

Economic study finds mortality and fertility factors in educational achievement

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(Phys.org)—The majority of students in the U.S. will graduate with a high school diploma. The same cannot be said for some students around the world. Access to public schools is one explanation for the educational gap between students in rich and poor countries, but a new study shows other factors are more significant.

Juan Carlos Cordoba, an associate professor of economics at Iowa State University, and a colleague at the University of Pittsburgh examined the differences in [educational achievement](#) for a study published in the *Journal of Monetary Economics*. What they found was that students are more likely to drop out of school in [countries](#) with higher fertility and [mortality rates](#).

"The bigger the family, the more problematic it is for each child to get an education, because there are fewer resources," Cordoba said. "This trade-off shouldn't happen if the markets are perfect, because schooling should depend on ability, not on the number of siblings."

It is understandable that a child's education might be limited by family resources in countries without a public education system. But even if you take access to [public schools](#) out of the equation, Cordoba said there is still a trade-off in which children must decide between an education and a job.

Researchers were able to demonstrate this by controlling the data from the United Nations Educational, Scientific and Cultural Organization, so

that students in all 74 countries studied had equal access. The results improved but a large gap in schooling outcomes remained. For example, students in [African countries](#) still would only spend another two to four years in school. Cordoba said it all relates to that trade-off.

"Every day students go to school they have to ask themselves, 'Should I stay in this school and wait for my reward in 10 years? Or should I just go out and work now and get out of this poverty?' So even in a country with high [wages](#), those wages are going to affect the future and the incentives to remain in school, but they're also going to affect the present and the incentives to drop out," Cordoba said.

The reward of higher wages is often not worth the wait because countries with high fertility rates also have high mortality rates. Cordoba said life expectancy is an even greater factor in countries where AIDS is prevalent, because there is less incentive to stay in school.

"If you go to a country where people don't expect to live more than 40 years – even if there is a school and the student has high ability – they're likely going to drop out of school. People don't want to invest their life in school, if they're not going to live too long," Cordoba said.

The study disputes the economic theory that the markets will provide educational opportunities in the absence of public schools. Cordoba said if that were true, [students](#) would not be limited by family resources. It is not enough to let markets do what they do, he said; the government must be involved in building schools and providing access to education.

Ultimately, the lack of education makes it hard for a country or an individual to break that pattern. Even if a person leaves for better opportunity in another country, Cordoba said they still lack the knowledge to improve their situation or earn a higher wage.

"Poor countries are not only poor because of a lack of productivity, but also because of a lack of knowledge. The reason why individuals in those countries lack the knowledge is because they couldn't obtain it – there was a reason they couldn't stay in school," Cordoba said.

More information: [www.sciencedirect.com/science/ ...
ii/S0304393212001687](http://www.sciencedirect.com/science/...ii/S0304393212001687)

Provided by Iowa State University

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