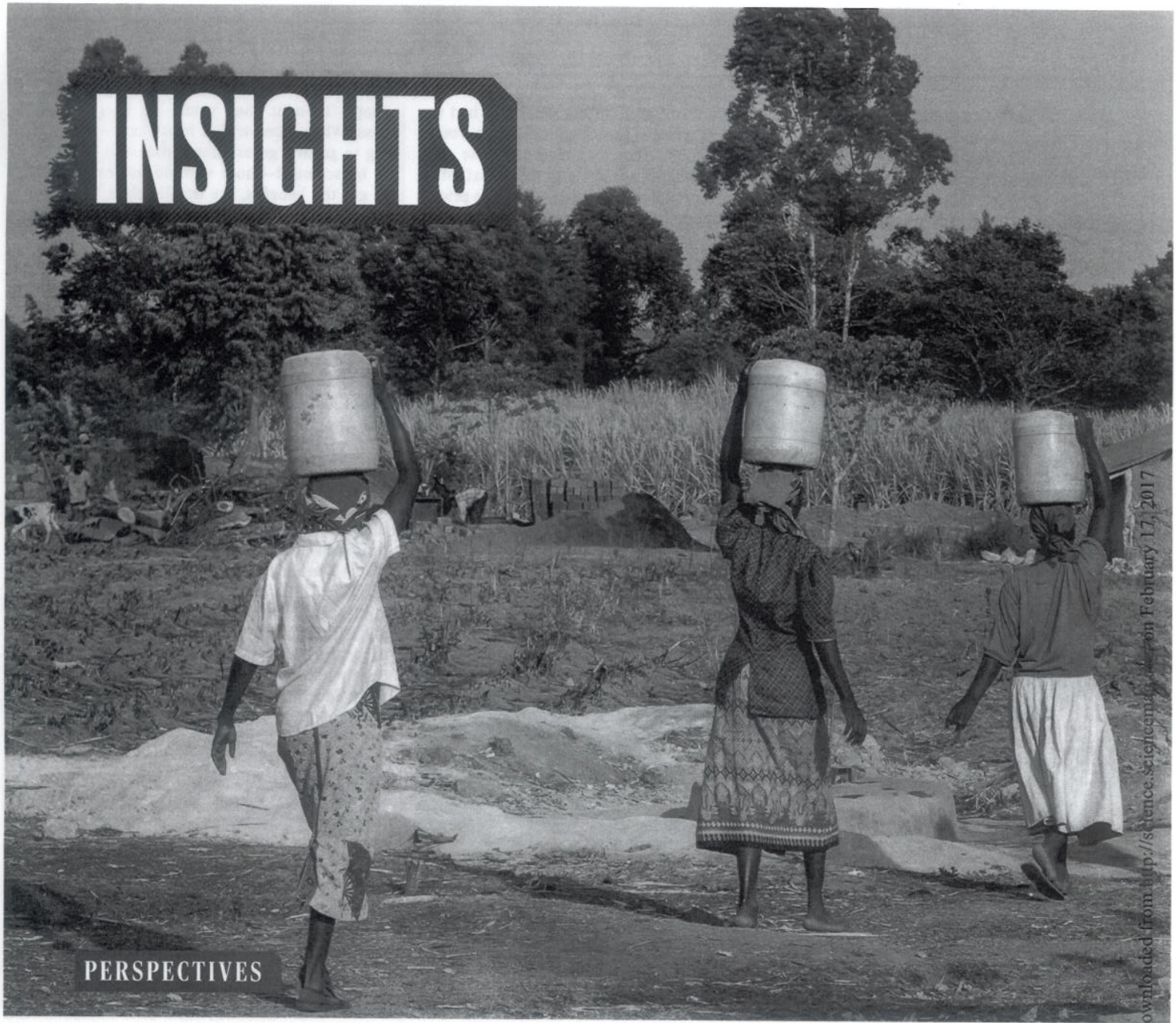




Downloaded from http://science.sciencemag.org/ on February 17, 2017

ECONOMICS

# *Hassles versus prices*

## How can subsidized health products best target those who value them?

*By* **Benjamin A. Olken**

Suppose that a government or NGO has a valuable health product, such as bed nets to prevent infection by malarial mosquitoes or hand soap to prevent the spread of disease. It wants to distribute this product to those who need it, but not everyone needs or will use the product. Thus, if the organization gives the product away for free, a substantial amount may be wasted. On page 889 of this issue, Dupas *et al.* show that introducing small hassles, such as visiting a store each month to redeem a voucher, can be a much more effective way of reducing wastage than charging for the product (*1*).

Many organizations and governments charge a price even for heavily subsidized goods to screen out those who would not use the product. The idea is that those who would not use a product value it less and would not buy it once it is priced. However, if the product is needed most by the poor, those who need it the most may no longer be able to afford it. Several studies have found that raising prices for these types of goods substantially reduces take-up but does not dramatically change usage rates among those who obtain the product (*2*–*6*). In short, charging a price screens out people not just based on how much they will use the product but also based on income.

Dupas *et al.* aimed to find an alternative way to eliminate wastage without charging a monetary price and thus discourag-

Department of Economics, Massachusetts Institute of Technology, Cambridge, MA 02139, USA. Email: bolken@mit.edu

PHOTO: DANITA DELIMONT/ALAMY STOCK PHOTO



Published by AAAS

ing the very poor. In their experiment, they compare three mechanisms for distributing a chlorine solution for treating household drinking water in Kenya: giving the chlorine away for free door-to-door to those who want it, offering people at their doorstep the option to buy chlorine at 50% off the retail price, or giving them a voucher that can be redeemed each month for free chlorine at a nearby shop. The key idea of the third mechanism is that going to the shop is a small hassle, costing time (scarce for both poor and rich) rather than money (particularly scarce for the poor).

The experimental findings show that this type of small hassle can work. Requiring households to redeem the vouchers every month reduces the amount of chlorine given out by 60 percentage points compared with the free distribution group. Yet, the share of households actually using the chlorine falls by only 1 percentage point: 32.9% of households in the voucher group had water that tested positive for chlorine, compared with 33.9% in the free distribution group. Vouchers dramatically reduce wastage with only minor reductions in usage.

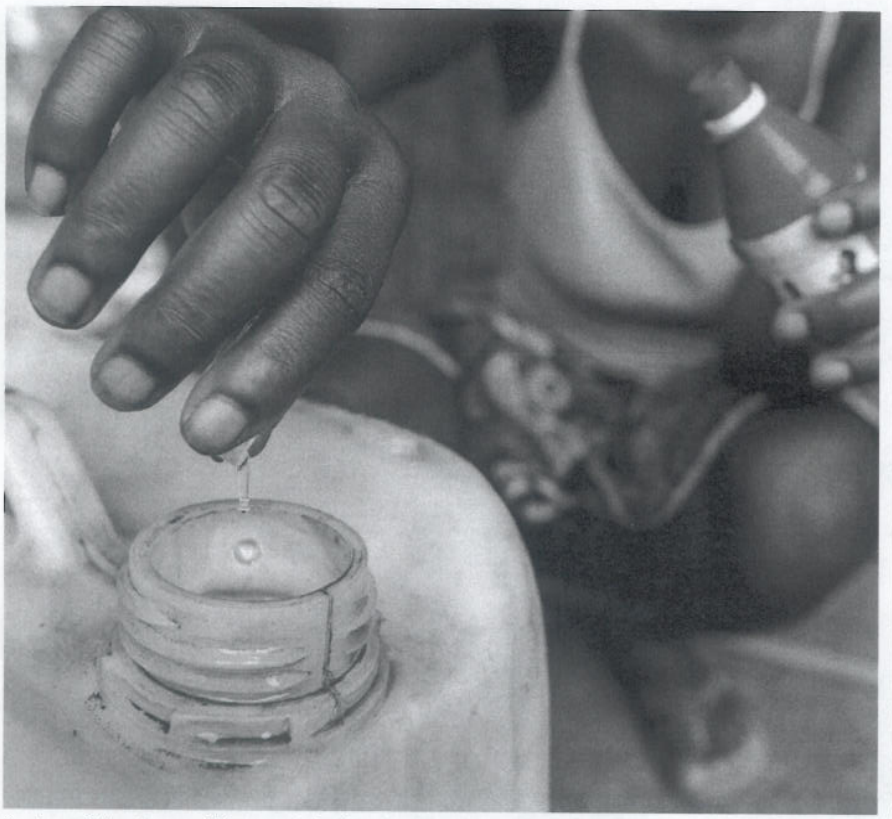
Charging a price, by contrast, screens out more households that would have used the product. Only 12.4% of households offered chlorine at 50% off the retail cost had water that tested positive for chlorine. Poorer households that may have used the chlorine under the voucher or free distribution treatment were screened out by the price.

The idea that time costs can be used to help target the poor is not limited to subsidized health products. The basic idea is that, whereas money is particularly scarce for the poor, time is not, and so time costs can be used to screen (*7*). This does not imply that the poor do not value their time—of course they do—but rather that the relative trade-off of time versus money is different for the poor, precisely because money is relatively scarcer than time for the poor.

For example, in an experiment in Indonesia, my coauthors and I found that in villages where people had to come to a government office to apply to be screened for a cash transfer program, the resulting group of program recipients was poorer on average than in villages where government representatives screened all potential recipients at home (*8*). The logic in that case was slightly different than in Dupas *et al.*'s study, but the result was the same. In the Indonesia transfer program, middle-class people knew that they were unlikely to pass the screening test, whereas poor people thought they would be likely to pass. When faced with a hassle cost—having to go to a government office and wait to be screened—those who do not expect to get the benefits, the middle class, self-select themselves out. But if the government comes to your house to give you the screening test at your doorstep, the cost of being screened is essentially zero, so even the middle class figure they might as well try—and since the formula is imperfect, some may wrongly qualify for benefits.

Other types of government benefit programs similarly use time costs to try to select just the poor for assistance. Workfare programs, such as the Works Progress Administration (WPA) in the United States during the Great Depression or the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) in India today, are based on a similar idea. These programs guarantee low-paying, manual labor–based employment to anyone who needs it. The unemployed can access these government benefits by working. But people with another job cannot take up the program, because they need to spend that time working elsewhere. And, indeed, the poor and those who have the most difficult time finding regular work are the ones who disproportionately take up these programs (*9*, *10*).

The key innovation of Dupas *et al.*'s study is to show that these same ideas—making people spend some time to claim a benefit—can be used for a different purpose, namely to target subsidized health products to those who need them. It is important, of course, that the time the poor spend on claiming benefits is not so onerous that it outweighs the benefits from better screening. But when this can be done, it is an important way of screening that, in contrast to prices, does not cut off those who may need the products the most. ■



Rural populations in many African countries do not have access to safe drinking water. A study in Kenya shows that giving out free water treatment vouchers helps to reach those households that need or will use the water treatment.

PHOTO: OLIVIER ASSELIN/ALAMY STOCK PHOTO

## REFERENCES


1. P. Dupas, V. Hoffmann, M. Kremer, A. P. Zwane, *Science* **353**, 889 (2016).
2. J. Cohen, P. Dupas, *Q. J. Econ.* **125**, 1 (2010).
3. N. Ashraf, J. Berry, J. M. Shapiro, *Am. Econ. Rev.* **100**, 2383 (2010).
4. J. Berry, G. Fischer, R. P. Guiteras, "Eliciting and utilizing willingness to pay: Evidence from field trials in Northern Ghana," 2015, see http://personal.lse.ac.uk/fischerg/Assets/BFG-EUWTP.pdf.
5. Abdul Latif Jameel Poverty Action Lab (JPAL), "The price is wrong," April 2011, www.povertyactionlab.org/publication/the-price-is-wrong.
6. P. Dupas, *Science* **345**, 1279 (2014).
7. A. L. Nichols, R. J. Zeckhauser, *Am. Econ. Rev.* **72**, 372 (1982).
8. V. Alatas *et al.*, *J. Polit. Econ.* **124**, 371 (2016).
9. P. Dutta, R. Murgai, M. Ravallion, D. P. Van de Walle, "Does India's employment guarantee scheme guarantee employment?" *World Bank Policy Research Working Paper*, no. 6003, 2012.
10. R. A. Margo, *J. Econ. Hist.* **51**, 333 (1991).


10.1126/science.aah5055



*Published by AAAS*

Downloaded from http://science.sciencemag.org/ on February 17, 2017