

# IS THE PRICE RIGHT?

## FAIR PLAY AND ECONOMICS

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- Notions of fairness matter for a variety of economic transactions.

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**IN 2011, JUST BEFORE** the Rugby World Cup, Adidas got into controversy over the price of the All Blacks jerseys, which retailed for more than twice as much in New Zealand as elsewhere. According to the company, the price it set in New Zealand was “relative to the local market”. When local team supporters tried to order cheaper jerseys online from overseas suppliers, Adidas moved aggressively to block such attempts. Public indignation rose to such a pitch that even New Zealand's Prime Minister weighed in on the debate, and several local retailers began selling the jerseys at a loss.

ESTER TONGS (ALL ILLUSTRATIONS)



## WHAT WENT WRONG WITH Adidas' strategy?

The company had merely engaged in traditional price discrimination by charging a higher price to buyers with little purchase flexibility in the expectation that they would be willing to pay a premium.

After all, the person sitting in the seat next to you on the airplane may have paid hundreds of dollars more than you did for this very reason, having bought their ticket at the last minute while you bought yours two months earlier.

Adidas implicitly assumed that once the Rugby World Cup got underway, and the All Blacks started to win, fans would catch the fever and would snap up the jerseys, in spite of the much higher prices. However, the logic behind such pricing strategies depends crucially on people's willingness to accept the price. If enough people consider it to be unfair and refuse to buy then the anticipated profitable trades no longer take place.

The idea that notions of fairness may matter for a variety of economic transactions, including pricing, is not usually taught in classrooms or adequately appreciated by businesses. But there is mounting evidence that they do. Consider the following scenario: it is your anniversary, and to celebrate you take your significant other on a romantic dinner and a cruise. At the end of the cruise a photographer shows you a lovely photograph of the two of you taken that evening. You are told that a print will cost \$50. The photo would be an excellent memento of your memorable night,

but \$50 seems high. You offer \$25, but the photographer balks. You walk away without the photo. Clearly, this is a bad outcome for both of you. You probably value the photo at \$25 or more, while the photo is essentially valueless to the photographer. If you had agreed on \$25, you would both be better off.

Do people turn down profitable deals if they think that the price is too high? One way to find out is to put people into economic decision-making experiments that involve real money. Such experimental 'games' are designed to simulate real-life situations.

### MEASURING PERCEPTIONS OF FAIRNESS

An experiment called the Ultimatum Game, introduced by Werner Gueth and two of his colleagues at the University of Cologne, is particularly suitable for studying such transactions.

The game is simple. You recruit a number of strangers, split them into two equal groups and place them in different rooms. Members of one group are designated 'proposers' while members of the other group are 'responders'. Each proposer is given \$10 and told that he

or she must suggest a split of the money with an unknown and unseen responder. For instance, the proposer could propose keeping \$8 and offering \$2 to the responder. If the responder accepts, then they both get the designated amounts. If the responder refuses, neither gets anything. This, then, creates a situation in which there are many ways of splitting the \$10 to the benefit of both parties. But each has an incentive to avoid disagreement at all costs, because that would lead to an unwanted outcome.

How should this game unfold? In thinking about problems of this type, a useful approach is to start at the end and work back – a process known in Game Theory as 'backward induction'. We start by considering the responder's choice. A simple solution is to assume that people care only about monetary payoffs. If that is true, then any amount, no matter how small, is better than nothing and should be accepted. By this logic, the proposer should make an appropriate offer – say \$1 – and the responder should accept the offer because it is better than nothing. The implication is that in a game of this type the proposer would get \$9 and the responder \$1.

However, it turns out that over many replications of the game in a variety of countries proposers almost always made more generous offers – in the range of \$4 to \$5 – and offers of less than \$3 were routinely turned down by responders. When the results first began to circulate, critics responded by stating that they were due to the very small stakes involved.

### DO THE STAKES MATTER?

To investigate this possibility, Lisa Cameron of the University of Melbourne replicated the experiments in Indonesia using stakes equivalent to a month's wage or more. She found that with these much larger stakes, the offers were even more equitable. Proposers ended up offering 40-50 per cent of the total available, and most such offers were accepted. As before, small offers, which



were few in number, were rejected. Similar results were reported in the United States, where college students played with stakes as high as US\$100.

The implication is that responders were willing to turn down substantial sums if they considered the offers to be unfair, even if that meant getting nothing. Anticipating such rejection, the proposers felt compelled to make generous offers.

### PAYOFFS MATTER, BUT INTENTIONS MATTER MORE

These findings led to at least two further questions. First, in turning down small offers were responders reacting to the amount involved or were they protesting against the unfairness of the proposers? That is to say, were they objecting to the 'intentions' of the proposers? Second, when proposers made generous offers were they doing so in anticipation of small offers being rejected or were they merely being generous?

Sally Blount of the Chicago Business School provided an answer to the first question by comparing offers generated by human proposers and computer proposers. She found that computer offers, not matter how small, were always accepted, while unfair human offers were routinely turned down. Responders clearly made a distinction between the intentions behind the offers. Small human offers were treated as lacking in fairness whereas no such motive was imputed to computer offers.

Robert Forsythe and colleagues at the University of Iowa decided to answer the second question by comparing behaviour in the Ultimatum Game with the Dictator Game.

The latter is merely an allocation task in which the proposer is given \$10 and told to share it with the responder. The responder has no say in the matter and gets whatever amount the proposer decides is appropriate. If, in the Ultimatum Game, the proposer is motivated by altruism rather than the fear of rejection, then the proposers should send roughly equal amounts in both games. But it turns out that proposers send a lot less in the Dictator Game than in the Ultimatum Game.

Gary Bolton of Penn State University and Rami Zwick of the University of Auckland took a different tack. They investigated what happened when the responder's ability to punish the proposer was removed. In other words, where the rejection of an offer resulted in the proposer getting what he or she decided on but the responder getting nothing. Bolton and Zwick found that in all cases the offers were very small, yet the responders invariably accepted them.

### DO FAIRNESS PERCEPTIONS DIFFER ACROSS CULTURES?

Anthropologists tested the Ultimatum Game in a large cross-cultural study involving a number of tribal societies across the world. They found significant differences in what was considered fair and acceptable. In the Peruvian hunter-gatherer society of Machiguenga, proposer offers were often small but were nevertheless routinely accepted, while among the whale-hunting Lamalera of Indonesia offers were often 'hyper-fair' in the sense that proposers, quite often, offered more than half of the total available to the responders. However, it appears that the norms do not differ widely across industrialised nations and, moreover, the greater the market integration, the more fair the offers tend to be.

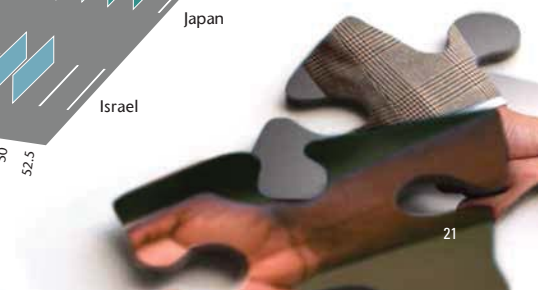
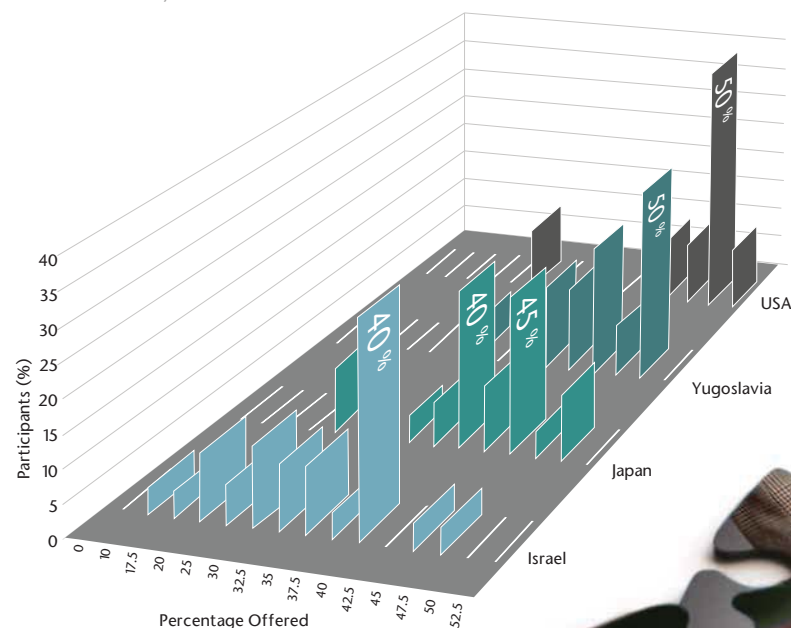
Nobel laureate Alvin Roth of the University of Pittsburgh, and fellow researchers Vesna Prasnikar, Masahiro Okuno-Fujiwara, and Shmuel Zamir, compared bargaining and market behaviour in four locations: Jerusalem, Ljubljana (Slovenia, formerly part of Yugoslavia), Pittsburgh, and Tokyo. Figure 1 summarizes their results.

Several things stand out from the data. Not surprisingly, the proposers seldom offered the responder more than 50 per cent of the total available. Second, overall the offers are similar, in that nowhere do we see the extremely

parsimonious offers predicted by the theory. However, there are minor differences. In Israel the modal offer (that is, the offer made by the most subjects) is 40 per cent. In Japan there are two modes – 40 per cent and 45 per cent. However, in Yugoslavia and the US, the modal offer is 50 per cent.

Rejection rates are also broadly similar - roughly 28 per cent of all offers were rejected in Israel and the US, 29 per cent in Yugoslavia, and 22 per cent in Japan.

FIGURE 1: BARGAINING BEHAVIOUR IN JERUSALEM, LJUBLJANA, PITTSBURGH, AND TOKYO



## FAIRNESS AS A CONSTRAINT ON PROFIT-SEEKING

But how exactly do notions of fairness act as a constraint on profit maximisation or the exploitation of market power? One of the early attempts to understand this was undertaken in the mid-1980s by Daniel Kahneman, a psychologist at Princeton University and winner of the Nobel Prize in economics, and two economists, Jack Knetsch of Simon Fraser University and Richard Thaler of Cornell University.

They used an extensive questionnaire to understand people's predispositions toward a multitude of strategies adopted by businesses. Here is an example from the questionnaire: "A hardware store has been selling snow shovels for \$15. The morning after a large snowstorm, the store raises the price to \$20."

Of 107 respondents, 82 per cent considered the action unfair.

Kahneman and his colleagues then teased out the responses to a variety of pricing strategies, four of which are outlined below.

### (I) EXPLOITATION OF INCREASED MARKET POWER

The market power of a business reflects its ability to charge its customers a higher price (in the form of a higher mark-up over costs) and often depends on the availability of suitable substitutes. Monopolies, for instance, are able to charge large mark-ups because customers have no alternative choices. By and large various types of price-gouging were seen as unfair because such actions constituted opportunistic behaviour.

One of Kahneman's examples is as follows: "A severe shortage of Red Delicious apples has developed in

a community and none of the grocery stores or produce markets has any of this type of apple on their shelves. Other varieties of apples are plentiful in all of the stores. One grocer receives a single shipment of Red Delicious apples at the regular wholesale cost and raises the retail price of these Red Delicious apples by 25 per cent over the regular price."

Only 37 per cent of 102 respondents considered this price increase acceptable.

Firms with market power often use that power to engage in price discrimination as alluded to in the Adidas example at the beginning of this article. But the survey results suggest that many forms of price discrimination are considered unacceptable.

### (II) THE CONTEXT FOR PRICING DECISIONS

The next two scenarios look at what happens when a business increases price in an attempt to protect its profit: "Suppose that, due to a transportation mix-up, there is a local shortage of lettuce and the wholesale price has increased. A local grocer has bought the usual quantity of lettuce at a price that is 30 cents per head higher than normal. The grocer raises the price of lettuce to customers by 30 cents per head." And, "A landlord owns and rents out a single small house to a tenant who is living on a fixed income. A higher rent would mean the tenant would have to move. Other small rental houses are available. The landlord's costs have increased substantially over the past year and the landlord raises the rent to cover the cost increases when the tenant's lease is due for renewal."

These increases were considered acceptable by 79 per cent and 75 per cent of the respondents respectively. This suggests that it is acceptable for firms to protect themselves from losses even if this means raising prices.

### (III) SOCIAL NORMS

In traditional economic theory, compliance with contracts depends on enforcement. But buyers and sellers may be willing to abide by norms of fairness even in the absence of any explicit enforcement, as the following scenarios illustrate:

"If the service is satisfactory, how much of a tip do you think most people leave after ordering a meal costing \$10 in a restaurant that they visit frequently?" And, "...in a restaurant on a trip to another city that they do not expect to visit again?"

The average tip for the first example was \$1.28 (122 respondents), and for the second \$1.27 (124 respondents). The possibility of enforcement in the form of repeat visits is therefore evidently not seen as a significant factor in the control of tipping. This is entirely consistent with the widely observed adherence to a 15 per cent tipping rule in the US, even by one-time customers who have little reason to fear embarrassing retaliation by an irate server. Most people who travel to that country on business will appreciate the strength of this social norm.

### (IV) FAIRNESS IN LABOUR MARKETS

Do such fairness norms extend to the market for labour as well? It turns out that even there, market prices and the history of previous transactions between a seller and a buyer can serve as reference transactions. The role of prior history in wage transactions is illustrated by the following scenario:

"A small photocopying shop has one employee who has worked in the shop for six months and earns \$9 per hour. Business continues to be satisfactory, but a factory in the area has closed and unemployment has increased. Other small shops have now hired reliable workers at \$7 an hour to perform jobs similar to those done by the photocopy shop employee. The owner of



the photocopying shop reduces the employee's wage to \$7."

Out of 98 respondents 17 per cent thought this was acceptable while 83 per cent considered it unfair.

Kahneman and his colleagues suggest that "many actions that are both profitable in the short run and not obviously dishonest are likely to be perceived as unfair exploitations of market power.... Further, even in the absence of government intervention, the actions of firms that wish to avoid a reputation for unfairness will depart in significant ways from the standard model of economic behaviour."

One problem with survey evidence is that people's survey responses and their real-life actions do not always match up. A classic example comes from a 1930s study by social psychologist Richard LaPierre who wanted to discover if people with negative attitudes toward other ethnic groups would demonstrate these behaviours overtly. For approximately two years LaPierre travelled around the US with a young Chinese couple, stopping at 184 restaurants and 66 hotels. They were refused service only once. LaPierre subsequently wrote to each of the businesses where he and the Chinese couple had dined or stayed. In the letters, which gave no indication of his previous visit, he enquired whether they would offer service to Chinese customers. Although almost none of the establishments had refused service, the majority said that they would not serve the Chinese visitors. There are many other such examples of dissonance

between attitudes and behaviour. So, will buyers actually refrain from buying at prices they consider to be unfair? As indicated above, proving a negative is difficult.

## EXPERIMENTAL EVIDENCE OF DEMAND WITHHOLDING

Rather than relying on survey responses, Bradley Ruffle of Ben-Gurion University of the Negev decided to study this issue using more elaborate decision-making experiments with real money at stake.

Ruffle set up an experiment involving a 'posted-offer' market, in which the buyer has the option of either purchasing a product at the price set by the seller or not buying at all. Most retail stores operate on this principle in that each item has a price tag and there is no scope for haggling over the price.

If a trade takes place, the seller's payoff is determined by the difference between the price and the cost of each unit sold. The buyer, in turn, earns a 'consumer surplus' – which in one sense is a psychological payoff – as measured by the difference between how much the buyer values the good (the maximum price he is willing to pay) and the price that he actually pays (i.e., how much he actually is out of pocket). If the buyer rejects the price then neither party earns any surplus. Thus a posted-offer institution is a natural multi-player extension of the ultimatum game.

What Ruffle found – and bear in mind that these experiments involved people playing for real money, with real gains and losses - is that 'demand withholding'

by buyers is indeed a factor in these markets. The effect of such withholding is more pronounced when (1) there are two buyers rather than four; (2) when the surplus accruing to the seller is six times that accruing to the buyer; and (3) when the buyers are made aware of this inequitable distribution of the surplus. These results are similar to turning down small offers in the ultimatum game except here such rejection comes in the explicit context of a market transaction.

So what does this all mean? Does fairness make a difference in real life? I end with two examples where the stakes were high.

In 2007, Rosanne Martinez of Santa Fe, New Mexico was hit by a car that was insured by industry giant AllState. Her medical bills and lost wages added up to \$25,000. Allstate offered \$15,000 to settle. According to an Allstate claims adjuster, Martinez's case reflected what many US insurance companies did to save money – including, in some cases, making extremely low offers. The logic is that people will often accept such an offer, fearing that otherwise they would end up with nothing.

However, Martinez refused the offer. Instead, she sued and a jury awarded her \$167,000 dollars. But that verdict took three years.

The second example involves the players of major league baseball in the United States who, in 1994, went on strike. This led to the cancellation of 938 games, including the entire post-season and the World Series. Team owners were demanding a cap on player salaries and came up with a new revenue-sharing plan. The players' union rejected the offer, which they thought was unfair to the players. After prolonged negotiations failed to break the impasse, the acting commissioner, Bud Selig, cancelled the rest of the season. The move resulted in the loss of US\$580 million in ownership revenue and US\$230 million in player salaries. Thus, the players essentially walked away from US\$230 million collectively – the average salary of players at this time was about US\$1.2 million per year – because of what they considered was an unfair offer. This in turn resulted in a loss of more than twice that amount for the owners. ■

## KEY TAKE-OUTS

- Perceptions of fairness can act as a constraint on profit-seeking and exploiting market power.
- Context matters. It is acceptable for firms to raise prices in order to recoup losses.
- Strategies perceived as 'price gouging' may be counter-productive.
- Getting the price wrong can have a significant and long-term negative impact on a brand's reputation.



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