The Future of Pricing

A Guide to the Next 10 Years of AI Pricing

Maciej Kraus

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"To my family, for their unwavering support and encouragement throughout my life and for always being a source of strength"

Maciej Kraus

Preface

Steve Jobs said that "The only way to do great work is to love what you do." I'm fortunate that pricing has been my work and passion for the last 20 years. The purpose of this book is to summarize my main findings and draw a forecast for the future of pricing.

Factors affecting the profitability of a business often change whenever the market in which it operates undergoes significant changes - such as innovative technologies, new regulations, changing consumer tastes, or unstable cost levels. Therefore, to maintain/increase profitability in ever-changing markets and keep customers loyal, companies must frequently introduce completely new pricing models. And as pricing technologies develop drastically, the use of AI and ML algorithms for pricing models becomes more and more common practice.

At the same time, too few managers possess the ability to anticipate the need to make strategic decisions concerning prices relying on advanced technologies. A majority of companies are still changing their pricing strategies using outdated legacy approaches, and only after market changes occur, not in advance. The information revolution has caused prices to become much more transparent. As a result, consumers have become increasingly more sensitive to price changes. Even in the sector of services, the globalization of markets has resulted in increased competition and a decrease in selling costs. The rapid pace of technological changes in many industries has created new sources of value for customers, although this does not always directly translate into higher income for manufacturers.

Companies that can implement innovative changes in their pricing strategies can expect a bonus in the form of higher profits and returned customers. It has been proven that companies that develop and effectively implement strategies based on value, achieve an operating income higher than business entities which base their pricing policies on market share or the assumed level of profit. A good example illustrating how profits can be realized from a strategy based on value is Walmart. This US department store chain introduced a novel system of discounts under which rebates differ depending on the type of product as well as the location of the store. Such activities provide an opportunity to increase the number of customers visiting the store, as they will also buy goods not covered by the sales promotion. Competitors who carry a smaller assortment cannot make use of a strategy consisting of offering such extensive reductions, making Walmart a big winner in this market, without simultaneously triggering a price war.

This book would be first of all helpful for pricing practitioners in retail, but also for other stakeholders dealing with prices across the industries and business segments. By reading the first part "Pricing Fundamentals", you will be able to understand how to approach and manage pricing so you can grow your profits smartly and sustain your organizations' financial health. In the second part "Gaining Pricing Power Through Technology" you will get a detailed overview on the last-gen pricing technologies already transforming the retail landscape. Finally, the last part "Thinking Out-of-Box or What Can You Learn From Subscription Model" will give you a food for thought using examples of the innovative pricing approaches applied by subscription-based services.

I trust that reading The Future of Pricing: A Guide to the Next 10 Years of AI Pricing will prove to be a useful and interesting way to improve your business skills and will inspire you to take action when necessary which will result in measurable profits and reinforced customer loyalty!

Maciej Kraus PhD

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PART I

Pricing Fundamentals

1.1 The impact of pricing on profit or how to stop leaving money on table

by Maciej Kraus and Greg Leśko

On a very basic level we can distinguish four main leverages of profit in each company: sales volume, sale price, variable (unit) costs and fixed costs. For the company that sells one product, a simple equation for profit is presented below.

$$profit = Q \times (P - V) - F$$

Q – volume of sales (i.e. selling in items or other units of measure)
P – sale price
V – variable (unit) cost
F – total fixed costs

All four of these variables have a direct impact on company profits. Therefore, what do these elements depend on and how can they be modified?

Sales volume

In simple terms, we can say that how much a company sells depends directly on the number of their customers and the demand for the products they offer. Therefore, it is necessary to stimulate at least one of the following areas: acquiring customers and/or increasing the demand for their product to make an impact and increase the volume of sales. And depending on the location of the company in the supply chain, we may also stimulate further sales.

Attracting new customers leads to increased expenditures. In less complex organizations, these include sales representatives, phone calls, printing of informational materials and expenses related to transportation or representational duties. As the organization grows, the (total[1]) costs of acquiring customers increase and include issues such as expenditures for market research or media (advertising).

Stimulating further resale or consumption takes on different forms. The most common is the involvement of a manufacturer in the cost of a product's advertisement (e.g. at point of sale or in the media) or even financing a campaign from start to finish. From the point of view of the FMCG (fast-moving consumer goods) manufacturer, running and financing marketing campaigns and providing clients with materials for internal advertising at the point of sale (pallet displays, posters, T-shirts for personnel in restaurants, etc.) seems reasonable. Such actions have a positive impact on business relations and help to increase sales.

Stimulating consumption makes the end user choose larger quantities of products more often. Some methods by which this can be achieved are:

- Encouraging consumers (e.g. in marketing communication) to more regular use of the product;
- Finding new applications for the product and informing customers about them;
- Deliberate reduction in a products' lifetime (durability) or the expiration date.

Generally speaking, in order to sell more, you should first consider the following points:

- Where and how can I acquire new customers?
- (B2B) How can I help make my customers sell more of my products to their customers?
- (B2B, B2C) How can I make my customers use my product more often (and therefore buy more of it)?

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[1] It is natural that with the development of an organization the total cost of acquiring customers increases, but despite the increase in costs, the decrease in an average cost of acquiring (one) client is most frequently observed in absolute values.
This may be due to economies of scale or recommendations given by the customers acquired earlier.

Selling price

Obviously, price constitutes an integral part of the profit equation. In short, we use the leverage of profit, which is the price, by raising it and providing a proper explanation of such an increase to customers. We can therefore justify this decision to maintain sales volume at the same (or slightly lower) level.

It is clear that the higher the price at which a company is able to sell their products, the better. However, analysis of various markets confirms that not everyone is always aware of the obvious.

It is not unusual to sell a lot and sell it cheap. Silent winners in many developing markets often turn out to be those companies which do not offer the cheapest products and sell just a little (or very little) but still earn more than others. History shows that, at the end of the day, such companies prove to be the most successful. Thanks to a long-term profit-oriented strategy and (to a slightly lesser extent) aiming at gaining market share, they can dedicate more resources to investments such as the expansion and improvement of machine facilities, implementation of new technologies, market research, hiring qualified professionals, increasing the range of advertising (B2C) or expansion of sales (B2B). Such a foundation of success is much more stable than low prices.

Another seemingly obvious point is: customers often choose the supplier that meets their primary need best. In this way, Apple, through distinctive design and the durability of components in their products, attracts customers who, above all, value the appearance of Apple devices and their high standard of quality. Mobile devices manufactured by Samsung or HTC (and other brands using the Android operating system) have an attractive price to quality ratio and are therefore most frequently chosen by buyers for whom this factor is of utmost importance. If the main or only prerequisite of sale is a low price, such items will attract people who depend primarily on this very factor. It is not difficult to conclude that such customers will gradually demand increasingly lower prices and will simply change their provider if prices remain unchanged. If a company decides upon a temporary strategy of lowering prices and (at a later stage) exploiting an increased customer base by introducing additional fees and increases in price - in order to increase its market share - such a strategy should always be carefully considered.

Implementation of the first stage of this strategy appears to be relatively easy, but the real challenge is to effectively navigate a business through the second stage. It is often forgotten that plausible justification of change plays a key role while introducing a price rise.

The justification must convince both sales representatives and customers of its purpose, otherwise the price increase will be introduced only "on paper". If there are no grounds for the increase, exposing customers to other non-price factors that other companies do not offer might be a necessary lifebelt. Reference to competitive advantages often allows for an effective increase in prices.

The most common of these include, among others, reliability, prompt execution of orders, dependability, a good history of cooperation and most importantly the unique functionality of the product or its unfailingly high quality.

Variable (unit) costs

The costs attributed to a sold unit are an important component of the basic profit equation. The issue of calculation and allocation of costs is a topic for a separate book, but the definition of variable unit costs adopted here covers not only the direct costs of production or purchase but also other selling costs (additionally taking into account other elements, such as cost of transport or disposable packaging, expenses related to preparing and placing POSM[2] at points of sale, etc.).

Naturally, in order to maximize profits one should strive for continuous reduction in costs. To achieve this, enterprises usually:

1. Renegotiate agreements with suppliers or seek new partners;
2. Use cheaper alternatives in the manufacturing process, thus lowering the quality of products offered[3];
3. Look for savings in areas of costs not related directly to the cost of manufacture or purchase (transportation, packaging, etc.);

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[2] POSM (Point of Sales Materials) – advertising materials placed in stores to stimulate sales of specific goods, also referred to as POS or POP.

[3] The fact that this practice is applied, does not mean that it should be recommended. The decision to lower the quality of the products must have firm justification.

4. Introduce changes to the management of the company (i.e. limiting losses during the production process to the minimum);
5. Introduce new technologies.

Before deciding on savings in the area of variable costs it is necessary to take into account factors more extensive than the aspect of profit itself. Obtaining and then dealing with a new, cheaper supplier is often risky - sometimes it turns out that they have problems with timeliness or completing orders or advisors in the service department do not perform well enough. Therefore, such changes should be introduced gradually, e.g. by increasing the share of supplies from a new business partner across the purchase portfolio successively. This way you can test a particular company and at the same time work out a basis for renegotiation of price conditions with an existing supplier.

Lowering the quality of products is of considerable importance when it comes to a business perspective which takes other points into consideration besides profit. Keep in mind that the quality and value of the product are closely linked - reducing one means reducing both.

Fixed costs

Most companies which have been active for several years have most likely implemented a project to reduce fixed costs at least once. Such initiatives are definitely needed and should periodically be considered every few months. Please remember that “saving on paperclips” and trimming the budget in such a way that will do more harm than good in the long run is not recommended (e.g. resigning from coffee or water dispensers, which workers are accustomed to, buying office supplies of apparently inferior quality, etc.).

Which lever to move?

Not every lever for profits that a company may use works with the same force. Some affect the final profit to a greater degree and some to a lesser degree. The old saying is that it is wise to first reach for the fruit that hangs lowest - i.e. to find where the smallest effort can gain the best results.
So in which area should we begin operating to increase profit?

Exercise

To better demonstrate which of the four elements influencing profit is of the greatest importance, let us travel for a moment to an alternate dimension where fairies exist to fulfill our every dream.

Your company is visited by a fairy godmother who says, "You have a unique opportunity to improve the results of your company. You can upgrade one of the factors affecting profit - I promise that it will not affect other factors in any way[4]. What do you choose: to increase sales by 10%, increase prices by 10%, reduce variable costs by 10% or reduce fixed costs by 10%?".

Of course, as the person who manages part of a large organization, before making any decision you are guided by cost-effectiveness (if possible). Therefore, let us look into an exemplary structure of your company.

Sample structure of revenues and costs in the enterprise

Leverage of profit	Value
Price	100 PLN
Variable costs	60 PLN
Sales volume	1 000 000 units
Fixed costs	30 000 000 PLN

Due to the fact that the main criterion for assessing the decision is total profit, you should calculate its initial value by the following formula:

$$profit = 1\ mln \times (100\ PLN - 60\ PLN) - 30\ 000\ 000\ PLN = 10\ 000\ 000\ PLN$$

[4] i.e. increasing sales will not make it necessary to reduce prices, and vice versa - increasing prices will not lead to decline in sales volume. Reducing costs will not have any effect on the level of sales or price as well. The real world of magic!

We will make a decision based on simple calculations, which are presented in Table below.

The structure of income after changing the leverage by 10% and leaving the other factors unchanged:

Leverage of profit	Value	After change	Profit after change
Price	100 PLN	110 PLN	1 mln x 50 - 30 mln = 20 000 000 PLN
Variable costs	60 PLN	54 PLN	1 mln x 46 - 30 mln = 16 000 000 PLN
Sales volume	1 000 000 units	1 100 000 units	1,1 mln x 40 - 30 mln = 14 000 000 PLN
Fixed costs	30 000 000 PLN	27 000 000 PLN	1 mln x 40 - 27 mln = 13 000 000 PLN

As can be seen from the calculations, price is the most important element of this simple profit equation. For most realistic revenue structures (assuming the price is higher than variable costs) the exercise above leads to the same conclusions. Situations in which the company incurs very high overhead costs at low or zero variable costs may be an exception.

Although the exercise above greatly simplifies reality, it clearly exemplifies how extremely important price is. It should be noted that profit leverage works both ways. This means that reducing prices by 10% can do much more harm to the total profit than a decline in volume by 10%. This is well worth remembering in decision-making situations related to renegotiation of prices or the accountability of sales representatives for the execution of planned activities. It often happens that the bonus remuneration for a sales representative who fulfilled a plan, but greatly reduced prices (and as a result earned less for the enterprise), is higher than the remuneration of a sales representative who defended the price and actually sold less, although, in reality, the company profited more.

1.2 The power of value: offer customers what they want

by Maciej Kraus

Price is defined as a sum of money which a seller requires to exchange certain goods or services. It is the only revenue component of the basic marketing mix (others components influence the generation of costs) and therefore deserves special attention. There are concepts according to which price is always equal to the value of the product or service involved. Current theories which are closer to common practice state that if these two variables turn out to be the same, a transaction could not be made. For a customer, the value of the product must be at least slightly higher than its price - which allows both parties of a transaction to secure a mutual benefit.

Defining value is a difficult task as it is an abstract concept. Most often it is impossible to precisely determine the value of your product or service, because it is usually defined through comparisons to previous transactions.

This is why we subconsciously compare previous transactions or products and relevant acquisition costs with the offer that we are considering, as we assess both the difference in the estimated value of the product and its price.

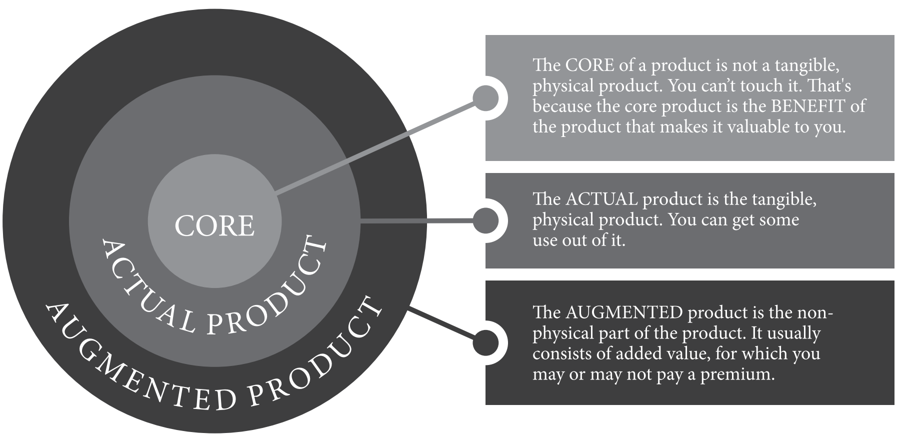
Value-price balance

In what way are concepts of value and price related? On one hand, companies create value from the assortment f their non-price offers, such as newer and better products, or a wider range of additional services, or enabling the completion of orders “ASAP”, or by focusing harder on customers’ needs. On the other hand, there is the price, which is the amount a consumer pays for the value delivered to him or her. The higher the value, the higher the price may be.

Understanding the concept of the value of goods and services

The value of goods and services can be explained well by the concept of three levels of a product[5] (an outline of this concept is shown in Figure below). According to this method, each offer features three levels: the core, the actual product and the augmented product.

Three levels of a product - outline of the concept

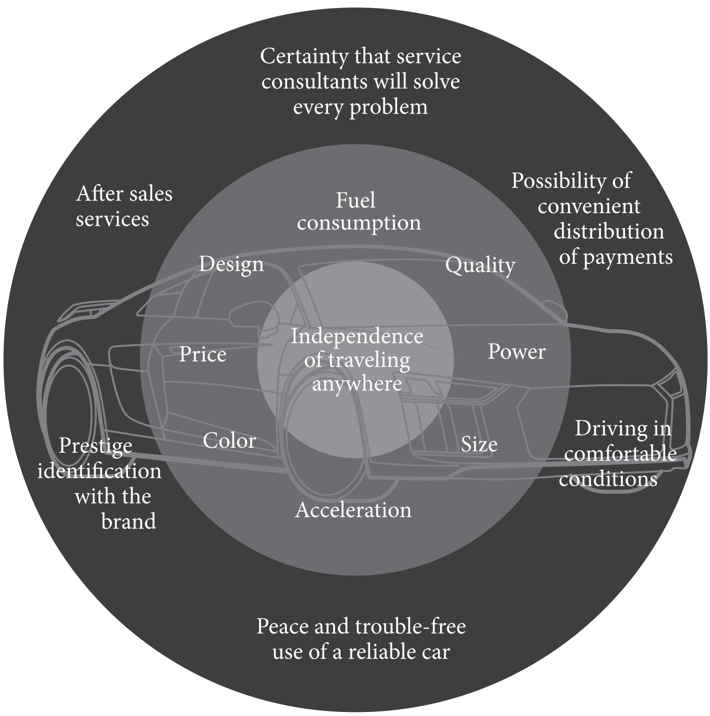


[5] The concept of three levels of the product was taken from Principles of Marketing by Philip Kotler

Components of value of a sample product (in this case juice), at the actual product level include: taste, appearance and functionality of the package, the contents of additional ingredients (vitamins, sweeteners, etc.) At an augmented level, the components being compared include, among others, trust in the brand and certainty about the quality of the product purchased. Comparison of values of two different offers featuring the same core (e.g. in relation to juice the core is to quench thirst) takes place at both the actual and augmented levels (i.e. on one hand, we compare the packaging, taste, trust in the brand etc., and on the other the price).

For a more complex product such as shoes, the core product offered is the ability to walk independently anywhere you want (not hurting your feet etc.), and the actual product is a real, tangible pair of shoes of a certain brand, model, color etc. Features of an augmented shoe product may include prestige, a feeling of safety, service reliability and so on.

Three levels of product - car example



The concept of three values is suitable to be applied to both products and services. Value of a product can be created and strengthened at both the actual and augmented levels. The key to proper development of the value of a product (or creation of other variants thereof) is to learn the expectations and preferences of end users. The coming chapter titled Match your portfolio and prices of goods to the customers you are serving, has been dedicated to the customization and development of a product portfolio which will meet the needs of customers, and provide the company with outstanding results.

Value in B2C markets

How does the concept of three levels translate to estimating values of B2C products and services? At the first two levels, the evaluation of offers takes place only within the comparison of prices of competitive offers. If the concept of a product covered just those two levels, difference in prices of identical products existing in the market would not be well-founded. Eventually, the decision would be based solely on the price, and that in turn would result in a situation where selling items more expensive than the competition would be impossible. In conclusion, the third level in terms of B2C transactions constitutes justification for the difference in price (and this is due to disparity in the offered value!).

The third level of B2C sales can be formed by the following factors:

- The possibility of placing custom orders or orders with a short completion time;
- Timeliness and completion of delivery (suppliers often have problems with this, so it can be a source of price premiums[6] in many markets!);
- Effective consultancy and professional customer service;
- Availability of goods (especially in markets characterized by seasonality);
- Long-term good relations established by customer service (also, getting recipients accustomed to specific persons responsible for their customer service);
- Favorable terms of payment and required securities;
- Diverse range of products.

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[6] Price premium shall mean an additional amount charged to the customer. Depending on the specifics of the situation, the price premium may be included in the basic price of a product or may be a separate item on the invoice (e.g. in the case of orders with shortened time of delivery the position “hastened delivery” can become a separate record).

Obviously, the above list does not include all possible variants, yet it is important to know what customers value in a company beside the product or service itself, as these factors affect the evaluation of an offer. For example, a timely, diligent supplier of various office supplies is of greater value to customers than a supplier of paper only, whose shipment of goods is occasionally delayed. An additional advantage of being the leading partner can be the opportunity to order all necessary items in one place (so-called one-stop shopping). Such a major supplier may then set their prices at a slightly higher level than their competitors.

The concept of value in the context of business management

The value of a product when theoretically converted to its sale price can be an important criterion when making strategic decisions for the company. This is illustrated by the following case study.

ABC is a printing company operating mainly in the B2B market. Some of its clients are prestigious companies, which have brands known throughout the world in their portfolios. Due to technological progress and the declining effectiveness of existing machine facilities it became necessary to replace some of their presses with more efficient ones. The CEO, together with the senior managers and top salespeople needed to make a decision concerning the technical specifications: of new machines. They can choose a machine that uses four colors, or a machine that uses six colors and provides slightly better print quality.

The difference in the price of the machines is substantial. To make the best decision in this situation we should consider whether the company will be able to ensure new profits (i.e. whether it will be able to recover this additionally created value in sales) thanks to higher print quality. When we face the challenge of continuous price pressure, we can see that the cheaper machine becomes a tempting alternative. If we take into account that customers prefer prestigious companies which do not compromise on quality, the more expensive equipment may prove to be a better option. The ABC company, knowing that better print quality would reduce the price pressure coming from customers, decided to purchase the more expensive device. This allowed for maintaining long-term contact with the most profitable customers and provided the opportunity to set better margins (i.e., obtain higher delivered value) and at the same time accept the loss of some of their less profitable customers, who did not require such high quality.

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[7] Profit margin is defined as the percentage of the profit in the sale price. In the case of a product that is sold at 100 PLN and whose unit cost is 80 PLN (profit of 20 PLN) the margin is 20%.

1.3 The best pricing methods or why using a single approach doesn't work

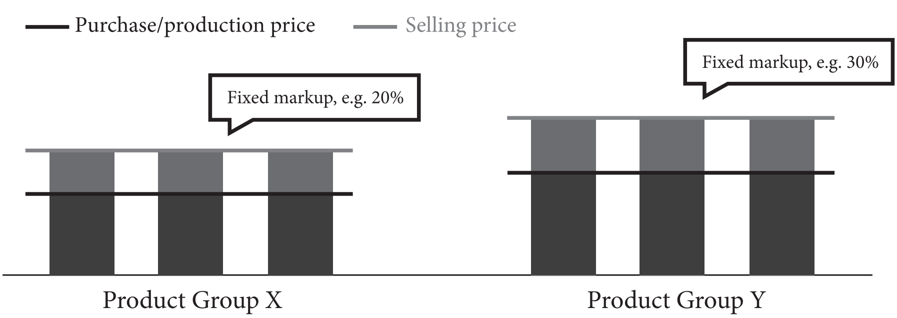
by Maciej Kraus

Price is the most important component of an enterprise's profit. The price of products and services should always be kept at optimal levels.

Cost-plus pricing

The cost-plus pricing method involves applying a fixed mark-up to the cost of purchase (or production) of a given product or product group. The existence of the so-called standard markup approach in the industry can be taken as a frequent prerequisite for applying this method.

Cost-plus pricing method



Cost-plus pricing is common and is sometimes appropriate. The following table shows the main advantages and disadvantages of its application.

Advantages and disadvantages of the cost-plus pricing method

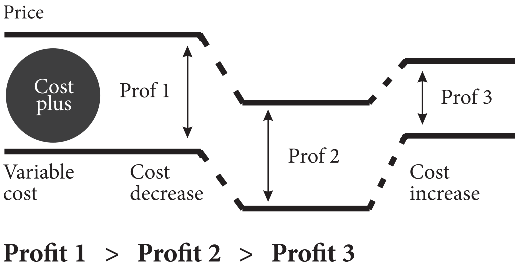
Advantages	Disadvantages
Ensures simple and quick solutions	Does not include customer's tendency to make a purchase
Easy to implement	Does not foresee actions of competitors
Ensures application of margin at costs fluctuation	Difficult to apply during price positioning
At a similar competition's cost structure it can lead to absence of price wars	In general, adversely affects company's price image
Facilitates decision making and reduces the cost of the process with large assortment	Does not use the full potential of profit
Simplifies the calculation of price rebates	Does not make use of marketing price mechanisms

Nonetheless, the simplicity of cost-plus pricing often proves unfavorable. The moment costs change, the company using this mode of pricing faces a choice: to establish a new price according to a fixed percentage (or quota) markup and maintain a consistent, easy-to-manage structure with pricing policy or to leave the price at a fixed level.

When costs are declining, maintaining the old price allows for more profit. However, as costs of an increasing number of products in the portfolio change, a multitude of mark-ups start to create more and more problems for management.

Lowering the price by a percentage markup is associated with loss of profit in a situation where it should grow (reduction of costs is such an example). And what happens in a situation when costs increase? Here, making a decision presents a challenge because keeping prices at the same level leads to decreased profitability of the product and also disturbs the fixed markup assumption. Whereas the price rise may meet with customers' disapproval, we should expect that few customers will accept higher prices. As shown in the example, any change in costs makes this method a cause of loss for a company of its most important advantage - simplicity.

Cost-plus pricing method: pricing decisions and their consequences associated with changing costs



The use of fixed mark-ups or levels of margins in%

With cost decrease: customers eagerly accept lower prices.

Result: at the same level of mark-up or margin in% profit expressed in absolute values decreases.

With increase in costs: Customers accustomed to lower prices don't accept increases easily; it is difficult to achieve the expected level of margin or mark-up.

Result: The profitability is reduced in both % and absolute values.

Competition-based pricing

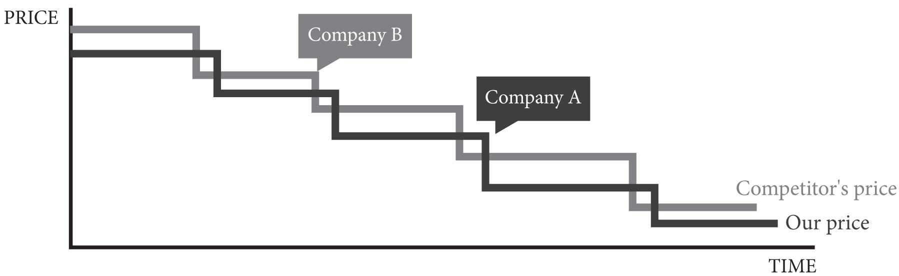
The method involving price-fixing by reference to competition is also among the most commonly used and simplest methods. Its main advantages and disadvantages are presented in table below.

Advantages and disadvantages of competition-based pricing

Advantages	Disadvantages
Relatively easy to implement	Requires precise definition of pricing strategies used by competitors
Creates opportunity to implement main pricing strategies	It is difficult to apply it in relation to custom products that are difficult to compare
Lets companies adapt to the competition in terms of prices	It cannot be applied in the case of new products (or does not create opportunities for effective pricing)
Allows for basic creation of price image	Not related to costs
	Does not allow the company to build its own pricing strategy

Frequently companies decide to set the price at the exact level as their competition or maintain a constant quota or percentage distance (behavior described as competition-based indexing[8]). In practice, the most common indexes are equal to or less than 1, however, rarely does maintaining such indicators remain beneficial for the market. It may happen that our main competitor will also maintain a price index below 1 in relation to our prices, which in turn will result in a price war. This situation is illustrated by the following graphics.

Reactions of prices in two companies indexing each other's prices below 1



Indexing is not always a bad solution. If the calculated index has strong prerequisites, a strategy based on this method can contribute to significant success. The correct approach to pricing using indexes should take into account the entire value supplied by the enterprise and compare it to a competitive offer, which constitutes a base to which we want to apply the index. This process should have three stages:

1. Definition of price positioning against the competition (on the basis of supplied value);
2. Analysis of prices of competing products;
3. Setting the price of the product, taking into account price positioning and competition prices.

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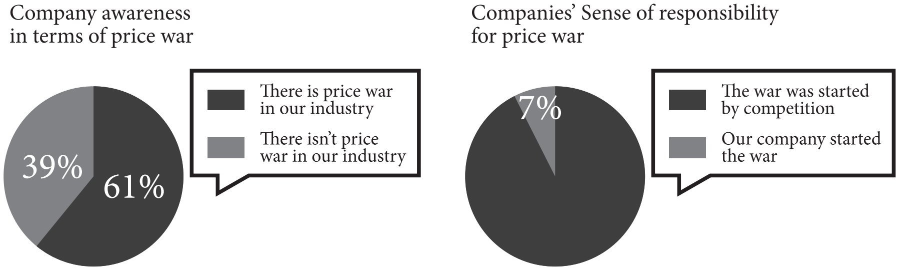
[8] For instance, if a company has adopted an index of 0.95 to competition price for the product, it means that it will strive to continuously reduce the price of this product by 5% compared to the price of a competitor against which such an index was adopted.

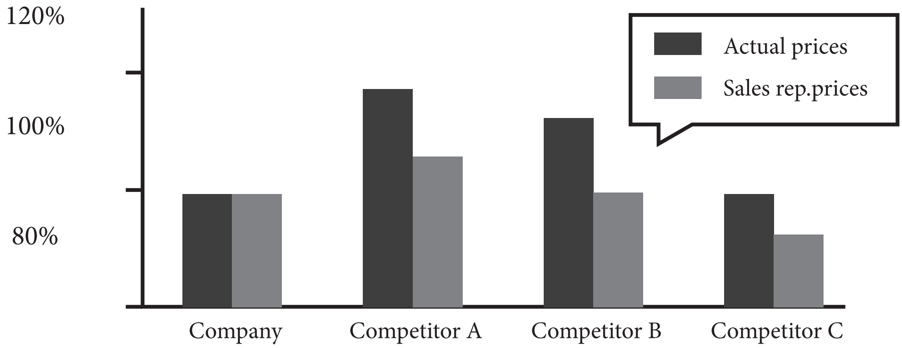
To summarize - if we believe that our company provides a value greater than that provided by a competitor, the index should exceed 1; in the reverse situation an index below 1 should be considered. It is worth mentioning that there are tools that let us determine the correct index very accurately. Note: it is important to make sure before implementing an index below 1 (e.g. by analyzing historical market data) that competition does not base its pricing strategy on this index - that way we will avoid a chain reaction.

Competition-based pricing: the problem with reliability of information

When going through the three-step process of competition-based pricing, defining the price positioning is not the biggest problem, as in fact accurate and reliable determination of the competition's prices is more difficult. In many markets competitors' price lists are not publicly disclosed (or only the price lists for B2C transactions are made public) and the only source of knowledge about their net prices usually come from information provided by customers during negotiations. However, this data is frequently incomplete, i.e., it may relate to a similar, but different model or a product that has been sold at a lower price due to its revealed defects) or simply untrue (negotiators may resort to such methods in order to get a lower price). This leads to situations where company sales forces have a wrong idea of the value of transactions in the market, which eventually translates to underestimated price, even if the price index was set correctly.

Comparison of prices at which transactions are actually concluded on the market and the prices at which transactions are concluded on the market according to sales representatives of the studied company (anonymous data)





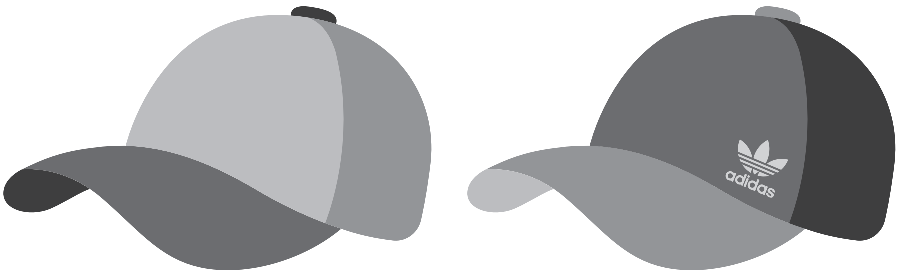
Value-based pricing

Price and value are very similar categories - in fact they are so similar that some people do not notice the difference between them. A large number of consumers equate price with the information about the potential value of the product. This applies particularly to products bought occasionally - in such cases the price often (but not always) becomes the most reliable source of information for customers about the quality of a commodity (a good example of this type of product is wine).

Thanks to this phenomenon we can try to explain why two baseball caps - one for 10 PLN, the other for 150 PLN - having exactly the same function and a very similar appearance often sell equally well. Herein lies the problem: we all know how much (more or less) a baseball cap should cost. But for some customer groups, a much higher price for one of the caps will indeed suggest it must be of better quality. However, in order to fully understand this phenomenon, we should refer to the concept of value-based pricing. Regarding value-based pricing, we will first try to understand the factors (features, parameters) for which customers pay when they buy something, and in the second step assign specific numerical values to these factors[9].

[9] Numerical values are assigned to specific factors from the actual product and the augmented product levels; This concept is discussed in chapter Sell value, not the product.

Ordinary Baseball cap (9,90 PLN) and Adidas baseball cap (149 PLN)



How does this relate to reality? Above we see two caps. Their value in use is al- most identical. If we were to apply value-based pricing, we would find that the fashio- nable design and logo of Adidas are worth about 140 PLN. Comparisons with other baseball caps would let us estimate the value of each of these factors quite accurately. However, the tasks we frequently face in the market are not so simple because information on prices tends to be classified, and there are dozens of differentiating factors involved. Or customers may simply be unable to understand the added value of the presented offer (and during negotiations refer to prices contained in the "inferior" competitive offers). Value-based pricing requires time, research and experience, but if the market and the business model of the company justify its use, it is definitely worth using. We should emphasize that there is no optimal, single price for each customer - everyone perceives the value of features of a product or service differently. In practice, this means that during value-based pricing we try to match the price to a specific group of customers that will prove to be the most profitable. Sometimes, while shopping we happen to encounter products which in our opinion no one would ever buy. They amuse us with their non-standard, sometimes even strange patterns or solutions offered. Often we are surprised by the high prices of such products, but they provide a perfect illustration of value-based pricing because their unique features are noticed and appreciated by niche customers[10].

[10] The issue of segmentation and matching products to customer segments is discussed in the chapter 'Match your portfolio and prices of goods to the customers you are serving'

Value-based pricing has many advantages:

1. First of all, it provides the company with information about customer's actual inclination to buy - especially when it comes to unusual elements of the portfolio which appeal primarily to a very limited target group.

2. It helps to improve the quality of a product, as some negative features may reduce its total value. However, through the ongoing study of values, we can counteract this as we receive information about any undesirable characteristics of the product.

3. It promotes the growth of customer satisfaction and engagement through market research, a tool often used during value-based pricing. Customers, who have the opportunity to comment on the characteristics of products usually react positively to the opportunity to become involved in a product's marketing.

Of course, this approach to pricing also has some drawbacks. First, this method is time-consuming and requires more financing than other available tools. Second, we must remember that, as with any method of pricing, valuations need to be regularly updated. And the often unavoidable costs of such research points out a key disadvantage inherent in Value-based pricing.

Introducing Demand-Based Pricing

Not all products react to a new price in the same way. For some products, a change in price may hardly have a significant impact on its demand and sales volume. In contrast, for another product, even a slightly changed price may turn the demand upside down.

SKUs in a retailer's portfolio are not just numbers or codes that can be treated in the same way. Every product has its specific identity which is defined by the number of parameters. And price elasticity of demand is one of the crucial characteristics underlying the product role, performance, and sales potential.

Being aware of price elasticities of demand and an ability to manage them properly is crucial for businesses willing to leverage optimal prices so they can keep customers loyal while achieving business goals.

What is price elasticity of demand?

Let's look at the definition of price elasticity of demand again. That is the correlation between the change in the demanded quantity of a product and a change in its price.

This definition appears to be rather simple, yet when it comes to practice, the concept of price elasticity of demand may turn out to be full of uncertainties and rabbit holes. An examination of three simplified examples showcasing different types of elasticity may help to understand the concept profoundly.

Prices' impact on KPIs

Prices affect all sales KPIs:

Revenue = sum (selling price*number of items sold)
Gross profit = sum (selling price-cost)*number of items sold)
Demand (sales in items) is elastic to price changes (reacts to prices)

Conclusion: everyone wants to know the optimal prices.

Let's forget for a moment that the impact of price on the demand is non-linear supposing it is. What do charts on the screen show? These are the three categories with real sales data: irons, electric kettles, and TV sets. The mean value of each curve marks the current price. So, the impact of price appears to be direct and evident if we consider the number of items sold within each category. And that's the point: the lower the price is, the more items are sold and vice versa.

But the highest number of items sold is not the ultimate goal the business may want to achieve. Managers strive to increase revenue and gain more profit, right? Eventually, even though sales react to a price change in the same way on average, i.e. the price elasticity has negative coefficients, the slope is significantly different in every single case.

The "impermeability of the future" problem

The problem is "impermeability of the future"

Demand reaction to price changes:

non-linear	**multifaceted**
asynchronous	**distorted by the other factors**

If we assume that revenue is now the key metric and multiply the price by the number of products, we may get three fundamentally different situations per every product.

In the case of irons, the maximum revenue is gained after the price is increased by 100 currency units. If the price continues to increase, the revenue would decrease. Reducing the price would have the same effect. That's how we've found the optimal price point.

Now, the second case. It seems to be similar to the first one. Still, if we'd multiply the change in the price by the difference in the projected number of items sold, we'd get the maximum revenue with the price reduced by 50 units. If the price is decreased, the revenue drops and vice versa. Here is the optimum; we can see it with the naked eye.

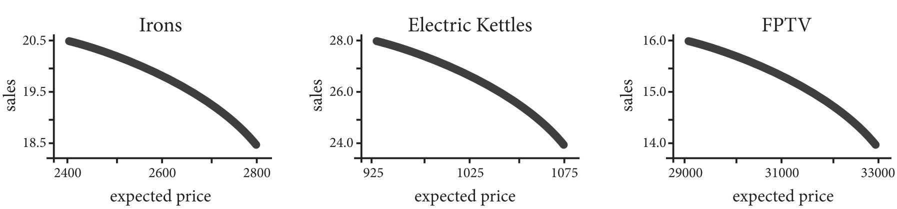
And the third case: TV sets. We multiply the number of items by the change in price and what we get is that the revenue drops in case of both price increase and decrease.

If the business reached the plateau stage, it would most likely have to deal with the law of large numbers. Especially if it sells the products of mass consumption. What it means is that changing any variable by two or three percent would bring a tangible effect on total revenue. The effect stems from the fact that large groups of buyers need such products.

Now, let's complicate our examples and get a little closer to real-life cases. That's when the complexity of price elasticities of demand comes into play.

With a linear reaction, we can imagine the proportionality of changes in prices and demand. In the non-linear response to a price change, the so-called price thresholds can make the demand go crazy.

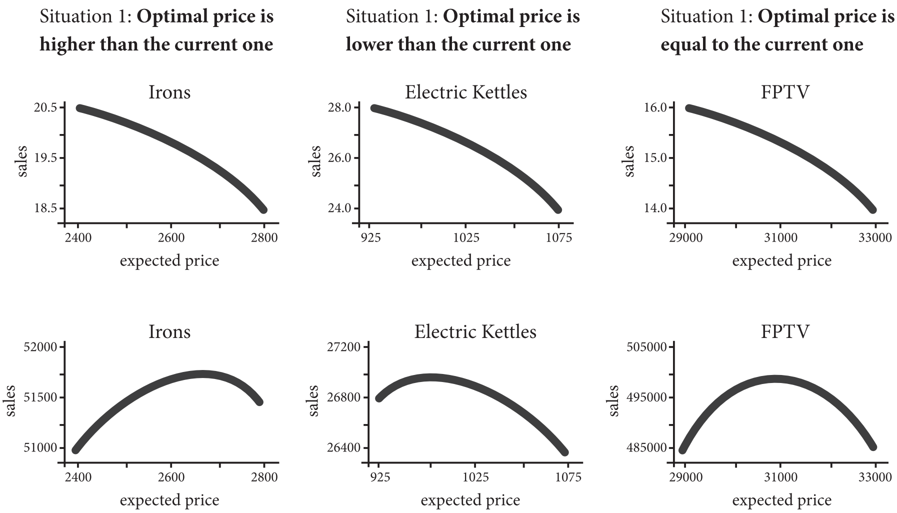
Linear reaction of demand



Reaching a threshold means that the demand begins to either increase sharply or fall drastically. But unfortunately, it's not that easy just to sit down and calculate the reaction of demand to price changes.

Firstly, the reaction of demand is non-linear. That means that, for example, if the price rises by 5%, sales can drop by 3%. Or when the price is increased by 20%, a 40% drop in sales might happen. There are no limits for the difference and that might become a problem for a business.

Nonlinear reaction to demand



Secondly, demand response to the price change is multifaceted. It includes the impact of the price indicated on the price tag; the effect of how the price tag works in the context of other prices; the influence of the products by which the buyer compares prices, etc.

So, the price itself is not a single factor that affects sales, but a whole set of factors.

Thirdly, the response of demand is asynchronous. It means that the new price cannot work immediately after it is displayed because of a so-called buying cycle. Imagine, it lasts three months for a particular product.

During the first week after the price is changed, it will be noticed by only one-tenth of the buyers. Then, another one-tenth of buyers will mark it in the next two weeks and so on. And it means that a price impact would change during the entire period of three months before it is stabilized.

And finally, the reaction is distorted by other non-pricing factors. It means that if two elements are changed at the same time (for example, a price is increased and an advertisement campaign is launched), they can neutralize the impact of each other.

For instance, advertising can lead to positive changes, while price increase can lead to negative ones.

One of the ways to gain more control is by understanding the concept of price elasticity and calculating products' own and cross elasticities properly.

The methodology of linear regression or how to calculate price elasticity of demand

Before speaking of the right methodology to calculating price elasticity of demand, let's look at one common mistake that many managers make when they have to evaluate a price elasticity of demand. If you search for a price elasticity formula on the Internet, you may find a basic formula that suggests finding price elasticity by dividing the change in quantity demanded by the change in price.

Price elasticity calculation mistake

$$\mathbf{PE} = \xcancel{\frac{\textbf{Change in Quantity Demanded}}{\textbf{Change in Price}}}$$

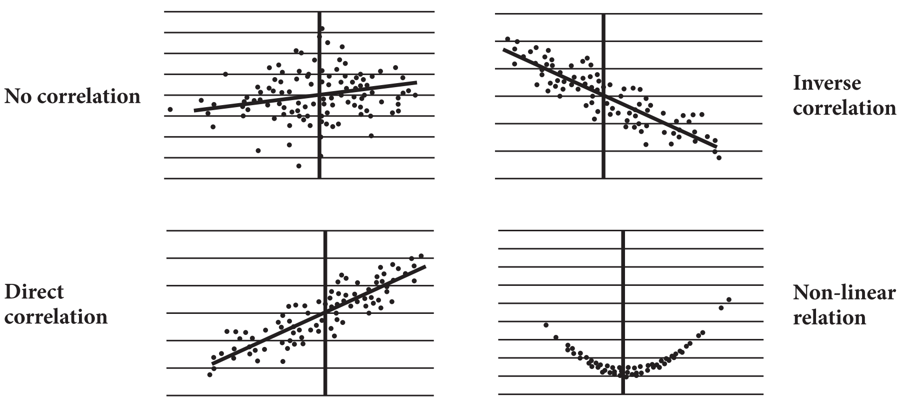
This formula might be good to explain and illustrate the general principle behind the price elasticity concept, but using it practically in real life can be misleading and even harmful to the business. The reason is that it does not take into account many additional factors and parameters that have to be considered while calculating price elasticity.

Hopefully, there are more reliable ways to calculate elasticity. The methodology of linear regression is one of those. The linear regression method is used to build a representation of how changes in an independent variable, e.g. prices, relate to changes in a dependent variable, e.g. items sold.

In order to calculate the price elasticities of demand using the method of linear regression, the business has to have records of at least several price changes and their sales figures for a particular period of time. Of course, the more historical data is available, the more accurate the representation and final results will be.

The image below shows examples of how the different types of correlations between a price change and sales might look after applying the linear regression method.

Regression based on historical data analysis



Linear regression is a rather affordable methodology as a regression graph can be built even in an Excel spreadsheet. However, the portfolio size may turn out to be a limitation for the method's manual use. Building a graph for a dozen products is not a problem. But for a portfolio with hundreds or thousands of SKUs, the human-centric manual calculations of price elasticity might become a significant challenge. If all these calculations fall on the shoulders of pricing managers, they could hardly find enough time to focus on strategic business tasks. This is where tech-driven price optimization comes in handy.

Demand-based price optimization: League A of Pricing

Businesses cannot effectively manage price elasticities on the portfolio level by relying on traditional pricing approaches. Maybe, except for the case when there are only a few SKUs offered in the assortment.

However, even in such a case, the manual calculations may turn out to be a rather risky approach because the roles of products in the assortment tend to change. Simply put, the product which had inelastic demand yesterday may today become remarkably vulnerable to any price changes because of the changing consumer behavior or new similar products introduced to the market. Even more, in their reaction to demand, the products are not self-sufficient. Each SKU not only has its own elasticity but there are also more or less explicit cross-dependencies with the demand for other SKUs in the portfolio.

The advanced technology powered by the latest AI and ML algorithms are capable of constantly recalculating billions of possible price combinations based on each product's own and cross-elasticities. This approach is used for demand-based price optimization.

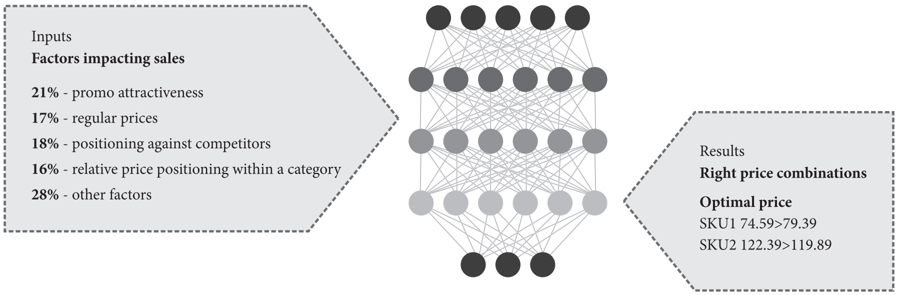
Advanced demand-based pricing engines are powered with neural networks measuring products' own price elasticity and cross-elasticities to ensure that goals on both the product and the category level are achieved.

Remember the linear regression method to calculate price elasticities? Now, imagine an engine capable of building such a regression for hundreds and thousands of products simultaneously with the results being recalculated right after new data is added or any factor impacting demand is changed.

Such algorithms can be applied to separate assortment groups, which allows parallelization and scalability.

The accuracy of every recommendation is achieved through context-dependent price elasticities and a high-performance solver capable of shovelling through billions of possible price combinations to find the right one.

Algorithmic pricing



The pricing solutions powered by the latest-generation neural network ensure the integrity of results with the price effect prediction accuracy of 90% and above.

The high accuracy of the result is secured while the algorithms recalculate and consider not only the elasticities of demand but also dozens of other pricing and non-pricing factors, e.g. weather, promo, competitors' prices, etc.

In contrast, a manager who sets the prices manually can consider no more than three different factors at once. That's why demand-based price optimization is the League A of Pricing.

Pricing new products and services based on substitutes

Substitute-based pricing works best when we are dealing with new products. This method is particularly useful during valuation of software and services. It is characterized by simplicity, a high degree of accuracy and low cost. This pricing method is illustrated by the following steps:

1. **Identification of the best substitutes for the product under consideration**. In the sphere of innovative services, certain tasks or activities are often performed manually or using less advanced technologies. For example, if a new product or technology allows for reduction of production costs, the alternative is to incur additional costs associated with inefficiencies.

2. **Valuation of identified substitutes.** If human labor is an alternative, the working hours of an expert can be included during pricing, and in the pursuit of reducing inefficiencies, the resultant costs should be subject to pricing.

3. **Determining the direction of pricing in relation to prices previously developed.** It should be objectively assessed whether a new service or product should be more expensive or cheaper than the most similar substitutes. The direction "up" (i.e. more expensive) should be applied when a new service (or a product) provides additional benefits which substitutes don't offer. The direction "down" (i.e. cheaper) often turns out to be beneficial in the case of new technologies that allow management to limit losses or optimize certain processes. Then the lower price justifies the use of the priced product i.e., if new technology reduces losses by 5%, it is reasonable to price a product or service below the reduced losses value, so the choice between innovation and the status quo would not be indifferent to customers.

4. **Inclusion of additional items related to the business environment.** After determining the price range, the surrounding business environ ment of the product should be studied. In some situations it would be better to move towards the lower limit of pricing, while in others towards the upper limit. To make the best decision, we should answer several key questions:

   - Can the competition find ways to copy our new products (or services) quickly? The quicker our potential competitors are able to achieve this, the more we should lean towards lower pricing, to create a profitability barrier.

   - How much time does the competition need to duplicate our product? The answer to this question will let us adjust the price development plan more accurately. The more time competition needs to introduce an alternative solution, the longer we can apply price skimming (i.e. maintain high prices in the early stages of a product's life cycle).

- How much is the target group of customers accustomed to existing solutions? Will potential customers relate favorably to an upcoming modification? The greater the attachment and the lower the propensity to change, the more we should lean towards the lower limit of pricing.

- What role will the new product play in our customers' value chain? The greater the significance in the value chain (e.g. new service can significantly increase the quality of the main elements in a client's portfolio), the higher we can set the price.

- What is the plan for product development? Will it be possible in the future to charge additional fees for extra features? If the product is to be improved in future and we expect to charge such additional fees, we can afford a slightly lower pricing now, in order to grow our customer base during the initial phase of the product's life cycle.

- What are the exit (resignation) costs of our product after purchase? Are potential customers aware of them? For example, if the new service consisted in the collection, storage and analysis of sensitive data, the costs of resignation could be theoretically very high. The higher the costs resulting from the resignation (after purchase), the lower we should set the price. Once the product is on the market we must adopt a strategy of dynamic expansion of the customer base and lower price can certainly facilitate this.

- What are the other circumstances? Due to the fact that any pricing method for new products takes place in different business conditions, we should take into account as many factors that might justify price moves within a fixed price range as much as possible. A good starting point is a long-term strategy coupled with setting the objectives which we want to achieve by placing the product on the market.

The best pricing method

The best method of setting and adjusting prices is one that takes into account all key assumptions of each of the three primary methods (i.e. cost-plus pricing, competition-based pricing and pricing based on value). It should be kept in mind that a universal, totally correct distribution of each method's weight (i.e., the degree of each method's impact on the final price) does not exist. It will always depend on the individual situation. To ensure optimal prices for every product (or in the case of an extensive portfolio, at least for each product category), the significance of the individual sources of price information should be adjusted.

It is very important to remember that pricing cannot be a one-off exercise. To improve the pricing policy, we must continually review our approach, eliminate and/or reduce the significance of some of the price-forming factors present in the pricing process. For example, after the introduction of an innovative product it would seem very reasonable to reduce the price-forming factor related to competition) We should also add and/or increase the relevance of other factors, which due to market changes are becoming more essential (e.g. increasing the component related to competition when more competitive enterprises begin to operate).

Reaching the proper method is closely related to the basic model, which takes into account all three ways of pricing. In a nutshell: our first step should be to determine the mark-up (cost-plus method), which will provide us with profitability. As a second step, we should compare its value with competitive offers to assess the chances of implementing the proposed price. Then, value-based pricing comes into consideration because in most cases it is a mistake to refer only to the price offered by competitors and skip all the additional issues affecting the value of a product or a service.

1.4 Do not give money away for any reason: introducing price ladders

by Maciej Kraus

Determination of optimum price is only the first step to success. This process is obviously something completely different from the enforcement and implementation of prices. For B2C that is most often reflected in negotiations with vendors and distributors. When determining price, we can make use of complex methodologies, market research and econometrics to arrive at the best solutions.

Afterwards, the responsibility of the seller is to sell a product for a certain price - and often that stage turns out to be much harder. You can even venture to say that in most cases, selling products at prices included in price list in the field of B2B sales is not complied with. Therefore, during the pricing process we should also take into account the effective price, namely, one that will be valid in real terms. Very often, too little attention is devoted to this area, resulting in an ineffective sale (i.e. one that could have been implemented at a higher price).

There are a few basic reasons why we don't achieve final prices at a satisfactory level (and thus lose profits):

1. **Negotiators' lack of conviction concerning the legitimacy of the target price.** This factor is mentioned first for a reason. A situation, in which a sales representative attempts to negotiate a price which he feels is

exorbitant, can be compared to an attempt to convince our friends to watch a movie that we had already watched - but didn't like! For this reason, it is always worth justifying proposed prices ("why does it cost so much?") and ensure that those responsible for its later negotiation are convinced that it is legitimate. If possible, negotiators themselves should participate in the process of setting prices, as this can reinforce their commitment and certainty as to the validity of arrangements.

2. **Inadequate incentive schemes for negotiators or lack thereof.** If a negotiator doesn't achieve additional benefits from well-conducted ne gotiations (i.e. from obtaining favorable prices for the company), he will quite possibly no longer care about the pursuit of optimal conditions for the transaction. Today, such situations do not happen often as sales managers realize how important motivating factors are (both fi nancial and non-financial) for sales representatives' productivity. A much more common problem that affects the quality of negotiated prices is an ineffective incentive scheme. We should keep in mind that remuneration is of greatest importance for sales department personnel. If this is determined on the basis of the incentive scheme, negotiators will first pursue assignments which generate attractive earnings with little effort (i.e. the strategy of reaching for low-hanging fruit).

Example

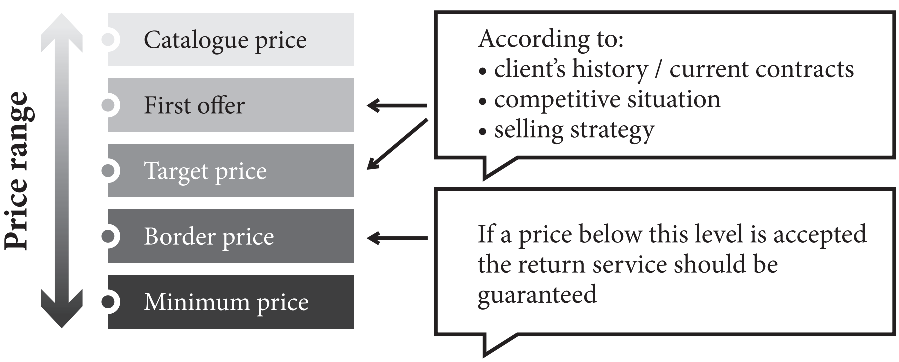
Negotiator's remuneration is calculated primarily on the basis of obtained sales volume and to a lesser extent on total generated profit. So will a negotiator seek to set the highest prices possible (to ensure high profits) during talks with a customer or instead maximize the volume of the order (which at a low selling price doesn't always provide the desired level of profit)?

Of course, in some business circumstances or during implementation of a long-term strategy, the situations in which the volume of sales is more important than the profit generated might actually be desirable. More information about the structure of incentive schemes can be found in the chapter Motivate your sales department properly.

3. **The complexity of negotiated contracts (orders).** If a single transaction concerns a number of different products and services, many of them often fail to reach the anticipated prices. Before negotiations of this sort, it is good to identify the priorities of the company (i.e., which products are most profitable, which are most important for us and which are less sig nificant). Then, we can judge when we can afford to make a compromise and when not. We can also try to predict what might be essential for the company with which we are about to contract (e.g., which components would the contractor rather not give up? Are there any components of the contract which play a very important role for the other party and which can be implemented at a low cost?).

Apparently, setting an optimum price is just the beginning. We should also take care of the effective price, namely, the one that becomes valid "at the end of the day". The first step to a more structured, effective price management is the creation of a so-called "price ladder" for each product (in an ideal situation individually for each of the negotiated sales) in order to limit possible price movements and clearly define priorities.

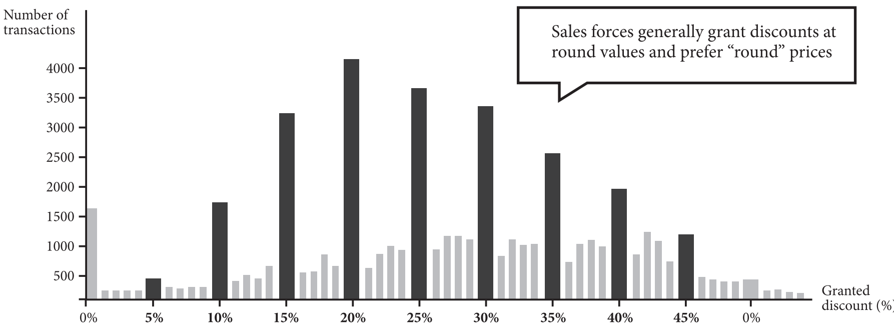
Sample price ladder - setting priorities and border points in price negotiations



It is worth using tools such as the price ladder for many reasons – for instance, in order to avoid the frequently encountered phenomenon of the so-called attraction to "round" prices (or value discounts). Observations show that rounding off discount values for the benefit of the buyer is a frequent trend (regardless of how it is expressed: percentage or fixed amount), which in each case results in a significant drop in profits for the company.

The following example shows a study carried out through a consultancy project, which was aimed at increasing sales effectiveness. The graph displays how often discounts at a given level were granted. There is a clear tendency to round off discounts by multiples of 5%. This situation is often the consequence of a lack of specific rules for discounting (lack of a price ladder) or a defectively constructed incentive scheme (traders do not care about every percentage point of the margin - they don't fight for another good performance, because it doesn't entail additional remuneration).

Reactions of prices in two companies indexing each other's prices below 1



Example

During trade negotiations one of ABC's customers is inquiring about the possibility of obtaining a discount of 6%. The recipient buys goods from the assortment group, for which margins of 16% have been established internally.

Granting discounts for "free" is the main reason behind loss of profits in enterprises. A good negotiator will try to get something in return for his concessions. Suppose that in the case of a transaction with ABC's customer we simply want to maintain our planned level of profit. As a counterproposal we suggest an increased order (to compensate for the reduced profit).

After calculations it appears that in order to maintain the output level of profit for this transaction, the buyer would have to agree to an order 60% higher than planned!

Discounts, even seemingly small ones, greatly affect the profitability of each sale. Not everyone is aware of this, because to some extent discounts hide their direct links with income from the seller. This is because they are calculated on the selling price and not on the profit from the sale. The seller often falls into the mental trap of "well the markup is 20%, so a 6% discount is bearable." Without accurate calculations such a discount may seem acceptable, but it is worth noting that when we give a discount of 6% at a mark-up of 20%, we reduce the margin on sales by more than one-third!

The impact of discounts on sales profitability - what should be the negotiator's counter-proposal?

We offer a discount at...

If the profit margin at the current level is	2%	4%	6%	8%	10%	12%	14%	16%	18%	20%
2%										
4%	100%									
6%	50%	200%								
8%	33%	100%	300%							
10%	25%	67%	150%	400%						
12%	20%	50%	100%	200%	500%					
14%	17%	40%	75%	133%	250%	600%				
16%	14%	33%	60%	100%	167%	300%	700%			
18%	13%	29%	50%	80%	125%	200%	350%	800%		
20%	11%	25%	43%	67%	100%	150%	233%	400%	900%	

If our margin is at 10% and the discount offered - 6%, then we must sell 150% more to achieve the same profit

The table above is an illustration of simple mathematical calculations. The given equation allows us to calculate how much the percent of sales would have to increase to achieve the same profit, if the profit margin is x and the discount is the value of y:

$$\textit{profit} = Q \times (P - V) - F$$

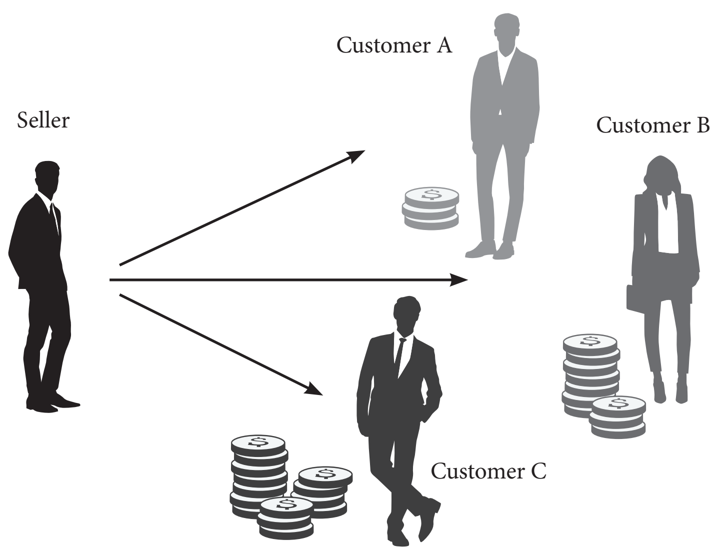
y – discount (w %)
x – profit margin (w %

1.5 Manage portfolio and set prices based on your customer profile

by Maciej Kraus

In an ideal situation allowing the company to maximize profit, it sells its products and services to each customer at the maximum price that they are willing to pay. Of course, we assume here that we trade only with customers who guarantee profits.

Ideal pricing - to maximize profit by differentiating the prices for each customer



Unfortunately, in actual practice such a situation is not always possible. But you can take action aimed at getting as close as possible to the optimum. The most effective way to achieve this goal turns out to be customer segmentation.

Segmentation consists of dividing a customer base into separate groups. They will vary in terms of characteristics according to how the segmentation was conducted. For example, if segmentation is conducted on the basis of preferences, regarding the color of a product, then color constitutes the difference between the segments.

Sample result of customer segmentation carried out on the basis of a given feature

Segment	1.	2.	3.	4.
% of total	13%	28%	34%	25%
Preferred colors	Only light shades of blue and green	Only dark, expressive colors: red, black, navy, purple	Warm, friendly colors: yellow, orange, brown	Color of a product is of little importance/ irrelevant

From the point of view of price policy, each customer segmentation should be supplemented with an element of price sensitivity (or propensity to pay). This is important because you can determine which segment will spend more on a product and which will spend less. Segmentation carried out in this way will draw many valuable conclusions concerning the product portfolio.

Sample result of customer segmentation carried out on the basis of a given feature and willingness to pay[11]

Segment	1.	2.	3.	4.
% of total	13%	28%	34%	25%
Preferred colors	Only light shades of blue and green	Only dark, expressive colors: red, black, navy, purple	Warm, friendly colors: yellow, orange, brown	Color of a product is of little importance/ irrelevant
Propensity to pay	Moderately high (up to 20 PLN)	Very high (even up to 40 PLN)	Average (approx. 10-15 PLN)	Very low - segment looking for the cheapest offer

[11] For the purposes of the exercise it can be assumed that one copy of a product costs about 10 PLN regardless of colour.

Segmentation conducted this way greatly facilitates making a decision on price differentiation i.e., products of distinct colors can be sold at much higher prices than others. You can also afford a small price increase of copies in shades of blue and green. Other colors will be selected by people who are looking for the cheapest offer.

What is important is that such segmentation also give us clues as to which products are best included in promotions or price reductions. Of course, shades not preferred by groups willing to pay more should be selected. A person who attaches great importance to a specific color (e.g. to red), will make the purchase whether an item will be at a promotional price or not. So from the point of view of sales promotion, it is best to lower the price of the products in colors which play an important role for customers with high price sensitivity (and/or low propensity to pay).

Selecting criteria for customer segmentation

The key to segmentation, which will provide valuable knowledge that can be utilized in the optimization of both portfolio and prices, is an appropriate selection of parameters. Currently, demographic characteristics (in the case of B2C businesses) or information about the industry/client's sector are considered the most common parameters for segmentation. This approach is correct, although segmentation relating to consumer preferences (B2C) or the needs of the recipient (B2B) usually provides more detailed data about clients and allows us to make better decisions. Moreover, this approach to segmentation limits potential mistakes.

Example

Segmentation based on demographic characteristics often comes in handy, however, it does not provide us with complete knowledge about the specific needs of individual customers. By drawing conclusions from such segmentation, we run the risk of making decisions which might be erroneous. This results from the fact that consumers belonging to a homogeneous demographic segment will not always be characterized by homogeneous product needs or preferences.

Segmentation based on demographic characteristics can lead to errors

- **Born in 1948**
- **raised in Great Britain**
- **married**
- **two children**
- **rich and famous**
- **lives in a palace**

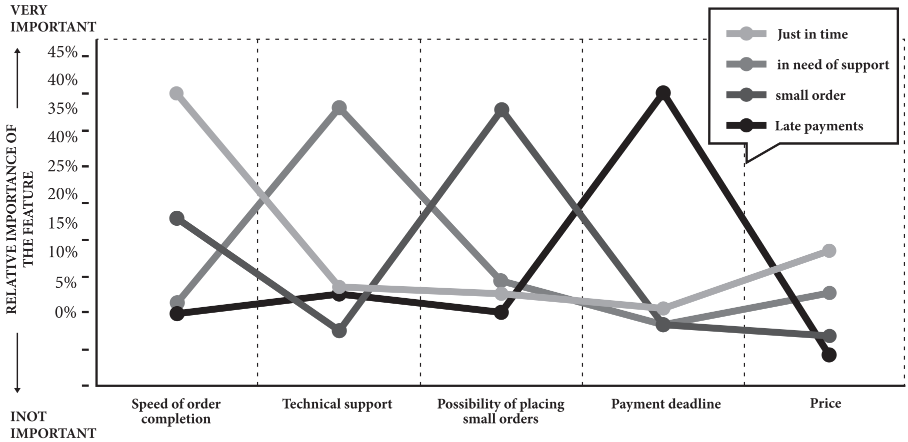
Example of customer segmentation in B2C business

We should begin segmentation by defining criteria. To differentiate the segments according to customer needs, we should consider what the specific elements of the value of our product or services are, and which needs our offer fulfills. We should remember that, thanks to segmentation, we try to isolate groups which differ from one another, so there is no need to be limited only to the main need (because it will be the same for each of our customers) which is met by the product's core[12]. Functions of segmentation criteria perform well by individual qualities of cooperation (and their hierarchy of importance), which are encompassed by the augmented product - for example:

- The possibility of placing custom orders or those with a short completion time;
- The timeliness and completion of delivery (suppliers often have problem with this, so it can be a source of price premiums in many markets!);
- Effective consultancy and professional customer service;
- Availability of goods (especially in markets characterized by seasonality);
- Long-term good relations established by the commercial department;
- Favorable terms of payment and required securities;
- Diverse range of products (if clients do not have to place orders with many different suppliers, it is very likely to obtain a price premium from them).

[12] The concept of product value levels is presented in the chapter Sell value, not the product.

An example of customer segmentation carried out according to the importance of individual elements of cooperation: four segments were distinguished significantly different in terms of needs



The example shown in the chart above illustrates segmentation for which selected criterion was the prioritization of the various features of the company's offerings. A single series in the chart represents one segment and the significance of certain factors. In this exercise, four separate groups were distinguished, each of them significantly different by priority of individual characteristics. The criteria that proved to be the main distinguishing features of individual segments are as follows:

- The speed of the order completion;
- Technical support;
- The possibility of placing small orders;
- Late payments;
- Price (the importance of price or price sensitivity should always be taken into account as an element describing the customer segment).

The knowledge that comes from this segmentation, despite small inter-segment differences in the significance of price, can lead to development (optimization) of a company's offer. For example:

- Introduction of an additional paid option to place an order which is to be completed on the next working day;
- Introduction of an additional paid support channel available in addition to standard working hours;
- Lowering the logistics minimum for select customers.

1.6 Pricing data: the secret weapon to build a competitive advantage

by Maciej Kraus and Łukasz Pawlaczyk

Setting Price in Marketing

Any company involved in the exchange of goods works each day on the valuation of the products they offer - regardless of the final shape of the offered services or goods - and in the end, the customer is informed of their product prices.

Due to its informative nature, the price as part of a trade has a function similar to that of other marketing activities undertaken by a business.[13] However, it differs significantly from those by generating income, which in the case of the other components of the marketing mix doesn't happen directly.[14] Other factors can only indirectly influence the outcome of a sale).

Pricing strategy should be closely linked to the principal elements of marketing employed by a business, which means that it is desirable to maintain the relationship of pricing to:

- Product;
- Brand;
- Message;
- Distribution.

[13] L. Garbarski, I. Rutkowski, W. Wrzosek, Marketing, Polskie Wydawnictwo Ekonomiczne, Warsaw 2006, p. 350.

[14] P. Kotler, Marketing Management: Analysis, Planning, Implementation, and Control, editor of the Polish edition M. Belka, Felberg, Warsaw 1999, p. 348.

Relationship of price to the components of marketing activities

Product price primarily acts as a source of income and takes the form of compensation for expenses incurred both for manufacturing an item and its ongoing maintenance in the market.

All businesses aim at increasing the size of the difference between the cost of bringing a product to market and its final price[15]. So the determination of appropriate price levels is one of the key tasks facing company management.

Establishing prices requires a thorough analysis of information - both information which an organization has readily available, as well as information which must be obtained in a commercial manner.

In addition to having data and competencies to determine prices appropriately, it is extremely important to also obtain knowledge about the activities of competitors, along with the opinion of end-users of the product or service.

Making appropriate use of information gathered within an organization and linking this information to current external market information (which knowledge results from studying the peculiar characteristics of consumers and competitors) makes working on product pricing more measurable. It also aids us by taking into account important variables that can affect the reception of our offers.

The next section of this chapter focuses on market research and its practical application at work concerning the price of products.

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[15] L. Garbarski, I. Rutkowski, W. Wrzosek, op. cit., p. 352

Market research methods used in product pricing

In order to obtain the information necessary to determining product prices, it may be necessary to conduct market research. Before we get into details of research work, let's describe the research process itself and characterize different types of market research. The research process begins when we recognize the need to obtain specific knowledge, via a series of product pricing questions.

This moment of recognition is considered crucial to the whole pricing process, because it determines all subsequent steps. This is why it is worth first considering just what we expect to learn. Once obtained, which information will be the most important in making correct business decisions.

Once we see the need to conduct market research and identify what specific information we are seeking. We can move on to the selection of an appropriate research method and adapt it to our company's expectations.

For studies regarding price range, both quantitative and qualitative methods should be considered primarily, in conjunction with price list methods, which are essential in making key business decisions. The ability to subject prices to mathematical analysis and to their market properties make quantitative methods and price lists the most often used methods of research into product pricing.

Quantitative methods are used when the questions relate to identifying the scale of the phenomenon of interest to us. Quantitative methods provide an excellent source of information about:

- The price image of a product, brand or retail chain the optimal price of the product;
- The price level being considered in the mind of the consumer.

Qualitative methods are often used during an analysis of the price issue. They allow for understanding the consumer and provide important information on:

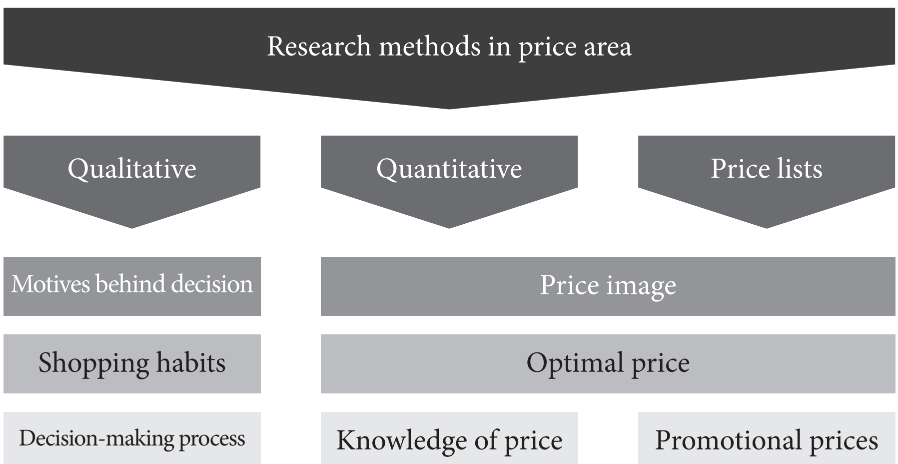
- The motives behind individual consumer decisions habits related to prices;
- The decision-making process, in which price plays a key role.

Price lists differ from the methods described above in that the interviewer examines the disclosed price of the product, not the consumer. This method should be regarded as a valuable complement to knowledge already obtained from customers, and is key to:

- Analyzing a company's price image;
- Determining the optimal level of the price of a product or service;
- Determining the promotional price of products.

There are a large number of market research companies available in the market to which you can submit a request for research assistance. These companies can provide excellent help to sellers in the research process.

Research methods in price area and sample price research scope



Examples of how the application of research methods helps determine pricing

Selection of a research method depends on what questions we expect the answer to. Let us consider for a moment the doubts that may actually appear while working on price determination. Regardless of whether we deal with prices offered at a point of retail sale, preparing the price table for a distributor of our products or introducing a new product under the brand, the most frequently asked questions include those listed below:

1. How do our trade conditions compare with competitors?
2. How do prices offered in our retail store relate to prices offered by competitors?
3. What attribute should best be emphasized in a product's price communication?

Think about the selection of an appropriate research method for question No. 1, which is "How do our trade conditions compare with competitors?". Suppose the focus of our work on pricing policy is to establish the most favorable discount and payment deadline for hand and power tools, delivered to retail outlets operating in what is considered to be the traditional market.

Accordingly, we should definitely compare our business to those of competitors, draw conclusions and on this basis optimize the offer. In such cases (if we only have contact data of the retail outlets with which we want to trade), quantitative studies conducted by telephone interviews are ideal.

When creating an interview questionnaire, we should take into account questions regarding customer satisfaction with the levels of discount and payment deadlines offered both by us and by competing companies.

The anonymity of respondents is crucial, especially where the respondents are the decision-makers (people responsible for the selection of suppliers and who have good knowledge of commercial terms). An exemplary questionnaire survey is presented below.

RESEARCH ON COMMERCIAL TERMS

Good morning, my name is .... and I have been commissioned by one of the manufacturers of hand and power tools to conduct a survey among suppliers of such tools to the public regarding the level of satisfaction experienced in dealing with retail outlets.

We would appreciate your opinion in answering several questions in our short survey.

Your honest feedback will help manufacturers better understand your product preferences and allow them to fulfill your needs and expectations to a greater degree. This survey is going to take only 3 minutes.

All of your responses will remain anonymous and will be presented only in the form of aggregated statistics.

1. *Tell me, please - are you responsible for the selection of tool suppliers in this shop?*
    a) Yes - go to question # 2
    b) No - end interview

2. *I will now read the names of companies involved in supplying retail outlets with hand and power tools . Tell me, please, if in the last three months You have done business with the following suppliers:*
    - *supplier 1?*
    - *supplier 2?*
    - *supplier 3?*

3. *Using a scale of 1 to 6, in which 1 expresses strong dissatisfaction, while 6 expresses great satisfaction, please indicate your level of satisfaction with the level of discounts granted by these sellers. If You do not do business with any of these sellers or refuse to provide an answer, please tick "Don't know / refused".*

4. *Using the same scale of 1 to 6, in which 1 expresses strong dissatisfaction, while 6 expresses great satisfaction, please indicate your level of satisfaction with the payment deadlines offered by each seller. If You do not do business with any of these sellers or refuse to provide an answer, please tick "Don't know /refused".*

These were all the questions, thank you.

After collecting the results, two factors should be compared: the average level of satisfaction with the level of discounts granted and with proposed payment deadlines. These should then be compared with the actual level of the commercial terms provided to business partners.

Comparison of the results on satisfaction with the level of discounts and proposed payment deadline and the actual level of commercial terms

Average rating on the 1-6 scale	Average level of discounts offered (in %)	Average payment deadline (in workdays)
4,56	19%	26

From this then we know:

- The level of satisfaction with the terms and conditions offered by our **competitors, and;**
- The level of satisfaction with the commercial terms offered **by our company;**
- And the actual level of commercial terms offered **by us.**

With this information, we can easily use the ratio to calculate the hypothetical level of commercial terms offered by our competitors.

Estimated level of discount and payment deadline

Area	Our company	Competitor 1	Competitor 2	Competitor 3
Average level of discounts granted (in %)	19	16	22	21
Average payment deadline (in workdays)	26	31	24	22

The answer to the second question ("How do the prices offered in my retail store relate to prices offered by competitors?") can be obtained through the creation of a price table. This method allows you to control the level of prices in relation to your main competitors and also supports the decision-making process (especially in short-term price movements).

List price analysis is not considered to be the most difficult of research projects - it can be done quite simply and independently (e.g. engaging your own sales force). Of course, you can also employ a research agency, which can be useful - especially while performing work on numerous projects.

For example, suppose that our area of particular interest is ketchup-type sauces and that we manage the pricing of this category of products in supermarkets.

To collect reliable data which will help us answer the key market research question, we should not forget three important preparatory elements prior to creating a price list. These are:

- Establish a list of competitive retailers;
- Prepare a table of products from this category offered at the point of sale (POS);
- Assign products sold at points of sale to their counterparts available in competing commercial retail chains.

Three elements of preparations for creating a price list

No	Product	Retail chain No. 1	Retail chain No. 2	Retail chain No. 3
		Product	Product	Product
1	Brand No. 1 500ml, Plastic bottle EAN code	**1 to 1** Brand No. 1 500ml, Plastic bottle EAN code	**1 to 1** Brand No. 1 500ml, Plastic bottle EAN code	**Substitute** Brand No. 4 500ml, Plastic bottle EAN code
2	Brand No. 2 250ml, Plastic bottle EAN code	**1 to 1** Brand No. 2 250ml, Plastic bottle EAN code	**1 to 1** Brand No. 2 250ml, Plastic bottle EAN code	**1 to 1** Brand No. 2 250ml, Plastic bottle EAN code
3	Brand No. 3 450ml, Plastic bottle EAN code	**Substitute** Brand No. 5 450ml, Plastic bottle EAN code	**1 to 1** Brand No. 3 450ml, Plastic bottle EAN code	**1 to 1** Brand No. 3 450ml, Plastic bottle EAN code

After preparing a list of products and their counterparts in competing stores you can move on to the data collection step. Remember the following five principles:

1. Choose competitive shops located close to your points of sale;

2. Analyze prices in competitive shops which are most similar to your points of sale, i.e. which provide a similar presentation of goods, and also which cater to a generally similar level of consumers;

3. Visit each of the competitors and write down prices in at least five shops;

4. Collect data at fixed, specific hours, because prices of products can change during the day, even several times;

5. If you don't have the EAN codes of products offered by competitive stores, write down prices from the shelf.

After collecting the data, you can move on to a simple analysis showing the ratio of prices of products offered at our points of sale to compare the prices set by the competition. The whole can be analyzed in relation to price indices, which are the result of dividing our prices by the prices of competitors.

A value of 100% indicates the same level of prices, a value below 100% indicates that our offer is cheaper and a result above 100% shows higher prices in our stores.

Price list result analysis

No	My price	Retail chain No.1	INDEX = MY PRICE / CHAIN NO. 1	Retail chain No.2	INDEX = MY PRICE / CHAIN NO. 2	Retail chain No.3	INDEX = MY PRICE / CHAIN NO. 3
		Price	INDEX	Price	INDEX	Price	INDEX
1.	6.99 zł	7.11 zł	98.31 %	7.05 zł	99.15 %	6.99 zł	100.00 %
2.	4.99 zł	4.98 zł	100.20 %	5.05 zł	98.81 %	4.79 zł	104.18 %
3.	5.99 zł	5.99 zł	100.00 %	6.05 zł	99.01 %	6.01 zł	99.67 %

The last question which we will try to answer through research methods is question No. 3: "What attribute should we best emphasize for product price communication to consumers?".

Price in marketing communication is crucial to customers. And of special importance are the words or phrases (relating to price) which we use, as well as what message will stay with the consumer while choosing a particular brand or product.

Suppose that we are responsible for a line of deodorants and the main subject of this discussion is a 150ml spray deodorant for men, competing in the market with several products that have similar features.

The product is positioned in the middle of the market in terms of price, and our task is to work on its price image so as to support common universal attributes used in communication by competitors. We should therefore develop marketing phrases related to prices that will distinguish our product from others, yet remain consistent with its perception by consumers.

Taking into account both the research questions and current market context, a qualitative market study involving focus group interviews will allow us to understand how the public perceives the price of our product. This seems an ideal choice. Given its complexity it is best to outsource such a study to specialized research agencies. Therefore, when you request such an inquiry, note the following should be done:

- Present the objectives of the study and its market context to the research company;

- Ask for an analysis of consumers of our products and competing products;

- Differentiate the cities in which the study will be carried out;

- Guarantee the delivery of not only our products, but also competitor products. (This will help respondents create image "attributes" relating to the price of products);

- Develop branding statements from the product pricing department and ask the researchers to verify that branding for effectiveness while testing focus groups.

It is equally important to recognize the tools developed by the research agency, paying attention primarily to the discussion scenario, used by the person conducting the interviews with clients.

Market research companies can provide us with an opportunity to actually observe clients during an interview. The ordering party is placed in a special room separated from the interview participants by a one-way mirror. Watching clients' reactions while talking about the product or its price, can lead to a much better understanding of the context of price image.

A study organized this way should certainly provide valuable information to help support the marketing department in the creation of favorable price "attributes".

1.7 How to manage your price image in a sustainable way

by Maciej Kraus, Monika Chodowicz, and Grzegorz Leśko

When setting appropriate prices it may not be adequate to state that it is an efficient pricing policy. Communicating prices and price image at the point of sale are also vitally important. There are situations in the market in which neglecting these important considerations (even when relatively attractive prices are offered) can result in consumers viewing the prices to be too expensive.

On the other hand, with proper communication and skilful use of image-related practices we can successfully maintain prices at an average level and be recognized by customers as an attractively priced supplier. Where does this phenomenon of price perception come from? Consumers have limited access to information about prices in the shops. They are unable to check, let alone remember the price of every product in every store in town. Therefore, their opinion of individual networks is based on fragmentary information, emotions and messages aimed at them (consciously or unconsciously) by the people managing the point of sale, rather than on sound knowledge.

According to the price basket from the dlahandlu.pl website, the cheapest network in Warsaw in November 2014 was Auchan, and in the other top five were: Kaufland, Biedronka, Carrefour and Tesco. The bottom of the list included the most expensive networks: Freshmarket, Lewiatan and Carrefour Express. Is their price image convergent with the above data? As shown by observations of the market and numerous studies, actual and perceived level of prices can differ significantly from one another.

What influences price perception?

There are numerous factors that determine the public's "price perception" of a company. To some extent, each of them can affect how a shop is viewed, fairly or unfairly, in the minds of customers (i.e., cheap or expensive). Among the main factors influencing a shop's price perception by consumers we can distinguish:

1. The actual level of prices, i.e. precise of products or services. Most often, this level is determined by comparison of the price of a basic "basket of goods" (although its contents and size can often vary due to the many different agencies that publish information about prices). It is worth noting that an average consumer has limited ability to compare costs. Therefore, special attention should be paid to branding products which are generally so-called "necessities", bought frequently, with high pricing flexibility. Good indicators of price comparisons may be, for instance, butter or meat, as these are products whose prices one can easily remember and compare in each of several different stores. In the context of shaping the actual price level we could offer some cheaper products - such as our own generic brand. This will respond to the needs of more price-sensitive customers and confirm others' belief that the store offers products at great prices.

2. Value for money ratio - where value is subjectively evaluated by customers. In this area, fresh products have a major impact on price perception in grocery stores (vegetables, fruit, meat and bread). The quality of these products may vary depending on the store, which means that they may constitute a kind of litmus test showing value for money and also be a component that creates added value for the customer.

3. Attractiveness of promotion - promotions appreciated not only by a product's frequency of appearance, but also for displaying reductions in price.

4. Fairness in setting prices and communicating them to consumers - for one example, the price on the shelf must always match the price on the receipt, and any information about pricing must be clear. The client shouldn't be required to perform mathematical operations on price announcements, as they can lead to misunderstanding or cause

uncertainty. Such care is a good example of fairness. Unclear pricing communication can be often seen in the case of the "3 for 2" promotions. The simplicity of such price conversions must be ensured for many reasons: i.e., to not call into question the veracity of the promotion, to not make customers anxious that they might overpay and to avoid the worse case of all: when an unclear communication or the complexity of a calculation can make a customer feel cheated.

5. Price transparency - the height at which a product is presented (on display or on a shelf), the easier it is for a customer to determine a price for a product. Printing prices in large font (in retail) and being consistent in the positioning of products at specific prices at a certain height (i.e., the cheapest on the bottom shelves, and the most expensive on the top shelves) is particularly important for achieving high transparency. In the case of B2B markets the transparency of prices is determined by the complexity of the payment model (the smaller the number of additional fees and factors affecting the final price, the higher the transparency).

6. Price comparability - the ease of comparing the prices of different products in a shop will affect price perceptions.

7. Transparency of pricing strategy - the clarity and consistency of messages communicated to the shop can also affect product price perception.

8. Assortment - the breadth and depth of a product's presence in a shop will affect price perception.

9. The decor - can give an impression that a store sells at inexpensive prices (e.g. by selling from bulk containers, pallets, etc.).

How to build the price image of retail outlets?

Creation of a desired price perception at the point of sale should proceed according to six basic steps:

1. **Identification of key factors influencing price perception at the point of sale.** We should start by identifying which factors affect a particular shop (or group of shops), and specify the importance of each.

2. **Competitive benchmark.** After identifying the factors affecting the price image at the point of sale we should also determine how we are perceived in relation to the competition in terms of these identified factors (i.e. in what respects we are better or worse than the competition).

3. **Determining the image constructed by prices:** This next step is to incorporate the perception of our product prices into the everyday habits and purchasing decisions of our customers. Based on an analysis of receipt data we can determine how often products from each category are bought and what the average basket value is. This allows for determination of the preferred type of shop and what the main purchase goals of its customers are. Such knowledge is essential to define the role of individual product groups. Certain product categories are designed to attract customers to a specific store, which usually includes stores selling the most frequently purchased items whose prices customers generally remember. Other product categories are designed to generate sales income (products rarely bought, usually those associated with a medium or large one-off expense). Lastly some product categories are designed to build profit margin (usually rarely purchased products whose price customers do not remember, i.e., goods from the premium shelf, for instance).

4. **Implementation of changes in pricing policy and its communication of such changes to customers.** Information obtained through analysis should be incorporated into pricing policy and the company's method of communication in order to build a favorable image in the eyes of customers.

5. **Construction of the rules of procedure for different categories of products in terms of their impact on a consumer's perceived level of prices.** Depending on the role of a pricing category (i.e., increasing margins, turnover or the number of customers) it is necessary to create a set of operational activities and principles for category management, allowing us to maintain the desired change in the price perception for a longer period.

6. **Monitoring the effectiveness of actions undertaken.** The most important step is continuous monitoring of the effectiveness of actions taken - for example, by regular consumer surveys, so that we will be able to determine the changes in the price perception index.

While conducting branding activities it is always best practice to be sure that consumers are kept aware of the fact that we are constantly catering to them! Appropriate marketing communication may help supplement our actions. For example: a popular slogan used by Castorama for a long time was ”we won't let anyone beat our prices”. Another by Biedronka was “Everyday low prices and high discounts”. This type of simple straightforward assurance strengthens the network's image in our customers' eyes and reinforces their belief that they have made the right choice.

Therefore, if we want our pricing to be seen as inexpensive, we should determine which factors affect its perception most and how it is assessed in relation to the competition. The portfolio should also be analyzed to understand the functions of each product and then choose the ones that will build the price image of our company. These actions should be supported operationally, for instance by communicating our low regular prices often (particularly branding products), our attractive discounts, and by having our own brand or other products on a low price shelf. What is important is the way customers perceive us in comparison to our competitors. This should be periodically monitored and we should keep track as to whether the introduced changes are well received. This is highly advisable, because the price perception of the company translates into its success.

1.8. Creativity is the key or how to present your services to customers

by Maciej Kraus and Maciej Kroenke

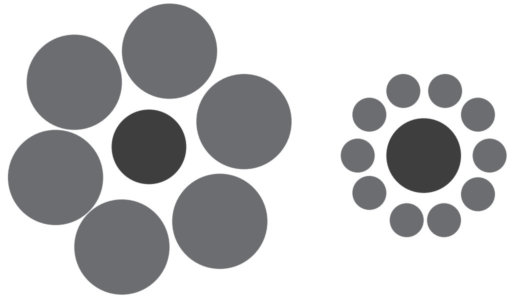
Studies on the decision-making process show that purchase decisions are influenced by many cognitive errors consisting mostly of a misperception of actual facts. Such incorrect assessments made by customers stem mainly from time pressure or the complexity of an offer. That's why the conclusions they draw from our actions are often irrational (though they usually claim otherwise) or perhaps deliberately intended.

Let's think about this: by creating an offer wholly appropriate to their needs, can we consciously influence a customer's perception of our company? Experience shows that it is not only feasible, but more importantly, will give tangible results.

Context is crucial

Would you say Tim Robbins is: 6'5" and Kevin Hart is 5'2"? No! Why? Because you've never seen them standing next to each other. This is the effect of contrast. We often evaluate things on the basis of comparisons, i.e., our perception of one thing against the other. The Ebbinghaus illusion in the figure below is a great example of this. In this example, depending on whether the geometric shape is surrounded by either larger or smaller figures of the same shape, our perception of its size changes significantly.

Which of the center circles seems to be bigger? What can this tell us about price perception?



This cognitive error is often used by real estate brokers. During the initial stage of presenting offers to buyers, an agent shows one or two houses that are not exceptional but are quite expensive. Finally, he shows them the house which he really wants to sell and which looks better than the previous ones in terms of both quality and price. For the consumer the choice will be obvious, then the agent quickly finalizes the transaction thanks to his self-proclaimed cleverness. The same goes for the selection of goods from our product assortment, i.e., we place on the shelves a variety of goods belonging to the same category. Included among the expensive products, the one that is cheaper will seem to be just that - cheap.

Therefore, by contrast, more expensive products from the same category should be placed on the same shelf. This will ensure that the product to which we want to draw the attention of consumers, will then seem cheaper to them.

Magic of ownership

How often do we unconsciously overestimate the value of a thing just because it belongs to us? When we sell a car, we first estimate its value and quote a price that we think is appropriate. Meanwhile, you may find that a potential purchaser of the car valued it much lower. This is an effect of possession, i.e., we value things much higher when they belong to us. This effect is also cleverly used in offers of "take it for a trial period, and then either return it or pay". The customer receives a product, uses it and perceives it as increasingly more valuable because it's "theirs". That's what ultimately makes a customer keep the item and pay the price expected by the manufacturer. Moreover, the customer is often willing to pay more than they would have if they hadn't had the chance to try it first. This same effect also applies to all kinds of tests or trial periods. If we get accustomed to a product, and work out its capabilities by testing it, we are more likely not only to buy it, but even buy it at a higher price.

The same applies to the principle of guaranteed satisfaction - i.e., buy it and if you are not 100% satisfied, return the product for a full refund. The customer becomes the "owner" of a product, and because everyone values their own choices, returns almost never happen. The more the buyer can feel they are the owner, the more they are prone to pay for the product. Additionally, this approach gives the customer a sense of security that they can always return their purchase if there is something they aren't satisfied about - although in practice this option is rarely exercised.

Concentration of attention

We naturally strive to make decisions as quickly as possible, which is why we try to simplify our choices at every step. When comparing options, we usually focus on what is the most important element, such as the price per minute of a phone call or a bank's deposit interest rate, while ignoring any associated fees, surcharges, etc. This is due to the effect of concentration which consists in paying attention to one aspect of an offer (generally the most obvious one), and ignoring the rest.

A classic example of the application of consumer concentration is the policy of "opinion-forming" products in an assortment of products, namely those major products which lead a consumer to create an overall favorable opinion about an entire offer. They are generally easily comparable and are often found in the standard "shopping basket" used in comparative sales. The price of such products must, of course, be very attractive and easily remembered by consumers.

Other elements of an offer are not as important to consumers, however the seller's real profit, obtained through margin, is based on them. Studies confirm that on average we are able to recall from memory the prices of just a few products, even immediately after a visit to the supermarket. For this very reason, advertising brochures compete with each other every week trying to offer a similar assortment of goods, including their opinion-forming products, in hopes of ending up in the greatest number of consumer baskets.

Less is more

An old British proverb says: "look after your pennies and the pounds will take care of themselves." How many times have you had paper currency or its equivalent in coins in your wallet, and spent the coins first? Repeatedly, right? This is the result of denomination. In the practice of price management this is applied by displaying a price in installments, or as price per unit. Consumers often readily accept such offers as they mistakenly perceive a "lower" price, when total time payments can far exceed a product's normal full price. Such sales might not take place if the aforementioned "installment" procedure wasn't applied.

The situation is similar in cases of purchases using tokens or billing increments. If we only move within the range of nominally small amounts, our price sensitivity remains low. Knowledge of the consumer's decision-making process while making a purchase and understanding how such processes develop, are now issues taking on increasing importance for manufacturers and distributors. The more knowledge a company obtains in this area,the more they will be able to reach (and sell to) a greater number of consumers.

Nevertheless, companies must keep in mind the key principle of fairness in trade, which is particularly important in relational sales. A customer who feels cheated will undoubtedly be unlikely to return and the loss of such purchasers may become so acute that such loss of customers cannot be offset by any momentary profit obtained in an ethically questionable manner. The numerous protests aimed at financial institutions and telephone companies creating offers virtually impossible to compare or comprehend are solid proof of that. Does anyone really understand their electricity bill?

The sense of fair price for a product is the basic premise underlying proper pricing policy. Knowledge of and acceptance that common cognitive errors will happen should primarily serve to better align our offers in future with consumer expectations, in such a way that both parties to future transactions will be satisfied.

PART II

Gaining Pricing Power Through Technology

2.1 Basics of pricing models (decisions based on variables combination)

by Marina Dias

Setting the Goals & Defining the Pricing Strategy

Setting up a pricing strategy and goals requires first to be able to understand how the company wants to be perceived by the customers – and this is not only a pricing exercise, but also a 360° company vision about value that is going to be delivered to clients.

When we dive deep into pricing, it's crucial to know positioning in the market – does the company want to be perceived as offering low prices, fair prices, premium prices? Different categories may have different pricing positioning, but globally (and again we are discussing value) what is the brand positioning that companies want their customers to perceive?

Pricing strategy is also about driving value to business, either from being the driver to support market share consolidation and / or margin growth. Here we are discussing tangible value – real information that we can put a target on, work for it and measure to perform improvements.

Identifying opportunities to increase value for the business and for the customers is a continuous exercise which determines that defining a pricing strategy is not a one-shot task. Monitoring the success of the strategy along with impact (financials, brand awareness, competition positioning) creates room to understand small improvements – and this is critical given the context of the world. Pricing strategy should be solid and clear to all organizations, but also should be adaptive to create room to add value within a continuous improvement approach.

Thinking about setting up a price for a product or service, many variables may affect or be affected by the decision that we take. Of course, we can build different layers of complexity by adding more information to the decision tree. Normally cost-plus pricing is the first strategic approach. When we start to explore the market (if an organization does not navigate in a blue ocean) price position vs competition lead to competitor-based pricing approach and online dynamic pricing along with how omnichannel/ symbiotic strategies are designed. Value based pricing considers product characteristics as well as consumer preferences and demand is the next step to data driven pricing approaches.

Setting a pricing strategy requires navigating the perspectives of how to manage prices and promotions.

Specify which variables may influence the pricing strategy

Revenue can be different if we consider data from sunny days and rainy days (assuming no seasonality). Diving within a category vision we may have differences, and some categories are not affected at all by weather. Even more different if we deep dive into the KVI articles. However, if we have data from competitive prices on those days, we will have different conclusions, and some articles can have a better performance because it's a rainy day, people are at home or at the mall and other articles have a bad performance because competitors have a good promotion running and are cannibalizing our sales - at the end of the day is it weather or competition that influences our performance?

Before trying to understand the importance of and correlation of the variables, we should know which of the variables we should consider when designing a pricing strategy.

To establish a strategy for managing prices, there are variables that may influence and be influenced by the designed strategy. In this context we present internal variables as the ones controlled by an organization – here we consider strategic and operational categorization.

External variables are not controlled by an organization although may be influenced by its business performance and decision making.

Internal variables:

- Strategic: category roles; product visibility on shelf / website; promotions &/ featured articles (store posters; banners); product roles (KVI, Regular, Tail...); targets & business performance (revenue; margin; profit margin; sell through rate; stock levels & planning, basket average price; market share; price index vs competitors); client purchasing behavior (website traffic data) & CRM specific strategies; physical store location;

- Operational: co-occurrence between articles; price families (anchor articles); costs & supplier support to sale; website visits & conversion.

External variables:

- Market share;
- Competitors dynamics (shelf price, promotions; brand advertising);
- Weather forecast;
- Product trends & digital marketing influences.

It's crucial to understand what variables impact and be impacted by pricing decisions and movements. To be able to assess and quantify / qualify these variables we should always consider a balance between the ability to have real time and accurate data together with the capacity to have this information stored and easily accessible.

This creates the need to prioritize and quantify the impact of each variable when we are building a pricing strategy. It's also relevant to assess the possibility of understanding the correlation between these variables. Combining the information to facilitate decision making is a good idea, but still, we should not jeopardize opportunities to understand the isolated impact of variables impact when we decide to combine them.

It's relevant to understand which costs will be considered to structure a pricing decision – we can have legal restrictions that we need to commit to and therefore it's a topic that should be clarified at the start of any pricing project. Considering the effect of marketing, logistics as well as contract conditions and special deals with the supplier – companies should have the ability to decide if additional money should be used to invest in pricing and, in specific cases, build breakeven analysis and scenarios forecast, to determine if it's an investment with short return or if the investment will be to generate price perception awareness.

Additionally, before operationalizing pricing strategy, businesses should assess if any additional communication will be done (price warranty; price drop advertising) and the impact on customers & competitors of this type of advertising.

Structuring Pricing Rules

Based on the previous, after we decide which variables will be taken into account, we will need to structure the rules on how to assess and combine them. Also, in some cases, it can be necessary to consider some constraints or restrictions to price suggestions.

As an example, some of the pillars that are considered when setting up rules are:

- Define pricing strategy according to category roles (traffic builder, convenience…);
- Have a price position vs relevant competitors on price perception builders (KVIs) and define difference vs competitors;
- Create guardrails to position prices vs anchor articles (structure price families);
- Create margin limits and understand granularity that you need to apply (brand level / category level/ article level);
- Define limits to price changes;
- Define policy to manage rounding rules;
- On articles that are not the top price perception drivers - find opportunities to increase prices based on elasticity studies and scenarios forecast (forecast for margin & revenue).

2.2 Limitations of in-house pricing models

by Marina Dias

Pros & Cons of in-house pricing models – full control & difficult to evolve & maintain

After setting a pricing strategy, with or without consultants' support, companies tend to struggle on how to implement it and monitor results. If the team is sufficiently skilled to manage databases and or excel files, normally the rules are created under these formats.

The issue here is that, to be able to update all the information and formulate price recommendations according to rules is highly difficult and too much time is dedicated to preparations. At this stage, either time or motivation dedicated to reviewing the value of the results are low.

The effort to update data is also connected to the ability of managing not only huge data to gather historical data but also ability to have real time information that is accurate enough to provide insights to the price decisions.

An additional layer is that often operational decisions require that rules are flexible and easy to change- when we have models being developed and maintained manually the effort of changing inputs is cumbersome and the risks of generating mistakes increases. It's relevant to consider that the ability to run scenarios to support decisions is also a challenge.

Until now, we only discussed the ability to keep the files working in order to provide a price recommendation based on the company's pricing strategy. We need to consider as well that the strategy needs to be monitored, meaning, pricing teams should be able to provide reports and insights that monitors not only the performance but also provides guidelines and recommendations on what to do better. This requires access to historical data and the ability to have it at a granular level like product – store – day and sometimes transactional data with insights by customer profile. Again, these reports and data management are something that creates pressure on the pricing teams because the majority of time is again dedicated to data preparation and validation instead of being dedicated to the analysis that can really add value to the business. Another relevant topic is that, in order to support decision making, these reports are required to be updated almost in real time which, given the fact that everything is managed manually, we must consider almost as an impossible exercise.

Although we may think that different teams can support pricing teams (such as IT, Data Science, Marketing), it requires a lot of effort to keep communication and goals aligned.

2.3 How to use Neural networks to reproduce customer's decision making

by Marina Dias

Ability to monitor results and analyze data – reporting

As discussed previously, in order to have an efficient pricing strategy execution it is critical that companies can easily measure and understand the impacts of price setting across a business's performance. This is not translated into the internal performance (as a P&L metric, sell through rate, stock rotation, margin or revenue or quantities upfit as examples) but also on market share, competitors' reactions (price responses or special campaigns & marketing communication) and brand perception (NPS, price perception studies). When costs of a software or consulting are in place, measuring ROI is also critical.

To be able to monitor results, granular data availability with a historical vision is critical. This applies not only to knowing what customers saw as the price for a product but also what really was paid as soon as a transaction happens - and yes, it can be different due to vouchers or even systems mistakes where the tag is one thing but on POS the price is different.

Having this data available, organized and accurate is sometimes a major effort. Trying to perform calculations on top is also not easy when large databases are used.

It's fundamental that companies are prepared with software that supports not only the ability to extract data but also the ability to work with it. Visualization of the data is also critical: sometimes it's the factor that differentiates from having the ability to have the trust from stakeholders or not regarding all pricing management.

Choosing the best tool to manage data and build visuals as well as making sure that people are well-trained to set up reports and to read them is something that companies should also evaluate prior to starting a pricing journey. If possible, build the reports to be updated automatically and also usable so that final stakeholders are autonomous in managing all the information that they need (and can be different across different areas).

Every year, the amount of structured and unstructured data grows by 60% globally. That makes Big data a non-alternative domain for business decision-making. Data is a powerful instrument that can boost bottom-line metrics but only if utilized correctly.

Big data is a complex phenomenon exploring and covering the most effective means to systematically collect, process, and analyze data sets that cannot be dealt with using the traditional approaches. It refers to both structured data from databases, as well as unstructured data from external sources, web, mobile devices, social media, etc.

In contrast to traditional data-processing approaches, Big data analysis is almost deprived of human involvement but, it also, implies using advanced algorithms and software capable of processing billions of data points within a short period.

Big data is considered to be one of the mega-trends defining global development in the 21st century. As often happens, business trendsetters have become the first to have realized the potential of using Big data. According to IBM, organizations applying analytics powered by Big data are 2.2 times more likely to sustainably outperform their industry peers.

The use of Big data has its distinctive features per every industry and retail is not an exception. As pricing has long been and will continue to be a core capability for retailers, it remains the major field in which data is used.

A short history of Data use in pricing

Even though the term Big data is said to be first coined by Roger Mougalas in 2005, structured and unstructured data was used in pricing for decades. In 1985, the first yield management system was implemented by American Airlines, which can also be considered an early prototype of data-driven pricing. However, at that time, retailers relied mainly on consultancy agencies while developing a pricing policy. In practice, it meant human-centric pricing based on analytics processed and analyzed manually.

Things changed in the 1990s when retail giants started to build their own in-house systems capable of storing and processing historical data. These solutions were still too slow in processing and integration. Their effectiveness remained rather ambiguous. By 1999, global online sales reached the point of $20 billion so more, and more data was available for the retailers. It was already clear that the future belonged to data-driven pricing.

In the first years of the 21st century, second-wave pricing solutions were presented. Data-driven rough predictions were now possible, but because of poor scalability, it was not until the 2010s that the genuine pricing revolution became possible.

At that time, dozens of the so-called 'third wave' pricing solutions emerged offering a full range of pricing services powered with Big data and ML technology. Now, depending on a retailer's needs and business maturity, it was possible to quickly and easily adopt any type of solution from a simple price scrapper to a complex engine predicting demand with 98% accuracy. The era of data-driven pricing had officially begun.

Neural Networks and Big data: a few cases of how Pricing can benefit from it

For every product, retailers have to choose the right pricing approach depending on its type and lifecycle stage. This is why the use of machine learning algorithms might also differ depending on the type of product being repriced. Let's look at a few examples showcasing how neural networks help to reprice particular product types.

When it comes to new entries' pricing, AI algorithms help to find the most similar items sold in the past by comparing all products' credentials (including images, descriptions, etc.) using computer vision, tabular data, and natural language processing.

Once the most similar products are identified, the algorithm correlates a new product with similar ones. Based on historical sales data, the engine finds the most relevant benchmarks, compares prices, turnover, and elasticity of similar SKUs to recommend the initial price for a new entry.

When SKUs have to be priced in regard to the competition, the combination of machine learning and rule-based pricing comes in handy. An auxiliary ML algorithm using Graph Theory identifies a retailer's competitors and potential KVIs. A Recurrent Neural Network (RNN) calculates elasticity coefficients and helps to find an optimal price positioning. All the repricing processes are done with a rule-base engine to make sure any data changes are reflected in a retailer's prices instantly. Recurrent Neural Networks are also often used to price SKUs under promo. In particular, the algorithms are capable of predicting the effect of one of another promo scenario. Based on the cannibalization effect evaluation and comprehensive scenario testing, the engine helps to plan optimal promos with maximum effectiveness for the retailer.

In a similar way, when it comes to markdown optimization, RNN analyses retailer's historical sales data to recommend an optimal discount at an SKU-level so the targeted stock level is reached with a maximum margin rate. Based on set parameters (max. promo depth, markdown's time frames, expected stock level), the platform's time-series-based algorithm generates the prognoses on hit the stock level and gaining margin.

Finally, pricing SKU based on demand is powered with neural networks measuring product elasticity and its cross-elasticity to ensure that goals on both the category and portfolio levels are achieved. The accuracy of every recommendation is gained through an analysis of a range of external non-pricing factors impacting sales.

Typically, the inputs needed for ML-driven pricing may include several of the following data sets:

- Historical sales data;
- Historical promo data;
- Historical price changes;
- Product stock availability;
- Product description competitive data;
- Cost data;
- Consumer research data;
- ABC analysis results;
- Web traffic analysis;
- Other data impacting sales.

The scope of data required for the ML algorithms to work effectively depends on the type of product being repriced. However, the general rule implies that the more relevant data is available, the more accurate the recommendations will be achieved.

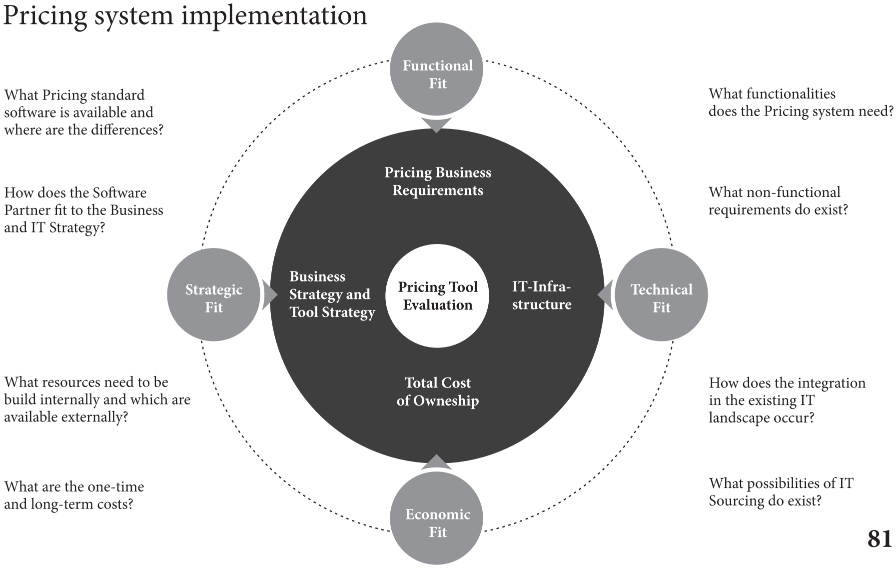
2.4 Key benefits of implementing Pricing Solutions & Technology

by Marina Dias

How to get prepared to implement a demand pricing solution

When it comes to implementing a demand-based pricing system, the business has first to analyze its own specific needs and requirements and then decide which system or vendor offers the best-fitting solution. There are four essential domains of criteria we recommend to consider before implementing a particular demand-based pricing system. These are functional, strategic, technical, and economic domains.

Pricing system implementation



Obviously, an implementation of a demand-based pricing system requires some preparation and forethought. First and foremost, the business has to have a large and reliable dataset.

The more accurate data you have, the better. Once the dataset is in place, a retailer has to choose the best-fitting AI-driven solution capable of processing the data to generate insights and recommendations based on their parameters.

The components constituting the dataset needed to switch to demand-based price optimization may differ in each specific case. The standard set of data includes historical sales and promo data of at least the last two years. The data on historical price changes as well as SKUs' stock availability and product descriptions might also be required. Even if you are not going to switch to demand-based pricing tomorrow, collecting and organizing data properly would definitely be wise. After the dataset is in place, the business has to choose either to build an in-house AI-driven pricing system or find a best-fitting third-party vendor that specializes in demand-based pricing solutions.

The point is that setting prices for the entire portfolio based on thousands or millions of data points is something which can hardly be done effectively without utilizing the power of AI algorithms.

Finally, it should be noted that even the most advanced AI-based pricing solutions cannot substitute human beings. The implementation of demand-based pricing software changes the role of a pricing team but the key strategic decisions are still to be made by a manager or other stakeholders.

That's why before implementing a demand-based pricing system, the business has to make sure it has a dedicated team of specialists ready to supervise the software integration. The team should be able to utilize the data and have the final say in strategic decision-making.

To get prepared for the demand-based price optimization solution's implementation, it is vitally important to avoid the typical mistakes businesses make while adopting advanced technologies. Let's look at the most critical issues and find out how to tackle them.

First of all, every price optimization system starts with a test run that allows trying out the capabilities of the algorithms and engines. For the test run, retail teams should thoroughly choose the test and control groups.

The typical mistake here implies choosing stores that have different product mixes and sales patterns. This difference can play a negative role in achieving the test run goals.

For example, part of the stores may predominantly sell the retailer's private-label products, while they may not be available in the other stores. In the end, the final results would be misleading. To avoid this mistake, one should carefully study the sales structure for each of the stores, identify key product groups in greatest demand, and analyze the procurement of goods. After that, test and control store groups can be selected properly.

Another issue often appears in the next step of the solution's implementation and refers to the choice of the right pricing strategy for reaching the business goals.

To go through this stage without risks, the business should develop a pricing strategy in advance, together with a competent pricing architect.

One thing which should never be disregarded while defining the pricing strategy is the level of promo pressure. That's because a significantly different reaction to promo in different stores may indicate the need for re-clustering the product range both in the test and control groups and in the retail chain as a whole.

The implementation results can also be significantly affected by the product scope entrusted to the solution. It may simply be insufficient for the system to fully unroll and apply all the potential to grow the intended financial indicators.

To achieve all the set goals for the growth of key indicators, it's vital to consider the number of SKUs and revenue under management delegated to the solution.

Insufficient volumes may significantly limit the system's ability to generate elasticity-based optimal prices.

If a business is aware of these critical issues, the effectiveness of the solution would not be as risky. Once the test run is complete, the pricing engine's effectiveness is evaluated and a comprehensive price optimization rollout gains the green light.

2.5 User experience as a key driver for the success of pricing solutions

by Marina Dias

To keep it as concise as possible, pricing teams major tasks can be split into 3 different 3 buckets:

1. Operational (analyze & set prices according to strategy);
2. Reporting (prepare and check performance results);
3. Support Analytics & Revising strategy (review impacts - includes scenarios simulations & provide guidelines to adapt strategy - can include support to change current systems / calculations configurations).

The 3 major tasks require different perspectives when it comes to user experience. For operational tasks, the aim is that things (normally a huge number of products for different scopes - online/in-store) are done in a short period of time but with a high level of accuracy. From this perspective, users need the ability to understand global vision if everything is according to the strategy and to be able to act quickly in case something goes wrong - which requires the ability to go granular.

The same approach (high level & granular vision) for reporting but here it's important also to have the possibility to review historical data and be able to do comparisons between different scopes or periods. As an example, the ability to easily change from article level to category; from store to group of stores is also required.

When we start to think about measuring impacts to be able to add value to the strategy and the business, a different approach is needed. Ability to gather historical data; elasticity studies and forecast scenarios given a target / business goal is a need. To be able to do that, besides trusting the data (no black boxes) users need to be able to enter different parameters to do simulations - this can be goals (like to grow revenue) or target (1M in the next month). Also it's relevant that configurations to input parameters and run the adjusted strategy are fast and easy to structure.

Managing the process of changing a price or defining a price for a new article can require that different teams be able to analyze it prior to implementing it. Information Flows are critical to exist (different users & pricing final decision) as well as keep track of who did what and when. Same for notifications in case something is dependent on someone.

User experience in pricing is something that sometimes is forgotten if everything is managed by excel or databases - and here we migrate our thoughts to the benefits of using Pricing Platforms.

Pros & Cons of using a pricing platform

Below its presented a short list with the wrap of the pros and cons of adopting a SAAS solution to manage pricing.

Pros:

- Integrative Solution - different sources and formats of data may be used
- Ability to keep & maintain a data warehouse (internal - organization data and external- competitors data);
- Ability to access and manage Historical data;
- Possibility to easily apply statistical models effectively to be able to build predictions and support pricing and business decisions;
- Continuous focus on user experience - ability to monitor user journey and collect feedback to include or adjust new relevant features;
- Consulting services as a plus to gather new trends and market insights
- Data Science teams to support reporting and analysis ad hoc;
- Ability to run scenarios to support pricing strategy definition (according targets and taking into account seasonality);

- Communication flow (which tasks need to be done and by whom) and monitorization (who did what and when);
- Alerts & Notifications;
- Cloud based - mitigates risks of losing data and reduces cost of ownership.

Cons:

- Customization for specific features (depending on effort);
- It's not a pricing management department - it can help with guidance, implementation of pricing strategy, operational price recommendations, monitoring competitors and monitoring effects but its not a decision maker;
- Lack of 360 vision of the business in case data is not provided (eg: online traffic data; marketing data; sales teams data);
- It requires good communication between different stakeholders;
- Statistical models can be seen as black box by different stakeholders.

2.6 Showcasing Tech-driven Success in Retail

by Marina Dias

Who wins the most with advanced pricing technologies

By 2020, the global retail market reached a value of more than $23 trillion. And as long as the price remains the core communication interface between sellers and shoppers, retail industry players would be the major beneficiaries of the advanced pricing technologies.

However, from the historical perspective, retailers often turned out to be rather resistant to technology implementation. In contrast, tech-driven pricing solutions were first adopted in industries that are smaller in size, yet more flexible and open to innovations.

For example, in 1985, American Airlines introduced the first yield management system which is considered to be the first-ever prototype of an algorithmic pricing system used in business.

Just to compare, at that time, retailer market leaders were relying almost exclusively on the large consultancy agencies that provided sophisticated and manually managed pricing strategies.

Since then, the industry's tech evolution has gone through several explicit periods. In the mid-1990s, the monopoly of large consultancy agencies was undermined by the first tech solutions that could analyze historical data, yet were too expensive and difficult to integrate.

The second wave of pricing tech solutions was introduced at the dawn of the new millennium. With this type of pricing system, retailers could even build rough predictive models, however, the systems remained rather complicated in onboarding and operational use.

In the mid-2010s, retailers finally got the third-wave solutions that ruined giants' monopoly on innovation and made optimal pricing possible for all types of players regardless of the industry or a retailer's size.

Paradoxically, the global economic crises and recessions turned out to be the major triggers fostering retailers to adopt pricing technology solutions. The 2008-09 economic recession or the CV19 pandemic may serve as good illustrations in this regard.

The number of sellers implementing advanced pricing solutions increases from year to year. One of the reasons is the practically proven effectiveness of AI and ML-driven technologies across various retail industries. Just one fact: on average, the demand-based pricing enabled through advanced solutions enables retailers to grow margins by 6%.

How advanced pricing software helps retailers in different industries

It is important to note that the use of pricing technology in every retail segment might have its own specific features and peculiarities. Most of them are stemming from the difference in the challenges that the market players seek to solve through algorithmic pricing.

The table below shows which typical challenges do retailers of various industries solve with advanced pricing solutions.

Industry		Grocery	DIY	Automotive	Home	Apparel	Sports	Dark stores	Health&Beauty	Electronics	Office supplies	Convinience	Toys	Pets
Challenge	Solution													
Failing to identify true KVI items in near real time	Monitoring competitors' prices on true KVIs and non-KVIs to manage price perception and avoid margin dilution	+	+	+	+	+	+	+	+	+	+		+	+
Raising costs & supply chain disruptions forcing to lower prices leading to lost margin	Distinguish SKU candidates for price increase without decrease in sales volume based on cross-elasticity of products in range and on competitor prices	+	+	+	+		+		+	+	+	+	+	+
Pricing diversification on store level with local consumer targeting	POS clusterization based on behavior & competitors impact criteria	+	+	+	+		+	+	+	+		+		+
Lack of expertise-driven approach to setting New entry price	New entry price suggestions based on latent clusters of similar products and assignment to the most affinitive clusters		+	+	+	+	+			+				
Inability to get a complete picture on competitors with both similar and exact product matches	Use ML-powered product matches considering all product characteristics and image recognition				+	+	+						+	
Reactive pricing to consumers changing behavior and purchasing habits	Price elasticities help to understand consumer behavior patterns by channel and manage omnichannel prices	+	+		+				+	+				

Industry		Grocery	DIY	Automotive	Home	Apparel	Sports	Dark stores	Health&Beauty	Electronics	Office supplies	Convinience	Toys	Pets
Challenge	Solution													
Missing margin opportunities due to inconsistent pricing ladders application	Reprice considering anchor articles as well as calculate price indexes within product families to segment products based on characteristics				+				+	+		+		+
The increasing percentage of Long tail caused by demand fluctuations and repartition of items' roles in the assortment	Apply a demand-based approach to move Long tail from the dead spot and make a profit for other catego-ries at the expense of Long tail				+					+	+		+	+
High promo pressure with offers never-ending discounts and low visibility of ROI	Optimization inside promo cycle can adjust TPR level to clean up unnecessary and bring balance to the most effective	+							+	+		+		
Limited understanding of private label price perception	Similar matchings on private labels products	+	+									+		
Gross profit margin dilution due to 'blanket' markdowns aimed to sell out the stocks before new season	Apply differentiated discounts tak-ing into account individual product price elasticities and cross-product impacts					+	+				+			

Failing to manage brand restrictions effectively (min/max discounts; MAP; RRP)	Configure limits and smart rules as a mechanism to set external boundaries to price optimization								+	+				
Inability to get a complete market picture covering marketplaces and competitors websites	Use fresh and accurate competitive data to monitor competition as well as negotiate better conditions with suppliers								+					+
Need for considering products' expiration date in each repricing cycle	Improving markdown depth & timing taking into account product lifecycle	+										+		
Failure to provide various customer types (direct, wholesale, corporate, small distributors) with divers offering and assortment composition	Set and manage price lists/clusters per each customer type with differentiated approach on regular pricing and promo offering can cover specific cases and bring higher results										+			
Inability to leverage product lifecycle as a driver for managing the balance between revenue & profit	Use ML-powered scenario forecasts to manage prices in order to boost revenue and protect profit to minimize markdowns when new products enter the market			+										
Different cost basis due to various suppliers resulting in losses on not proper recalculation of current inventory and dropship	Control and make adjustment for cost and markup in near live mode to propose optimal price with no loss on margin or customer loyalty			+										
Unnecessary margin cuts due to unsmooth sell-through rate	Regular demand-driven repricing for margin protection and predictable sellout					+								

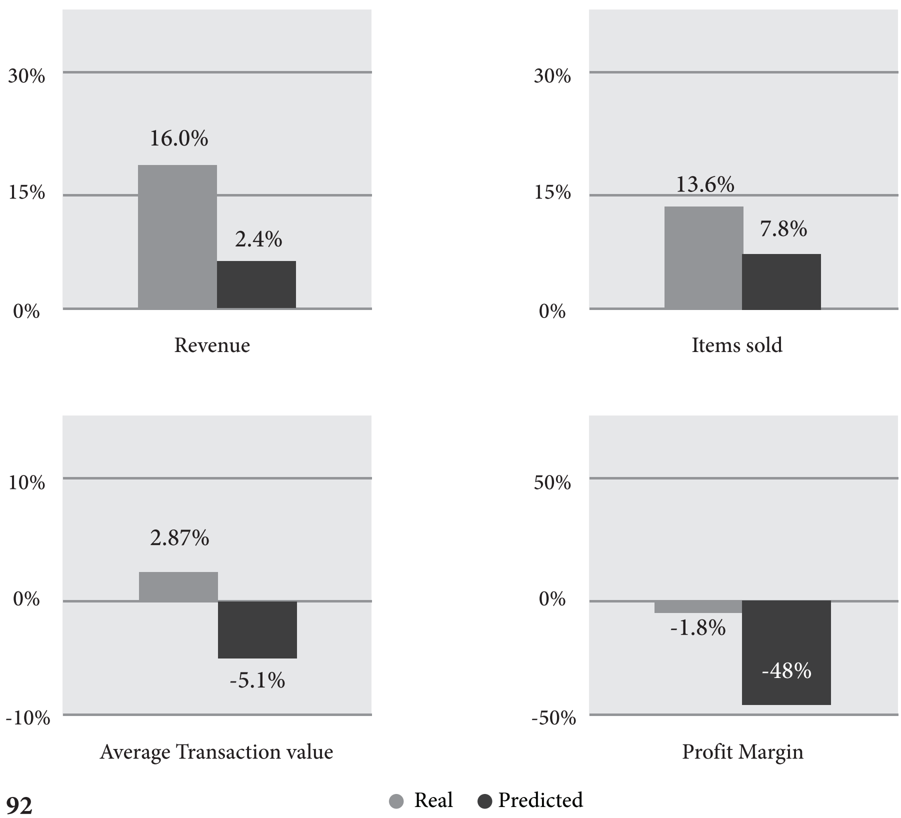
Proven by numbers: how pricing tech boosts key metrics across industries

A few real-life cases with numbers are probably the best illustration on how AI-driven pricing can boost bottom-line metrics across industries. The visuals below show the key results retailers gained after implementing the advanced pricing solutions.

Consumer electronics [$400M in revenue, 117 stores]

Problem: the retailer exhausted all the traditional scaling approaches, as a result the company used to mimic competitors' pricing and promo decisions.

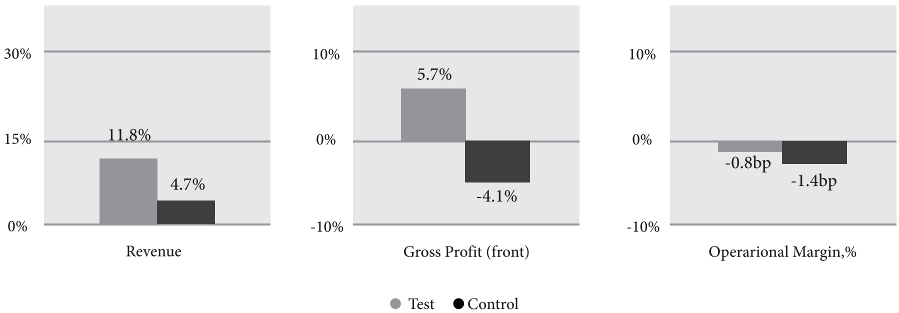
Solution: data-driven demand-based price recommendations to sustain financial growth as well as ensuring that only true competitors influence pricing decisions.



FMCG retailer [$200M in revenue, 104 stores with 41 pricing zones]

Problem: significant promo pressure with over 60% of discounted items in portfolio. Competitor-based pricing only for over 100 price zones with different price elasticity.

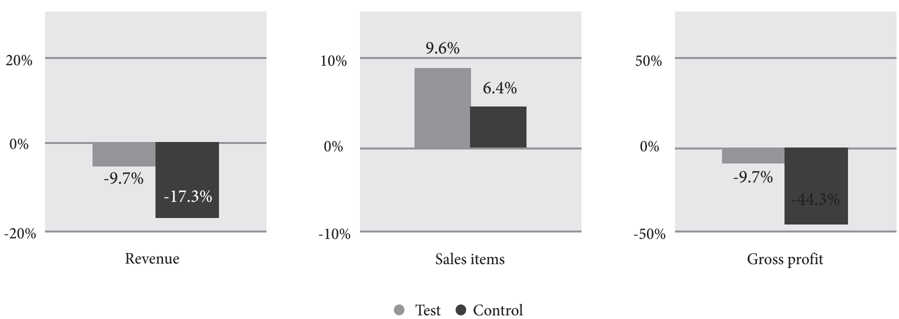
Solution: regular demand-driven recommendations for price and promo decisions.



Fashion retailer [$200M in Revenue, 114 stores]

Problem: high pressure to clear off shelves fast while maintaining the gross profit and profit margin. In addition, repricing process takes too much time.

Solution: regular elasticity-based markdown suggestions along with data-driven analytics for well-informed pricing decisions available with one click.



PART III

Thinking Out-of-Box or What Can You Learn From Subscription Model

3.1 Business model change

by Maciej Kraus

Membership economy, subscription model, recurring revenue, and consumption-based model. Whatever you want to call it, it ultimately comes down to the "forever transaction," the point at which users sign up once and remain there forever.

Selling unique goods to faceless, anonymous customers is no longer the focus of business. The future of business is the membership economy.

Recent years have seen historic growth and profitability in the subscription economy. In actuality, the subscription economy has grown nearly five times faster than the S&P 500 over the last ten years. Additionally, consumers have a tendency to feel more loyal to and spend more money with the brands they follow.

The subscription economy is undoubtedly here to stay. But what can we infer from the subscription industry's quick development? Here are a few lessons one can learn from the pioneers in the subscription industry.

Subscription businesses are growing revenues between 5 and 9 times faster than S&P 500 company revenues, according to the most recent Subscription Economy Index (SEI) report.

Gartner notes that “new subscription and recurring-revenue-based businesses are being launched every week in nearly every industry.” What’s more, “by 2022, more than 90% of software providers will have migrated to a subscription-based business model.”

But it’s not just limited to the software industry. We’re witnessing the end of ownership and the rise of usership. Consumers want ongoing access to the latest and greatest (tools, content, services, etc.) and they demand value. Meanwhile businesses want the stable and predictable revenue offered by subscription models.

As Gartner notes, “subscription and other recurring revenue streams derived from digital business models…will soon become standard in modern day businesses.”

This part will be obviously skewed towards tech and startups.

Business model change

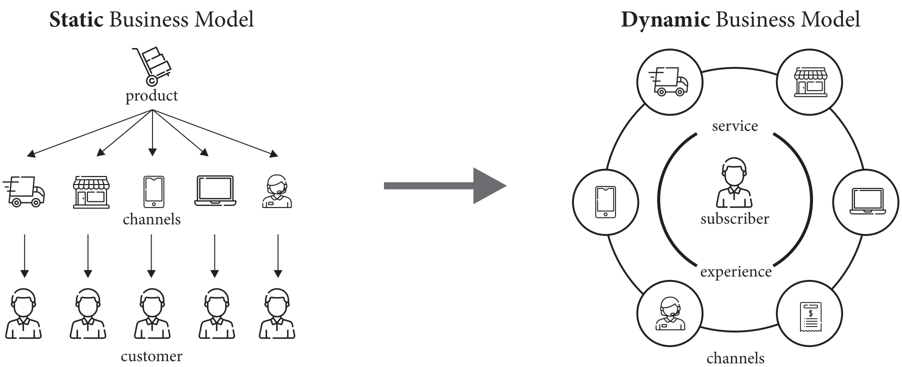
Before the internet, people had to pay to subscribe to services like milk delivery and newspapers. For businesses, however, embracing and putting into practice new subscription business models has typically proved challenging. For many years, merely collecting money was one of the subscription models’ main problems. To collect recurring payments from thousands, or even millions, of clients, businesses needed the necessary infrastructure.

Recurring payments can now be set up and processed without the previous significant human resource input thanks to digital payment services like PayPal, Stripe and many others.

Businesses now have a better understanding of consumer behavior thanks to analytics systems like Zuora, Chargebee and the like, which they can utilize to improve their subscription models over time.

The ability to ship physical goods consistently and at scale has become more efficient and affordable thanks to developments in logistics, best represented by Amazon.

Although these infrastructure improvements have increased the viability of subscription business models, viability alone cannot explain the subscription economy's impressive growth rates. It's vital to look at the attractiveness that the subscription model has for both businesses and the clients they service in order to comprehend that.



The necessary transformation is depicted in the above diagram. IT comes from Zuora Founder and CEO Tien Tzuo's best-selling book, Subscribed: Why the Subscription Model Will Be Your Company's Future—and What to Do About It. First and foremost, service providers need to transition from a static, product-focused business strategy that depends on several channels to reach customers to a dynamic, subscription-based business model that prioritizes customer experience and service.

Subscription is a powerful business model because it creates an environment where the default customer behavior is retention, as opposed to one where the default behavior is churn

1

Appeal for businesses: predictability, recurring revenue, can grow as usage grows, customer insight, upsell/cross sell, risk mitigation for R&D, drives relationships, quicker time to market

2

Appeal for customers: better aligned with value, cost, convenience, and customization, continuous innovation, risk reduction

Although switching to a subscription-based model has clear commercial advantages for both users and service providers, it won't always be easy.

It can be more challenging to change an organization's culture and practices than its technology. Before the concept of the digital subscription economy even existed, the majority of accounting, billing, and payment systems were created. Additionally, there may not always be executive support for reform. Set your priorities first- what's your North Star metric? Do you want to grow or increase revenues?

Most probably you need both.

I think most companies underemphasize profits and overemphasize growth. They're both crucial but one of the main reasons businesses ultimately fail is unprofitability, not slow growth.

In any case, to be successful you most probably you need both.

The simultaneous pursuit of growth and profitability is one of the most exquisite and difficult leadership dilemmas. There's no right answer.

Let's look at tech businesses. Maybe profit is not the right term for them after all? We all know that very few startups achieve it. Numerous companies that are IPOing aren't profitable — while not a great indicator, they sold the story of growth etc. In 2018 over 80% of IPOs were not profitable, in 2019 it was over 70%. Several of 2020 year's largest IPOs — including ride-hailing rivals Uber and Lyft — have fallen below their offering prices as investors turn away from business models with unproven paths to profitability. And there's WeWork, who pulled its highly anticipated IPO.

How will things change in the future? You hear more often of camels rather than unicorns as the way to grow your business. Unlike unicorns, camels are not imaginary creatures living in fictitious lands. They are real, resilient and can survive in the harshest places on Earth. While the metaphor may not be as flashy, these startup camels prioritize sustainability, and thus survival, by balancing strong growth and cash flow.

I've worked for companies that focused on growth, and I've worked for companies that focused on profit. More importantly I've seen successes and failures of both.

But if I had to pick, I'd pick profit. Or at least a strong proof for one.

The explanation for my choice is actually very simple; it all comes down to the runway. The more profitable you are, the stronger your leverage in raising capital or reinvesting profits into growth or product development.

If you're profitable, then you will have as much runway as you want. That's why, generally speaking, I'd pick profit over growth in almost every instance. But it's still a question of balance. And of course, there's plenty of exceptions and you can name plenty of successful companies with hyper growth and negative profit.

Personal perspective

There's another perspective — for some strange reason, we all think that bigger is always better. This refers not only to business but also to other aspects of life.
When I owned and was running my own business, I felt this common and prevalent idea that bigger is always better. One of the most common questions I was asked by friends and family was,

"How many people work for you?" For some reason, the number of people working in your office is often used as a metric of how successful your business is. But it's not always a good metric.

For me personally, growing the number of people in my business is never a goal. Not even remotely. It is not easy to explain it to the outside world, though. Eventually I don't let society's mantra that bigger is better influence me. Think for yourself, independent of all the noise out there, and then go for it.

3.2 Pricing perspective

by Maciej Kraus

I usually say that pricing is a tool. If you apply it well, you'll successfully achieve your goals. Again, first you need to know your goal. My friend Wojciech Gorzen wrote a great piece on this and let me quote it here:

"If you were to maximize Revenue or Profit – which one would you choose?"

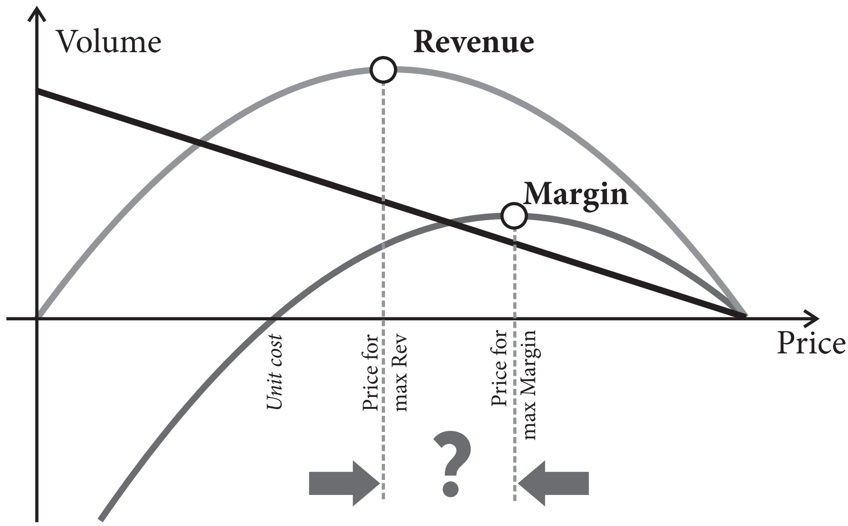
So many times I hear people saying (or thinking): "Obviously both!"

But is it at all possible? Unfortunately, in most of the cases, it is NOT. Especially on established and mature markets.

Simplifying things a bit and assuming linear volume reaction to price changes both Revenue and Margin curves have "mushroom" shape – see the picture. However, the top of each "mushroom" is in a different place! So, you cannot be on top of both of them at the same time.

Depending on your starting position (current price level) it is possible to move up with both "mushrooms" – when you are too much to the left (too low) or too much to the right (too high with your price).
But what if you are between the peaks?...

- Be clear about your priorities;
- Understand the price response functions for your products;
- Choose wisely & act accordingly.



You should set your pricing model differently for growth and for profit.

"Rule of 40".

For a number of years we have had the "Rule of 40" - the principle that a company's combined growth rate and profit margin should exceed 40%. This principle has gained momentum as a high-level measure of performance for businesses in recent years, especially in the realms of venture capital and growth equity. It is being embraced as an important metric to help measure the trade-offs of balancing growth and profitability.

Young companies often beat that mark with ultra rapid growth. But older companies, whose growth has tapered off, need to improve performance and profit margins to hit that metric. So, your goals will probably shift down the road.

How to beat the "Rule of 40"?

Strong growth. My vague estimate would be that 1/2 of early stage companies that outperform the Rule of 40 in consecutive years achieve it with revenue growth above 40%. These companies might generate some profit while investing all the money in hypergrowth to build a large installed base. This works particularly well for any platform business.

Balanced, profitable growth. 1/3 of companies consistently exceeding the Rule of 40 do so with revenue growth between 20% and 40%. It's more true for large, more established companies that have successfully developed new products for markets adjacent to their core, and navigated technology or business model transitions (for example, to SaaS and subscription models) to keep growing.

Profitability. Remaining companies beat the Rule of 40 with annual growth below 20%. It's easier to do it if you have a large, established business. With growth stabilizing around 10%, companies turn to becoming more efficient and profitable — exacting pricing power, leveraging the scale and scope of large salesforces, cross-selling and expanding installed base customers, exploring new business models, increasing renewals, moderating R&D investment.

Wrap-up

The profit-growth question doesn't have easy answers. Depending on your industry and the stage of your company, "success" equates to very different ratios. Ultimately, it's important to remember that what all investors truly care about is the cash flow which a company generates over its lifetime. You may not be profitable now, but there needs to be a clear route to profitability, ideally in your near future. No matter how groundbreaking your business idea may be.

From product-market fit to product-market-price fit

Most startups fail. We all know it. Depending on the study it's anything from 70% to 99%. But why? According to the Startup Genome Report, it's mostly because of scaling too fast.

While growth is good, a "too fast, too furious" approach can create cracks in the foundation that can slow down your business later.

Before joining Movens Capital, I was a pricing consultant for 15 years. Speaking to startups on pricing I often ask them — what will happen if you start charging for your product or service? And if you charge, what if you charge 10% more than you currently do? Too often, I get the same answer- it'll hinder our growth. Or, our customers will turn away.

Charging $ is the best proof of product market fit

Everyone is obsessed over product-market fit. It is nothing bad. It is a critical necessity to scale and crate value to shareholders.

Startups fail for many reasons, but so often the problem is the failure to put the customer's willingness to pay at the very core of product design. The vast majority of companies postpone pricing decisions until the product is ready and hope they'll make money some time in the undefined future. This is not the sequence you should have.

Best verification of your product-market fit?

Question 1: Do you like my product or service?
Question 2: Would you pay $XX for it?

Charging for your product or a new feature is the best validation of your product-market fit.

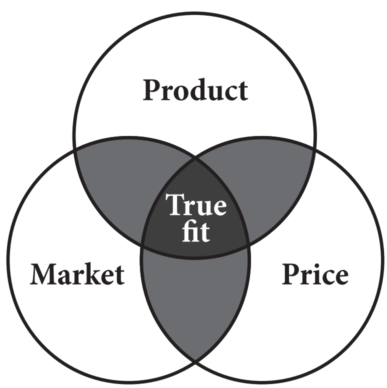
Getting price into product-market fit equation

Getting new customers (free) is not the toughest part. The true test is making them to pay you anything at all.

We see (based on our experience although with no quantitative data to prove it, sorry), startups that struggle with fundraising tend to monetize too late. Yet it's clearly fundamental to a startup's success.

Make sure you verify what customers are willing to pay early in the process. It'll drastically increase your odds of success.

Product-market-price fit = your company offers a new product that meets a genuine need and customers will pay for it at a price that can validate your investment.



Finding True Fit might sound easy, but often takes years of hard work

In SaaS, pricing is tightly linked to the product itself. It's different from other types of software and non-tech products - where price is more detached from the product itself.

Real story (one of many)

Recently one successful SaaS startup came to me. They wanted my support with the pricing. They said the rest was fine. It was only pricing ($ number) that was missing.

What soon came out was that it was not pricing (or price points) they were struggling with. It had more to do with pretty much everything else:

- Revenue model;
- Customer segmentation;
- Value proposition;
- Marketing strategy;
- Conversion optimization;
- And loads more.

So I give them a high-level pricing strategy framework. They said they need details, an operational plan, value argumentation, and an answer to the key question: how much is your product and why is it so expensive?

They had 80% free customers. We run a few surveys with those free customers. We quickly agree that we should not draw far-fetched conclusions from what they say. Only learning from paying customers counts. Think about it. What someone declares he/she'll pay or what he/she says your product is worth is irrelevant if he doesn't follow that up with giving you money. Free users aren't actually customers and won't give you the same insights (feedback, usage patterns, etc.) as customers that pay you.

The company showed me a pricing spreadsheet they came up with. They said that they need to charge $1000/mo to break even. But customers would not pay more than $500/mo. Oops. That's not where you want to be.

3.3 Why SaaS pricing is a little different than in other businesses- product architecture

by Maciej Kraus

One of the big topics is product versioning, product bundles, product architecture, product tiers- you name it.

The beauty of SaaS pricing is the ability to price the same product at each customer's willingness to pay (and get away with it). The next best thing is to define one version for each customer with the right value-price combination. But how to do it properly?

I always tell my clients to differentiate the pricing bundles based on value drivers (parameters customers care about). Avoid "commodity" items like storage, CPU, or users! (for more details see my previous article why user-based pricing is no good). In most circumstances value-based pricing allows you to charge more.

The great thing in SaaS is, if you've built your product properly, you can very easily customize pricing bundles, versions, tiers, etc. to fit the appropriate market segments.

How to offer Different Products for Different Audiences?

It's not rocket science: not every user has the same preferences. And not every user has the same budget and willingness to pay. If you manage to create different product variants addressing different customer segments, you can increase your user base and revenues at the same time.

I'll use celebrity cases here. One form B2B and two Consumer Software. For all of these- core products are the same. With premium plans for an extra $ you can get additional features, bells and whistles.

Free	**Standard**	**Plus**	**Enterprise Grid**
For small teams trying out Slack for an unlimited period of time	For small- and medium-sized businesses	For larger businesses or those with additional admistration needs	For extra large businesses or those in regulated industries
$0 USD/mo	**$6.67 USD**/mo*	**$12.50 USD**/mo*	
GET STARTED	GET STARTED	GET STARTED	CONTACT SALES
	All the benefits of Free, and:	**All the goodness of Standard, and:**	**All the greatness of Plus, and:**
• Access to 10,000 of your team's most recent messages • 10 integrations with other apps like Google Drive, Office 365 and many more • 1:1 voice and video calls between teammates	• The full context of your organization's message history at your fingertips • Timely info and actions in one place with unlimited integrations • Face-to-face communication with group voice and video calls of up to 15 teammates • Secure collaboration with outside organizations or guests from within Slack	• Advanced identity management through SAML-based SSO and real-time Active Directory syne with OneLogin, Okta and Ping • Compliance requirements met with corporate exports for all messages • Around-the-clock teamwork and assistance with 99.99% guaranteed uptime and 24/7 support with a four-hour response time	• Peace of mind with enterprise-grade security and compliance, including Enterprise Key Management and HIPAA support • Large scale collaboration and alignment with support for up to 500,000 users • Streamlined administration with centralized controls and customizable policies • Tailored support with a designated account and customer success team
		You can live without these features if you're small and cost conscious. But for larger companies with hefty budgets, that might be relevant	**We can do anything for you. As long as you're ready to pay extra**
Students, hobbyists, testers	**Small business, startups**	**Large business**	**Full option**

It's definitely easier to apply and thus more popular with B2B. But you see it more often with consumer software.

Spotify Free

$0.00 / month

- Shuffle play
- Ad free
- Unlimited skips
- Listen offline
- Play any track
- High quality audio

GET FREE

Spotify Premium

$9.99 / month

Start your 30 day free trial*
Family and Student offers available

- Shuffle play
- Ad free
- Unlimited skips
- Listen offline
- Play any track
- High quality audio

GET PREMIUM

Whopping 40% of Spotify users pay!

Why user-based pricing model is crap for (almost) any subscription business

Recently I was working on a pricing strategy with a large Indian med-tech SaaS. When I told them that we should consider moving away from the price-per-user to a more efficient pricing metric, their first reaction was "But everyone does it the same as we do, price-per-user." This is one of those cases when you'd be better off not following the crowd.

My other SaaS client's CTO said recently, "Pricing should encourage excessive usage instead of limiting it". This is exactly what per-user pricing doesn't do. What does it do? It hinders your growth and dooms for future failure. Why? Because users are seldomly where your Clients see value in your solution.

So why do so many SaaS charge per user and do not want to introduce new pricing solutions?

It's probably a relic of the ancient past (1980s) when you had to physically deliver the software (CD, floppy drive). That was when the per-user made a lot of sense. You didn't have a subscription fee. It was a one-time license/copy fee, which was then equal to the "user".

But things did change. Nowadays you don't have to do physical delivery. Nevertheless, many of you want to move on to recurring revenues in the form of a SaaS subscription. However, you forget that most companies (new and old) copy what they know best-adjust the old license prices to the prices for the user.

Per-user pricing kills your growth and sets you up for long term failure because it's rarely where value is ascribed to your product. If you're charging per user, I guess that your well-deserved revenues probably go down the drain. My experience is that almost all companies that use per-user pricing should be using a different value metric. That's especially true if your product doesn't provide more value with additional users. If there's no better alternative, go for per-user pricing. But I've never experienced such a case in my career as a pricing advisor.

Ideal value metric like Holy Grail or Harbinger of Trouble?

The best value metric is one that most closely correlates with where your client perceives value from your service. It determines how you charge for your service, and how you set each pricing tier. Remember, a "value metric" is what and how you're charging for a product. For example, if you're selling a pair of shoes, then your value metric is "per pair of shoes". As a result, when customers buy more pairs, your business expands.

An approach to avoid when you are thinking value metrics:

1. **Not linked to value**

   Consider an analytical product used by 100 users at an enterprise company, but with only 3 power users accounting for 95% of the usage. Beyond the initial 3 licenses, the value to the company would not increase consistently as more users are added.

2. **Not scalable**

   Consider a tool aimed at an accounting team, which has remained the same size for 15 years, and shows no sign of changing. Charging per user will never raise the revenue per customer, and so it is not a scalable metric for growth.

3. **Not auditable**

   Maybe it's not that relevant these days. But still. How many times have you shared licenses (or credentials) with your friends and colleagues? It can often be challenging to know and measure how many users genuinely use the product. How can you set the price appropriately?

So how to do it?

The key to find the best pricing metric is simple: the better you understand your market and customers the easier it will be to create an offering that they perceive to be high value. It means more revenue and profit from selling your service for you.

When you are creating a value metric, first start with running a list of all the axes you could charge along (not feature differentiation, but actual axes). Next, send a survey or conduct some interviews to determine where your customer ascribes value in your product. It's important to use a process that would be outlined in our feature value post to ensure validity. Finally, test, implement and iterate.

A great value metric must pass following three tests:

1) Transparency and ease for the customer to understand;

2) Adjustment to where the customer receives value in the product;

3) Grows with your customer's usage of that value.

Valuable advice: Your SaaS Pricing Model should be built around what the customer values, which probably means staying away from "commodity" metrics like users.

4. Is it easy to understand?

The value metric needs to be intuitive to the user. Best verification questions need to make sense to your prospects, and they should be able to "get it" without talking to someone at your company.

That's one of the reasons why per-user pricing is so popular: everyone can understand it and can calculate how much they'd end up paying if they used your service, if their whole team used it, or if the whole company used it.

5. Is it win-win strategy?

Yes, there are several products where per-user pricing makes sense. On the other hand, it should never be the end all be all of your SaaS pricing. Feature differentiation, additional value metrics (storage, contacts, bandwidth, reports), and add-ons need to be an aspect of your overall SaaS Pricing Strategy. The important thing to keep also in mind here is that you need to test and truly make your pricing customer and value based.

The key goal is to have a pricing strategy that works in the interest of the customers as well as that of the business.

What can SaaS tech business learn from Netflix's pricing changes? How to develop your pricing over time?

I wanted to write about Netflix pricing for a few different reasons. I work with SaaS companies at various stages of development. In most cases, I have to explain to the funders that you need to adjust your pricing policy to where you are at with your company development. You need different pricing when you start, and different on the following stages of the journey. And most of all- KISS, keep it simple & straightforward. But at the same time- SaaS tech companies update their pricing on average every 2–3 years??!!

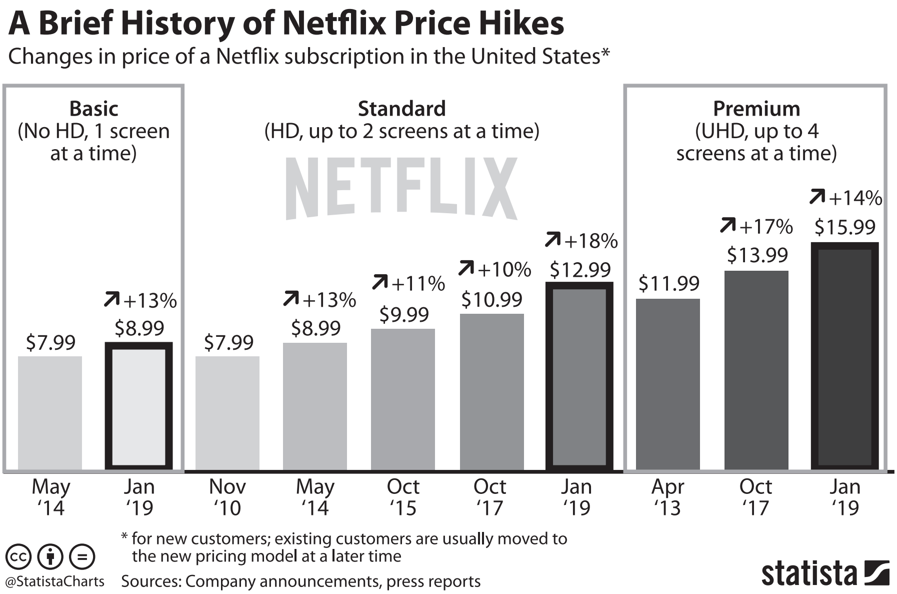
In recent years streaming services have significantly changed and shaped our trends in spending free time and perception of television as entertainment. Every year we have more options to choose from (Amazon, Apple TV plus, Disney, HBO, Hulu to name just a few). Nevertheless, incessantly number one for 20 years is Netflix. It has become a precursor of streaming services and sets standards for digital content. The company took a DVD rental service and transformed it into a cultural icon worth multibillion-dollars. How did Netflix pricing develop over those years?

Starting with DVD rentals back in 1997, they moved to monthly subscriptions in 2000, followed by "Watch Now" streaming in 2007. Throughout its lifetime, Netflix has consistently been at the forefront of change in the market, also when it comes to pricing logic.

How Netflix price strategy evolved over the years?

Where it all started, in the USA, Netflix now has the most users (73 million, Q2 2020). At the beginning of its operation, the platform attracted customers with a low subscription price and only one pricing plan. At first glance, it may seem that such a price solution is too simplistic for such an innovative product. Nothing could be further from the truth! This strategy has allowed Netflix to create huge reach among consumers and build instant awareness. You should remember that back in the year 2000 no one heard of video streaming subscription platforms! Simple pricing was the best solution back then.

Pricing changes came as the company invested more in high-end original series and movies, marketing and technology. As people got the basic concept of what video streaming is about, Netflix was able to develop and address its service to more market segments (4k quality, family plans, simultaneous streaming etc.).



Initially, Netflix introduced the standard module for a price of $8 per month ($7.99 to be precise). However, the increasing demand for new technologies (choose-your-own-adventure format in Black Mirror series) and productions (Stranger Things or The Irishman) gave additional justification for price increases and introduction of new pricing plans. Let's remember that the price entry point remained almost unchanged for 10 years- $7.99->$8.99. This way Nextfilx managed to achive two, seemingly contradicting, goals: positive price perception (how users perceive Netflix's pricing relative to its competitors) and grow ARPU.

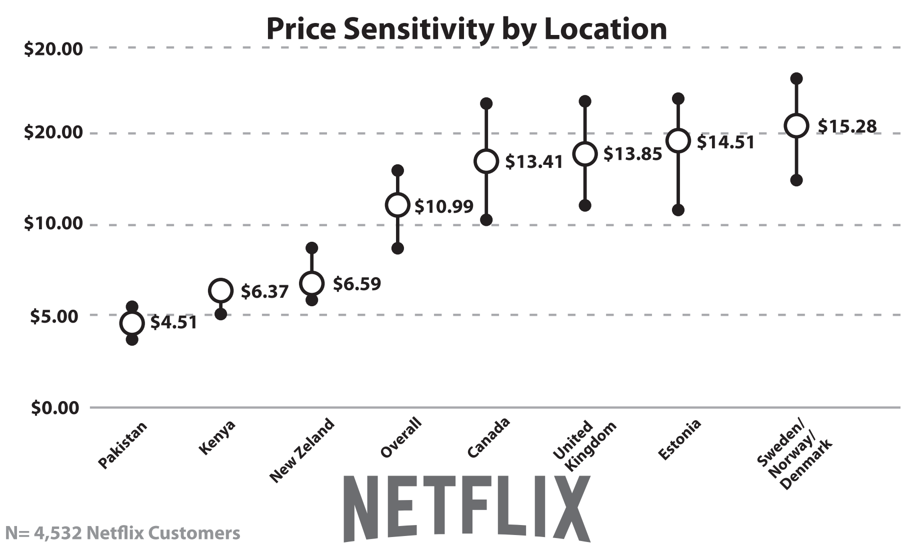
89% of Netflix current users said in a recent survey they would be devastated if Netflix no longer existed. Such a result is a phenomenon on a global scale! Only 11% of respondents said they would not be disappointed. That said, there's still work Netflix can do. There are three aspects that customers have pointed out for improvement:

- 25% said more content — "Continue to add new stuff that other streaming companies do not have.";
- 19% said lower price — "The price has gotten a little high.";
- 8% said improved search/cataloging — "I would like to be able to personally tailor it.".

The results speak for themselves! When it comes to price level complaints- every single company will face a "lowest price" customer segment. If it's only a single digit % of your customer base, it doesn't really affect your bottom-line.

Price discrimination according to Netflix. Is that difficult?

At present, Netflix offers its services in 190 countries. Should pricing differ across geographies? Most potential customers in Asia or Africa would not be willing to pay as much as subscribers in the US and EU.

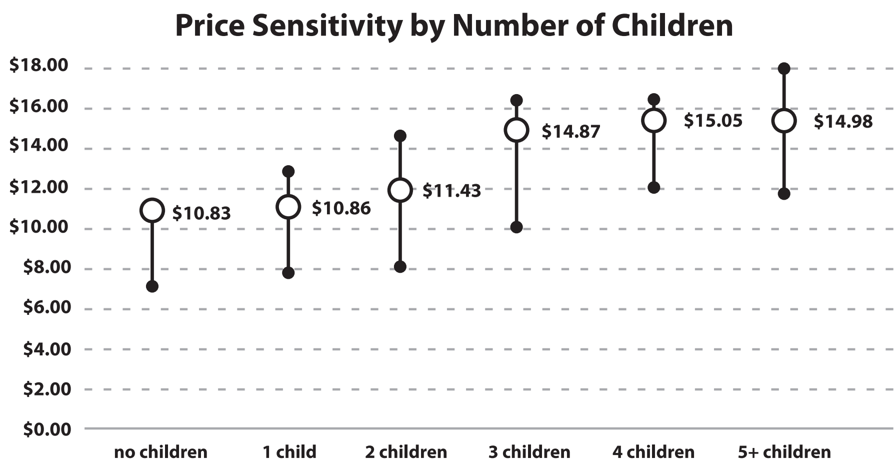


Therefore, Netflix has become an expert in slimmed-down subscription plans. For example, in India Netflix offers a low-end mobile plan for only $3 a month. Such solutions are also implemented in other Asian countries, such as Malaysia and Indonesia.

A good example of price differentiation is the comparison of prices in European and American countries (Source: ProfitWell). For example, in Canada, where users would be willing to pay for Netflix around $13.5, the price of a standard subscription is $8.6 (more than 35% lower). On the other hand, in Sweden, where the willingness to pay is $15.3, the price of the same service is $13.4 (12% lower). Different size of the gap between the willingness to pay level and standard price in those countries shows that Netflix skillfully controls the price. In some regions, it lowers the price of the service to make it more available, while in others, it increases the maximum margin.

In each of these countries, Netflix is charging less than the market would allow. People in these countries want Netflix badly and are willing to pay. They might not have other streaming services to turn to, so Netflix doesn't have the same market pressure as in the US. In those markets Netflix wants to improve market penetration, lock-in as many new customers and make Netflix a default streaming service in each country. Data shows that many customers stay with the streaming provider they've already signed-up to.

Land and expand- Different Products for Different Audiences



NETFLIX

N= 4,532 Netflix Customers

Not every user has the same preferences. And not every user has the same willingness to pay. One way to increase the number of addressable users is to create different product packages for different user segments. SaaS products, for example, are usually segmented by user type (personal/hobby, SMBs, scale ups, enterprise).

While the core product is the same for everyone, premium plans come with additional features (that are more relevant for customer segments willing to pay more) and thus a higher price tag. You would see it even more in B2B SaaS.

The core idea behind these different packages is to find features that are proxies for willingness to pay. Screen quality is a perfect example: Users who are willing to spend $$$ on an Ultra HD TV, are probably also willing to spend more $$$ on a video streaming service.

In a way Nexflix follows the old "land and expand" strategy. In Netflix's case an individual user signs up for a free trial, then converts to a paid user and later might migrate to premium service.

Retention is the king of growth.

What separates top growing companies from all the rest? You might think it is customer acquisition but it's not! It's retention!

If you have poor retention, what's the point of customer acquisition?

The goal of the text below is to show why customer and user retention is the most important factor in traction and growth, the anatomy of retention, and strategies and tactics to improve and optimize the various pieces of retention.

It seems so obvious. Every improvement in retention also improves all of the other factors of your business. Why then do so many companies put all the focus on customer acquisition?

Most (if not all) of your future revenue will come from existing customers.

In a recent project 50% of an ecommerce store's revenue is created by 10% of its customers

→You increase LTV. The longer you retain a user, the more money you'll make of them. and can afford higher CPA at the top of the funnel. That increases your growth opportunities. You'll be able to afford more users from more expensive channels and spend more and grow faster.

→You increase virality. The longer users stay, the more opportunities you have to prompt them to invite other users or recommend your product. The best example is any file hosting platform. Take dropbox.com. The longer and more intensive a user uses the platform the more folders they might share with users outside of the platform which brings them to the product. As you increase virality, you decrease effective CPA and you can get more out of every dollar spent on acquisition.

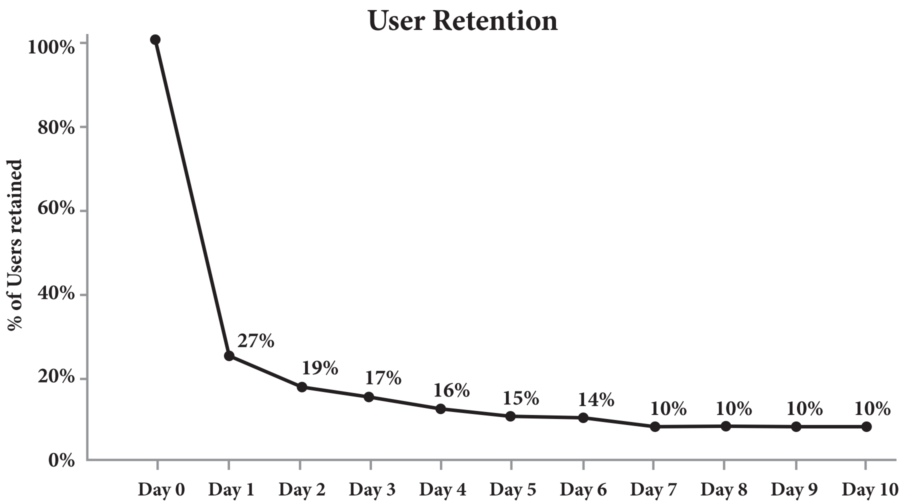
→You increase upgrade rates. Take freemium products. What we see in our projects is a strong positive correlation (r>.7) between the time a user spends with the product and the odds that he or she will upgrade. This way you decrease payback period- every dollar invested in acquisition you get back faster and you can reinvest that at quicker rate and grow more rapidly.

For an ecommerce company we worked with a 2% increase in customer retention had an equivalent impact upon profitability as a 10% reduction operating costs.

→ It costs 5 times as much to attract new customers as it costs to keep an old one.
→ Cheaper than Acquisition. …
→ Loyal Customers are More Profitable. …
→ Your Brand Will Stand Out from the Crowd. …
→ You'll Earn More Word of Mouth Referrals. …
→ Engaged Customers Provide More Feedback. …
→ Customers Will Explore Your Brand. …
→ Loyal Customers are More Forgiving. …
→ Customers Will Welcome Your Marketing

If you have poor retention, nothing else matters.

How to understand and improve your retention? Start with … data analytics. Here's a simple example of cohort retention curve.



Source: https://clevertap.com/

It shows you what percentage of acquired users still use your product and how it develops over time. In the case below, after day 2 over 80% of users are gone. Is this a lot? That depends on what happens next.

The most important factor of retention curves is that they flatten out at some point. Hopefully, you're getting cohorts of users that stay with you over time and stack up on top of each other. If your retention trends toward zero, that's bad. It means that over time you'll churn all the users that you acquired. That makes it hard to sustain growth over time.

To understand this curve you can't just look at it with an ambitious goal to optimize it. You need to also break it down into pieces.

In the graph above you see "day 1" retention (it can also be "week 1" or "month 1" depending on your curve shape, duration of the onboarding etc.). this is about how to get users to experience the core value of our product. It's commonly known as the "Aha moment"

What is that action that makes your users understand the value that your product delivers?

The crucial thing about this chunk of the curve is that even though it's tiny in terms of time, it has the biggest impact. Any improvement that you make here will cascade down the curve and make it shift up and have a major impact over a long period of time. It is often about better onboarding, clearer messaging, better UX for new users.

The second part is "mid term retention". In our case it's days 1–4. So, your user got your core value. You think you're done. Just the opposite is true. This phase is even more challenging. You must make your users use your product on a regular basis, create habits and processes around your product. We all know how difficult it is to change habits. As we're stubborn creatures, the hardest thing to change in this world is human behavior.

Many businesses make this mistake- if our users get our value, they'll automatically get hooked, come back to my application or my product and use it regularly.

If you want to be successful, you must create habits around your product.

The third part is "long term retention". You got your users to experience your core value upfront, managed to rewire their brain to use it over time. Now you have to get your users in front of your product as often as possible. The more they use it over a long period of time, the more chances you have for long-term retention.

There are a lot of strategies on how to slow or flatten the curve off. There are two I'd want to draw your attention to.

Retention hooks

Those are built-in features that give customers a reason to send notifications to other customers, bringing them back to the product. Most social media sites do this quite well, but LinkedIn comes to mind first.

You get endorsed by someone on LinkedIn. Not only will you receive a notification email, but you'll receive a notification as well. More importantly, LinkedIn will encourage you to endorse people in your network.

These types of retention hooks make you feel good about yourself and encourage a retention loop. Active users are continuously pulling inactive users back to the product, reminding them of the core value.

Referral programs work

Different surveys confirm that 70%-90% of customers trust recommendations from someone they know about products (making them the most trustworthy).

Let's look at Dropbox again. The more people users refer to Dropbox, the more free space they have for themselves. On the surface, referral programs might seem like strictly an acquisition play. However, the benefit for Dropbox here is threefold:

- Trusty word of mouth advertising results in new users;
- Habits begin to form as groups of friends and / or colleagues begin relying on the same product;
- A longer habit formation period (extra of free space) results in a higher likelihood of purchase down the road.

Experience shows that referral programs deliver customers of up to 50% greater lifetime value than other customers. So, while encouraging habit formation with existing customers, you're simultaneously acquiring new customers with a higher probability of repeating the purchase behavior.

How to resurrect your customer retention after COVID knockdown

Most of you might have heard this quote from Mike Tyson - Everybody Has a Plan Until They Get Punched in the Mouth.

For some of the businesses, 2020 was a hard, unexpected hit right between the eyes.

You might be tired of all the COVID-related things. True, it's overwhelming. But just because you pretend it's not there, that doesn't mean it's the best approach? I see a lot of companies and teams working hard to adapt to the new normal. My expectation is that the real work is still ahead of us.

I wrote my last text on retention and a lot of you got back to me saying- "It all makes sense in "normal" times but if you didn't notice, 2020 was somewhat different".

I still believe that retention is the king of growth (or survival). What did change- specially for businesses negatively affected by the pandemic- are the underlining and surrounding factors.

A lot of you asked me to write on how to adjust your retention strategy if 2020 was an unexpected knock-down hit for you.

Let's start with what stays the same.

1. **Focus on usage, not revenue!**

   Revenue is a derivative of usage. Most probably your decrease in revenue is a consequence of drop in usage. Track and optimize for the usage, not for $. If you have a strong usage base, money will come.

2. **Break down retention into its core inputs!**

   It's difficult to have actionable ideas to improve retention. What you can do, is to work on your retention at every stage of your customer lifecycle.

   - **Get**- How to attract new customers?
   - **Engage**- how to make your existing customers use your product or service more?
   - **Keep**- how to win back those being inactive for a period of time or are considering to quit?

To think about your retention recovery plan, try to ask yourself this question:

How have the habits of your customers changed? How might they change in the future?

I mean motivations to sign-up, use, cancel. To understand it better, break it down by your customer segments/ buying personas etc. Remember that it will probably be a rather dynamic picture, so you should update your answer at least every 2–4 weeks, depending on your business.

Looking at the retention numbers (sign-ups, usage, cancellations) try to understand reasons for changes. Ask yourself: why? why? why? why? Monitoring quantitative measures is not enough, you must understand underlying motivations!

This should allow you to understand which input you should focus on to improve your retention. Don't think that your customers will magically re-appear. Even if they do, it'll take time and reinforcement to reestablish.

How to resurrect your users? Who to resurrect?

Check your own data. My hint is that most of you, severely affected by the pandemic, suffer from the fact that your current customers decreased in usage. To re-activate existing users is usually more difficult than initial activation of new cohorts. I don't want to discourage anyone, but I'd expect that you can re-activate only a fraction of your pre-COVID customers. To be efficient, you should prioritize your most promising customer segments. Your first, intuitive choice might be your pre-COVID "heavy users" or key accounts. But it can be misleading.

I'll give you an example form a accommodation booking marketplace (for confidentiality, let's say it's something like hotels.com, booking.com, but it's neither of those two). Looking at historical data, they had two important segments on the demand-side: business travelers and international family holidays. Both of those segments are rather unlikely to be first to come back. It seems to make more sense to focus on local travelers in the first resurrection step.

On the supply-side they had a significant segment of large, +50 bed accommodation providers (hotels). Who's likely to open first and get bookings- large hotel or small family-owned 3 room guesthouse? I'd bet the latter.

Some customers will never return

Take my own case. I had a gym membership and would train 3x/week. But last spring I bought myself an elliptical trainer, treadmill, and a set of weights. All I need I have at home now and I don't plan to go to the gym any time soon. I have a strong alternative to my gym membership.

On the other hand, consider my friend who's a member at the same gym. His COVID alternative is watching exercise videos on YouTube 3x week. He hates it but doesn't have any better option. He can't wait for the gym to re-open. His alternative is weak. For the gym, my friend should be a resurrection priority, not me.

Think ahead — Imagining the unimaginable, perform a "pre-mortem"

I'm honored to know S tanford Professor Baba Shiv for some years. He's a world's leading expert in neuroeconomics. Prof. Shiv advises companies to perform "pre-mortems" (aka prospective hindsight). We're great at retrospective rationalizing, analyzing what went right or wrong after the fact. We always seem to know what the right tactic would have been once the game is over. Obviously it's much harder to make the right choices beforehand. Hindsight is always 20/20.

I know a lot of companies that greatly benefited over the years from Prof. Shiv's pre-mortem approach. A pre-mortem of a healthy company in normal times can provide a number of key insights. You try to identify those factors that might cause the downfall of your current business model. Then you assess which factors represent a genuine risk and determine which offer the greatest opportunities. Once you've identified the possible causes of death, you can start to anticipate.

I strongly believe "pre-mortem" is even more relevant these days! Your ability to identify possible issues and also to come up with clear solutions is dramatically improved when you aren't already in a stressful situation. Humans are biased substantially to optimism — you need to explicitly give them permission to imagine the scenario where everything goes wrong.

What are the extreme scenarios that could happen?

What signals would tell us that this scenario is unfolding?

What is the impact on the business?

What would we do to mitigate?

It's better if the team makes decisions when the stakes aren't high, so that if one of the scenarios happens, we already have an action plan to address this scenario.

Quick fixes?

I don't believe in silver-bullets. But maybe some of the ideas below will be useful.

1. **Connect your brand initiatives with customers**

   Humans like products they feel invested in and can trust. Generate that trust for your customers. Use social media to connect with your customer about the vision behind your company, any interesting facts about products, the kind of leadership appeal, smart goals, and resilience during COVID-19. This will keep them invested and build trust when they see the groundwork behind the company.

2. **Concise communication**

   It is very important to put the right and best foot forward. Instead of bombarding your customers with generic emails, go for something interesting that will add value to their overall life. Tell them the unique features of how your company can aid them at this time. Providing value is a great way to not only remind them that you are there, but it's also important to keep goodwill in their minds about their association with you.

3. Add-ons to products and services

See how well you can stand out amongst competitors by tweaking your product to address current needs or concerns. Relevant additions that address immediate concerns can be a great help to all and will even bring in more customers.

4. Social media for the win.

Social media plays an integral role today and its best to use it in a rich manner of advantage. Even right now most of your customers are scrolling through Instagram, Facebook, and Twitter and consuming digital content. Make your mark there with engaging content that is interactive. Respond to customer queries, answer their comments, and show your presence.

5. Incentivize

It's an open secret that incentivizing your customers is important to keep them invested in your product or service. Measures such as gift cards, discounts, free trials, and more can help them stick. Reduce customer churn through personalization and offer rewards for promotion. Implement customer loyalty programs that will aim at client retention and brand loyalty.

6. Create helpful content

Publishing online content can bring you to the top of your customers' minds, but the key here is to create content that is helpful. Offer webinars, podcasts and online tutorials to teach your customers something that solves their current needs. Consider hosting online events or live video streams to connect with your community and keep them engaged. This content can be informational as well as entertaining.

7. **Add a personal touch**

Remember that the coronavirus crisis has personally impacted your customers on multiple levels. As you speak to your customers, create messaging that is personal and compassionate. Business owners can deliver personal touches through handwritten cards, customized emails and check-in phone calls to see how their customers are doing.

Mike Tyson was right: Everybody does have a plan until they get punched in the mouth

The real key to success is to have the right kind of plan to be able to move forward after they get hit. For those running any size business or organization, from the CEO of the largest organization to an entrepreneur heading his or her own startup to the mayor of a small town, you will always be wise to plan for bumps in the road- and more- along the way as you execute that beautiful, flawless plan. That's reality, and reality is more competitive and complicated each and every day.

This text was inspired by my recent experience with numerous companies, as well as all the amazing content on retention and growth from reforge.com. If you want to explore more, I strongly recommend to check out Reforge Retention + Engagement program.

Want to be successful? Prepare for a daily struggle of constant rejection trying to retain users. The good news is that you'll learn some lessons along the way and hopefully improve your retention KPIs.

I work with loads of Saas businesses recently. What I see is that some questions are quite common across the board. I decided to start a series of texts that tackle the most common challenges faced these days by subscription businesses. Here's my first one. I hope it to be a living series, so please reach out and give feedback on what you feel I should cover next.

Dan Ariely is one of my favorite authors, and expert in behavioral economics. Allow me to start here by butchering his quote and saying :

"Retention is like teenage sex: everyone SAYS they're doing it, few are, and if they are then it's not as great as they say it is."

Some (most) of you might think- "F!@#$ off, I'm doing retention: I send e-mails." Let me challenge you on this one- your emails probably suck, and they probably have promotions which train people to respond to the discount on your product instead of to see the actual value of the product.

Before I write about some lessons I've learned in retention, I want to write about what happens if you're really good at everything else, but not good at retention. T witter is a perfect example here. Twitter has extremely effective acquisition. Though, their activation rate into a monthly active user hovers around 10–15%. So, 85 out of every 100 users that try Twitter, don't get it and they leave. If you do the math on that, Twitter would run out of the entire Internet to acquire new users. What happens with Twitter is, they end up with ~350m MAU and almost 2bln dormant users! What they learned after they went public.

It's much harder to reacquire someone that tried Twitter and didn't get it, than to introduce someone to a great experience the first time.

What Twitter would have rather done is- not sign up as many of those users! Rather, wait until they figured out how to explain the value and the service better to the average user, and then go out and get those users.

How do you improve retention?

The first thing you have to do — learn what causes it? Only then you have to learn to love the rejection (or aka the feedback) and the data as to why customers don't retain.

Methods to retain users better

For a few reasons, let's take a food delivery platform as an example. Like: Uber Eats, Postmates, Doordash, Bolt Food, Wolt etc. Because it's probably an industry most of you can relate to. Plus, I dare to say that I have some hands-on experience here.

Improve the product

You probably think- "No shit, Sherlock! That's not very interesting for me." But the one thing I want you to take away, if nothing else, from this read is… Retention is driven by a lunatic, or maniacal focus on improving the core product.

This is not usually accomplished by building new things into the product. It is usually by reducing the friction of the current product and making the product simpler to use. Sometimes even by removing features, rather than adding them. This is a mistake I see a ton of founders make. They (founders) think:

"My products not super great, but I add this cool feature and it's gonna be better."

All it does is, it makes the product more complicated, and your retention rates decrease instead of increase.

What can food delivery platforms do to improve the product to increase retention? Data shows that with every additional restaurant they add in an area, they increase not only the conversion rate but also they increase the retention rate. i.e. how much and how many people who ordered first-time came back. Plus they increase the frequency.

By now you hopefully understand why those companies are very aggressive about adding as many restaurants as they can onto the platform →They see the return…

1. **Smooth onboarding, more users (minimum order delivery)**

   The second thing they work on, is lowering the minimums and delivery fees on the platform. Restaurants might get greedy and they might think- "I only want a delivery order if someone's gonna spend e.g. $20." The problem is that the conversion gets super low. Customers come to the platform and they see all these restaurants with high minimums. If a person orders just for her/himself, they might not want to spend that much money. So those platforms work directly with restaurants to help them understand that if they were able to lower their minimums and fees, they would actually make more money over the long run due to higher volume. This is true in almost all cases…

2. Easier onboarding, UX, value communication

For food delivery platforms you often have 3 options on how to continue as a first-time user:

a. create an account;
b. could connect with social platform login (Facebook etc.);
c. create a guest account which just lets you go through, without giving any information.

Data would show a disturbing trend - people that continue as a guest for their first order whose retention rates continuously drop. Still, the volume of people clicking the guest account increases. How to solve it?

Experiment with UX, and value communication. Instead of having the above three options with equal weight, show the value of creating an account. Outline how users could quickly reorder food, how they can choose favorites, etc. Only then, below all of that information, show the guest account option.

The experiment might show that a platform is able to take new users and not lose any of them. Conversion rates stay the same. But instead of ~50% of people choosing a guest option for their first time order, it drops to 15%. And the people that now create accounts, that would have been guest accounts before, retain just as well as the people that were opting in to create accounts before the experiment.

It's just a few examples of different options figuring out what drives increased retention, doing experiments and making the product better.

Maciej has taught as a guest speaker in the Executive Program for Growing Companies for the Stanford Graduate School of Business since 2019. His extensive knowledge of pricing, years of experience in multiple industries, and teaching style are just some of the reasons his class sessions are so well received. Maciej Kraus' book is a remarkably thorough and practical guide to pricing in a range of industries, with a particular focus on retail and subscription.

James Perkins,
Director of Executive Education Programs at Stanford Graduate School of Business

An insider's perspective, full of insights with modern tools and frameworks for any organization that wants to develop customer-centric pricing models. There are very few books that provide this level of detail in an accessible, easy to follow, step-by-step guide on how to put pricing at the center of customer acquisition and retention. Maciej has done it again!

Francisco Bram,
Vice-President of Marketing at Albertsons Companies

The authors have written a practical and organized quick read for all retailers and brands on how to win the buy box and increase consumer trust through pricing. They lay out proven and systematic pricing methodologies for today and into the future. It's a binge-worthy must-read for all retail leaders, merchants, and pricing professionals who are looking to use AI or technology to create, maintain, and win with pricing power.

Kirat Anand,
Former Head of General Merchandise Pricing, Promotion, and Markdown Strategy at Walmart

“The Future of Pricing” offers a compelling view into the full-scope of pricing considerations, and illuminates how technology can be applied to turn pricing into a strategic asset. This book is highly recommended for anyone in the pricing field, as well as for senior leaders who impact pricing decisions.

David Perry,
Sales Leader at Adobe, Author, Advisor

"Maciej Kraus' book is a remarkably thorough guide to pricing with particular focus on retail and subscription. I have had the privilege of knowing Macej for years. He is a practitioner with a deep understanding of the critical factors affecting pricing. His book is a must-read for anyone involved in pricing decisions. University students with aspirations to work in business will find the book particularly useful and informative. I can't wait to see this book becoming a standard reading in the realm of pricing."

Baba Shiv,
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