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Yerevan, Armenia

The education system in Armenia is structured in three-levels of compulsory education: 4 years of primary school, 5 years of basic school (lower secondary), and 3 years of high school (upper secondary). The system has undergone several reforms since the Soviet era, including the extension of compulsory schooling years (from 10 to 12 years), a new grading system (moving from a 5 to a 10-point scale), and the creation of separate high schools (grades 10-12).

Access for children to primary education is universal independently of gender or socio-economic background. However, a significant proportion of youth coming from poor families remain unable to access secondary schooling or are more likely to drop out from school. Still in Armenia students from wealthier families and living in urban areas benefit from better education opportunities compared to students from poor families and living in remote rural areas. Equity in the distribution of education opportunities is a major challenge for education policy not only in terms of access to education but also with regards to the quality of education that is delivered across socio-economic contexts.

Figure 1. Student performance and family socio-economic background
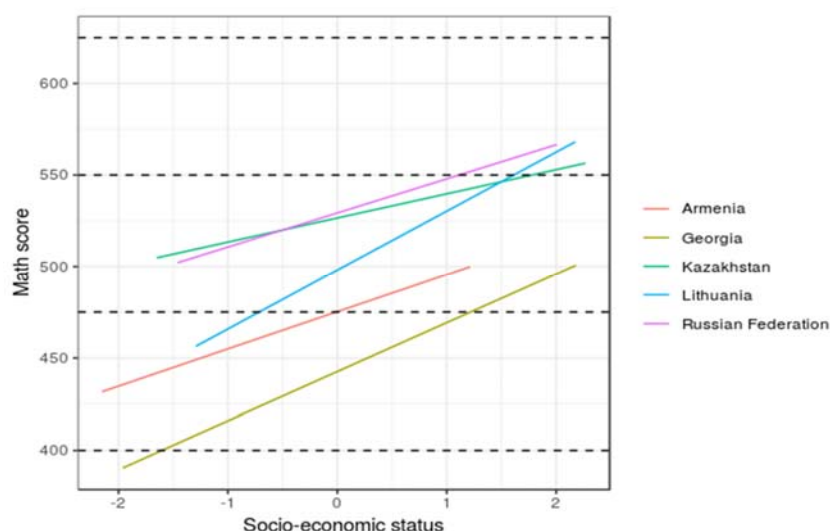
Note. Trends in International Mathematics and Science Study (TIMSS) 2015 results. Solid lines summarize the association between students' math performance and family socio-economic status. Dashed lines indicate proficiency levels established by TIMSS: low international benchmark (400 points), intermediate international benchmark (475 points), high international benchmark (550 points), and advanced international benchmark (625 points).

Armenia conducts national assessments and has participated in the Trends in International Mathematics and Science Study (TIMSS) since 2003 to monitor the quality of education provision.[1] TIMSS results show that students in secondary schools in Armenia perform poorly compared to their counterparts, for example, in Lithuania, Kazakhstan, and the Russian

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[1] There are concerns that national teams in Armenia lack the technical capacity to administer and analyze large-scale assessments. And, for example, exceptionally high results of Armenian students in TIMSS 2007 have been challenged and are deemed unreliable.

Federation. In the most recent TIMSS 2015 study, half of students in Armenia performed at the lowest proficiency benchmark or below this level, compared to 11% of students in Kazakhstan, 22% in the Russian Federation, and 32% in Lithuania. And only 2% of students in Armenia performed at the highest proficiency level, compared to around 15% of students in Kazakhstan and the Russian Federation, and 6% of students in Lithuania. Armenia's performance in TIMSS has remained stagnant for the past fifteen years, while it has improved in other countries in the region.

The issue of low performance is aggravated by existing inequalities related to family socio-economic background and between urban and rural schools. That is, students from lower socio-economic backgrounds and living in rural areas perform even worse.

THE URBAN-RURAL GAP

Students in rural schools perform worse than students in urban schools. The urban-rural gap has remained unchanged at least since 2003. We know from different contexts that the urban-rural gap is partly explained by the socio-economic context. That is, students in rural areas perform worse because they tend to come from socio-economically disadvantaged families and attend schools in disfavorable contexts. For example, our research shows that provided with comparable family and school socio-economic contexts, students in rural areas perform similarly or even better than students in urban areas in Georgia, Iran, the Russian Federation and Turkey. Namely, if students in urban and rural schools came from similar family backgrounds there would be no urban-rural gap or the gap would favor students in rural areas.

In Armenia, as well, students in rural areas tend to come from relatively disadvantaged socio-economic backgrounds and perform worse in school than students from urban areas. However, the socio-economic context alone is not enough to explain underperformance of rural schools in Armenia. Given two students with similar backgrounds, one attending an urban school and the other a rural school, the one in the urban school outperforms the one in the rural school. In other words, students in urban areas continue to outperform students in rural areas even if there were no differences in the family and school socio-economic context of students in urban and rural areas.

The socio-economic context is not solely responsible for the urban-rural gap in Armenia. Our findings therefore suggest that national policies and arrangements around the education system in Armenia are contributing to widen the gap between urban and rural schools. Inequities produced by the system are worrisome and deserve the attention of policy-makers. Beyond the socio-economic context, we have found that, for example, the quality of the school infrastructure, school management, and teaching promote higher achievement of students in rural and urban areas and across different socio-economic contexts. Policies in these areas targeted towards students in rural areas could contribute to reduce gaps in student achievement.

POST-SECONDARY EDUCATION PLANS

Disparities in educational aspirations related to family background are another alarming factor. Students from disadvantaged backgrounds are less likely to pursue post-secondary education: 73% and 55% of students from non-poor and poor families, respectively, plan to pursue post-secondary education. We know from other contexts that inequities in student aspirations are

partly explained by academic achievement in school. That is, students performing better in school are better equipped and more likely to enroll in higher education. In Armenia, however, lower aspirations of students from poor families are not only attributed to school performance. That is, given two students with excellent grades in school, one from a poor family and another from a more advantaged family, the student coming from a poor family is less likely to pursue secondary education (63% vs 82%).

Not only this is problematic in terms of perpetuating socio-economic inequalities, but it also points directly to wastage of human resources. Particularly, high skilled students from disadvantaged backgrounds with potential to contribute to the economy are not participating in higher education. It is worth then asking, what are the socio-economic mechanisms beyond school performance contributing to disparities in student aspirations? And how can education policy promote post-secondary education aspirations of students coming from disadvantaged backgrounds with academic potential to successfully complete higher education and integrate in the labor market?

Figure 2. Students planning to pursue post-secondary education
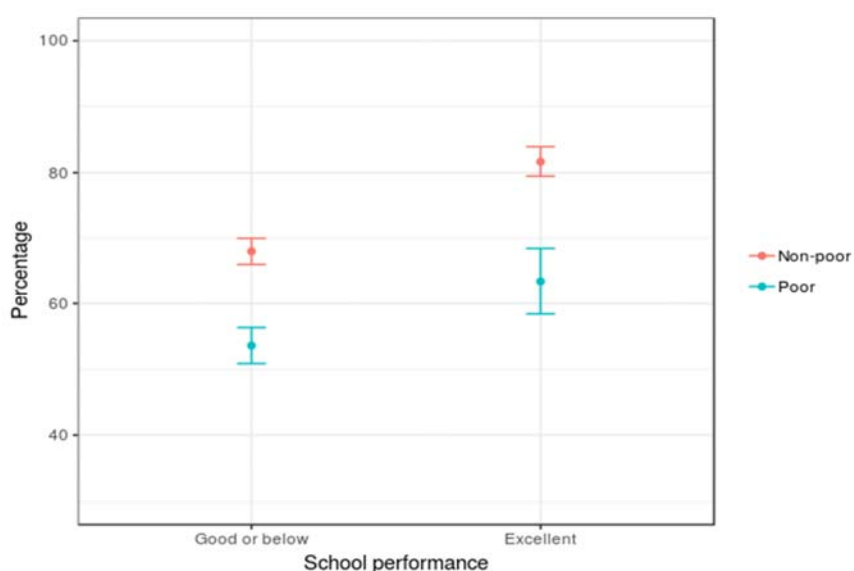
Note: School performance is "excellent" for marks of 9 and 10 and "good or below" for marks of 0 to 8. Families with scores in the socio-economic status scale below the 30th percentile were classified as poor.

We have found that private tutoring and family income contribute to explain differences in post-secondary education aspirations among students with similar school performance. Clearly, part of the explanation is financial means to afford and prepare for higher education. Additionally, we know from other research that parental aspirations and access to information on the education system facilitate higher education plans. For example, parents with academic careers have higher educational aspirations for their children and are more likely to motivate and support them in their plans to pursue higher education. They also typically are more knowledgeable and informed on the education system (eg. private tutoring, high-stakes examinations, higher education admission criteria, career pathways) and can therefore guide better their children navigating the system and making informed decisions in the transition from school to higher education. Schools can somewhat contribute to fill these gaps.

One avenue for intervention is private tutoring. The role of private tutoring in post-secondary education plans reflects deeper problems. Previous research by OSF suggests that some teachers tend to reduce effectiveness in teaching towards the end of secondary school in order to allow for private supplementary classes. As a result, students from poorer backgrounds unable to afford private tutoring will be deprived of learning opportunities. As it is, private tutoring creates uncertainty among parents and students on the effectiveness of the school system in preparing students for higher education and affects negatively student motivation, particularly, among students from disadvantaged backgrounds. Education policies directed at regulating the private tutoring system could contribute to preparation, motivation, and plans of socio-economically disadvantaged students for pursuing post-secondary education.

Further, schools can offer career guidance to compensate for lack of information and family support among students from disadvantaged backgrounds. Whenever possible, teaching content towards the end of secondary school could be aligned with student aspirations and the realities of higher education and the labor market. Schools can contribute to decision making of talented students from disadvantaged backgrounds by presenting and explaining the different pathways after school and possible consequences of decisions in the future.

In short, Armenia is lagging behind neighboring countries in terms of student performance. The education system appears to be amplifying existing gaps between urban and rural schools and hindering post-secondary education plans of highly talented and motivated students from poor backgrounds. In addition to improving socio-economic conditions, there are clearly needs and opportunities for improving and designing education policies that will reduce inequalities and contribute to sustainable development.

NOTE:

This article is based on two research reports sponsored by OSF Armenia, one using international comparative data from the Trends in International Mathematics and Science Study (TIMSS) and another using national survey data collected by OSF.