what are the barriers?



Barriers at the gate?

©Photos courtesy of P H Yang; ©Photography: Bixing Yang

Once students from poor rural families get into high school, there are two types of barriers that they could face 1) those that occur during the three years of high school and 2) those that arise during the College Entrance Examination Process.

But according to two types of metrics—standardized test scores and drop out rates, in fact, it does not appear as if there are any real barriers during the student's three years of high school. For example, the data on the standardized test scores collected for the sample students from their first and second years of high school show clearly that the average math scores and Chinese language scores of students that are poor and non-poor are quite similar (all around 65/100). Neither is there evidence that drop out rates of high school students are any higher among poor students. **During their high school years, the poor in high school perform every bit as well as the nonpoor!**

Perhaps then the College Entrance Exam (CEE) system is biased. The CEE Process is divided into 4 steps [see flowchart below].

Many people argue that there are subtle barriers within the CEE process that keep minorities out of colleges, barriers that give urban students an edge because of the cultural values that are embedded in the CEE system. Do similar barriers exist for the rural poor?

Step1:College Entrance Exam

Students take a province-wide standardized CEE examination at the end of senior year.



Step2:Zhiyuan Form

Students fill out the zhiyuan admissions form in which they rank their top choices for schools. Students do not yet know their CEE scores, and must estimate which schools they think they might qualify for.



Step3:Universities Pick Applicants

Universities fill slots for freshman by picking applicants with the highest gaokao scores, from those who listed the respective university as a top choice.



Step4:Students Must Pay Tution

Students accepted to a college must pay tuition in full *before matriculating*.

The CEE Process is divided into 4 steps [see flowchart].

In fact, here again, our analysis shows that there is little empirical evidence that the College Entrance Exam (CEE) is biased against the poor. Holding all other factors constant, **the exam scores of poor students are virtually the same as the exam scores of non-poor students. The admission rates between the poor and non-poor who take the CEE examination are also the same.**



The college entrance exam, or Gaokao, is a grueling process, but the poor do just as well as the non-poor!

Perhaps it's an economic problem. **In addition to overcoming the academic hurdle of getting into college, poorer families must pay high levels of tuition and fees for a child's college.** Tuition costs rose by four times between 1997 and 2006, increasing from 1,620 yuan to 4,500 yuan per student per year. Once fees for books, room, and board are included, the average college student spends between 10,000 to 12,000 yuan per year at school. This expense equals approximately 10 times the per capita income for a rural family that is living at China's poverty line!

In the late 1990s and early 2000s, there were many stories of students being admitted to college but not being able to afford to attend (e.g., People's Daily, 2003). However, according to our survey this is no longer true in 2008. In fact, **100 percent of the students that passed the CEE and were admitted to a tier one or tier two college ended up going to the college.**

So from this analysis it is clear: **the forces, the traps, and the fences that create China's greatest gap are not found between high school and college matriculation.** Indeed, according to our data and analysis, poor rural high school students do just as well as the students from better off areas during and after their high school years.



Barriers, Barriers Everywhere: Rural Education Before the High School Years

If the real barriers do not exist at the time of admission to college, there must be something systematically keeping poor children from ever making it to the point where they take the CEE.

Difficulties of Entering High School

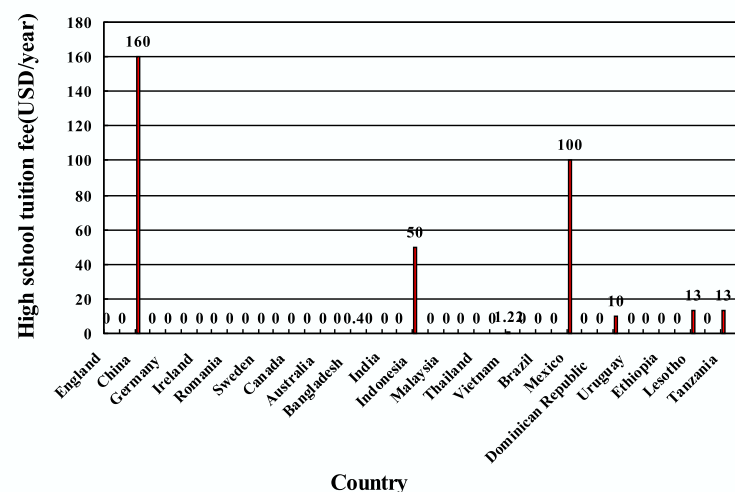
While there has been progress in promoting higher education—both high school and tertiary education—there has been little reduction in tuition and fees. On average, students pay around 2,200 yuan per year for high school tuition and fees. High school students who are from remote villages and townships have to live in school dormitories, which cost about 1,600 yuan. This means that three years of high school can cost a poor family nearly 12,000 yuan. The opportunity cost of school in forgone wages that a student can earn if he/she drops out of high school is even higher—up to 30,000 yuan for three years!

When comparing the tuition of China's rural public high schools against the levels of tuition for rural public high schools in more than 40 other countries including Indonesia, the US, and Mexico, China has far and away the highest high school tuition relative to per capita income [see graph next page]. While many students can not proceed onto high school



©Photos courtesy of P H Yang; ©Photography: Bixing Yang

because their High School Entrance (Zhongkao) scores are too low, interviews show many students and their families give up thinking about high school far before the zhongkao date because they know even if they could test into high school the costs would be too high.



Barriers From the Beginning

In addition to high tuition, there are other factors that underlie the low enrollment rates of rural students in high school. REAP has discovered three other stages along the educational continuum dotted by obstacles.

Behind Before They Start

According to the literature and our own work, the disadvantages to rural students appear even before students start elementary school.



Early Childhood Education (ECE) refers to the education that children obtain during early stages of their childhood. Early childhood is a crucial time period for the development of the mental

©Photos courtesy of P H Yang;
©Photography: Bixing Yang

functions of children as well as social behavior and physical development.

There is a big disparity in ECE between urban cities and rural areas. In major urban areas more than 95% of young children attend a pre-school prior to starting primary school. However, in a 2008 REAP canvas survey, we found that fewer than 20% of children in rural areas went to preschool. In part, no doubt, enrollment rates are so low because of the difficulty in accessing the few preschools available in rural areas. The preschools are privately owned, poorly regulated, and unnecessarily expensive.



What is the consequence of such low rates of attendance in preschools? For the past 30 years, a child psychologist, Dr. Ou Mujie from the Peking University Health Science Center, has developed and benchmarked a test of educational readiness for urban 4 to 5 year olds.

If a child scores lower than 70, she is considered not ready to go into elementary school. Dr. Ou's research showed that about 3 percent of urban students can be called unready. But when we gave Ou's test to children in rural areas, we found that a full 57 percent of the 4 year olds from poor rural counties were not ready to attend even elementary school. If rural children are already lagging behind before they start formal education, it explains why educational attainment in rural China is so low: these children are already behind before they even start. For more information, please see Brief #102 "Behind Before They Start."

Anemia, the Silent Grade Killer?

Perhaps one reason why rural children score lower than urban students is because of the low level of nutrition that still plagues many students in rural schools across vast regions of China. **A current REAP study shows that nearly 40% of elementary students in rural Shaanxi Province are anemic.** When students suffer from anemia, it is well known that the cognitive ability of children fall, their attention span wanes and, in general, they are less able to learn. However, when severely anemic kids took multi-vitamin pills (containing iron) every day, not only did their iron levels increase, but their math test scores did as well. In other words, the study shows that there is a clear link between anemia and educational performance.



Few in rural China know about the negative effects of anemia on academics.

©Photos courtesy of P H Yang; ©Photography: Bixing Yang

Other Health and Nutritional Problems

There are also many other health and nutritional problems in poor rural areas. According to data from 66 rural schools in Shaanxi that provide dining services, there is no meat, animal protein or other multivitamin supplements in the regular diets of school children. In fact, there are no standards at all. And, **while there is a lot of evidence that parasitic worms are still a problem, we can find almost no schools that recognize that there is any sort of systematic health crisis.** Fewer schools (almost none) take any action to deworm their children—even though the cost of deworming drugs is less than 30 cents (in US currency) per dose. If there is so little attention to nutrition at school, it is no wonder that educational performance of rural students is so poor.

For more information, please refer to REAP Brief 105 “An Invisible Epidemic: Anemia in Rural China” and Brief 106 “Malnutrition in China’s Rural Boarding Schools.”



Conclusion

A close reading of the literature and some of our own data demonstrate that the rural education system in general is putting rural children at a severe disadvantage at almost every point of the educational process—low rates of enrollment into early childhood education; low quality of elementary schools; poor nutrition and low quality boarding facilities and high levels of high school tuition. Not mentioned, but certainly exacerbating the problems is that in many of China’s largest cities, including Beijing and Shanghai, there is a migrant schooling system that is outside of the public education system. It is unregulated, expensive and low quality. A recent REAP study shows that the test scores of students in migrant schools are lower than those of students in schools in some of China’s poorest rural areas. Clearly, the real barriers keeping the rural poor from pursuing a college education start early in their education and are present throughout the entire schooling system. >>



©Photos courtesy of P H Yang; ©Photography: Bixing Yang



Peaking over the barrier.

○Photos courtesy of P H Yang;
○Photography: Bixing Yang

Addressing these problems will be the challenge for the government to face if China is to produce a work force that can meet the challenge of a higher productivity economy. The rural poor account for one third of China's population. If the economy continues to grow without including this segment of the labor force, China is planting the seeds for long run inequality and poverty.

REAP is looking for ways to take action now. Contact us if you want to help. REAP is always looking for volunteers and donors. For more information on REAP please see our website: www.reapchina.org

This brief was the work of a collaboration between Michelle Lee and Tayler Cox.



For more information about the Rural Education Action Project's work on Financial Aid, Early Childhood Education, and Nutrition and Education, and to learn about our many other projects to address rural education problems, please visit:

<http://reap.stanford.edu>
www.reapchina.org