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Our latest note highlights recent research showing the effectiveness of financial education in schools in Brazil.

The Impact of High School Financial Education: Large-Scale Experimental Evidence from Brazil

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Research in economics and psychology highlights how preferences about inter-temporal choices (today vs. tomorrow) formed in early life can have profound effects on future economic and financial decision-making. The ability to control temptation and delay gratification, in particular, has been shown to improve lifetime academic, economic, and social outcomes. Willpower and self-control are key determinants of such behavior and have been shown to resemble a muscle which requires repeated practice to become stronger.

Financial education is one way to equip individuals to make prudent financial decisions, and the psychological insights above suggest that introducing such instruction early and repeatedly – in schooling years – can have beneficial effects throughout adulthood. Calls for such school based programs are widespread: the U.S. Consumer Financial Protection Bureau now officially recommends introducing and building key financial education concepts throughout the K-12 school years, as do the UK and Australian governments. Many developing countries including Brazil, Colombia, India, Indonesia, and Uganda are introducing financial education in their school systems as well.

In a new paper, we study a comprehensive financial education program in Brazilian high schools that offered repeated instruction and exercises on responsible inter-temporal financial choices spanning three academic semesters, from August 2010 to December 2011. It provided complementary support, training, and instruction tools to teachers to enable quality delivery. The instruction used new textbooks with interactive classroom exercises on financial education themes, take-home exercises such as creating household budgets with parents, and role playing assignments. As such, the intensity of treatment was much stronger than typical one-off financial education workshops.

We study the impact of this financial education program on student and parent outcomes using a randomized control trial. This study represents the largest such evaluation in the financial education literature, covering 868 public high schools in six Brazilian states with approximately 20,000 students.

Student Financial Outcomes

We collected data in schools through three rounds consisting of baseline (Aug 2010), follow-up 1 (Dec 2010), and follow-up 2 (Dec 2011). Follow-up survey results show that the program caused a quarter of a standard deviation improvement in students' financial knowledge, as measured by a SAT-like financial proficiency test. In fact, the entire distribution of scores shifted to the right with students at all levels of capability showing marked improvements in test scores. On financial behavior, we find a statistically significant increase of 1.4 percentage points in saving up for purchases, and significant improvements in the likelihood of making budgets and negotiating prices and payment methods.

Do you have a project you want evaluated? DECRG-FP researchers are always looking for opportunities to work with colleagues in the Bank and IFC. If you would like to ask our experts for advice or to collaborate on an evaluation, contact us care of the Impact editor, David McKenzie (dmckenzie@worldbank.org)

Parent Financial Outcomes

We also examine "trickle-up" effects of the program on parents to test whether students can act as agents of change in their households. Parents in treatment schools were significantly more likely to report that their children discuss financial matters with them at home and that they volunteer to help organize household budgets. In addition, we detect improvements in parental financial knowledge on standard financial literacy questions used in the literature. And finally, we find significant improvements in parental financial behaviors, with an increase of 0.67 percentage points in the savings rate and improvements in the likelihood of keeping household budgets.

In addition to these indirect effects, our study complemented the student program with a standard adult workshop on financial education for parents. This involved a DVD-based intervention where parents in treated schools were randomly assigned to either a financial education screening or a health education screening. Although the attendance at these workshops was low, we detect further improvements in the percentage of disposable money saved by students from families that attended the financial education workshops. Hence, these workshops helped parents reinforce the messages taught to the students.

Student Preferences

We finally study the mechanisms of impact to shed light on how and why the program influenced students' financial behavior. To do so, we use new indices of financial autonomy and intentions to save, which were constructed with the assistance of a local education survey firm. The financial autonomy index aggregates a series of questions designed to measure whether students feel empowered, confident, and capable of making independent financial decisions and influencing the financial decisions of their households. The intention to save index includes a series of questions that identify preferences over hypothetical savings and spending scenarios. Our analysis finds strong and statistically significant treatment effects on both these measures, with an effect size ranging between 0.08-0.12 of a standard deviation.

Policy Implications

1. Financial education can be an effective tool in improving financial outcomes of students when delivered in a comprehensive manner and over a significant period of time.
2. Key complementary benefits can be derived by involving the entire household, students and parents, as indicated by the trickle-up and parents' workshop impacts.
3. Student preferences on saving intentions and financial autonomy are important pathways for improved financial behavior.

The findings of this study are already being used to guide policy discussions on the impact of financial education in schools. The Ministry of Education in Brazil has recently approved a continuation of the financial education program to 3,000 public high schools, and the development of a pilot project for primary schools. Furthermore, other governments in the region have expressed keen interest in developing similar programs.

For further reading see: Bruhn, Miriam, Luciana Leao, Arianna Legovini, Rogelio Marchetti, and Bilal Zia. "The Impact of High School Financial Education: Experimental Evidence from Brazil," World Bank Policy Research Working Paper no. 6723, December 2013.

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