

# Money or morals? How to get people to save water

**A study finds that households do not need economic incentives to reduce water usage – normative incentives are enough**

**If normative incentives are as powerful as economic incentives, formulating such incentives should be given as large a role in public policy as formulating economic incentives.**

**Leong Ching  
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Given that water is so cheap, yet so essential to life, how do governments get people to be less profligate with water?

In the light of the soaring temperatures and reduced rainfall, managing water demand is a societal challenge in Singapore. It also looms large across the world – from Manila to Cape Town, there are problems of rising demand and falling supply.

One problem arises because price, a reliable policy instrument when regulating most behaviour, fails in large measure for water.

Water is relatively price inelastic. That is to say, you have to raise prices by a lot to get a little reduction in consumption. Research has shown that a price increase of anywhere from 33 per cent to 100 per cent is required to bring about a 10 per cent reduction in consumption.

This squares with the lived experiences of people, who feel that a certain amount of water is essential to life, and would therefore exact a political cost to any act which they perceive as extracting profits out of water. We see this in the large protests in cities around the world – including Jakarta – that have attempted to privatise their water utilities.

But the opposite end of the spectrum is also true – water is relatively cheap so that even a small loss of comfort due to water conservation tends to be unacceptable. One shower in Singapore typically costs 20 cents – to ask people to halve their shower time to save 10 cents is, one would imagine, quite difficult.

To motivate conservation behaviour, in short, we need to separate the value of water from its price.

## **MOTIVATING OUR BETTER SELVES**

Together with our colleague, Dr Qian Neng, at the Institute of Water Policy at the National University of Singapore, we conducted a field experiment to test the role of economic and normative incentives in influencing environmental behaviour.

In a randomised controlled trial, we recruited 1,000 households living in Housing Board flats in Ang Mo Kio to participate in late 2016. We surveyed the participating households, and tracked their water consumption for three months by reading off their water meters weekly. These households were all of Singapore citizens or permanent residents.

Two groups of people were given normative treatments – one group was given feedback on how much water they were consuming and whether they are among the most efficient users in their neighbourhood. A second group was given campaign messages such as “Use water wisely. Every society

shares a responsibility to promote sustainable use of water. The future is in our hands”.

We had categorised these two groups as being exposed to normative incentives, but both were “normative” in different ways – the first is a shorthand of “social norms”, quite simply what other people are doing, a form of conformity. The second, perhaps more moral definition, is a motivation which stems from “doing the right thing”. In this experiment, we considered both as “normative incentives”, while understanding that they are conceptually quite different.

Another two groups were given economic incentives. On top of getting feedback on their water use, one group had a chance of winning a \$200 grocery voucher if they were listed among efficient users each month, and another group was given a \$10 grocery voucher each month as long as they were among the lower 50 per cent of water users.

A final group was used as a control group.

The study was designed to test one simple question – how do economic and normative incentives compare as motivating factors? Further, if we layered on economic incentives on top of normative incentives, is there an additional effect?

This is one of the few experiments which compared normative and economic effects directly and, further, to do so using real money. Our results were astonishing.

First, we found that all four treatments have significant effects in reducing water use. People used less water – an average of 4.9 litres per capita per day less compared with the control group. Households with higher-than-average water use saved even more – 10 litres per capita per day.

Given the fact that the Government’s target is to reduce water use from 143 litres to 130 litres by 2020, this experiment shows that a simple campaign message or feedback can get us to nearly 50 per cent of the target reduction. In addition, these interventions are especially effective for households with excessively high water use – precisely the group one would want to target.

Second, and this is the intriguing part, we found that adding incentives to conserve water has no additional effects on conservation efforts. That is to say, people responded the same way whether they were given feedback and campaign messages, or given money on top of these normative incentives. Somewhat to our surprise, economic incentives to conserve brought no additional power to bear on environmental behaviour.

The implications for policymaking are numerous – the most important of which is that normative incentives should have a more central place at the policymaking table. If normative incentives are as powerful as economic incentives, formulating such incentives should be given as

large a role in public policy as formulating economic incentives. We refer here specifically to public behaviour in the use of environmental resources – economic incentives may still be more powerful for private corporates.

This experiment also illustrates a deeper point about human behaviour. In an increasingly contested world, environmental stewardship is one of the few things where there is wide agreement. Yet profligacy and waste remain a problem.

This study has general significance because water shares so many characteristics with other environmental resources. Raising the price of environmental resources is generally politically fraught, as well as being relatively ineffective.

Our experiment gives hope that most of us want to “do the right thing” when it comes to consuming environmental resources – that we can and will respond to normative incentives. Governments, as well as scholars and scientists, have a responsibility to create these incentives that allow us to be our best selves.

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