An Interview Study of Pricing

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April 22, 2015

This project is a follow-up on my study of downward wage rigidity. With both, I seek insights into the behavior of the macroeconomy. This project turned out to be much bigger than expected, because pricing is so varied. I have not yet had time to do a literature survey.

I have tried to learn about pricing by talking to people involved in it as buyers, sellers, intermediaries, or consultants. I ask them what they do, the circumstances they face, and how they think about pricing.

I have no statistics, no mathematics, no model, no tests of hypotheses.

I obtain interviews through personal contacts and networking. Some refuse. It is impossible to get interviews in industries being investigated for possible price fixing.

I always promised full confidentiality.

The interviews last about an hour and a half and are free form, and most were done in person rather than by telephone. I let people know what I am interested in and try to let them talk. I send a list of questions beforehand. The list varies according to whom I am talking to and what I want to know. I make clear that I don't want answers to all the questions, but to be told what I need to know to understand pricing. I recognize that I may not know what to ask.

I have done 560 interviews, some with two or three people at once. They were not all equally valuable. About 500 were really useful.

The interviews were done from 1999 to now. The world of pricing has changed during that time. This change has both drawbacks and advantages. Some of my information is out of date, but the reasons for change are interesting.

In arranging interviews, I sought variety. Some areas I stayed away from, such as medical services and insurance, since pricing in these industries is complicated by many legal restrictions. I did some interviews in the electric power industry, but may not use them because what happens reflects the legal framework as much as natural economic phenomena.

The coverage of industries is inevitably incomplete.

Most of the interviews were done in the US and all over the country. A few were done in Canada, the UK, and Germany.

If people agreed to be interviewed, they were usually glad to talk and made a lot of sense. Irrationality was certainly not a theme, though all people are, of course, imperfect.

The silence on some subjects was informative.

- The only negative productivity shocks I heard about were the impact of weather on agriculture and Great Lakes shipping.
- No one mentioned projected Federal Reserve policy or future inflation, perhaps because there has been little inflation during the last 15 years.

I mention some salient features of what I heard.

- A large fraction of prices are very flexible.
- Menu costs, interpreted literally as the administrative costs of price change, have an important influence on price change only in the pricing of meals in restaurants with menus that are expensive to print.
- There has been a growing use of indexed pricing of commodities, where a commodity in business parlance is a standardized good traded on a competitive market with a freely floating price.
- In manufacturing and retail trade as well, marginal costs or unit variable costs are flat or slightly decreasing functions of output until a capacity limit is reached.
- The recovery of fixed costs is a major problem for lots of manufacturing firms. In order to do so, they try to differentiate themselves to gain some monopoly power, they try to price discriminate, or they try to discipline themselves to charge a certain margin over marginal or average variable costs.

- Most manufacturers produce to meet the quantity demanded. Some producers of commodities with highly organized central markets produce all that is profitable at the prevailing current or futures price.
- Whether sellers or buyers determine a price or it is negotiated depends in part on the relative numbers of buyers and sellers. If there are many buyers for each seller of a particular good, the seller sets the price. If there are many sellers for each buyer, the buyer sets the price. If individuals on each side deal with few on the other side, prices are negotiated. The reasons for these arrangements are practical.
- Downward price rigidity is usually a consequence of upward price rigidity – sellers are reluctant to reduce prices if it is hard to raise them again later.

- Upward price rigidity is largely confined to four areas: 1) goods that individual buyers purchase frequently, so that they notice the price increase and may react badly to it, namely restaurant meals and many manufactured goods in stores; 2) inexpensive products sold business to business that are sold with a value pricing sales pitch; 3) inexpensive items sold business to business, where sellers do not want to attract attention to the price by increasing it; and 4) products sold business-to-business under long-term fixed price contracts, such as parts and folding boxes.
- There exist prices determined by Cournot equilibrium, such as the prices for wallboard and paper.
- The prices of durable consumer goods are fairly flexible, simply because individual consumers buy them infrequently and so do not remember the prices they paid previously and the goods themselves change rapidly due to technical and style change.

- Grocery stores do as well or better in recessions than booms, because they sell necessities and in hard times consumers eat less in restaurants and more at home.
- Since business fluctuations are reflected mainly in the demand for durable goods, it may not make sense to attribute business fluctuations to price rigidity as opposed to wage and salary rigidity.

Value Pricing

- Suppose you are selling a glue for locking nuts onto bolts. The glue would replace lock washers. The manufacturer using it would save money on lock washers and labor time in attaching nuts and bolts. The manufacturer of the glue could estimate the buyer's manufacturing expense when using a lock washer and the expense when using the glue, if the glue were sold at its unit production cost. If the latter sum is less than the expense using the lock washer, the difference is a surplus. A value price for the glue would be a price that split the surplus between the buyer and seller according to some ratio, say 50/50. The seller makes it clear that the price is chosen in this way.
- Value pricing involves a commitment to a certain split of the surplus and to being open about production costs.
- This commitment creates a rigidity of the price with respect to changes in demand for the product, provided individual buyers buy it so often that they remember the split.

- Value prices are not rigid with respect to changes in production costs or in competitive alternatives.
- Value pricing is very common for industrial products.
- The value pricing argument is used in selling expensive machine tools and other equipment, but does not have a rigidifying effect there because individual buyers are not making the purchases frequently and the products change over time and are customized to fit particular needs.

Indexed or Formula Based Pricing

- Indexed pricing appears in many places.
- Indexing occurs where there is a long-term relationship between buyer and seller that would be expensive to change and when the commodity traded has a competitive market price or has production costs that can change radically.
- The index can be a market price on some central futures exchange. It can be an average of negotiated settlement spot prices for the commodity traded, where the average is calculated and reported by a government agency or a private market reporting company. The index can be a production cost index generated by a government agency or a private firm. The index could be the average of prices of important inputs, e.g., soybeans and corn for chickens.
- An alternative is to have long-term contracts that fix prices. There has been a tendency to replace such contracts with indexed contracts, because if the market price falls way below or rises way above the contract price, one or the other side is likely to renege on the contract. Also there has been increased price volatility.

- In order to understand why such contracts arise, imagine that a pork processor provides bacon to a restaurant chain. The chain wants the boxes of bacon to be delivered to each restaurant according to a fixed schedule. The bacon should also meet certain quality standards. If the schedule is not met or a restaurant opens a box and finds the bacon to be defective, the chain wants to be able to correct the problem immediately. So the processor devotes a whole production line and delivery system to the chain, and each box is labeled so precisely as to make clear who was working on the line when the box was produced. In this way, a supply problem can be corrected promptly, and there always are such problems. When a processor and chain are linked in this way, it becomes expensive to break off the relationship. This switching cost makes price negotiations difficult, because when negotiations reach an impasse, the next step is to change customer or supplier. So the obvious solution is to make the price a function of some index of the market price of bacon, usually that index plus (or minus) some constant.

- The need for such supply chain management is a consequence of the huge size of the buying and selling firms.
- One effect of the prevalence of indexation is to reduce the amount of trade on the spot markets on which many indices are based. It does not undermine futures markets.
- Another problem with indexation is that the indices can be manipulated. If a company buys or sells on an indexed long-term contract, it has an interest in falsely reporting spot trades in the commodity in order to influence the index.
- Indexed long-term contracts are common for pork, some farmed fish, chicken, eggs, petrochemicals, petroleum, gasoline, natural gas, steel, and lumber. Fresh milk is indexed, though the indexing formula is specified by law and administered by government agencies. Indexation spread to the steel industry during the period of this study.

Grocery Store Pricing

- I will talk about this, because this is the only chapter I have written and it covers many interesting issues.
- Retailers set their own prices, though suppliers can provide incentives to achieve a certain price. Suppliers usually push for as low a retail price as possible.
- Grocers distinguish manufactured goods from perishables. Manufactured goods have stable wholesale and retail prices. Most perishables have wildly fluctuating wholesale and retail prices and the wholesale markets are very competitive. Manufactured goods are often branded, with the brand being either that of the manufacturer or the retailer.
- We should also distinguish high-low from everyday low price (EDLP) retailers.
- High-low retailers have regular and promotional prices. EDLP retailers have only regular prices.

- Many stores are a hybrid between EDLP and high-low.
- In considering regular prices, all grocers distinguish what they call price sensitive or market basket items from peripheral ones. Price sensitive items are those that a significant number of individual consumers buy often enough to remember the prices. The belief is that consumers react badly to increases in the prices of these goods, because they notice the change. They then cut back on their purchases, at least temporarily, and may acquire a bad impression of the store.
- The chain’s or store’s markup is small or negative for price sensitive items and can be large for peripheral ones, especially if the peripheral items are impulse items - items bought on a whim. Much of a store’s profit can come from sales of the peripheral items.
- Perishables can be among the price sensitive items, such as fresh milk, bananas, and lettuce.

- The choice of price sensitive items and markups on them can vary markedly from store to store, even within a single chain. The choice of price sensitive items can depend on the demographic composition of the local population, and the average markup can depend on the pricing policies of local competing stores.
- Promotions are temporary reductions in price for a particular good or set of goods, accompanied by advertising and perhaps coupons.
- During a promotion, sales can increase as much as ten to fifteen fold. Urgency, advertising, and price reduction all contribute to this increase.
- After a promotion, the price returns to its regular level. Retailers want consumers to remember this price, so that they recognize promotional prices as bargains.
- High-low retailers seek promotions in order to build traffic in the store, so that consumers are likely to buy high margin peripheral items along with those on sale.

- Manufacturers want promotions in order to attract attention to their product, in order to promote trial, and simply to increase sales.
- Manufacturers provide funds for promotional advertising, discounts, and displays. These funds are a source of quick income for stores.
- In order to treat chains equitably, manufacturers have a basic price depending on quantity and then provide funds to retailers on a nearly uniform per unit basis. These funds can be used to produce a low constant purchase cost for an EDLP chain, or can be used for temporary discounts of the manufacturer’s price or for advertisements and displays. The way the funds are spent is negotiated and agreed on by the buyer and seller and the retailer must show proof of advertising or price reduction to receive them. The equitable treatment of chains is both good business practice and required by the Robinson-Patman Act. (This is not exactly how it always works, but it is close enough.)

- Manufacturers can change the average price charged to retailers by modifying the regular price charged to the retailer or by changing the promotional discounts.
- High-low retailers tend to charge manufacturers slotting fees for introducing new products. Wholesalers do so as well.
- EDLP retailers ask for no slotting fees and as low a price as possible from the manufacturer.
- The choice between high-low and EDLP seems to be a matter of management choice, though in order to counteract the appeal of promotions and be profitable, EDLP stores have to provide very low prices and so must be enormous and efficient operations.

Changes in Grocery Prices

- A key question is why the prices of manufactured goods are so stable in comparison with the prices of perishables.
- Retailers resist manufacturers’ price increases. They do so by refusing to buy at the increased price or by not allowing promotions.
- Their huge size gives supermarket chains the ability to refuse increases.
- Retailers resist increases because they think they will lead to at least a temporary dip in sales, will hurt the price image of the chain, and could lead to a price war with other retailers that do not pass the increases through to consumers.
- Manufacturers are reluctant to decrease price, because it is so hard to raise prices.
- Manufacturers are reluctant to reduce price, because retailers often do not pass the reduction on to consumers.

- Retailers cannot so effectively resist increases in the wholesale prices of perishables, because they buy these on competitive markets, which are designed to sell all the product available, so that suppliers can find alternative markets if one supermarket chain refuses a price increase.
- There have been some attempts by big retailers to make arrangements with suppliers of some perishables to buy them at fixed or very stable prices and sell them at stable retail prices. This has been done mainly for farmed fish, bananas, and apples, items with a fairly stable supply. I hope to find out why retailers want to do this or whether this tendency will last.
- Gasoline prices behave like those of perishables and for the same reason – the wholesale price is flexible and the wholesale market cannot be thwarted or circumvented by retailers.