

# Why are Competitive Grants Important—Especially in Ukraine?

Scientific funding through competitive grants is a key driver for innovation, but some countries—Ukraine in particular—need a push to embrace the practice more fully.

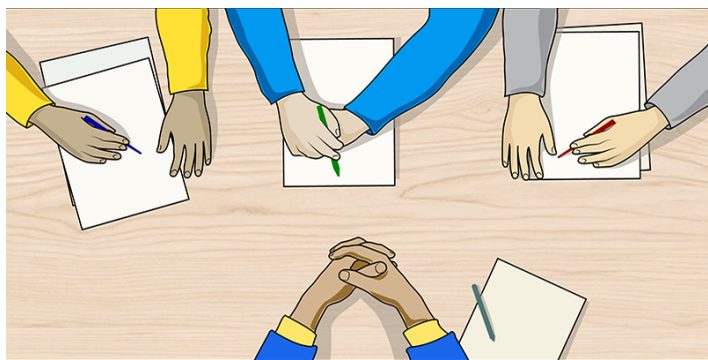
By **Gerson S. Sher**

Most scientists are familiar with submitting grants to a funding body and then waiting for a greenlight from a jury or other decision committee. But this sort of competitive review is not common in all countries of the world. In places like Ukraine and other former Soviet bloc nations, scientific funding has historically been awarded in more of a top-down fashion, with scientific academies deciding which research projects merit financial support. Over the past two decades, several of these countries have made the switch to a competitive grant process, but Ukraine has been slow to make the change. Clearly, the ongoing war dominates much of life in

Ukraine, and yet scientific research continues (see [Research News: Publishing Science in a War Zone](#)). The international community has offered support for Ukrainian scientists in a number of ways, including partnerships in merit-based research grants [1]. The path forward for Ukrainian science is further engagement in competitive grant funding—a project that individual scientists from around the world can help out with.

Why is a competitive grant system so important? It might be hard for Western researchers to enumerate the advantages, as they have probably never experienced any other type of funding system. But there are many reasons that competitive grants are to be desired. Competitive grants began in the years after World War II, with funding agencies, such as the National Science Foundation in the US and the European Research Council in the European Union, aiming to provide a fair and open decision process. By choosing whom to fund based on merit rather than political connections, a grant system can create a more level playing field for scientists.

Despite the wide uptake of competitive grants in Western nations, the Soviet science system took a different approach [2]. Here, the most important scientific research was done in enormous academies of sciences and branch ministries with hundreds of vertically organized institutes, while universities were in almost all cases reduced to pedagogical institutions. The source of roughly 70% of this top-down funding was military, according to estimates by former Soviet scientists and Western experts. This system worked reasonably well in the



Funding science through competitive grants has been a boon for the US and many other countries around the world. Adopting similar practices in Ukraine is seen as key to helping the science community in that war-torn nation.

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Soviet command-economy system, albeit very inefficiently in comparison with advanced industrial countries' standards [3]. It was poorly suited, however, for the transition to a 21st century knowledge economy, in which innovation is a key driver.

When the Soviet Union collapsed in 1991, each country in the bloc dealt with the transformation in a unique way. Some of the countries, such as the Baltic states and Poland, dramatically reduced the roles of the academies in deciding how funding is allotted. In their place, fledgling grant organizations—very modestly funded—began to appear in some of these countries. Serious efforts were also made throughout the region to integrate research and education in the model of the modern research university. There followed major science-funding programs by Western foundations and governments, including George Soros's International Science Foundation (with a budget of over \$100 million) and the even more massive “nonproliferation” programs such as the International Science and Technology Center and the Science and Technology Center in Ukraine. All these programs employed competitive, merit-reviewed grant making to prioritize and allocate funding in accordance with practices and experience of advanced industrial countries.

In Ukraine, however, the old top-down structure remained intact, with reform efforts hindered—in my view—by weak government institutions and entrenched political interests. The situation improved in 2014 when the Ukrainian Revolution of Dignity brought modest progress in modernizing Ukraine's science culture and in bringing it into line with world standards. The introduction of competitive grant funding was a key feature of these reforms. The 2018 Law of Ukraine “On Scientific and Scientific-Technological Activities” established a National Research Foundation of Ukraine (NRFU) as a state budgetary institution. Its first competition was held in 2020. Over the next three years it made 216 competitive grants to Ukrainian researchers for a total of \$33 million [4]. While this sum was considerable, it was but a small portion of overall research

funding. Further increases ran afoul of the more established institutions. Since the Russian invasion of February 2022, the financial exigencies of war have slashed the nation's research budget by more than 50%.

Although Ukraine has had a late start with the grant-making process, one may hope that the deep rethinking in Ukraine right now about its future path in science and higher education will further elevate the role and budget share of organizations like the fledgling NRFU. In the meantime, there are two natural ways in which the international science community can contribute to these efforts. First, funding agencies in the US and Europe are launching cooperative initiatives to encourage merit-reviewed, project-based scientific collaborations with Ukraine. If a Western scientist already holds a funded research grant in their country, they should reach out to the funder to see about opportunities to bring Ukrainian colleagues into the project. A second opportunity, one which is completely cost free, is for individual scientists to **volunteer to participate** in merit review of NRFU competitive research proposals. By doing so, scientists can not only support science in Ukraine, but also help Ukraine survive as an independent, sovereign nation.

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## REFERENCES

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