An exchange rate board in Buenos Aires, Argentina, during a day of devaluation.

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VIEWPOINT

Argentina's Economic Crisis Threatens Science

Researchers urge the government to prioritize science and technology—or risk the total collapse of the country's science infrastructure.

Argentina is facing a serious financial crisis that is already forcing a substantial part of the population below the poverty line, and not for the first time. The scientific community is not immune to this situation. The nature of the crisis and the measures taken by President Mauricio Macri's administration threaten to bring the Argentine scientific system to the brink of collapse.

After a fiscal catastrophe that peaked at the end of 2001, Argentina's economy began to recover around 2003, boosted by record international prices of certain agricultural commodities. At this point, the government strategically decided to invest in the development of science and technology in the country. One iconic element of this strategy was the creation, in 2007, of the Ministry of Science, Technology and Productive Innovation (MINCyT).

After MINCyT's creation, many young researchers were incorporated into the scientific system, infrastructure was improved, equipment was renovated and a clear long-term strategy was implemented. Moreover, the ministry delineated a strategy to bring back scientists who had over the years emigrated for various reasons—from

poor financial conditions to political persecution—and subsidized international collaboration. These MINCyT activities not only stimulated great advances in the Argentine scientific system, but also in public health and the economy.

Austerity measures

In 2015, the country's financial situation was deteriorating again. On the campaign trail, then-presidential candidate Mauricio Macri expressed his support of science and technology, promising to continue with the same successful strategies while doubling the sector's budget. Macri won the election and took office in December of that year.

However, as the country's financial situation continued deteriorating under the new administration, President Macri did not hold to his campaign promise. As the situation worsened, the budgets for universities and research institutes, salaries of researchers and scholars, and the number of fellowships all decreased. Budget cuts compounded by currency devaluation and high inflation have made it, in many cases, impossible to keep research projects afloat, particularly those that depend on imported supplies. To make matters worse, in an effort to reduce the fiscal deficit, the Macri administration demoted MINCyT from a ministry to a secretariat; it now falls under the umbrella of the education ministry—sending a clear message about the government's science priorities.

In response to the escalating situation, a group of high-profile scientists wrote a letter to President Macri last September, urging him to revert these compromising policies (Nature, doi: 10.1038/d41586-018-07003-x). Endorsements of the letter by more than one thousand scientists from all over the world, including several Nobel laureates, have shot Argentina's science crisis to global attention.

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Argentine researchers are in danger of becoming alienated from the rest of the scientific community as a consequence of their country's financial crisis.

Troubling effects

Argentine researchers working in optics and photonics, many of them current or former OSA members, are not exempt from these dire conditions. Researchers are re-adjusting their expenditures to account for the scarcity of funds from research grants. Under these circumstances, only top-priority expenses are addressed—often, this equates to the bare-minimum activities that will allow students to graduate.

Fees for membership in scientific societies such as the International Commission for Optics (ICO) and OSA are no longer covered, limiting access to OSA journals as well as OSA conferences. Argentine researchers are hard-pressed to cover travel and accommodation, and current budgets cannot cover conference fees. This was exemplified at the Latin America Optics & Photonics conference held in Lima, Peru last November—out of 200 conference attendees, only four came from Argentina. Argentine researchers are in danger of becoming alienated from the rest of the scientific community as a consequence of their country's financial crisis.

On top of dismantling MINCyT, the drastic budget cuts, the currency devaluation and the high inflation, another issue weighs heavily upon the country's scientific community: Many commitments outlined in international collaboration frameworks have not been fulfilled. The suspension of international collaboration projects began toward the end of the previous administration. This practice not only interrupts long-term strategically relevant projects, but also casts Argentina in a very negative light in the eyes of its international collaborators. International collaboration is fundamental to scientific advancement and is essential to confront global problems.

Only by practicing bold, realistic and sustainable scientific policies is it possible to face the lack of development in many areas in Argentina. It takes many years to build a scientific system, yet it can be destroyed very quickly. OPN

G.M. Bilmes and OSA member G.A. Torchia are with Centro de Investigaciones Ópticas (CONICET-CIC-UNLP), Argentina. J. Torga is with Facultad Regional Delta, Universidad Tecnológica Nacional (CONICET), Argentina. O.E. Martínez is with the Universidad de Buenos Aires (CONICET), Argentina. S.E. Braslavsky (silvia.braslavsky@cec.mpg.de) is with the Max Planck Institute for Chemical Energy Conversion, Germany, and CONICET. 2018 OSA Ambassador F.J. Furch is with the Max Born Institute, Germany. M. García is with the University of Kassel, Germany. 2019 OSA Ambassador C. Saraceno is with Ruhr University Bochum, Germany.