

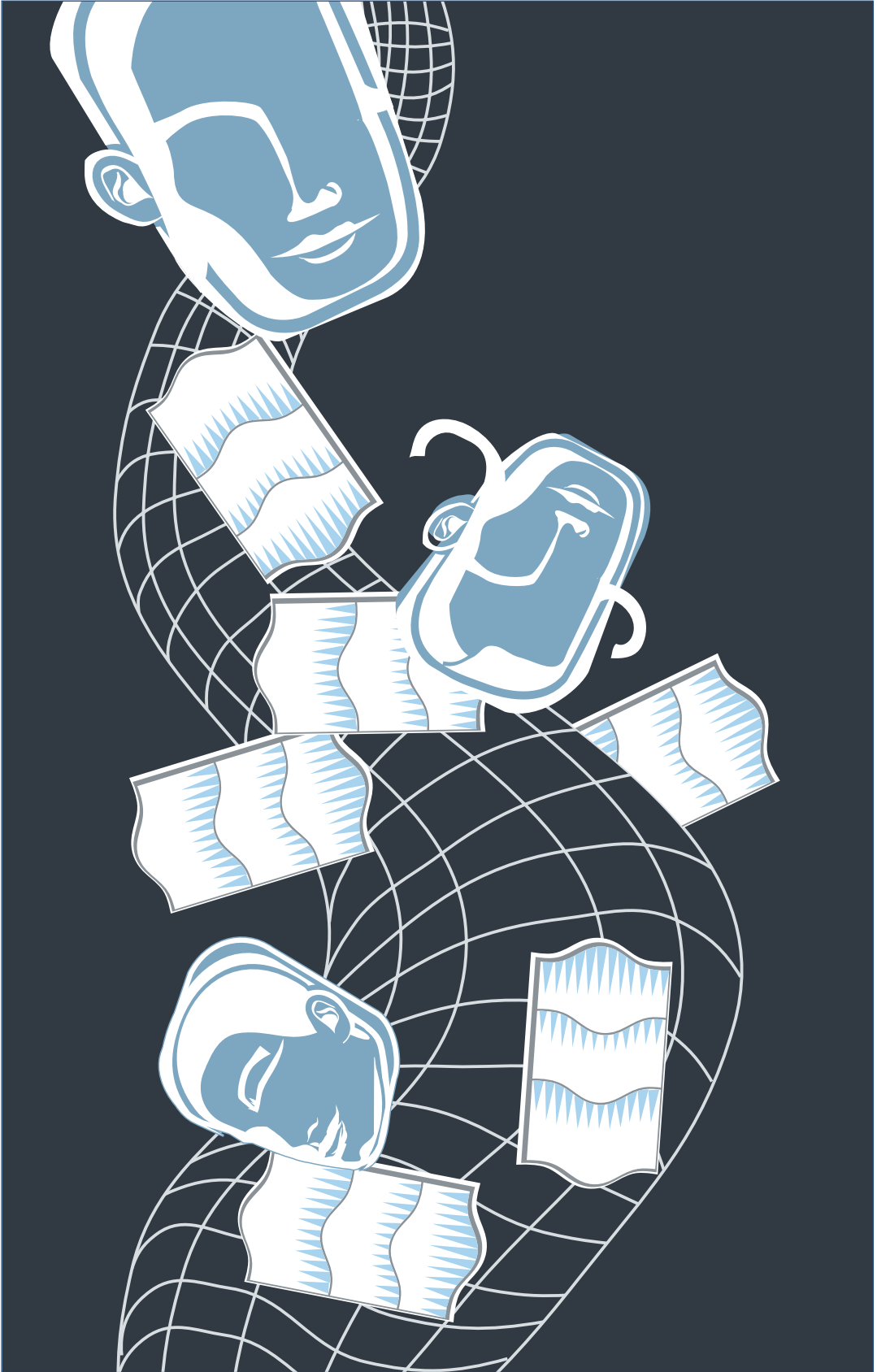
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Back to Basics



Pricing in Downturn Economies

Daniel Deneffe and Ferdinand Hoyos

Increasingly aggressive pricing that deeply cuts into companies' profits is a consequence of the worldwide economic downturn. Companies should protect themselves against price wars by offering value differentiators that decrease the price sensitivities of customers. Value differentiators are those product and service features that customers are willing to pay for. They exist in almost any industry. To identify those features companies should use intelligent methods putting potential customers in choice situations, and should do so well before aggressive competitive pricing tactics have set in.

The worldwide economic downturn is hitting hard. Stock markets have recovered only part of the losses incurred over the last few years, which often exceed 50 percent. In the first quarter of 2003, the U.S. Manufacturing Index posted its largest decline since the early 1980s. Consumers do not feel any better, as the sharp decline in the consumer confidence index from 77.9 to 77.6 from February to March 2003 indicates. In the euro-zone, the gloom is equally prevalent with slowing growth and steadily rising unemployment.

While the symptoms of economic malaise have been abundantly covered in the business press, less attention has been paid to the implications for business decisions related to pricing and product positioning. In many industries, prices are cut, sometimes by more than 50 percent or are dragged awfully close to variable costs, painfully cutting right into the bottom line. Pricing in downturn economies is thus a major agenda point for any CEO.

This article sheds some light on what companies should do in such dismal times. Why and how does the downturn economy affect industry pricing dynamic? What are the financial implications for any individual company? And which pricing and related actions should companies take to prevent getting carried into negative financial pricing spirals that disturbingly loom on the horizon?

The effect of the downturn on pricing decisions

A number of key characteristics of the downturn economy affect the incentives in setting prices.

- Slower demand growth or declining demand,
- Higher customer price sensitivity,
- Continued productivity gains,
- Ensuing increasing excess capacity levels,
- A "cash is king"-attitude by executives.

The slowdown in demand is at the heart of the downturn and affects numerous sectors. In the Western European automobile sector, new car registrations between January 2002 and 2003 slipped by 7 percent, with countries like Portugal (-21 percent), Switzerland (-19.1 percent) and Italy (-14.5 percent) particularly hard hit. Airlines suffered even more, as the effects of the downturn economy were exacerbated by fears over SARS, the Iraq war and terrorist attacks, culminating in a decrease in advance bookings by 20 percent.

Not only is there a drop in overall demand, having less to spend private customers and businesses are increasingly price sensitive. On the supply side, productivity is not declining. In fact, U.S. labor productivity figures reveal an increase in labor productivity of 4.8 percent in 2002 as measured by output per hour worked.

Coupling slower or negative demand with increased productivity naturally causes excess capacity levels to increase. In the US, excess capacity in fact pretty much steadily increased from less than 17 percent in June 2000 to close to 25 percent by February 2003.

In these adverse environments, companies focus a lot more on the current day-to-day performance. With an industry like airlines, for instance, having lost over \$30 billion since the terrorist attacks of September 11, 2001, the focus is simple: What must I do to survive today? The 'long run' is pushed aside as it may never be forthcoming.

So how do these characteristics affect pricing decisions compared to healthy economic times?

Consider a very simplified hypothetical pricing problem between airlines competing on a particular route, say Frankfurt-Barcelona. Suppose for simplicity that only two carriers, Iberia and Lufthansa, service the route. The situation is depicted in the well-known 'pricing matrix' (Exhibit 1). In this matrix, the left entry in each box represents Iberia's profits from operating the flight at the corresponding prices of the two carriers, whereas the right entry is Lufthansa's profits.

Exhibit 1 Pricing in a Healthy Economy

		Lufthansa	
		Price € 499	Price € 399
Iberia	Price € 499	€ 10,000 / € 10,000	€ 12,000 / € 6,000
	Price € 399	€ 6,000 / € 12,000	€ 8,000 / € 8,000

Suppose now that in better times the price for a flight that tends to maximize profits for both airlines equals 499 euros. At that price both airlines make a profit of 10,000 euros.

Of course, even in healthy economies, the temptation to cut prices always exists: by cutting prices to 399 euros, Lufthansa can raise

its profits as long as Iberia does not follow suit, since some customers will switch to cheaper Lufthansa. However, in healthy conditions, there is a cap on these gains dictated by the level of excess capacity of the price-cutter. With limited excess capacity characterizing a healthy economy, the gains from undercutting will be small and so will be the losses to the airline keeping prices high. In the game matrix Iberia ‘only’ gains an extra 2,000 euros (to 12,000 euros) from lowering prices, Lufthansa loses 4,000 euros, ending up with profits of 6,000 euros. The move is not without risk, however, as chances are high that Lufthansa will match prices later on. The net effect of the price-cut is well known: both airlines end up at lower prices, the same market share and lower profits: 8,000 euros each in the example. Managers who can achieve their individual targets (say 8,000 euros

on the flight) by pricing diplomatically, of course, understand this interdependency and would refrain from cutting prices in the first place, notwithstanding the short-term gains associated with it.

Exhibit 2 shows how weak economic conditions affect both the profits of the pricing strategies as well as the individual incentives in making pricing decisions.

Exhibit 2 Pricing in a Downturn Economy

		Lufthansa	
		Price € 499	Price € 399
Iberia	Price € 499	€ 7,000 / € 7,000	€ 10,000 / € 2,000
	Price € 399	€ 2,000 / € 10,000	€ 5,500 / € 5,500

Relative gains from price cutting go up

Likelihood of ending in loose-loose situation shoots up.

The overall drop in demand leads to lower profits at any price as fewer passengers fly. If Lufthansa and Iberia both charge 499 euros each one's profits on the flight would now be, say, 7,000 instead of 10,000 euros in the healthy economy. If they both charge 399 euros, profits drop to 5,500 instead of 8,000 euros in better times. Profits are relatively higher at lower prices during the downturn, reflecting higher customer price sensitivities.

Not only are overall levels affected, but the competitive landscape changes as well, crucially affecting the stability of prices in the industry. The short-term gains for one of the airlines when it cuts prices and the competitor does not are significantly higher in the downturn. In the example when Iberia charges 499 euros, a price cut by Lufthansa yields a gain in profit of 3,000 euros as a result of cutting prices, increasing its profits from 7,000 to 10,000 euros. A number of factors of the downturn economy bring about these higher gains from unilateral price cuts:

- The increased price elasticity during economic hardship makes more customers *willing* to switch to the price-cutter.
- As a result of the higher excess capacity and non-decreasing productivity, the price-cutter has sufficient capacity to accommodate bargain hunters.

Losses inflicted upon the company that keeps prices high when the competitor slashes prices are also higher in the downturn than in better times. The corollary of more passengers switching in the downturn when Lufthansa cuts prices is that Iberia flies close to empty and loses relatively more passengers. In the hypothetical example, Iberia loses 5,000 euros (7,000 to 2,000) from Lufthansa's price cut during the downturn versus only 4,000 euros (10,000 to 6,000) from the same cut in better times.

The implications of this change in the competitive landscape are rather disturbing, especially in combination with typical managers' incentives and the more pronounced 'cash is king' attitude. At standard prices of 499 euros, marketing and sales managers may no longer be

able to achieve their individual profit targets in the downturn. Suppose the manager's bonus is a function of profits above 8,000 euros. During the downturn this can no longer be achieved at a price of 499 euros, whereas it was possible in better times. The only way to have a chance of obtaining the bonus is through cutting prices.

Of course, such a cut is likely to foster a reaction of the competitor thereby jeopardizing future profitability. In the downturn, when survival (and individual pay) is at stake, managers considerably discount the future. Lured by the significant immediate extra profits that come from lowering prices, managers often tend to disregard the future stability of the market place. As competitors are hurt particularly hard in the downturn from price cuts they will sooner rather than later follow suit and match the lower prices.

Global warning: Price Wars in the US Motor Industry

In the US automobile industry, price wars are getting increasingly aggressive. The destructive competition that characterized the US automobile industry in the early 1990s that almost ruined Chrysler is rearing its ugly head again. Back then, major rebates and dealer discounts were introduced, but as soon as one company used those incentives others followed, ultimately changing consumers' expectations that cars should be sold with a heavy rebate. In 2002 and continuing into 2003 particularly GM has taken the initiative at offering rebates and zero-interest loans, causing Ford and DaimlerChrysler to follow suit. While GM's US auto sales have increased by 8 percent, at 0.2 percent its market share gains are negligible - since others followed. The net effect is falling profits from the rebate and interest war. Both GM and Ford posted negative profits in the automobile division, with Ford losing almost \$1 billion in 2002. Both GM and Ford now hold the lowest valuation (market cap/turnover) of 0.1 within the sector.

The effect of downturn panic tactics is enormous and widespread. In airlines for instance, the AMEX Airline index, which gauges the performance of ten airline companies, has fallen more than 20 percent in less than ten trading sessions. This was mostly due to the downturn in demand and the ensuing price wars.

In the German cement industry, the situation is equally dramatic. With prices hovering around 60-65 euros a ton, one player, RMC, lowered prices by three euros in the beginning of 2002. The CEO of one of our clients in the industry told us that the move was

initially not even taken seriously, as it had never been experienced before. The ball started rolling when prices were lowered by five euros as competitors reacted to

regain lost customers. RMC kept on decreasing prices in five-euro steps. Twelve months later prices in some regions were below 50 percent of what they were a year ago. Meanwhile, the downturn spiral goes on. The level where no company is making any money off cement has been reached. The price war has spread from the Berlin area to the whole of Germany and beyond. Market shares are roughly unchanged, with sales value having dropped by over one third in a year's time. The dynamics of the cement industry are even worse than those of the airline or automobile industry: while total airline travel increases with overall price drops, in cement, price drops only make customers switch, but they won't be inclined to buy more bags of cement!

Not only industries that have a high fixed cost/low variable cost structure, which are traditionally prone to price wars, such as airlines are at risk. Fast food, telecommunications, servers, game consoles, fast food, etc can all be hit. The critical CEO question is therefore: Which pricing and related actions do I take in the downturn?

How to price in the downturn?

The answer depends on whether or not there are possibly any value differentiators for the product or service: features differentiating the product or service from competitors in ways that are valued by the customer, increasing the likelihood that people are willing to pay for it.

When it is certain that there are no longer value-based differentiators, follow this integrated set of tactics:

1. Cut costs to the bone,
2. Do not differentiate a bit,
3. Play tit-for-tat cautiously by applying:
 - a. the competitor share stealing test and,
 - b. the competitor's perceived share stealing test.

Differentiation only makes sense when customers value the differentiating features in monetary terms, that is, they want to pay for it. It is not that customers find the differentiating features important or very important. To explain the difference, think of customers wanting to buy

a plasma TV or any other high-ticket item that they are not so familiar with. Do these customers find in-store service important? Very much so. Without it they would not know which model to spend their hard-earned money on. Yet, what does in fact often happen after a first visit to the store when the sales person pushes a customer to buy? “Well, I have to sleep over it.” Sure, but before doing so, this customer may well order the item that the sales person explained so well over the Internet and pocket the savings. Result: the customer found the service very important, but didn’t want to pay for it.

*The crucial question:
What are the value differentiators and are customers willing to pay for them?*

When there are truly no value-based differentiation opportunities, don’t even bother. Any dollar invested in differentiation will hurt your bottom line even more, so just focus on costs. In pricing, tit-for-tat is generally advised, at least for competitors of equal size. It suggests the following: Do not initiate a price cut; when a major competitor initiates a price cut, follow right away. When he raises prices again, follow again right away.

Tit-for-tat has a number of known drawbacks in that competitors might not intend to take away market share from you with price cuts. For example, in periods where more price sensitive customers enter the market place, it may make sense to offer special discounts for them. Another example of a non-aggressive price cut is that fashion retailers lower prices at the end of the winter to get rid of winter clothing inventories fast.

Therefore, to avoid misreading your competitor’s intentions - which is one of the major causes of price wars - apply the competitor share stealing test and use all your competitive intelligence.

- Obtain all possible information to assess competitor intentions with perceived price cuts and,
- Answer the question: Would the competitor also have cut prices had he not faced competition?

Competitor share stealing test:

If the answer is no, do not cut prices and definitely not across the board in response to his move. At best you may want to think that his moves may make normal business sense and consider a similar move.

The reverse applies as well: Your competitor may misread your moves as share-stealing while your intention is non-aggressive. Hence, make it easy for your competitors to perceive them that way and apply the competitor's perceived share stealing test to do so.

Competitor's perceived share stealing test:

- Provide as much competitive intelligence as possible to your competitors for them not to misread your moves as share stealing,
- Clearly explain the terms and conditions for any type of discounting or price cut.

If your customer understands that discounts on clothing only applies to winter wear, chances are that your competitors will also understand this and not overreact with storewide discounts.

Many clients underestimate this move. Whether it be in construction equipment, vaccines or consumer durables, the first assumption regarding competitor intentions is that 'they' don't understand, 'they' are aggressive, etc. In reality competitor intelligence is simply not performed. The reverse is true too and competitor interpretations can therefore be devastating.

Applying tit-for-tat pricing strategies cautiously is relevant when value-differentiators can be proven not to exist. In most sectors, however, they do. As the foregone profits of going for cost cutting and tit-for-tat when value-based differentiation opportunities do in fact exist are too high, you must work with the hypothesis that value-differentiators may exist. The burden of proof is on you to show that they do not.

Get to the root cause: Lower customers' price sensitivity with value differentiators

The best strategy in downturn markets (or, much better, before the downturn sets in) is to make every effort to identify value differentiators, since they reduce customers' price sensitivity. Introducing value differentiators can protect companies from having to succumb to follower price strategies and from experiencing a downward spiral in prices.

Value differentiators exist in almost any industry:

1. They consist of one or two features and, more often, even a change in the level of existing features.
2. Identifying them is difficult and cannot be achieved with standard market research methods, but requires intensive interactive choice analyses with customers.

The first point is encouraging: Even in the most commoditizing industry, a number of features or feature levels exist that usually make customers tick. One of Arthur D. Little's clients considered entering the market for industrial equipment, but in fact did not know how to lure customers away from incumbents. Based on gut feeling, the client considered making investments to improve product feature levels to avoid having to enter at a lower price. For instance, increasing the Mean Time Between Failure (MTBF) of the equipment or increasing its reliability. Changes in service features were also considered, like reducing the delivery time, the delivery time of spare parts, increasing the warranty etc. It turned out that, by and large, the key driver to make customers switch to the entrant was to increase the warranty period from the usual 12 months to 36 months. This increase was identified as monetarily equivalent to the significant price disadvantage of more than 10 percent that the entrant would otherwise have had to accept compared to incumbents to achieve its market penetration goals.

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Even in industries as 'commoditized' as cement, gloves, office supplies, and telecommunications one or two value differentiators do exist. The difficulty lies in identifying them. This is, however, key as launching differentiators that customers do not value can turn your bottom line figures from black to solid red.

How to identify value-differentiators?

Identifying value differentiators is difficult, especially because of the high degree of accuracy required. An increase in warranty from 12 to 36 months may be valued considerably, but a further increase from 36 to 60 months might not. To find out this level of detail, a particularly

refined approach to obtain accurate information on customer preferences is necessary. What do four common approaches have to offer?

a. Customer satisfaction studies

Customer satisfaction studies provide important information about what keeps customers satisfied. One of the questions, for instance, could be how satisfied they are with the company's service assistance. They then have to rate their satisfaction on a scale from 1 (very dissatisfied) to 10 (very satisfied). Customer satisfaction studies have a number of major drawbacks, however.

- They only assess satisfaction of current customers, and cannot capture what it takes to satisfy lost or potential customers.
- They only assess satisfaction with current features and current levels. Customer satisfaction studies can therefore also not capture the extent to which current customers would value changes in the level of those features (such as decreased delivery time by two weeks) or how they would value new features.
- Finally, customer satisfaction studies do not provide much advice for action: What if the average satisfaction level of interviewed customers is 8.5? What should the company do? Is it protected against price wars by doing nothing?

b. Key purchasing criteria assessments

Here customers are interviewed about the importance of attributes. They might be asked, for example, how important service assistance is for the decision to buy the services. They then have to rate the importance of this feature on a scale from 1 (completely unimportant) to 10 (very important). But key purchasing criteria assessments have a number of drawbacks.

- Customers find many things important but may not be willing to pay for them.
- Again, key purchasing criteria assessments do not provide advice for action either: What should the company do in case the average importance for one feature is 7.5?

c. Conjoint analysis

There are many variations of conjoint analysis. Whatever form it takes, in some way or another, subjects are asked to either rank or rate alternatives, assess the likelihood of

buying a particular product with a number of features or assess the amount of the products they would buy of that type of product in a given time period¹.

In one of the variations of conjoint, participants are asked how likely it is that they would buy a product with a well-defined set of features. They then have to rate this likelihood on a scale from 1 (would never buy this product) to 10 (would definitely buy this product).

Features and levels are then varied and the same rating questions are asked for every new product with different features. The results are then processed by means of regression analysis and key driving features are inferred. While conjoint analysis has a number of appealing features, in reality it is a misleading and inaccurate method.

- There is a wide body of research that points to the methodological flaws in numerous steps of conjoint, leading to systematically invalid estimates of customer preferences².
- When asked about the likelihood of purchase, customers typically go for extremes. The relationship between their actual and intended buying behavior is quite different. In addition, there is ample psychological research that customers cannot accurately assess concepts such as 'likelihood' or 'probability'.
- In conjoint analysis applications constant 'rescaling' must be applied, precisely to adjust the answers of respondents. At the extreme, the results are almost assumed. In the words of one of our clients who used conjoint before: "We had to divide the results in two to get some view of market potential".
- Finally conjoint cannot deal with the competitive context and therefore cannot provide strategic insight. It cannot test whether consumers would choose your product or that of your competitor.

d. *Large-scale market research assessing willingness-to-pay*

In large-scale market research, customers are in some way or another asked for their willingness to pay for product

¹ For a good summary of various variations of conjoint, see Wharton professor Anne Marie Knott's Chapter 4, "Conjoint Analysis" (2001).

² See Roe et Al (1996). For instance, regression techniques are used whereas these are proven to generate inappropriate estimators in conjoint rating, leading to systematic biases.

or service features through closed and open questions. The key difficulties with this type of research is that there is ample empirical evidence that the formulation of the questions have a huge impact on the answers provided, so that the estimated willingness to pay may be completely different from the true valuations of the customer.

The fact that questions to a major extent influence the answers is characteristic of any type of large-scale research using closed and open-ended questionnaires, not just of willingness to pay assessments. In a large-scale study assessing the incidence of management fraud, for instance, a representative sample of auditors was asked if management fraud was below or above ten out of 1000 firms audited. At the same time another representative group of auditors was asked whether the incidence of fraud was below or above 200 in 1000 firms audited. Both groups were also asked a second open-ended question (identical to both groups): "What is your estimated level of fraud (per 1000 firms audited)?" On this second question, the first sample averaged 18.52, whereas the second averaged 43.11. Just a mere difference of over 200 percent!

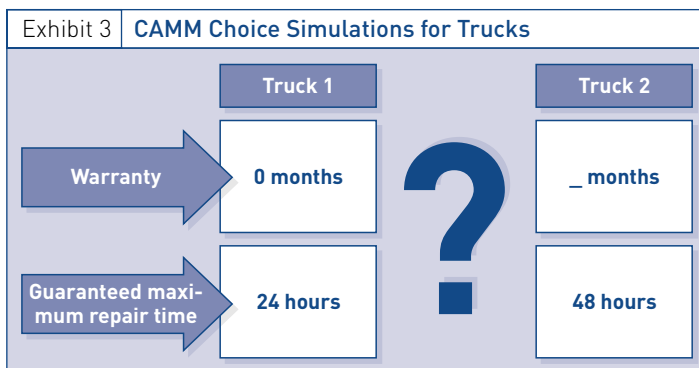
If you already have this kind of difference in this case, would you use large-scale market research to accurately obtain much more sensitive information about customers' willingness to pay? Probably not.

Customer Attribute Management Method (CAMM)

What to do then? The answer lies in using methods that put customers in situations that they are familiar with: choice situations. In real life, customers do not answer questions or assess likelihoods. They make choices, trading off benefits and costs of various options. The method that we propose, the Customer Attribute Management Method (or CAMM) does precisely that: It puts customers in choice situations and assesses at what point they will switch from one option to another.

In the example in Exhibit 3 a potential client for of a particular product, say a truck, is asked to choose between two hypothetical trucks with different levels of maximum guaranteed repair times during periods of breakdown and

warranties. Clearly, if truck 2 comes with no warranty at all, the individual will prefer truck 1. If truck 2 has 60 months of warranty, he will in all likelihood choose truck 2. Somewhere in between, say at six months, he is indifferent. We then know that for this individual an increase in warranty from zero to six months has the same monetary value as a decrease in maximum guaranteed repair time from 48 to 24 hours.



Applying the method further refines the understanding of preferences even more. For instance, it may take an increase in warranty from six to 18 (not 12) months to be equivalent to the same decrease in repair time from 48 to 12 hours. It means that this customer is willing to pay the same for

an increase in warranty from six to 18 months as for an increase in warranty from zero to six months. The same type of inferences can be made for other features, reliability, delivery time, price, environmental friendliness, and so on.

Applying the CAMM method allows product strategists to come to conclusions such as an increase in environmental friendliness from current levels by ten percent keeps about 80 percent of customers equally satisfied as an increase in warranty by 25 percent from current levels. And this increase in ten percent in environmental friendliness can command an increase in price of five percent without having to give up market share.

Ultimately, CAMM generates a forecast of the sales and profit potential for any type of product/service that could possibly be developed under various competitor scenarios. This leads to answers such as: "If we were to offer a truck with an improved environmental friendliness of 12 percent, a warranty increase from three to five years and keep our prices constant, then, even when competitors were to drop prices by ten percent our total annual sales will remain stable, whereas they would be expected to

drop by 12 percent with our current offering. Another example: “If in the short term we can technically only improve the environmental friendliness by five percent over current levels in a cost-effective way, then an increase in warranty from three to six years, coupled with a reduction of the guaranteed repair time from the current three days to 24 hours and a decrease in price by one percent would achieve the same objective in response to price drops of competitors by ten percent.” For scenarios in which competitors will match any warranty increase, other optimal responses can be accurately calculated. The approach thus provides an accurate foundation for strategic decision-making in aggressive competitive scenarios.

This method has numerous advantages over the methods discussed before. The most important advantage is the accuracy of the prediction. Results are not results on paper but results that materialize in reality.

Unlike conjoint analysis, the approach is strategic; it deals with competitor offerings, does not rely on inapplicable econometric techniques and does not ask questions about likelihood of purchase. The ensuing accuracy stems in fact from the sound methodological foundation of this type of choice modeling and decision analysis³. It is no surprise that two of the recent Nobel Prize winners in economics have been in these or closely related areas: McFadden in 2000, and Kahneman in 2002.

With such an approach, marketing strategists can optimize exactly what they have to do to boost the financial performance in an accurate and reliable way while taking competitor offerings into consideration. Most importantly, the strategist can identify in a reliable way what the value differentiators are and how to manipulate them, so as to decrease customers’ price sensitivities. Doing so well before the downturn sets in is the best way to protect margins and retain customers when the price and share stealing battle has begun.

³The proposed method is closely related to the empirically validated choice preference elicitation method developed by one of the authors with Prof. Peter Wakker (Wakker and Deneffe, 1996).

Insights for the Executive

We summarize our discussion with a number of key recommendations:

- Don't differentiate by adding features at any cost: customers may claim features are important, but are not willing to pay for them.
- Identify those features that customers are really prepared to pay for: they will offer you maximal protection in aggressive share stealing environments.
- To identify those features, use intelligent methods putting potential customers in choice situations, and do so well before the pricing game has set in.
- If there aren't any differentiating features that customers are willing to pay for, cut costs to the bone and carefully play tit-for-tat pricing.

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Daniel Deneffe

... is a Director in the Brussels office of Arthur D. Little where he has over seven years of consulting experience in the area of evidence-based marketing strategy for companies in numerous industries. Dr. Deneffe has been active in Europe, North America and the Asia/Pacific region. He is a former professor at the Fuqua School of Business, Duke University, NC, USA.

Ferdinand Hoyos

... is a Business Analyst in the Berlin office of Arthur D. Little. He has over two years of consulting experience in the field of Corporate Finance and has contributed to several assignments in the areas of mergers and acquisitions, corporate restructuring and corporate strategy with a main focus on telecommunications, manufacturing and the utilities industry.