How counting the true cost of cheap food could make a better world

New Scientist, 28 November 2023 By Graham Lawton

What we pay for food and other goods doesn't reflect the environmental and social damage they cause. But a radical new approach to economics could change that.

IN THESE difficult times, it seems utterly bananas to say that food is underpriced. In the UK, average grocery bills have risen by more than 12 per cent in the past year. But it is. The price tags on food are way lower – by about two-thirds – than what they would be if we were paying the full cost. Don't worry, though, there are plans to sort this out.

That might sound unpalatable: who wants their grocery bill to rise even more? Yet in reality, we already pay the true price, it is just that most of it is stealthily hidden from us. "We pay overall four times for our food," says Alexander Müller at the sustainability think tank TMG in Berlin. First, we pay at the checkout. Then we pay for the health, environmental and social costs of producing that food, mostly though taxes.

Green accounting

These costs are "externalities" – things that are treated as free even though they aren't, such as the environmental damage caused by farming or the health costs of obesity. Right now, producers ignore them and let the rest of us pick up the bill. Maybe not for much longer. Economists and accountants – don't yawn at the back! – have been working on a system called true cost accounting (TCA), which aims to internalise these externalities and upend decades of economic orthodoxy. Play our cards right, and it won't result in all of us spilling more cash at the tills, but rather in a wholesale recalibration of global supply chains that finally accounts for the actual cost of food and other goods.

For decades, economic success or failure has been measured in purely financial terms. Consider the global yardstick of economic progress, gross domestic product (GDP) – the value of all the goods and services produced in a country. The concept was invented in the 17th century, but became the internationally accepted indicator of economic success after the second world war. If GDP grows, the economy is deemed to be healthy, and GDP growth has long been an overriding priority of most governments.

But GDP contains some glaring absurdities. For example, it omits services provided by the state, such as healthcare. Unpaid work also doesn't count, even though it often displaces activities that, if paid for, would. Car accidents boost GDP because they stimulate economic activity in the insurance and repair sectors. Waste contributes to GDP as long as the discarded stuff was bought with money.

Economic externalities

Worst of all, GDP keeps many aspects of economic activity entirely off the books – the aforementioned externalities, which the Organisation for Economic Co-operation and Development defines as "situations when the effect of production or consumption of goods and services imposes costs or benefits on others which are not reflected in the prices charged". Natural capital, such as trees, is invisible to the GDP system until it is destroyed and turned into products. Ditto environmental degradation, which largely doesn't attract any financial penalties in calculations of GDP. In fact, deforestation and pollution can positively contribute to GDP if they generate economic activity. Health and social problems caused by industry are also swept under the carpet, even though somebody will eventually have to pay for them.

When we buy stuff – food, clothes, energy and so on – the price we pay often fails to reflect the full cost of producing, consuming and disposing of those goods and services across their entire life cycle. The price of a tank of petrol, for example, doesn't include the cost of dealing with climate change and the air pollution caused by its combustion products. The price of a pair of jeans doesn't reflect the social cost of producing them in a sweatshop and the environmental cost of growing the cotton, transporting the jeans halfway around the world and managing the landfill they will probably end up in. The price of food doesn't reflect the social cost of low agricultural wages, the environmental cost of soil erosion, water and pesticide use, and the health costs of obesity and other diet-related conditions.

These externalities are arguably one of the main causes of our myriad environmental and social problems. "Destruction of biodiversity costs nothing, therefore, let's destroy it," says Müller, who is a former assistant director-general of the Food and Agriculture Organization of the United Nations (FAO). "Polluting the atmosphere with CO2 has no cost immediately. These ignored real costs are leading to a global crisis."

In today's economy, companies can deplete natural resources, pollute the environment, drive down wages and create harmful products, safe in the knowledge that they will reap the rewards while taxpayers pick up the tab. This is what is known as "privatised profits and socialised losses", according to Lauren Baker at the Global Alliance for the Future of Food in Washington DC.

The destruction of the Amazon rainforest isn't currently factored into the cost of soya

Indeed, companies are incentivised to do so, as those that are more successful at externalising their costs will be more profitable, more competitive and better at raising capital for more of the same, says Baker.

This is where TCA comes in. It aims to capture all of the pluses and minuses that arise from economic activity, not just raw profit and loss. That means tallying up the cost of the environmental, human health and social harms (or benefits) of production and adding them to the balance sheet.

Until recently, that was almost impossible. But years of progress on methodologies such as life cycle assessment, which tallies the full social, environmental and economic impact of products from cradle to grave, have made TCA tractable. Life cycle assessment has been in development for 50 years, but, until now, has been largely non-monetary. TCA is a way of converting life cycle assessment into cold, hard cash, says Ulrike Eberle at sustainability consultancy Corsus in Hamburg, Germany.

That is the goal: to create a globally accepted accounting system for the true cost of our economic activities. "It's absolutely vital," says Rebecca Henderson at Harvard University, author of the book Reimagining Capitalism in a World on Fire. "If you don't measure it, it's all just corporate speak. We need material, auditable, replicable measures that are simple to implement."

It is in food and agriculture that TCA has made the most progress. In 2018, a United Nations Environment Programme initiative called The Economics of Ecosystems and Biodiversity (TEEB) created a tool called the TEEBAgriFood Evaluation Framework, which includes a methodology for TCA. Snappy it ain't, but vital it is, enabling users to calculate the externalities of products.

The true price of chocolate

The tool is already being used by various actors in the food and agriculture sector. Some food companies have embraced it to reduce their negative impacts on society and the environment. One example is Dutch chocolatier Tony's Chocolonely, which aims to charge the "true price" of its products (see: "Shopping with true costs"). Insurers are increasingly interested in TCA to assess their clients' future exposure to climate change and environmental breakdown, says Baker, and financial advisers use it to help socially and environmentally conscious investors. It is also attracting interest from other sectors, notably clothing and aquaculture, she says. But TCA must spread further and wider. "The concept needs to be applied to everybody, to all economic activities," says Müller.

The application of TCA is exposing some very troubling facts about the current economic system. Earlier this year, a team led by Sheryl Hendriks, then at the University of Pretoria in South Africa, published the first global assessment of the true cost of food. It doesn't make for mouthwatering reading. Right now, consumers spend a total of around $9 trillion a year on food. But if they paid for the externalities, that bill would rise to $29 trillion. Around $10 trillion of the extra is the health costs from diet-related cancers, diabetes and cardiovascular disease; most of the rest is from fixing environmental damage. "Cheap food is very expensive if you consider the externalities," says Müller.

Hendriks emphasises that the $20 trillion extra cost is only a rough estimate, and also that it is incomplete. "It doesn't include social externalities, such as underpayment of wages and child labour," she says. Nor does it include the health costs from obesity, though some of these will be captured by the three conditions in the analysis. When all this is factored in, that vast underpayment is likely to rise even higher.

Last month the FAO put a slightly lower price tag of $12.7 trillion on the hidden costs of food production in its annual State of Food and Agriculture report, which focused on TCA.

Does that mean we need to pay more for food? "If a consumer was to pay for those externalities, they would have to pay three times the market value of food," says Hendriks, now at the University of Greenwich, UK. "But that is not what we're promoting. We're not promoting that prices should go up to accommodate this." The point, rather, is to expose the extent of the externalities to raise awareness and drive change.

This is a misunderstanding that dogs the TCA movement – that it will push up prices at the checkout. "People say, 'You with your TCA, you want to make food even more expensive'," says Müller. "That's nonsense. We are applying the 'polluter pays' principle." That means the agribusiness and food companies would foot the bill, incentivising them to change their business practices so as not to go into the red.

Detractors who bleat about hard-pressed consumers having to pay more are simply defending the status quo so they can continue to externalise their costs, says Müller. And in any case, consumers are already paying – or will pay in the future – for those externalities. "Even today, we pay for it," he says. "Maybe future generations pay for it. Other regions pay for it, or a combination of everything. It is not that true cost accounting is inventing costs. We are only identifying already existing costs."

"This argument, it drives me crazy. It is just an excuse for inaction," says Baker. "The cost of inaction is trillions of dollars."

Redirecting harmful subsidies would soften the blow. The world currently subsidises agriculture to the tune of $600 billion a year, says Müller, most of which props up unsustainable practices, such as factory farming and excessive use of pesticides. That money should be redirected to pay for the industry's externalities, he says.

Of course, we aren't going to transition to a TCA world overnight. "I'm lobbying for a phased approach: try to gain friends, try to win some companies who can benefit from true cost accounting," says Müller. "Otherwise, you're looking like people who have crazy ideas and will never be successful."

At some shops, the prices reflect the true cost of making the products

Those friends might be companies that have adopted a circular economy approach, where everything is reused, and can showcase their environmental credentials via TCA. Or they might be firms that want to assess their future risks and take pre-emptive action, perhaps on the assumption that consumers will increasingly punish companies engaged in environmentally destructive activities, or that their assets will become less valued as the world transitions away from unsustainability. "I think most of them have realised that they will have to do it sooner or later," says Müller.

But getting from where we are now to where we need to be will be difficult. "Right now, we have a lot of people on the starting line," says Baker, "but the short-term incentives aren't there and you really are penalised in the market right now if you're an early adopter." There needs to be legislation, she says, to force companies to move towards TCA.

There also needs to be institutional backing, and it is coming. At last year's COP27 climate summit in Egypt, Máximo Torero, the chief economist at the FAO, threw his organisation's weight behind TCA. "FAO is taking this extremely seriously," he said. "It's a huge challenge, and we are afraid, like many of you, but we are going to overcome our fear and we are going to do this."

That could be a catalyst for real change, says Müller. "We will have it in the heart of policies, we will have a debate about the concept. Then the field is prepared for in-depth discussion."

The drive to internalise externalities seems to be catching on more widely too. The way GDP is calculated changes every 15 years; the next iteration, in 2025, will reportedly include measures of sustainability and well-being.

The transition to TCA will be a long, hard slog, however. "The construction of GDP took many, many centuries," says Müller. Overturning such entrenched economic orthodoxy is a tough ask. But if we recognise GDP for what it is, the transition will be easier, he says. "GDP is a social construction. It's not a natural law like the speed of light, it's an agreement in society."

Text highlighted in yellow was me (RW) trying to emphasise a few of the most important points.

Shopping with true costs

In Amsterdam, a pioneering supermarket displays two different prices for its goods. One is the market price, as you would see in regular supermarkets. The other is the "true price", which factors in the environmental, health and social costs of the creation, consumption and disposal of the product.

Unsurprisingly, the true price is always higher than the market price. Customers can choose which price to pay: if they opt for the true price, the premium goes to environmental and social causes.

In the True Price Supermarket, which opened in 2020, bananas are sold at either the market price of €2.79 per kilo or the true price of €2.94 per kilo – a measly extra 15 cents per kilo to cover the social costs of low-wage farming and impacts on land, water and climate. But some products have a much bigger mark-up: a hot chocolate rises from €2.79 to €3.70 because of the real price of cocoa and milk.

These premiums reflect the true cost of these products, as evaluated by a methodology called true cost accounting (see main story). Even though making the consumer pay the "true price" isn't the actual goal of this accounting method, the movement is spreading.

Many other Dutch retailers have trialled true pricing, as has German discount store supermarket Penny.