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Fairness as a Constraint on Profit Seeking: Entitlements in the Market

By DANIEL KAHNEMAN, JACK L. KNETSCH, AND RICHARD THALER*

Community standards of fairness for the setting of prices and wages were elicited by telephone surveys. In customer or labor markets, it is acceptable for a firm to raise prices (or cut wages) when profits are threatened and to maintain prices when costs diminish. It is unfair to exploit shifts in demand by raising prices or cutting wages. Several market anomalies are explained by assuming that these standards of fairness influence the behavior of firms.

Just as it is often useful to neglect friction in elementary mechanics, there may be good reasons to assume that firms seek their maximal profit as if they were subject only to legal and budgetary constraints. However, the patterns of sluggish or incomplete adjustment often observed in markets suggest that some additional constraints are operative. Several authors have used a notion of fairness to explain why many employers do not cut wages during periods of high unemployment (George Akerlof, 1979; Robert Solow, 1980). Arthur Okun (1981) went further in arguing that fairness also alters the outcomes in what he called customer markets—characterized by suppliers who are perceived as making their own pricing decisions, have some monopoly power (if only because search is costly), and often have repeat business with their clientele. Like labor markets, customer markets also sometimes fail to clear:

...firms in the sports and entertainment industries offer their customers

tickets at standard prices for events that clearly generate excess demand. Popular new models of automobiles may have waiting lists that extend for months. Similarly, manufacturers in a number of industries operate with backlogs in booms and allocate shipments when they obviously could raise prices and reduce the queue. [p. 170]

Okun explained these observations by the hostile reaction of customers to price increases that are not justified by increased costs and are therefore viewed as unfair. He also noted that customers appear willing to accept “fair” price increases even when demand is slack, and commented that “...in practice, observed pricing behavior is a vast distance from do it yourself auctioneering” (p. 170).

The argument used by these authors to account for apparent deviations from the simple model of a profit-maximizing firm is that fair behavior is instrumental to the maximization of long-run profits. In Okun’s model, customers who suspect that a supplier treats them unfairly are likely to start searching for alternatives; Akerlof (1980, 1982) suggested that firms invest in their reputation to produce goodwill among their customers and high morale among their employees; and Arrow argued that trusted suppliers may be able to operate in markets that are otherwise devastated by the lemons problem (Akerlof, 1970; Kenneth Arrow, 1973). In these approaches, the rules of fairness define the terms of an enforceable im-

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licit contract: Firms that behave unfairly are punished in the long run. A more radical assumption is that some firms apply fair policies even in situations that preclude enforcement—this is the view of the lay public, as shown in a later section of this paper.

If considerations of fairness do restrict the actions of profit-seeking firms, economic models might be enriched by a more detailed analysis of this constraint. Specifically, the rules that govern public perceptions of fairness should identify situations in which some firms will fail to exploit apparent opportunities to increase their profits. Near-rationality theory (Akerlof and Janet Yellen, 1985) suggests that such failures to maximize by a significant number of firms in a market can have large aggregate effects even in the presence of other firms that seek to take advantage of all available opportunities. Rules of fairness can also have significant economic effects through the medium of regulation. Indeed, Edward Zajac (forthcoming) has inferred general rules of fairness from public reactions to the behavior of regulated utilities.

The present research uses household surveys of public opinions to infer rules of fairness for conduct in the market from evaluations of particular actions by hypothetical firms.¹ The study has two main objectives: (i) to identify community standards of fairness that apply to price, rent, and wage setting by firms in varied circumstances; and (ii) to consider the possible implications of the rules of fairness for market outcomes.

The study was concerned with scenarios in which a *firm* (merchant, landlord, or employer) makes a pricing or wage-setting decision that affects the outcomes of one or more *transactors* (customers, tenants, or em-

ployees). The scenario was read to the participants, who evaluated the fairness of the action as in the following example:

Question 1. A hardware store has been selling snow shovels for \$15. The morning after a large snowstorm, the store raises the price to \$20. Please rate this action as:

Completely Fair Acceptable
Unfair Very Unfair

The two favorable and the two unfavorable categories are grouped in this report to indicate the proportions of respondents who judged the action acceptable or unfair. In this example, 82 percent of respondents ($N = 107$) considered it unfair for the hardware store to take advantage of the short-run increase in demand associated with a blizzard.

The approach of the present study is purely descriptive. Normative status is not claimed for the generalizations that are described as “rules of fairness,” and the phrase “it is fair” is simply an abbreviation for “a substantial majority of the population studied thinks it fair.” The paper considers in turn three determinants of fairness judgments: the reference transaction, the outcomes to the firm and to the transactors, and the occasion for the action of the firm. The final sections are concerned with the enforcement of fairness and with economic phenomena that the rules of fairness may help explain.

I. Reference Transactions

A central concept in analyzing the fairness of actions in which a firm sets the terms of future exchanges is the *reference transaction*, a relevant precedent that is characterized by a reference price or wage, and by a positive reference profit to the firm. The treatment is restricted to cases in which the fairness of the reference transaction is not itself in question.

The main findings of this research can be summarized by a principle of *dual entitlement*, which governs community standards of fairness: Transactors have an entitlement to the terms of the reference transaction and firms are entitled to their reference profit. A firm is not allowed to increase its profits by

¹Data were collected between May 1984 and July 1985 in telephone surveys of randomly selected residents of two Canadian metropolitan areas: Toronto and Vancouver. Equal numbers of adult female and male respondents were interviewed for about ten minutes in calls made during evening hours. No more than five questions concerned with fairness were included in any interview, and contrasting questions that were to be compared were never put to the same respondents.

arbitrarily violating the entitlement of its transactors to the reference price, rent or wage (Max Bazerman, 1985; Zajac, forthcoming). When the reference profit of a firm is threatened, however, it may set new terms that protect its profit at transactors' expense.

Market prices, posted prices, and the history of previous transactions between a firm and a transactor can serve as reference transactions. When there is a history of similar transactions between firm and transactor, the most recent price, wage, or rent will be adopted for reference unless the terms of the previous transaction were explicitly temporary. For new transactions, prevailing competitive prices or wages provide the natural reference. The role of prior history in wage transactions is illustrated by the following pair of questions:

Question 2A. 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.

($N = 98$) Acceptable 17% Unfair 83%

Question 2B. A small photocopying shop has one employee...[as in Question 2A]...The current employee leaves, and the owner decides to pay a replacement \$7 an hour.

($N = 125$) Acceptable 73% Unfair 27%

The current wage of an employee serves as reference for evaluating the fairness of future adjustments of that employee's wage—but not necessarily for evaluating the fairness of the wage paid to a replacement. The new worker does not have an entitlement to the former worker's wage rate. As the following question shows, the entitlement of an employee to a reference wage does not carry over to a new labor transaction, even with the same employer:

Question 3. A house painter employs two assistants and pays them \$9 per hour. The

painter decides to quit house painting and go into the business of providing landscape services, where the going wage is lower. He reduces the workers' wages to \$7 per hour for the landscaping work.

($N = 94$) Acceptable 63% Unfair 37%

Note that the same reduction in wages that is judged acceptable by most respondents in Question 3 was judged unfair by 83 percent of the respondents to Question 2A.

Parallel results were obtained in questions concerning residential tenancy. As in the case of wages, many respondents apply different rules to a new tenant and to a tenant renewing a lease. A rent increase that is judged fair for a new lease may be unfair for a renewal. However, the circumstances under which the rules of fairness require landlords to bear such opportunity costs are narrowly defined. Few respondents consider it unfair for the landlord to sell the accommodation to another landlord who intends to raise the rents of sitting tenants, and even fewer believe that a landlord should make price concessions in selling an accommodation to its occupant.

The relevant reference transaction is not always unique. Disagreements about fairness are most likely to arise when alternative reference transactions can be invoked, each leading to a different assessment of the participants' outcomes. Agreement on general principles of fairness therefore does not preclude disputes about specific cases (see also Zajac, forthcoming). When competitors change their price or wage, for example, the current terms set by the firm and the new terms set by competitors define alternative reference transactions. Some people will consider it unfair for a firm not to raise its wages when competitors are increasing theirs. On the other hand, price increases that are not justified by increasing costs are judged less objectionable when competitors have led the way.

It should perhaps be emphasized that the reference transaction provides a basis for fairness judgments because it is normal, not necessarily because it is just. Psychological studies of adaptation suggest that any stable state of affairs tends to become accepted eventually, at least in the sense that alterna-

tives to it no longer readily come to mind. Terms of exchange that are initially seen as unfair may in time acquire the status of a reference transaction. Thus, the gap between the behavior that people consider fair and the behavior that they expect in the marketplace tends to be rather small. This was confirmed in several scenarios, where different samples of respondents answered the two questions: "What does fairness require?" and "What do you think the firm would do?" The similarity of the answers suggests that people expect a substantial level of conformity to community standards—and also that they adapt their views of fairness to the norms of actual behavior.

II. The Coding of Outcomes

It is a commonplace that the fairness of an action depends in large part on the signs of its outcomes for the agent and for the individuals affected by it. The cardinal rule of fair behavior is surely that one person should not achieve a gain by simply imposing an equivalent loss on another.

In the present framework, the outcomes to the firm and to its transactors are defined as gains and losses in relation to the reference transaction. The transactor's outcome is simply the difference between the new terms set by the firm and the reference price, rent, or wage. The outcome to the firm is evaluated with respect to the reference profit, and incorporates the effect of exogenous shocks (for example, changes in wholesale prices) which alter the profit of the firm on a transaction at the reference terms. According to these definitions, the outcomes in the snow shovel example of Question 1 were a \$5 gain to the firm and a \$5 loss to the representative customer. However, had the same price increase been induced by a \$5 increase in the wholesale price of snow shovels, the outcome to the firm would have been nil.

The issue of how to define relevant outcomes takes a similar form in studies of individuals' preferences and of judgments of fairness. In both domains, a descriptive analysis of people's judgments and choices involves rules of *naïve accounting* that diverge in major ways from the standards of rationality assumed in economic analysis. People

commonly evaluate outcomes as gains or losses relative to a neutral reference point rather than as endstates (Kahneman and Amos Tversky, 1979). In violation of normative standards, they are more sensitive to out-of-pocket costs than to opportunity costs and more sensitive to losses than to foregone gains (Kahneman and Tversky, 1984; Thaler, 1980). These characteristics of evaluation make preferences vulnerable to framing effects, in which inconsequential variations in the presentation of a choice problem affect the decision (Tversky and Kahneman, 1986).

The entitlements of firms and transactors induce similar asymmetries between gains and losses in fairness judgments. An action by a firm is more likely to be judged unfair if it causes a loss to its transactor than if it cancels or reduces a possible gain. Similarly, an action by a firm is more likely to be judged unfair if it achieves a gain to the firm than if it averts a loss. Different standards are applied to actions that are elicited by the threat of losses or by an opportunity to improve on a positive reference profit—a psychologically important distinction which is usually not represented in economic analysis.

Judgments of fairness are also susceptible to framing effects, in which form appears to overwhelm substance. One of these framing effects will be recognized as the money illusion, illustrated in the following questions:

Question 4A. A company is making a small profit. It is located in a community experiencing a recession with substantial unemployment but no inflation. There are many workers anxious to work at the company. The company decides to decrease wages and salaries 7% this year.

(*N* = 125) Acceptable 38% Unfair 62%

Question 4B. ...with substantial unemployment and inflation of 12%...The company decides to increase salaries only 5% this year.

(*N* = 129) Acceptable 78% Unfair 22%

Although the real income change is approximately the same in the two problems, the judgments of fairness are strikingly different. A wage cut is coded as a loss and consequently judged unfair. A nominal raise

which does not compensate for inflation is more acceptable because it is coded as a gain to the employee, relative to the reference wage.

Analyses of individual choice suggest that the disutility associated with an outcome that is coded as a loss may be greater than the disutility of the same objective outcome when coded as the elimination of a gain. Thus, there may be less resistance to the cancellation of a discount or bonus than to an equivalent price increase or wage cut. As illustrated by the following questions, the same rule applies as well to fairness judgments.

Question 5A. A shortage has developed for a popular model of automobile, and customers must now wait two months for delivery. A dealer has been selling these cars at list price. Now the dealer prices this model at \$200 above list price.

($N = 130$) Acceptable 29% Unfair 71%

Question 5B. ...A dealer has been selling these cars at a discount of \$200 below list price. Now the dealer sells this model only at list price.

($N = 123$) Acceptable 58% Unfair 42%

The significant difference between the responses to Questions 5A and 5B ($\chi^2 = 20.91$) indicates that the \$200 price increase is not treated identically in the two problems. In Question 5A the increase is clearly coded as a loss relative to the unambiguous reference provided by the list price. In Question 5B the reference price is ambiguous, and the change can be coded either as a loss (if the reference price is the discounted price), or as the elimination of a gain (if the reference price is the list price). The relative leniency of judgments in Question 5B suggests that at least some respondents adopted the latter frame. The following questions illustrate the same effect in the case of wages:

Question 6A. A small company employs several people. The workers' incomes have been about average for the community. In recent months, business for the company has

not increased as it had before. The owners reduce the workers' wages by 10 percent for the next year.

($N = 100$) Acceptable 39% Unfair 61%

Question 6B. A small company employs several people. The workers have been receiving a 10 percent annual bonus each year and their total incomes have been about average for the community. In recent months, business for the company has not increased as it had before. The owners eliminate the workers' bonus for the year.

($N = 98$) Acceptable 80% Unfair 20%

III. Occasions for Pricing Decisions

This section examines the rules of fairness that apply to three classes of occasions in which a firm may reconsider the terms that it sets for exchanges. (i) *Profit reductions*, for example, by rising costs or decreased demand for the product of the firm. (ii) *Profit increases*, for example, by efficiency gains or reduced costs. (iii) *Increases in market power*, for example, by temporary excess demand for goods, accommodations or jobs.

A. Protecting Profit

A random sample of adults contains many more customers, tenants, and employees than merchants, landlords, or employers. Nevertheless, most participants in the surveys clearly consider the firm to be entitled to its reference profit: They would allow a firm threatened by a reduction of its profit below a positive reference level to pass on the entire loss to its transactors, without compromising or sharing the pain. By large majorities, respondents endorsed the fairness of passing on increases in wholesale costs, in operating costs, and in the costs associated with a rental accommodation. The following two questions illustrate the range of situations to which this rule was found to apply.

Question 7. Suppose that, due to a transportation mixup, 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.

($N = 101$) Acceptable 79% Unfair 21%

Question 8. 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.

($N = 151$) Acceptable 75% Unfair 25%

The answers to the last question, in particular, indicate that it is acceptable for firms to protect themselves from losses even when their transactors suffer substantial inconvenience as a result. The rules of fairness that yield such judgments do not correspond to norms of charity and do not reflect distributional concerns.

The attitude that permits the firm to protect a positive reference profit at the transactors' expense applies to employers as well as to merchants and landlords. When the profit of the employer in the labor transaction falls below the reference level, reductions of even nominal wages become acceptable. The next questions illustrate the strong effect of this variable.

Question 9A. A small company employs several workers and has been paying them average wages. There is severe unemployment in the area and the company could easily replace its current employees with good workers at a lower wage. The company has been making money. The owners reduce the current workers' wages by 5 percent.

($N = 195$) Acceptable 23% Unfair 77%

Question 9B. ...The company has been losing money. The owners reduce the current workers' wages by 5 percent.

($N = 195$) Acceptable 68% Unfair 32%

The effect of firm profitability was studied in greater detail in the context of a scenario in which Mr. Green, a gardener who em-

ployes two workers at \$7 an hour, learns that other equally competent workers are willing to do the same work for \$6 an hour. Some respondents were told that Mr. Green's business was doing well, others were told that it was doing poorly. The questions, presented in open format, required respondents to state "what is fair for Mr. Green to do in this situation," or "what is your best guess about what Mr. Green would do..." The information about the current state of the business had a large effect. Replacing the employees or bargaining with them to achieve a lower wage was mentioned as fair by 67 percent of respondents when business was said to be poor, but only by 25 percent of respondents when business was good. The proportion guessing that Mr. Green would try to reduce his labor costs was 75 percent when he was said to be doing poorly, and 49 percent when he was said to be doing well. The differences were statistically reliable in both cases.

A firm is only allowed to protect itself at the transactor's expense against losses that pertain directly to the transaction at hand. Thus, it is unfair for a landlord to raise the rent on an accommodation to make up for the loss of another source of income. On the other hand, 62 percent of the respondents considered it acceptable for a landlord to charge a higher rent for apartments in one of two otherwise identical buildings, because a more costly foundation had been required in the construction of that building.

The assignment of costs to specific goods explains why it is generally unfair to raise the price of old stock when the price of new stock increases:

Question 10. A grocery store has several months supply of peanut butter in stock which it has on the shelves and in the storeroom. The owner hears that the wholesale price of peanut butter has increased and immediately raises the price on the current stock of peanut butter.

($N = 147$) Acceptable 21% Unfair 79%

The principles of naive accounting apparently include a FIFO method of inventory cost allocation.

B. *The Allocation of Gains*

The data of the preceding section could be interpreted as evidence for a cost-plus rule of fair pricing, in which the supplier is expected to act as a broker in passing on marked-up costs (Okun). A critical test of this possible rule arises when the supplier's costs diminish: A strict cost-plus rule would require prices to come down accordingly. In contrast, a dual-entitlement view suggests that the firm is only prohibited from increasing its profit by causing a loss to its transactors. Increasing profits by retaining cost reductions does not violate the transactors' entitlement and may therefore be acceptable.

The results of our previous study (1986) indicated that community standards of fairness do not in fact restrict firms to the reference profit when their costs diminish, as a cost-plus rule would require. The questions used in these surveys presented a scenario of a monopolist supplier of a particular kind of table, who faces a \$20 reduction of costs on tables that have been selling for \$150. The respondents were asked to indicate whether "fairness requires" the supplier to lower the price, and if so, by how much. About one-half of the survey respondents felt that it was acceptable for the supplier to retain the entire benefit, and less than one-third would require the supplier to reduce the price by \$20, as a cost-plus rule dictates. Further, and somewhat surprisingly, judgments of fairness did not reliably discriminate between primary producers and middlemen, or between savings due to lower input prices and to improved efficiency.

The conclusion that the rules of fairness permit the seller to keep part or all of any cost reduction was confirmed with the simpler method employed in the present study.

Question 11A. A small factory produces tables and sells all that it can make at \$200 each. Because of changes in the price of materials, the cost of making each table has recently decreased by \$40. The factory reduces its price for the tables by \$20.

($N = 102$) Acceptable 79% Unfair 21%

Question 11B. ...the cost of making each table has recently decreased by \$20. The

factory does not change its price for the tables.

($N = 100$) Acceptable 53% Unfair 47%

The even division of opinions on Question 11B confirms the observations of the previous study. In conjunction with the results of the previous section, the findings support a dual-entitlement view: the rules of fairness permit a firm not to share in the losses that it imposes on its transactors, without imposing on it an unequivocal duty to share its gains with them.

C. *Exploitation of Increased Market Power*

The market power of a firm reflects the advantage to the transactor of the exchange which the firm offers, compared to the transactor's second-best alternative. For example, a blizzard increases the surplus associated with the purchase of a snow shovel at the regular price, compared to the alternatives of buying elsewhere or doing without a shovel. The respondents consider it unfair for the hardware store to capture any part of the increased surplus, because such an action would violate the customer's entitlement to the reference price. Similarly, it is unfair for a firm to exploit an excess in the supply of labor to cut wages (Question 2A), because this would violate the entitlement of employees to their reference wage.

As shown by the following routine example, the opposition to exploitation of shortages is not restricted to such extreme circumstances:

Question 12. A severe shortage of Red Delicious apples has developed in a community and none of the grocery stores or produce markets have 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% over the regular price.

($N = 102$) Acceptable 37% Unfair 63%

Raising prices in response to a shortage is unfair even when close substitutes are read-

ily available. A similar aversion to price rationing held as well for luxury items. For example, a majority of respondents thought it unfair for a popular restaurant to impose a \$5 surcharge for Saturday night reservations.

Conventional economic analyses assume as a matter of course that excess demand for a good creates an opportunity for suppliers to raise prices, and that such increases will indeed occur. The profit-seeking adjustments that clear the market are in this view as natural as water finding its level—and as ethically neutral. The lay public does not share this indifference. Community standards of fairness effectively require the firm to absorb an opportunity cost in the presence of excess demand, by charging less than the clearing price or paying more than the clearing wage.

As might be expected from this analysis, it is unfair for a firm to take advantage of an increase in its monopoly power. Respondents were nearly unanimous in condemning a store that raises prices when its sole competitor in a community is temporarily forced to close. As shown in the next question, even a rather mild exploitation of monopoly power is considered unfair.

Question 13. A grocery chain has stores in many communities. Most of them face competition from other groceries. In one community the chain has no competition. Although its costs and volume of sales are the same there as elsewhere, the chain sets prices that average 5 percent higher than in other communities.

(*N* = 101) Acceptable 24% Unfair 76%

Responses to this and two additional versions of this question specifying average price increases of 10 and 15 percent did not differ significantly. The respondents clearly viewed such pricing practices as unfair, but were insensitive to the extent of the unwarranted increase.

A monopolist might attempt to increase profits by charging different customers as much as they are willing to pay. In conventional theory, the constraints that prevent a monopolist from using perfect price discrimination to capture all the consumers' surplus are asymmetric information and

difficulties in preventing resale. The survey results suggest the addition of a further restraint: some forms of price discrimination are outrageous.

Question 14. A landlord rents out a small house. When the lease is due for renewal, the landlord learns that the tenant has taken a job very close to the house and is therefore unlikely to move. The landlord raises the rent \$40 per month more than he was planning to do.

(*N* = 157) Acceptable 9% Unfair 91%

The near unanimity of responses to this and similar questions indicates that an action that deliberately exploits the special dependence of a particular individual is exceptionally offensive.

The introduction of an explicit auction to allocate scarce goods or jobs would also enable the firm to gain at the expense of its transactors, and is consequently judged unfair.

Question 15. A store has been sold out of the popular Cabbage Patch dolls for a month. A week before Christmas a single doll is discovered in a storeroom. The managers know that many customers would like to buy the doll. They announce over the store's public address system that the doll will be sold by auction to the customer who offers to pay the most.

(*N* = 101) Acceptable 26% Unfair 74%

Question 16. A business in a community with high unemployment needs to hire a new computer operator. Four candidates are judged to be completely qualified for the job. The manager asks the candidates to state the lowest salary they would be willing to accept, and then hires the one who demands the lowest salary.

(*N* = 154) Acceptable 36% Unfair 64%

The auction is opposed in both cases, presumably because the competition among potential buyers or employees benefits the firm. The opposition can in some cases be mitigated by eliminating this benefit. For example, a sentence added to Question 15, indicating that "the proceeds will go to

UNICEF" reduced the negative judgments of the doll auction from 74 to 21 percent.

The strong aversion to price rationing in these examples clearly does not extend to all uses of auctions. The individual who sells securities at twice the price paid for them a month ago is an object of admiration and envy—and is certainly not thought to be gouging. Why is it fair to sell a painting or a house at the market-clearing price, but not an apple, dinner reservation, job, or football game ticket? The rule of acceptability appears to be this: Goods for which an active resale market exists, and especially goods that serve as a store of value, can be sold freely by auction or other mechanisms allowing the seller to capture the maximum price. When resale is a realistic possibility, which is not the case for most consumer goods, the potential resale price reflects the higher value of the asset and the purchaser is therefore not perceived as sustaining a loss.

IV. Enforcement

Several considerations may deter a firm from violating community standards of fairness. First, a history or reputation of unfair dealing may induce potential transactors to take their business elsewhere, because of the element of trust that is present in many transactions. Second, transactors may avoid exchanges with offending firms at some cost to themselves, even when trust is not an issue. Finally, the individuals who make decisions on behalf of firms may have a preference for acting fairly. The role of reputation effects is widely recognized. This section presents some indications that a willingness to resist and to punish unfairness and an intrinsic motivation to be fair could also contribute to fair behavior in the marketplace.

A willingness to pay to resist and to punish unfairness has been demonstrated in incentive compatible laboratory experiments. In the ultimatum game devised by Werner Guth, Rolf Schmittberger, and Bernd Schwarze (1982), the participants are designated as allocators or recipients. Each allocator anonymously proposes a division of a fixed amount of money between himself (herself) and a recipient. The recipient either accepts

the offer or rejects it, in which case both players get nothing. The standard game theoretic solution is for the allocator to make a token offer and for the recipient to accept it, but Guth et al. observed that many allocators offer an equal division and that recipients sometimes turn down positive offers. In our more detailed study of resistance to unfairness (1986), recipients were asked to indicate in advance how they wished to respond to a range of possible allocations: A majority of participants were willing to forsake \$2 rather than accept an unfair allocation of \$10.

Willingness to punish unfair actors was observed in another experiment, in which subjects were given the opportunity to share a sum of money evenly with one of two anonymous strangers, identified only by the allocation they had proposed to someone else in a previous round. About three-quarters of the undergraduate participants in this experiment elected to share \$10 evenly with a stranger who had been fair to someone else, when the alternative was to share \$12 evenly with an unfair allocator (see our other paper).

A willingness to punish unfairness was also expressed in the telephone surveys. For example, 68 percent of respondents said they would switch their patronage to a drugstore five minutes further away if the one closer to them raised its prices when a competitor was temporarily forced to close; and, in a separate sample, 69 percent indicated they would switch if the more convenient store discriminated against its older workers.

The costs of enforcing fairness are small in these examples—but effective enforcement in the marketplace can often be achieved at little cost to transactors. Retailers will have a substantial incentive to behave fairly if a large number of customers are prepared to drive an extra five minutes to avoid doing business with an unfair firm. The threat of future punishment when competitors enter may also deter a temporary monopolist from fully exploiting short-term profit opportunities.

In traditional economic theory, compliance with contracts depends on enforcement. It is a mild embarrassment to the standard model that experimental studies often pro-

duce fair behavior even in the absence of enforcement (Elizabeth Hoffman and Matthew Spitzer, 1982, 1985; our paper, 1986; Arvin Roth, Michael Malouf, and J. Keith Murningham, 1981; Reinhard Selten, 1978). These observations, however, merely confirm common sense views of human behavior. Survey results indicate a belief that unenforced compliance to the rules of fairness is common. This belief was examined in two contexts: tipping in restaurants and sharp practice in automobile repairs.

Question 17A. 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?

($N = 122$) Mean response = \$1.28

Question 17B. ...in a restaurant on a trip to another city that they do not expect to visit again?

($N = 124$) Mean response = \$1.27

The respondents evidently do not treat the possibility of enforcement as a significant factor in the control of tipping. Their opinion is consistent with the widely observed adherence to a 15 percent tipping rule even by one-time customers who pay and tip by credit card, and have little reason to fear embarrassing retaliation by an irate server.

The common belief that tipping is controlled by intrinsic motivation can be accommodated with a standard microeconomic model by extending the utility function of individuals to include guilt and self-esteem. A more difficult question is whether firms, which the theory assumes to maximize profits, also fail to exploit some economic opportunities because of unenforced compliance with rules of fairness. The following questions elicited expectations about the behavior of a garage mechanic dealing with a regular customer or with a tourist.

Question 18A. [A man leaves his car with the mechanic at his regular / A tourist leaves his car at a] service station with instructions to replace an expensive part. After the [customer/tourist] leaves, the mechanic examines the car and discovers that it is not necessary to replace the part; it can be repaired cheaply.

The mechanic would make much more money by replacing the part than by repairing it. Assuming the [customer/tourist] cannot be reached, what do you think the mechanic would do in this situation?

Make more money by replacing the part
customer: 60% tourist: 63%

Save the customer money by repairing the part
customer: 40% tourist: 37%

Question 18B. Of ten mechanics dealing with a [regular customer/tourist], how many would you expect to save the customer money by repairing the part?

Mean response
customer: 3.62 tourist: 3.72

The respondents do not approach garages with wide-eyed naive faith. It is therefore all the more noteworthy that they expect a tourist and a regular customer to be treated alike, in spite of the obvious difference between the two cases in the potential for any kind of enforcement, including reputation effects.²

Here again, there is no evidence that the public considers enforcement a significant factor. The respondents believe that most mechanics (usually excluding their own) would be less than saintly in this situation. However, they also appear to believe that the substantial minority of mechanics who would treat their customers fairly are not motivated in each case by the anticipation of sanctions.

V. Economic Consequences

The findings of this study 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.³ Such perceptions can have

² Other respondents were asked to assess the probable behavior of their own garage under similar circumstances: 88 percent expressed a belief that their garage would act fairly toward a regular customer, and 86 percent stated that their garage would treat a tourist and a regular customer similarly.

³ This conclusion probably holds in social and cultural groups other than the Canadian urban samples

significant consequences if they find expression in legislation or regulation (Zajac, 1978; forthcoming). 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 behavior. The survey results suggest four propositions about the effects of fairness considerations on the behavior of firms in customer markets, and a parallel set of hypotheses about labor markets.

A. Fairness in Customer Markets

PROPOSITION 1: *When excess demand in a customer market is unaccompanied by increases in suppliers' costs, the market will fail to clear in the short run.*

Evidence supporting this proposition was described by Phillip Cagan (1979), who concluded from a review of the behavior of prices that, "Empirical studies have long found that short-run shifts in demand have small and often insignificant effects [on prices]" (p. 18). Other consistent evidence comes from studies of disasters, where prices are often maintained at their reference levels although supplies are short (Douglas Dacy and Howard Kunreuther, 1969).

A particularly well-documented illustration of the behavior predicted in proposition 1 is provided by Alan Olmstead and Paul Rhode (1985). During the spring and summer of 1920 there was a severe gasoline shortage in the U.S. West Coast where Standard Oil of California (SOCal) was the dominant supplier. There were no government-imposed price controls, nor was there any threat of such controls, yet SOCal reacted by imposing allocation and rationing schemes while maintaining prices. Prices were actually higher in the East in the absence of any shortage. Significantly, Olmstead and Rhode note that the eastern firms had to purchase crude at higher prices while SOCal, being

vertically integrated, had no such excuse for raising price. They conclude from confidential SOCal documents that SOCal officers "...were clearly concerned with their public image and tried to maintain the appearance of being 'fair'" (p. 1053).

PROPOSITION 2: *When a single supplier provides a family of goods for which there is differential demand without corresponding variation of input costs, shortages of the most valued items will occur.*

There is considerable support for this proposition in the pricing of sport and entertainment events, which are characterized by marked variation of demand for goods or services for which costs are about the same (Thaler, 1985). The survey responses suggest that charging the market-clearing price for the most popular goods would be judged unfair.

Proposition 2 applies to cases such as those of resort hotels that have in-season and out-of-season rates which correspond to predictable variations of demand. To the extent that constraints of fairness are operating, the price adjustments should be insufficient, with excess demand at the peak. Because naive accounting does not properly distinguish between marginal and average costs, customers and other observers are likely to adopt off-peak prices as a reference in evaluating the fairness of the price charged to peak customers. A revenue-maximizing (low) price in the off-season may suggest that the profits achievable at the peak are unfairly high. In spite of a substantial degree of within-season price variation in resort and ski hotels, it appears to be the rule that most of these establishments face excess demand during the peak weeks. One industry explanation is: "If you gouge them at Christmas, they won't be back in March."

PROPOSITION 3: *Price changes will be more responsive to variations of costs than to variations of demand, and more responsive to cost increases than to cost decreases.*

The high sensitivity of prices to short-run variations of costs is well documented

studied here, although the detailed rules of fairness for economic transactions may vary.

(Cagan). The idea of asymmetric price rigidity has a history of controversy (Timur Kuran, 1983; Solow; George Stigler and James Kindahl, 1970) and the issue is still unsettled. Changes of currency values offer a potential test of the hypothesis that cost increases tend to be passed on quickly and completely, whereas cost decreases can be retained at least in part. When the rate of exchange between two currencies changes after a prolonged period of stability, the prediction from Proposition 3 is that upward adjustments of import prices in one country will occur faster than the downward adjustments expected in the other.

PROPOSITION 4: *Price decreases will often take the form of discounts rather than reductions in the list or posted price.*

This proposition is strongly supported by the data of Stigler and Kindahl. Casual observation confirms that temporary discounts are much more common than temporary surcharges. Discounts have the important advantage that their subsequent cancellation will elicit less resistance than an increase in posted price. A temporary surcharge is especially aversive because it does not have the prospect of becoming a reference price, and can only be coded as a loss.

B. *Fairness in Labor Markets*

A consistent finding of this study is the similarity of the rules of fairness that apply to prices, rents, and wages. The correspondence extends to the economic predictions that may be derived for the behavior of wages in labor markets and of prices in customer markets. The first proposition about prices asserted that resistance to the exploitation of short-term fluctuations of demand could prevent markets from clearing. The corresponding prediction for labor markets is that wages will be relatively insensitive to excess supply.

The existence of wage stickiness is not in doubt, and numerous explanations have been offered for it. An entitlement model of this effect invokes an implicit contract between the worker and the firm. Like other implicit

contract theories, such a model predicts that wage changes in a firm will be more sensitive to recent firm profits than to local labor market conditions. However, unlike the implicit contract theories that emphasize risk shifting (Costas Azariadis, 1975; Martin Baily, 1974; Donald Gordon, 1974), explanations in terms of fairness (Akerlof, 1979, 1982; Okun; Solow) lead to predictions of wage stickiness even in occupations that offer no prospects for long-term employment and therefore provide little protection from risk. Okun noted that "Casual empiricism about the casual labor market suggests that the Keynesian wage floor nonetheless operates; the pay of car washers or stock clerks is seldom cut in a recession, even when it is well above any statutory minimum wage" (1981, p. 82), and he concluded that the employment relation is governed by an "invisible handshake," rather than by the invisible hand (p. 89).

The dual-entitlement model differs from a Keynesian model of sticky wages, in which nominal wage changes are always nonnegative. The survey findings suggest that nominal wage cuts by a firm that is losing money or threatened with bankruptcy do not violate community standards of fairness. This modification of the sticky nominal wage dictum is related to Proposition 3 for customer markets. Just as they may raise prices to do so, firms may also cut wages to protect a positive reference profit.

Proposition 2 for customer markets asserted that the dispersion of prices for similar goods that cost the same to produce but differ in demand will be insufficient to clear the market. An analogous case in the labor market involves positions that are similar in nominal duties but are occupied by individuals who have different values in the employment market. The prediction is that differences in income will be insufficient to eliminate the excess demand for the individuals considered most valuable, and the excess supply of those considered most dispensable. This prediction applies both within and among occupations.

Robert Frank (1985) found that the individuals in a university who already are the most highly paid in each department are also

the most likely targets for raiding. Frank explains the observed behavior in terms of envy and status. An analysis of this phenomenon in terms of fairness is the same as for the seasonal pricing of resort rooms: Just as prices that clear the market at peak demand will be perceived as gouging if the resort can also afford to operate at off-peak rates, a firm that can afford to pay its most valuable employees their market value may appear to grossly underpay their less-valued colleagues. A related prediction is that variations among departments will also be insufficient to clear the market. Although salaries are higher in academic departments that compete with the private sector than in others, the ratio of job openings to applicants is still lower in classics than in accounting.

The present analysis also suggests that firms that frame a portion of their compensation package as bonuses or profit sharing will encounter relatively little resistance to reductions of compensation during slack periods. This is the equivalent of Proposition 4. The relevant psychological principle is that losses are more aversive than objectively equivalent foregone gains. The same mechanism, combined with the money illusion, supports another prediction: Adjustments of real wages will be substantially greater in inflationary periods than in periods of stable prices, because the adjustments can then be achieved without making nominal cuts—which are always perceived as losses and are therefore strongly resisted. An unequal distribution of gains is more likely to appear fair than a reallocation in which there are losers.

This discussion has illustrated several ways in which the informal entitlements of customers or employees to the terms of reference transactions could enter an economic analysis. In cases such as the pricing of resort facilities, the concern of customers for fair pricing may permanently prevent the market from clearing. In other situations, the reluctance of firms to impose terms that can be perceived as unfair acts as a friction-like factor. The process of reaching equilibrium can be slowed down if no firm wants to be seen as a leader in moving to exploit changing market conditions. In some instances an

initially unfair practice (for example, charging above list price for a popular car model) may spread slowly until it evolves into a new norm—and is no longer unfair. In all these cases, perceptions of transactors' entitlements affect the substantive outcomes of exchanges, altering or preventing the equilibria predicted by an analysis that omits fairness as a factor. In addition, considerations of fairness can affect the form rather than the substance of price or wage setting. Judgments of fairness are susceptible to substantial framing effects, and the present study gives reason to believe that firms have an incentive to frame the terms of exchanges so as to make them appear "fair."

REFERENCES

- Akerlof, George A.**, "The Market for 'Lemons': Quality Uncertainty and the Market Mechanism," *Quarterly Journal of Economics*, August 1970, 84, 488–500.
- _____, "The Case against Conservative Macroeconomics: An Inaugural Lecture," *Economica*, August 1979, 46, 219–37.
- _____, "A Theory of Social Custom, of Which Unemployment May Be One Consequence," *Quarterly Journal of Economics*, June 1980, 94, 749–75.
- _____, "Labor Contracts as Partial Gift Exchange," *Quarterly Journal of Economics*, November 1982, 97, 543–69.
- _____, and **Yellen, Janet L.**, "Can Small Deviations from Rationality Make Significant Differences to Economic Equilibrium?," *American Economic Review*, September 1985, 75, 708–20.
- Arrow, Kenneth**, "Social Responsibility and Economic Efficiency," *Public Policy*, Summer 1973, 21, 303–17.
- Azariadis, Costas**, "Implicit Contracts and Unemployment Equilibria," *Journal of Political Economy*, December 1975, 83, 1183–202.
- Baily, Martin N.**, "Wages and Employment Under Uncertain Demand," *Review of Economic Studies*, January 1974, 41, 37–50.
- Bazerman, Max H.**, "Norms of Distributive Justice in Interest Arbitration," *Industrial*

- and *Labor Relations Review*, July 1985, 38, 558-70.
- Cagan, Phillip**, *Persistent Inflation: Historical and Policy Essays*, New York: Columbia University Press, 1979.
- Dacy, Douglas C. and Kunreuther, Howard**, *The Economics of Natural Disasters*, New York: Free Press, 1969.
- Frank, Robert H.**, *Choosing the Right Pond: Human Behavior and the Quest for Status*, New York: Oxford University Press, 1985.
- Gordon, Donald F.**, "A Neo-Classical Theory of Keynesian Unemployment," *Economic Inquiry*, December 1974, 12, 431-59.
- Guth, Werner, Schmittberger, Rolf and Schwarze, Bernd**, "An Experimental Analysis of Ultimatum Bargaining," *Journal of Economic Behavior and Organization*, 1982, 3, 367-88.
- Hoffman, Elizabeth and Spitzer, Matthew L.**, "The Coase Theorem: Some Experimental Tests," *Journal of Law and Economics*, April 1982, 25, 73-98.
- _____ and _____, "Entitlements, Rights, and Fairness: An Experimental Examination of Subjects' Concepts of Distributive Justice," *Journal of Legal Studies*, June 1985, 14, 259-97.
- Kahneman, Daniel, Knetsch, Jack L. and Thaler, Richard**, "Fairness and the Assumptions of Economics," *Journal of Business*, forthcoming, 1986.
- _____ and **Tversky, Amos**, "Prospect Theory: An Analysis of Decision Under Risk," *Econometrica*, March 1979, 47, 263-91.
- _____ and _____, "Choices, Values, and Frames," *American Psychologist*, April 1984, 39, 341-50.
- Kuran, Timur**, "Asymmetric Price Rigidity and Inflationary Bias," *American Economic Review*, June 1983, 73, 373-82.
- Okun, Arthur**, *Prices and Quantities: A Macro-economic Analysis*, Washington: The Brookings Institution, 1981.
- Olmstead, Alan L. and Rhode, Paul**, "Rationing Without Government: The West Coast Gas Famine of 1920," *American Economic Review*, December 1985, 75, 1044-55.
- Roth, Alvin, Malouf, Michael and Murnighan, J. Keith**, "Sociological Versus Strategic Factors in Bargaining," *Journal of Economic Behavior and Organization*, June 1981, 2, 153-77.
- Selten, Reinhard**, "The Equity Principle in Economic Behavior," in Hans W. Gottinger and Werner Leinfellner, eds., *Decision Theory and Social Ethics: Issues in Social Choice*, Dordrecht: D. Reidel, 1978, 289-301.
- Solow, Robert M.**, "On Theories of Unemployment," *American Economic Review*, March 1980, 70, 1-11.
- Stigler, George J. and Kindahl, James K.**, *The Behavior of Industrial Prices*, NBER, New York: Columbia University Press, 1970.
- Thaler, Richard**, "Toward a Positive Theory of Consumer Choice," *Journal of Economic Behavior and Organization*, March 1980, 1, 39-60.
- _____, "Mental Accounting and Consumer Choice," *Marketing Science*, Summer 1985, 4, 199-214.
- Tversky, Amos and Kahneman, Daniel**, "Rational Choice and the Framing of Decisions," *Journal of Business*, forthcoming, 1986.
- Zajac, Edward E.**, *Fairness or Efficiency: An Introduction to Public Utility Pricing*, Cambridge: Ballinger, 1978.
- _____, "Perceived Economic Justice: The example of Public Utility Regulation," in H. Peyton Young, ed., *Cost Allocation: Methods, Principles and Applications*, Amsterdam: North-Holland, forthcoming.