

## Undercover Economist: For better or worth

By Tim Harford

**T**he price of the first serving of Coca-Cola was five cents in 1886, which is about a dollar (50p) in today's money. Coke no longer sells for a nickel, and that is not terribly surprising. What is surprising is that it took more than 60 years for the price of Coca-Cola to change.

Economists call this nominal price rigidity. My salary is not tweaked each month to reflect the latest inflation figures, and neither is yours. Restaurants do not reprint their menus, nor wholesale companies their catalogues, if the cost of their inputs changes by a penny.

That might be a problem. Prices keep the economy running smoothly by adjusting to reflect demand and the underlying costs of production. If prices don't adjust smoothly for any reason then the economic consequences could be serious. If wages can't fall in a recession then people will lose their jobs instead. If prices can't fall when demand does, sales will collapse with much the same effect.

Coke was clearly an exceptional example of rigid prices. Daniel Levy and Andrew Young, the economists who analysed the case, report that Coke's price stayed at five cents a serving while the price of other products bounced all over the place. The price of sugar tripled after the first world war before falling back somewhat; over the six decades, the price of coffee went up eightfold. Coke itself was taxed first as a medicine, then as a soft drink, and survived sugar rationing. All the while the price stayed at a nickel.

Part of Coke's problem was the cost of replacing vending machines that accepted only nickels - and the fact that the alternative, dimes, represented a 100 per cent price hike. (The boss of Coca-Cola wrote to his friend President Eisenhower in 1953 to suggest, in all seriousness, a 7.5 cent coin.)

Most companies don't wait so long to change prices if they need to. Researchers have tended to conclude that many prices change every year or so, and often sooner. Levy and some colleagues looked at supermarket pricing in the mid-1990s and found, based on detailed accounting data, that to change the price of a single type of product in a typical supermarket cost 52 cents in printing, labour and errors. The total of all such changes was about \$100,000 per store per year - still less than one per cent of revenue.

Technology makes it ever easier to change prices using bar codes, websites, and laser-printed menus. Amazon always seems to be changing book prices. Coke vending machines now take very little effort to reprogram. So should we conclude that "menu costs" no longer matter?

That would be too optimistic. Economists have long argued that even small "menu costs" could cause large economic distortions, because when companies are pondering whether to pay those costs, they don't consider the social benefits of a more accurate price, only their own profits.

A prize-winning paper from Carlos Carvalho recently showed that it does not even help if many prices adjust quickly, because those that change slowly will distort the rest. Amazon may be able to adjust its prices easily to reflect its costs, but that is little use if those costs are distorted by slow adjustments from, say, the bookbinders or the freight handlers.

Coca-Cola's experience reflected exactly that: long before the introduction of vending machines, they had signed a perpetual fixed-price contract to supply their bottlers, at a time of very low inflation.

I drank a 500ml bottle of Coke while writing this article, and it cost me 85p (\$1.70) from the corner shop. I'd rather have paid a nickel, but price changes are important. Perhaps I shouldn't be too ungrateful.

***Tim Harford's book "The Undercover Economist" (Little, Brown) is out now in paperback .***

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