The cost of research in developing countries

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The terms ‘third world’ country and ‘developing’ or ‘underdeveloped’ country are common enough for most readers to have an idea of what I mean by such nations. Yet few readers from the richer parts of the world understand precisely what it means to live in a developing nation with low to median per-capita income, a small taxpayer base and low expenditures on social security, health and research. The term ‘low’, however, does not indicate that the proportions of money spent on education, research and health are lower than in developed countries; rather, it refers to the fact that these are small sums in total dollar or euro terms. This is a serious problem on many levels, but particularly for academic research and training, which need stable and reasonable funding to function.

While foreign funding is crucial for developing nations, such money is often irregular, comes with onerous strings attached and is only available to the lucky few who successfully obtain a grant. What is more, scientists in poorer countries are also disadvantaged by unfair pricing: an informal survey in my own region—Cape Town in South Africa—revealed that some consumables and equipment purchased from Western suppliers can cost two to five times more than they cost in the USA or Europe. Even if we acknowledge some extra surcharge for supplying goods to a region distant from the manufacturing base, this does not account for the striking price differential. In some particularly outrageous cases, we found that the parent company in the USA or Europe has radically different prices for different regions in the world.

We have even experienced the ‘dumping’ of faulty batches of consumables on developing countries and their laboratories—not as donations, but in fulfilment

of genuine, paid-for orders. Reporting these faulty products is often met with little sympathy and no compensation from the company. The suggestion is that developing world scientists simply do not know how to use the product. Such conduct is unethical and unacceptable; fortunately, it is not widespread. Many companies do offer excellent quality and support, often in a socially responsible manner. Even so, the cash flow from the developing to the developed world is compounded, it would seem, by unnecessarily large profit-making. In many cases, it is as though the developing nation is just a conduit to move money from a sponsor in the developed world to the coffers of a company in the developed world, through premium prices paid in the developing world. Although profit-making is essential for business and progress, unfair profit-taking will not advance the cause of any party in the long term.

The result of the problems discussed above is that researchers in the developing world face a twofold funding crisis: lower absolute levels of funding than in the West, and higher costs of conducting research, despite generally lower labour costs. As a result, partners in Europe or the USA seem to be able to do more research with less money, while we appear to be ‘too pricey’ for collaborative work. Another consequence of this problem is that reviewers of grant applications for funding agencies in the developed world—who do not realise why our costs are higher—are critical of budget requests as overpriced. We have received such criticism ourselves, and the language used to raise the concern was suspicious, accusatory and offensive. Of course, the relevant grant application was rejected.

A further problem is that grants from funders in the developed world that go to

developing countries often do not allow for overheads, or only at a very low rate. Yet, in order to receive such funds in the first place, universities in developing countries must maintain ethics review boards and accounting practices to the standard in the developed world, all of which require money. Although a grant is therefore good for the investigator receiving it, it is of little financial benefit to his or her institution, which might struggle to fund the infrastructure necessary to meet international grant requirements.

This situation is not in the best interests of either party. International collaborations have many benefits to offer and academics are always keen to cooperate. The barriers, at least in part, are therefore the granting agencies themselves, and commercial suppliers in the developed world. Our partners and funders from Europe and North America would do well to take note of this phenomenon and should raise awareness of it with granting agencies and reviewers, and assist in pressuring the commercial sector for a fairer pricing model for developing nations.

The developing world suffers from historical and present-day exploitation to the benefit of other nations. That this extends to scientific research, with some Western companies making vastly exaggerated profits from selling equipment to poor nations, is intolerable. Scientists around the world should distance themselves from companies and agencies that are unfair and exploit their colleagues in developing nations.

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