On the pricing policy in environments with unbalanced economies. An approach to the Diffusion Law (PART ONE)

Vicente González-Prida, Department of Industrial Management, University of Seville, Spain.
Anthony Raman, Councilor – Canadian Institute of Marketing, New Zealand

1 INTRODUCTION

Usually, the selling price of a product is calculated as the sum of the acquisition or creation cost plus a defined margin desired by the company (Figure 1). Such costs may include the costs of commercialization, distribution, manufacturing, administration etc. On the other hand, the margin usually makes reference to the final price of a product with respect to all variable costs.

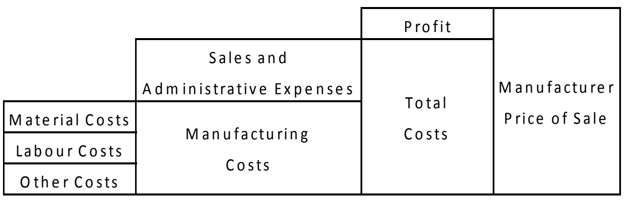

Fig. 1 Cost structure and Price of sale

For a specific company and taking into account its entire product portfolio, the profit is then the difference between the total contribution margin less its fixed costs. The margin therefore is a different concept of profit, expressing a closely related idea of added value.

With this, we want to show the importance of defining properly the price of a product when it is decided to launch it to the market. Among many other factors, this decision will depend on the type of product or service itself, the moment in the commercialization life cycle, and the political and legal environment around this commercialization. This article briefly discusses these last two points of view: First, we observe how the pricing strategy changes throughout the life cycle of a product launched to the market with a certain degree of differentiation; and second, we observe how the continuing integration of countries into a free trade market forces companies to operate in an international environment considering other criteria to establish their pricing strategies. For this purpose, this article suggests an analogy based on the law of diffusion or Fick´s Law. Finally, some conclusions reached during the development of the present research are shown at the end of the paper.

2 PRICES DEPENDING ON THE PRODUCT LIFE CYCLE AND THE POLITICAL ENVIRONMENT

When a product is launched to a market, it experiences several stages. All this stages are called the life cycle of the product, which begins with its introduction in the market and ends when the product disappears from the market. During this period we can distinguish four stages shown in Figure 2.

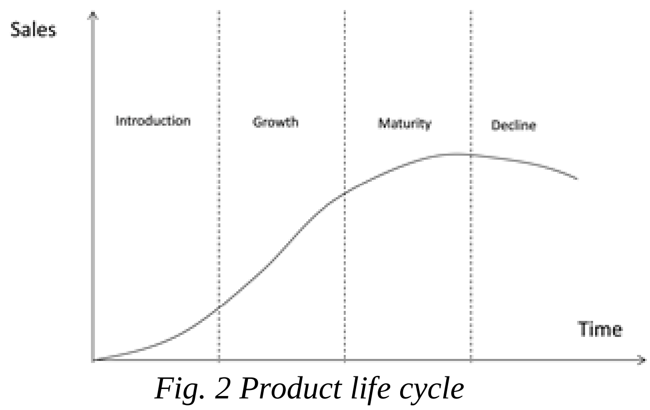

Fig. 2 Product life cycle

There are many factors that may vary during these stages: policy sales, distribution, advertising...(as internal variables), or taxes, competitors, regulations…(as external variables to the company). Obviously, the moment under which we analyze a product will be crucial for deciding its price for sale. Making a simplification, in a first approach the price function (*p*) depends consequently on the time (*t*):

$$p = p\,(t) \qquad (1)$$

For example, in the phase when a new product is introduced in the market, sales may be generally not high, so the cost per unit produced is elevated. For this reason, many companies focus on a goal of reaching the break-even point, where the profit is zero or, in other words, where the company just covers costs. On the contrary, other companies decide to sell their products at a higher price of parity, aiming to skim the market, and knowing consequently how much a customer is willing to pay for that specific product. These circumstances often occur in new products based on a strategy of differentiation.

After that, the phase of growth comes, where sales are expected to be on the rise. It will make the cost go down in proportion to each unit produced. This will increase the profit as sales are already above the break-even point. Consumers at this stage tend to be innovative and, thus, it begins to grow the number of competitors. The business objective is focused on: increasing the market share and distribution network; improving the quality of the main product; launching new models and accessories etc. Some consumer goods companies usually maintain and / or even reduce the price to reach other segments of the market, which are more sensitive to prices, increasing by this way the market share.

At this point, the product reaches its maturity in the market, going to its maximum of sales, so the cost per unit produced is the minimum. Profits have increased over the previous stage and the product is well known by the target audience. There is a situation where firms tend to focus on those models that are more demanded, continuously improving their quality and design. In some cases, it is the moment when companies launch a second competitive brand with a reduced price, while maintaining the standards and differentiation of the first brand.

Finally comes the decline phase in which the level of sales starts to fall and company may work with less margin. Customers here are already lagging, and competitors begin to leave the sector. The remaining companies focus on the most profitable models, reducing prices overall. At this stage, advertising is reduced to the level of remembering the brand to the loyal consumers.

As commented above, apart from the moment of the life cycle in which the product is in the market, the regulatory environment in which the market works is another crucial factor to the applied pricing policy. Excepting certain sectors of the economy where there is still some regulation and protection, usually the current global macroeconomic environment allows a high economic freedom. This situation increases a fierce competition between companies, where the objective is the consumer. Consequently, the consumer finds a high variety of options for the same product. Therefore (and continuing with our approach), our price function (*p*) not only depends on the time (*t*), but also the space (*s*) in which the product commercialization is getting on:

$$p = p\,(s,t) \qquad (2)$$

The creation of free trade areas (Figure 2) is an opportunity for dynamic exporters, but a threat to those who have endured thanks to protectionism. On the other hand, the need to adapt to common quality standards and new security policies increases inevitably the manufacturing costs.

Fig. 3 Free Trade Areas[1]

All these changes (among others) require managers and entrepreneurs to think about the changes that may affect their business or their industry, to seize those opportunities that arise at all times. Currently, one can see in the European Union (EU)

[1] www.wikipedia.org

how prices for the same product can be very different from one country to another. For example, the same model of German car can be purchased outside Germany at a much reduced price. In the pharmaceutical sector can be found even more extreme variations, finding cases with differences up to five times lower price.

SOURCES

Dibb, S, Simkin, L. (2013). Marketing Essentials (2nd ed.). Andover, Cengage (In Press), pp. 250.

Ellickson, P. B., Misra, S., & Nair, H. S. (2012). Repositioning dynamics and pricing strategy. Journal of Marketing Research, 49(6), 750-772.

Gandhi, KS. (2012). Use of Fick's law and Maxwell–Stefan equations in computation of multicomponent diffusion. AIChE Journal, 58(11), 3601-3605.

http://en.wikipedia.org/wiki/Free_trade_area

http://www.europa.eu.int/comm/internal_market

http://newsoffice.mit.edu/2014/one-currency-one-price

Kireyev, P., Kumar, V., & Ofek, E. (2014). Match Your Own Price? Self-Matching as a Retailer's Multichannel Pricing Strategy.

Lustig, H., Roussanov, N., & Verdelhan, A. (2011). Common risk factors in currency markets. Review of Financial Studies, 24(11), 3731-3777.

Mandelbrot, B. B. (2010). Fractals and scaling in finance: discontinuity, concentration, risk. Springer Publishing Company, Incorporated.

Philip & Keller, L. Kevin (2012). Marketing Management (14th ed). Pearson Education Limited

Walter, I. (2014). Non-tariff barriers and the free-trade area option. PSL Quarterly Review, 22(88).