The Undercover Economist

By Tim Harford, Little Brown, 2006

What makes markets work? What makes something valuable? What is the basis for bargaining power? Why do poor countries struggle to develop? What is the impact of trade on the environment? Using the basic principles of economics, the author analyses various problems of day-to-day life. Daily life is full of puzzles. But many of us do not even realize them. This book helps us to understand these puzzles and what lies behind them.

The importance of scarcity

When a deal is being done between somebody who has something unique and someone who has something which can be replaced, the profits are likely to be cornered by the person with the unique resource. When relative scarcity shifts, the bargaining power of the people involved in the deal, also shifts. Some things are scarce because of natural factors. Others are scarce because of man made factors – legislation, regulation or foul play. For any company, grabbing or developing unique resources is really the only way of generating profits on a sustainable basis in the long run. These resources could be physical or intangible assets or some unique competencies.

In the real world, people and organizations try to create scarcity by erecting barriers to entry in many ways. The purpose of a trade union is to prevent workers from competing with each other for jobs, thereby driving down wages and worsening working conditions. Professional bodies like doctors, actuaries, accountants and lawyers try to maintain high wages through long qualification periods. Some professional bodies give their approval to only a certain number of candidates per year. The CFA (USA) and CA (India) certification are good examples.

Price Discrimination

We learn in Economics that price discrimination is a good strategy to increase profits in imperfect markets. There are different ways of doing this. The first is to evaluate customers as individuals and charge according to how much each is willing to pay. This approach requires skill and effort. Where technology allows, as indeed the Internet does, firms with scarcity power can use highly sophisticated methods to target customers.

The group target strategy is to offer different prices to members of distinct groups. This strategy seems more popular as people in groups who pay more are usually people who can afford more. People who can afford more are usually people who care less about price. But this is only a coincidence. Companies are targeting the people who are willing to pay more, not those who can afford to do so.

The cleverest way to get better prices is to persuade customers into confessing that they are not sensitive to price. To achieve this, the company might offer products in different versions – size, features, location, etc.

No company has power to indulge in price discrimination unless it has scarcity. Sometimes, scarcity results because of the customers' own laziness. Customers do not shop around sufficiently. Companies, on their part, should be careful about leaks in their marketing programs. Price sensitive customers may stay away from expensive products. But price insensitive customers may also stay away from them. Another risk is that customers who are being offered a discount may buy the product and resell it at a profit to customers who are being charged the higher price.

The market mechanism

In a free market, people do not buy things that are worth less to them than the asking price. And people do not sell things that are worth more to them than the asking price. Nobody is forcing them to. Most transactions that happen in a free market improve efficiency because they make both parties better off and don't harm anyone else.

In a perfectly competitive market, the price of coffee would equal the marginal cost of coffee. If the price were lower, firms would go out of business, until it arose. If the price were higher, new firms would enter or old firms would expand their output until it fell.

A perfect market ensures that:

- Companies are making things the right way
- Companies are making the right things
- Things are being made in the right proportions
- Thinks are going to the right people.

In short, there is nothing more efficient than a perfectly competitive market. A non market process may be desirable in a police service or a school system. But in general, non market systems do not adequately capture, information about wants, needs, desires, inconveniences and costs. Sometimes this loss of information is a worthwhile sacrifice for gains in equality or stability, but often, it can lead to waste and confusion the economy and society. There is no such confusion in a well functioning market because the price signals what people value and what they do not.

When economists say the economy is inefficient, they mean that there is a way to make somebody better off without harming anybody else. The perfectly competitive market is perfectly efficient. But efficiency is not enough to ensure a fair society or even a society in which we want to live. Harford explains later on how the market mechanism can be supplemented by other governmental interventions to ensure equity.

Taxes

Taxes are inefficient because they distort the information carried by prices in perfectly competitive, efficient markets. Price no longer equals cost. So cost no longer equals value. We face a dilemma. What we need is a way to make our economy both efficient and fair. Nobel Prize winning Economist Kenneth Arrow proved that not only are all perfect markets efficient but all efficient outcomes can be achieved using a competitive market, by adjusting the starting position. Arrow argued that when trying to balance the excesses of competitive markets, instead of interfering with the markets themselves, the trick is to adjust the starting blocks by making lumpsum payments and levying onetime taxes. Fairness and efficiency can be simultaneously achieved by allowing markets to function freely and at the same time having a programme of appropriate lump-sum taxes and subsidies that put everyone on an equal footing. The perfect markets find every possible opportunity to make everybody better off from their revised starting points. This approach is not always possible in a practical situation. But the message from Harford is that the problem is better addressed by re-arranging the starting blocks than by interfering with the race.

Externalities

Markets fail to work well in the presence of scarcity power and when people lack information. But markets also fail when there are externalities, the costs/benefits that lie outside the organization and affect the society at large. When pain is caused to society, an externality charge may make sense. The idea of an externality charge is not to discourage everyone from doing anything that might inconvenience anyone else; it is to get them to take into account the inconvenience they cause to others. Externality charging should not be taken too far. It must reflect the cost of the externality, but no more. People should be allowed to do things they enjoy even if others are mildly inconvenienced. But we should also refrain from harming other people if the effort involved to avoid harming them is small. A charge for externalities is effectively a tax.

Private information

If one party to a deal has inside information and the other does not, then markets may not work as well as we would hope. An American economist named George Akerlof published a revolutionary paper in 1970 to explain how profound and dramatic the problem might be.

If some people know more than others about the quality of a product, then some high-quality products may not be traded at all, or not be traded very much. Akerlof described a market that should exist and simply doesn’t because of inside information. Value creating trades do not happen because the buyers will not buy without proof, and the sellers cannot offer proof.

So an insurance company may find it is able to sell insurance only to people who are confident they will use it. As a result, the insurer loses the desirable clients who are unlikely to make claims and acquires the unwanted clients who are likely to make costly claims, and then the insurer has to cut back on benefits and raise premiums. People of middling health now find the insurance is too expensive and cancel it, forcing the insurance company to raise premiums even higher to stay in business. More and more people cancel their policies, and in the end only the most undesirable customers will buy insurance (because they know it is worth paying that price) and at a price that will be nearly impossible to afford for ‘genuine’ customers.

In short an insurance policy depends on mutual ignorance. An insurance company can only insure us against an event like a burglary, a fire or a medical bill if neither of us has any idea whether it will happen. If we could predict the future, insurance would be meaningless. If our insurance company could predict fires much better than us, it would sell us insurance only if we didn’t need it. If we new that our house would burn down, the insurance company should be calling the police rather than selling fire insurance! Since insurance depends on mutual ignorance, any advance in medical science which pushes back the boundaries of ignorance, whether for the insurers, the insured or both will weaken the basis of insurance. The more we know, the less we can insure. This is a worrying prospect if we want to give people a chance to protect themselves against the high costs of bad luck.

Economists have attempted to find ways of getting around the problem. Michael Spence proved that one way to bridge the information gap in markets is for trustworthy vendors to find ways to signal their reliability. High-quality job applicants, banks, used-car salesmen and soft-drink manufacturers may spend substantial amounts of time and money simply to distinguish themselves from low-quality job applicants, banks, used-car salesmen or soft-drink manufacturers.

Another famous economist, Joe Stiglitz studied what the uninformed side could do to uncover it. He explicitly considered markets for insurance and concluded that the uninformed insurer was not completely helpless in the face of customers who could predict the likelihood of needing to file insurance claims. The insurer could offer different deals: for instance, reducing the premium but increasing the excess. The low premium makes the insurance cheaper, but the higher excess which is the amount by which any claim is reduced, means that any claim would pay out less. Low-risk customers would be attracted by that kind of deal, because the insurance is cheaper and they don’t expect to claim very often anyway. On the other hand, high-risk customers would rather pay the higher premium because they expect to claim frequently. A high excess does not make sense to them.

The lemons problem (adverse selection), when inside information guts a market because ignorant buyers are unwilling to pay for quality they cannot observe, is one example of the broader problem of inside information (asymmetric information). Inside information also produces an obstacle called ‘moral hazard’. If we compensate people when bad things happen to them, they may get careless and the frequency of bad events increases.

Moral hazard is an inevitable problem in the real economy. While it is impossible for insurance companies to avoid moral hazard altogether, they can take steps to reduce it. One of the most common ways is by modifying the insurance policy to provide incomplete insurance, in the form of an excess. Another way insurance companies can fight moral hazard is by gaining access to the inside information, such as smoking, existing ailments, etc.

Keyhole surgery techniques allow surgeons to operate without making large incisions, minimising the risk of complications and side effects. Economists often advocate a similar strategy when trying to fix a policy problem, i.e., target the problem as closely as possible.

Take the case of healthcare. Keyhole economics would first identify the specific market failures, which fall into three categories: scarcity power, externalities and imperfect information, plus the issue of fairness. Scarcity power is a potential problem, but for most treatments not a significant one.

This diagnosis suggests a two-part keyhole treatment. The first part is to ensure the widespread availability of information: it should be easy to get a second opinion, to call a help-line, or to get information from libraries, clinics, the internet, even supermarkets.

The second part is to give patients an opportunity to use this information. In a privatized, insurance-based system, the insurance company tends to make a lot of choices; in a government provided system, the government makes the choices. In a market-based system without insurance, the patient makes the choices. This is much better but the problem is that the patient also has to pay for unpredictable and potentially catastrophic health-care costs.

How can we give patients choice and responsibility without putting an unbearable burden on them? The best system would compel patients to pay for many of the costs, thus providing an incentive to inform themselves and to make choices that are both in their interests and reasonably cost-effective but which leaves the most severe costs to the government or insurance. This might work, because most medical bills are not catastrophic and so do not need insurance.

Such a system would give maximum responsibility and choice to patients, therefore requiring them to spend their own money rather than that of governments or insurers. But it would make sure that nobody faced catastrophic medical bills and ensure that even the poor had enough money to buy medical care.

Markets work because our choice as consumers between competing producers gives them both the right incentives and the right information to produce the right amount of exactly what we want. And scarcity power, externalities and inside information can each ruin the way markets do this.

In the case of health care, the market works poorly because while we want the reassurance of knowing we can afford expensive medical bills, inside information eats away at the insurance by driving away low-risk customers and forcing premiums to rise. Private companies have developed ways to get around the problem, but they are expensive and bureaucratic. Singapore's government tackled the problem head on, by using forced saving and catastrophe insurance to make sure costs were manageable but allowing patients sufficient freedom to exercise their choice.

Rational Insanity

Perfectly informed investors produce a random market, but a random market doesn't reward anybody for becoming perfectly informed. It wouldn't be worth anybody's while to invest time and effort to analyse the market or uncover new information, if everybody else was doing the same. On the other hand, a market full of unexploited opportunities would offer big profits to any investor willing to research them, which would then lead to fewer unexploited opportunities. Somewhere in the middle is a balancing point: a nearly random market with enough quirks to reward the informed investors who keep it nearly random.

We should not assume that an economic revolution will automatically lead to a rise in share prices. Share prices should rise only if there's good reason to think that future profits will be high. As we know, profits derive from scarcity; for instance, ownership of scarce land (protected by legal title), a scarce brand (protected by trademark) or an organization with unique capabilities (protected by nothing more than the fact that most effective organizations are hard to copy). So share prices should rise only if economic transformation increases the degree to which organizations control scarce resources.

There might be a link between economic transformation and the control of scarcity. Some companies will gain; others will lose. But there seems to be no clear link between economic transformation and high profits for the average company. In fact, the reverse is often true: economic transformation destroys the profitability of old firms (by replacing or duplicating their scarce assets), while the new firms that replace them often face a high failure rate and very large costs of building their businesses. The advantages are enjoyed by workers who are paid higher wages on average and by customers who pay lower prices or get new and better good and services. The economy will never change so much that companies with no scarcity power become highly profitable.

The lessons for making stock market investment are clear enough. All stock prices incorporate tremendous expert knowledge. If we plan to try to make serious money, we better have a clear idea of what we think we know, and what market insiders are ignoring. Also long-lasting profitability for a company comes from having some capability that others cannot match: like a powerful brand in a conservative market.

Why Poor Countries are Poor

Poor countries should have been catching up with rich ones for the past century or so. Logically, the further behind they are, the faster the catch-up should be. Poorer countries should catch up quickly because in a country which has very little in the way of infrastructure or education, new investments should generate quick and attractive returns. Rich countries don't gain much from further investment. This is called 'diminishing returns'.

When we look at countries like Taiwan, South Korea or China, which have been doubling their incomes every decade or quicker, the theory of catch-up seems reasonable. But many poor countries are growing more slowly than the developed countries and the gap is only increasing.

The political system does matter when it comes to economic development. Economist Mancur Olson produced a remarkable and simple theory of why stable dictatorships should be worse for economic growth than democracies, but better than anarchies. A leader who needs to secure broader support for his policies will need to spend more government revenues on wealth-creating goods and services like roads and courts, and less on himself and his cronies. The greater the democratic pressures, the more healthy the economy is likely to become.

Any development project is most likely to be successful if the people who benefit from its success are the same people who make it possible. Unfortunately, in many cases, development projects are often commissioned by people with less interest in success and more in bribes and career advancement. If the effectiveness of the project is a minor consideration, then it can hardly be a surprise if the project does not deliver on the publicly announced aims, even if it has delivered on the real aims of enriching bureaucrats. And even if the project was one that would still have been commissioned if genuine development really was the goal, bribes and other distortions are likely to spoil things.

Take the case of Cameroon, which the author has studied from close quarters. Cameroon's education system would be better if people had an incentive to get a good education; if a meritocracy were in place, and good grades and real skills – rather than connections – earned jobs. Cameroon would have better technology and more working factories if the investment climate was right and if the profits weren't eaten up by bribes.

The small amount of education and technology and infrastructure that Cameroon does have could be much better used if the society was organised to reward good productive ideas. But in Cameroon, this simply does not happen. To illustrate, there is no point investing in a business because the government will not protect you against thieves. There's no point in paying the phone bill because nobody can successfully take you to court. There's no point getting an education because jobs are not handed out on merit. There's no point setting up an import business because the customs officers will be the ones to benefit.

These problems cannot be fixed overnight. But there are some simple reforms which will move poor countries like Cameroon in the right direction. One simple reform is to cut red tape, allowing small businesses to be quickly established, which makes it easier for their entrepreneurs to expand and borrow money. The legal reforms necessary are often trivial; and while they still rely on sensible and benevolent government, all it takes is a single diligent minister. Another option, is to open up the country to the world economy. Most poor countries are also very small economies. Tiny countries like Chad and Cameroon cannot possibly be self-sufficient: they need access to cheap fuel, raw materials, loans from international banks and manufacturing equipment. Trade can help here.

Beers, Chips and Globalisation

Think of a country whose government is very keen on self-sufficiency. If the government bans all imports, a lot of effort will be devoted to producing locally what was once imported. This certainly is encouragement to the local economy. But then export industries will quickly shrink and die. Companies would not spend time and money exporting goods to earn foreign exchange, if they are not allowed to spend the foreign currency on imports. While one part of the local economy is encouraged, another is crippled. The ‘no imports’ policy is also a ‘no exports’ policy.

Trade barriers will always cause more harm than good, not just to the country against which the barrier is erected but also the country that erects the barriers. No matter if other countries choose to inflict trade restrictions on themselves, we’re better off without.

The solution, in a civilized but progressive society, is not to ban new technology or to restrict trade. Neither is it to ignore the plight of those people put out of work by technology or trade. It is to allow progress to continue while providing support to those who have been hurt as a result.

Trade & the Environment

Trade has often been linked to negative impact on the environment. According to the author, the link between trade and environmental damage just does not stand up to close scrutiny. There are three reasons for concern. The first concern is of a ‘race to the bottom’. Companies rush overseas to produce goods under cheaper, more lenient environmental laws, while hapless governments oblige them by creating those lenient laws. The second is that physically moving goods around inevitably consumes resources and causes pollution. The third worry is that if trade promotes economic growth, it must also harm the planet. While each has some merit, the idea that trade is bad for the environment is not quite valid.

When companies move abroad they are seeking cheap labour, not a pollution haven. And companies do not pollute for fun. The latest manufacturing techniques are often cheaper and less polluting at the same time. Energy efficiency, for instance, saves money and reduces pollution. This is why many companies regard environmental performance as part of general quality control and good efficient manufacturing. Even if some costs can be saved by diluting environmental standards, many firms build factories everywhere in the world using the same latest, cleanest technology from the developed world simply because that kind of standardization itself saves costs.

Poor countries produce goods like clothes, children's toys and coffee, while the seriously polluting industries like bulk chemical production require high levels of skill, reliable infrastructure and political stability. So moving the plant to a third world country to cut costs may not be all that straightforward an option.

There will usually be an alternative policy, which will fix the environmental problems more directly and efficiently than any trade barrier. Trade barriers are a clumsy and damaging way to pursue worthwhile objectives, like a healthy environment. And we must remember that even when we move goods within the country, the environmental costs are not small. An externality charge would encourage the use of cleaner methods of transport, whether within or between countries.

Harford also points out that the most deadly and certain environmental problems of today are not the result of trade but poverty. One example is domestic pollution from wood-burning stoves, which causes blindness and fatal respiratory conditions. Another example is unsafe drinking water, which kills millions. The cure for these environmental problems is economic growth, and trade can help. Trade helps both indirectly, by boosting growth, and directly, because fee trade in poorer countries has been associated with the end of subsidies to heavily polluting "strategic" industries such as petrochemicals and steel as well as the import of new, cleaner technologies.

If we restrict trade on the grounds that it is polluting, we would remove wealth generating opportunities for developing countries. Clearly no environmental catastrophe, could possibly inflict the same terrible human cost as keeping people in poverty.

There is plenty we can do to aid the environment without putting restrictions on trade. Externality taxes have already cut sulphur emissions in the United States. They could also be used to cut carbon dioxide emissions and fight climate change.

Polluting industries are still based in rich countries, rather than poor countries. Environmental standards are rising in China, Brazil and Mexico, the major destinations for foreign investment into poor countries. Protectionist measures such as those on farming, steel and coal, which sometimes claim environmental justifications in fact are tremendously harmful to the environment. Taxes on transport fuels are consistent with free trade and much better for the environment than trade restrictions. The worst environmental problems, at least of today, are caused by poverty, not trade.

Trade & the MNCs

MNCs have been extensively blamed for creating sweatshops in poor countries. But workers go there voluntarily, which means that other alternatives are worse. They stay there, too. Turnover rates of multinational – owned factories are low, because conditions and pay, while bad, are better than those in factories run by local firms. And a job is better than options like: running an illegal street stall, working as a prostitute or searching through landfills to find recyclable goods.

Free trade destroys the scarcity power of big firms by subjecting them to international competition. It encourages the use of new ways of working and better technology. Some people even think it promotes peace by giving trading nations powerful reasons not to go to war with each other.

It is often the special-interest groups with disproportionate influence, not the common man, that have reasons to oppose free trade.

Tariffs

The benefits of tariffs are substantial for a narrowly concentrated group of people, often sectors with organized unions and large businesses. If voters are well informed, the protectionists will be voted down. But if people are not well informed, tariffs may remain especially if the campaign for trade restriction is discussed as a campaign against sweatshops. Reform efforts may also be stymied by inertia and nervousness on the part of these poorly informed voters, while the special interest groups are well aware that they stand to gain from protection and find it worthwhile to invest in lobbying efforts to defend their narrow interests.

In a healthy democracy, special interests should have less power than in a fragile democracy or an undemocratic country, like Cameroon. If special-interest groups are part of the explanation behind trade barriers, countries with better-established democracies should have lower trade barriers. No political system is perfect, but democracies tend to favour trade more than others, because lowering trade barriers is good for the ordinary person.

How China Grew Rich

The author provides a fascinating account of the growth of China in recent years. Under Mao, China's development efforts were two-pronged: massive investment in heavy industry such as steel, plus application of special agricultural techniques to increase good production. The policy took into account the availability of coal in China's northern provinces and the fact that coal, steel and heavy manufacturing had been the basis of the industrial revolution in the United Kingdom, the United States and Germany. Increasing agricultural production was important because there was barely enough fertile land to feed the country's hundreds of millions of people.

But this two-pronged push was the greatest economic failure the world has ever seen. Mao conducted economic policy on the hidden premise that if people tried hard, the impossible would happen. Villagers were ordered to build steel furnaces in their backyards but had no iron ore to put into them. Some villagers melted down good iron and steel – tools, even doorknobs – in order to meet the quotas demanded by the state.

If industrial policy was a farce, agricultural policy was a tragedy. The Great Leap Forward had already pulled many workers off the land to labour at the furnaces or in public works like dams and roads. Mao ordered the people to kill grain-eating birds. The population of insect pests exploded as a result. Mao suggested closer planting and deeper sowing to increase yields. Rice planted so closely together could not grow, but party officials, anxious to please Mao, staged shows to demonstrate that the policies were succeeding.

Mistakes can happen in market economies perhaps more frequently than under central planning. But the mistakes stay small. When venture capitalists back new ideas, they do not expect many to succeed. When a few of them succeed, they make some people rich and bring innovation to the whole economy. In case of the many ideas that fail, some people will go bankrupt, but nobody will die. Only command economies can promote experimentation on an extravagant scale, suppress informed criticism and continue economically unviable activities for too long.

Mao's successor, Deng was more pragmatic. He had little time for such folly and immediately embarked on a programme of reform, announcing that 'socialism does not mean poverty'. To improve agriculture, he had to get the incentives right. He started by raising the price paid by the state for crops by nearly a quarter. The price paid for surplus crops rose by more than 40 per cent, substantially increasing the incentive for fertile areas to produce more crops.

At the same time, a few collectives experimented with subcontracting land to individual households. Instead of clamping down, the government allowed the innovation to see whether it would make people work hard and find smarter ways of doing things because they were rewarded directly for their successes. Crop yields immediately increased. The experiment spread: just 1 per cent of collectives had used the 'household responsibility system' in 1979; by 1983, 98 per cent had switched to the system.

Partly by accident, partly by benign neglect and partly by design, Deng introduced the market system to Chinese agriculture. Those who had good ideas, good luck and worked hard prospered. Farmers grew more cash crops and devoted less effort to crops that were difficult to grow. All of this was the result of introducing a price system.

As late as 1992, only 14 percent of industrial output was being produced by privately owned or foreign firms, while the state sector was responsible for nearly half of the output. The output of local-government township and village enterprises made up most of the remainder. The Chinese economic miracle was not really about privatization. What mattered was not who owned the companies. The companies were forced to compete in a relatively free market, driving down scarcity power and bringing in market forces.

The Chinese reformers realized that engaging with the world could help. First, China could tap into world markets for labour-intensive goods; toys, shoes and clothes. Second, the foreign exchange earned could be spent on raw materials and on new technology to develop the economy. And foreign investors could help the locals learn modern production and business techniques.

Conclusion

Countries who want to prosper must accept the basic lessons of economics – embrace markets, fight scarcity power and corruption; correct externalities; try to maximize information; get the incentives right and engage with other countries. In the end, economics is about people. And economic growth is about a better life for individuals – more choice, less fear, less toil and hardship.