

**THEORETICAL REVIEW OF PRICING STRATEGY EVEN AND ODD AND PSYCHOLOGICAL.**

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**Abstract.**

This paper presents a view about the theoretical framework and odd and even prices, also of psychological prices. It also shows, in summary form empirical evidence about the effectiveness of this pricing strategy, validated for different products. Finally the author presents results where shown evidence of the effectiveness of the strategy of psychological prices in Mexico.

**Key word: Purchase decision, psychological prices, theoretical framework about odd and even prices.**

**JEL: M20; D40; D11.**

**I. Introduction.**

At present the business competes through the marketing mix consisting of product, place, promotion and price strategies. It is precisely at the price where we can find a lot of tricks that increase the demand for a product.

According Dupont (2004) set the price is a very complex science and depends on the product, some marketing manuals you choose to use odd prices, that is to say, prices ending in the numbers 1,3,5,7 and 9 or just shy of a price number round. The assumption of these prices is that increase consumer awareness.

So, keep in mind that prices finished in 9 or 5 appear in more than 80% of retail prices. According to Cahners Advertising Research Report of 1979 cited by Dupont (2004) 98.7% of consumers they were influenced by the price to make a purchase. (Dupont, 2004)

In principle, when consumers are influenced by the price small changes in prices may indicate differences in the product in the consumer's perception, this means that a product of \$ 300.00 is perceived as higher quality compared with one of \$ 299.99 even though the difference is only a penny, perceived quality is higher in the product of \$300.00. (Kotler & Armstrong, 2008)

With respect to the odd prices, these are fixed to control bargains in return the even prices are set to involve quality generally, it really changes the behavior of consumers in the face of prices ending in 99 in connection with prices ending in zeros is the change in the digits on the left and not in ending the price; an explanation for this phenomenon is found in an investigation that showed that when the price varied in the left digits from 20 to 19.99, consumers perceive lower finished at 99, on the contrary, when

left digits not going to change 23.60 to 23.59 individuals perceived that the prices were essentially the same. (Lamb, Hair, & McDaniel, 2011).

With regard to even prices as already mentioned is emphasized to highlight the attributes that are perceived by consumers as these qualities, that is why perfumes are set at \$ 100 dollars per bottle, a prestigious clock in 500 and a coat of vision in 1000 dollars, the demand curve pairs of odd and even prices is segmented, in products mentioned the demand curve is also segmented except at the ends that would represent prices in even numbers and elastic demand. (Lamb, Hair, & McDaniel, 2011).

## **II Theoretical elements.**

### **II.1. Theoretical and conceptual framework.**

Keep in mind that, the prices are rarely round numbers, this arises from two factors; first, demand curves demand curves are not straight lines; demand elasticity of a product changes significantly at various points of price and, In second place clients perceive that the seller did everything to reduce the price. (Farrell & Hartline, 2006).

What is really important is to analyze the way in how people process information that we receive and categorize the data; the mind works very quickly and remembers very little of what it sees and hears, to make this selection of the information, a person just remember the numbers to the left of the price because these correspond those with more monetary value, This argument is where we can find the success of the strategy just below because these digits at the end of the price not remembered easily. (Beracha & Seiler, 2013)

For example, prices ending in 0, 5 and 9 are over represented on the market. In the finished in 9 is offered two explanations; one, indicating the tendency of consumers to consider it as round price in which give change, and the other, It is that consumers underestimate the price when it ends with 9 considering only the digits on the left through a mental process that selects the imperfect information. (Schindler & Kirby, 1997)

From all the above it is stated that: 'The change of \$ 45.95 to \$ 49.95 perhaps as result in a small decrease in demand. When the price reaches \$ 50.00, just 5 cents more, the drop in demand can be major". (Farrell & Hartline, 2006, p., 204)

The effect of odd prices ending in 9 increased demand and the increase depends on the product being offering. The effect that the price ended 9 can cause is stronger in new products with which the consumers have had few experiences in the past, that is to say, products that have been seen in a few previous occasions, in products where the consumer has experiences the effect is less. (Anderson & Simester. 2003).

Thus, for Schindler (2003), a price finished in 9 means a discount in the price for the consumer and the opportunity to buy cheaper.

(Baumgartner & Steiner, 2007), they comment about the fact that almost all empirical applications have been made at the aggregate level, assuming the homogeneity in the response of consumers to odd prices. They provide the first empirical study to measure the effects of fixing odd prices in the level of individual consumer.

True is that, there is limited empirical evidence that the digit at the end of price affect demand. Data and explanations do not say how consumers form the belief that price ended on 9 transmits information favorable that increasing demand. The explanation seems to be that is the way how consumers process information of price that is imperfect. (Anderson & Simester, 2003)

On the other hand, in the case where there are two products with exactly the same features and one had set a price of \$ 99.99 and another priced at \$ 100.00 even when logic and in practical terms this should not impact, research shows that consumers they will be more likely to choose and buy the product from \$ 99.99 even if the difference is \$ 0.01. (Choi, Li, Rangan, Chatterjee, & Singh, 2014)

In other order of ideas, with regard to the hedonistic consumption, odd prices may have negative implications for consumers because it allows them to justify, by pretending to be cheaper, leading them to purchase excessive consumption, the consumer can justify purchase will continue to buying. (Choi, Li, Rangan, Chatterjee, & Singh, 2014).

Quigley y Notarantonio in 1992 investigating the image of the products that end up in price for 00 by comparing these prices with those ending in 99 or 98, what they found was that consumers tended to receive a discount on prices ending in 98 or 99 prices, rather than the finished zeros, did not found statistical evidence of a significant difference between a price of 98 with one of 99 the effect on the perception of these two numbers were the same. (Schindler, 2001).

Apparently one of the explanations for why consumers perceived the price ended in 99 like more high that finished between 00 and 98 is that the consumers have learned in their commercial relations that this strategy does not represent an offer or a better price. (Schindler, 2001)

This suggests that the consumer, understand the strategy of prices ending in nine or unrounded prices and the purposes for which companies have it in their pricing, perceived to be a way to manipulate it to buy a product that is apparently in offer but just charging more for what they perceive.

Due to the above fact, it is proposed that create regulatory rules to protect consumers from manipulative strategies for the price for these not to be manipulated by a price ending in 99 and that educate consumers so they can decide better the purchase and not be influenced for the price.

(Schindler, 2001)

As regards the designation of psychological price from (Folkertsma, 2001), it is considered if it ends in 9, these prices are used in cafes, bars and public transport. If we assume that .99 is the only psychological price between 0.80 and 1.00, the price of 1.89 converted euros and rounded to the next psychological price will increase in price of 15%.

The image of the prices of 99 compared to prices ending in 00 was object the investigation of Schindler and Kibarian who in their study were asked the way in that the prices finished in 99 affecting quality image that the consumers perceived of a product, The study consisted to investigated the reaction of people in the face of price finished in 99 and one finished in 00, the subjects surveyed saw only one of the two prices, that is, they saw the price of 99 or the finished in 00 but did not see the two prices. (Schindler & Kibarian, 2001).

The authors mentioned above used in this study commercial papers of 8 different shops, research subjects were provided the prices; One group was given the papers with prices finished in 99 and the other group other paper but the prices finished at 00 prices, that is, for each person seeing an article with a finished 99 price was another seeing the same article with a price finished at 00, the price range was \$ 12 to \$ 500 dollars of products offered in women's clothing catalogs, men's clothing, furniture and shoes for women. (Kibarian & Schindler, 2001).

What they showed was that when a price is expressed in a termination of 99 individuals considered that they would not find a cheaper price. In high quality retailers set prices of 99 does not favor the image of quality compared with prices ending in 00. (Schindler & Kibarian, 2001).

Interesting research about prices finished nine, consisted of five experiments to show how much influence and why have impact these prices that are perceived lower to a penny and ending in zeros, this occurs only when the left digit is different as in \$ 2.99 and \$ 3.00, the effect also depends on the difference between the price at which a product is sold and the price competition difference, it has a greater effect when the difference is smaller, the effect of nine numbers at the end of the digits is not limited to the prices. (Thomas & Morwitz, 2005)

This research was asked to 52 students of undergraduate that bought prices that would show them, the prices were \$ 2.99 and \$ 3.00 on a session and \$ 3.59 and \$ 3.60 the next time that they showed prices, what they found was that when the left digit is does not change, the difference is not perceived and when change, in this test of 3 to 2, if it is perceived by the change in the units not by te diffrence of one cent difference in price.

That is, what determines the perception that the price is cheaper is the difference in the numbers to the left of price and which represent greater monetary value, apparently when a person looks at prices \$ 2.99 and have another \$ 3.00 , perceptions of the magnitudes are affected since identified a difference of 1 instead of .01 making it seem a lot cheaper 2.99. (Thomas & Morwitz, 2005).

The lower pricing strategy, pricing unrounded and prices ending in 9, odd and even are very applied for products sold on television such as the Innova beginning with a high price and after expiry of the advertisement price decrease steadily prices finished, mostly, at 9, the objective of that is that the consumer believe it is an opportunity to buy on sale at a price much lower and will save money if buy the product advertised in the commercial, they make the focus is more on price than if the consumer needs to buy the offered product.

## **II.2. Odd and even prices and psychological prices: Cultural Context.**

According Schindler (1991) price provides relative information about the quality of a product. Note also that, some numbers pursuant to psychological studies, such as the 8 create a soothing effect while 7 is an angle that can create an unsettling effect. (Kotler & Armstrong, 2008).

To clarify this idea, consider that in Chinese culture numbers have meanings of superstition so seeing them can produce a favorable or stressful effect on individuals being that, the Chinese relates number 8 with good luck and prosperity; instead the 4 with death. Which indicates a tendency of individuals to promote the use of number 8 above 4 in business practices in price fixing. (Simmons & Schindler, 2002).

A very interesting work in relation with comparative analysis between diametrically different cultures with regard to fixing prices even and odd is the study conducted in the same way in China, where asked people who did not know the purpose of the research that will select prices randomof the major newspapers in China (sample of 499 prices), being the most common numbers that prices end are in order 8, 5 and 9. By contrast 4 is the least used by traders.

In the study prices were divided into two groups; one consists of those above and, other one below the average price, which turned out to be more expensive than the average were considered as high prices and other cheap prices. Thus it demonstrated the ineffectiveness of the price strategy once considered completion in 4 called both high prices and low or cheap. Nevertheless, for a number 8 was found a significant difference in that the trend i, find these prices in the category of lower prices with more often than high prices. (Simmons & Schindler, 2002).

Following the reasoning, with this research it is a significant difference between Chinese culture and that of the United States for example, in the practice of fixing prices even and odd; given that, the EU usually at 9 and in China the prices are set with 8 at the end by the superstitions that have about

numbers in China. (Simmons & Schindler, 2002)

With regard to the scope of government organizations in some countries, for example, Denmark, also apply these pricing strategies, as it is in the case of tax payment. Also odd and even prices, especially finished in nine are overrepresented. As a retailer uses the odd price, holders uses odd taxes with the purpose of minimize the political costs and maximize income. Also, the numbers are most commonly used are 6, 7, 8 and 9 below decimal numbers 1, 2, 3 and 4. (Olsen, 2011)

We also note that people tend to process the numbers through a process from left to right this is supported by the finding that in Denmark of a universe of 9,533 observed taxes, the value of 19.9% in the tax rate is the most frequent. Tax rates of just below a whole number are overrepresented. (Olsen, 2011).

Similarly, in Holland was made an investigation in which a sample of 7200 prices were selected randomly by a computer to study the psychological prices and the effects these had to convert the price to euros where price is usually performed round. (Folkertsma, 2001).

In México, According to Cenicerros (2015: p.1081): “the psychological pricing strategy is more effective in women than in men. The consequences obtained from the sample of 300 buyers who were presented as stimulus products (condensed milk) with whole price and, even and odd, are conclusive; At first, the variables prices and consumer gender are related categorically (.0001<.05).  $H_0$ : The strategy of price fixing odd and even doesn't have more effective when valid for female buyers”. It is rejected ( $P=.0002<.05$ ). Finally, of total number of valid cases in the sample of women (166), the proportion who selected the pricing strategy is  $P_{1=}.7048$ . While, the total number of men (131), the  $P_{2=}.4961$ ”.

### **II.3. Other practical cases of odd and even prices and psychological prices.**

Another example shows how this odd pricing strategy also frequently used car dealers that their vehicles establish them a price with an odd number that causes an effect of a reduction of thousands pesos on the sale price. An example is given in a car of \$ 145,000 offered to 144,900, the difference is \$ 100 but perception is a difference of \$ 1,000.

In the Apple store, iTunes all prices of the product ending in 99, so consumers can read as 90 or even 9 cents and not a penny below the dollar. Even when the price of the albums varies depending on the artist's popularity, keep the \$ 99 termination. Even when the product prices end in dollars without cents is common to find prices that end with a 9, for example 9, 99, 999. (Mckenzie, 2008)

In a study of 54 students from the University of Midwestern, the set was formed by 29 men and 25

women with a mean age of 21.8 years who were presented with two options for laptop, a computer was a luxury brand and the other not. The luxury was set two prices, first one of \$ 599 and after it priced at \$ 600 while the laptop was not luxury brand will set a price of \$ 530. The results showed that students in 85% of the time chose the luxury brand at a price of \$ 599 and to increase it to \$ 600 56% switched to another brand \$ 530. (Choi, Li, Rangan, Chatterjee, & Singh, 2014).

In a study conducted in 1997 in E.U. articles by brand and model number or size of packaging were chosen. Health and beauty items, clothes, toys and sports-related items are included. The research was formed by 1,200 prices. The conclusion was that prices ending in 99 are the most common to appear in a 56.8% price and that they are perceived as higher prices than those ending in the digits from 00 to 98. (Schindler, 2001).

In another study commercial papers of 8 different stores, the subjects of the investigation were provided prices; One group were given newspapers with prices ending in 99 and the other one like it but with prices ending in 00, that is to say for each person seeing an article with a finished price in 99 was another seeing the same article with a price finished 00, range price was \$ 12 to \$ 500 dollars of products offered in catalogs of clothes for women, clothes for gentleman, furniture and shoes for women. (Schindler & Kibarian, 2001).

When a company uses the strategy of just below acquires the ability to establish a list of higher prices compared with competitors who do not use it. It is interesting that even when have a price just below the consumers try to negotiate the price, this is perceived at the time of buying houses. (Beracha & Seiler, 2013)

(Baumgartner & Steiner, 2007), studied as chocolate drinks of different brands and notebook are perceived by consumers as the odd price. Concluding that consumers so far has seen him evenly. They conclude that the answer is rather mixed when the problem is studied in a disaggregated way.

(Kendall et al, 1998), analyzed the effects of odd prices in the following products: Aerosols, cheeses and electric kettles. Concluding that set odd prices generates greater future demand.

Another study validated the theory of this type of pricing strategy when using personal care products. They used to do a model of binary logistic regression with spline and stratifying the consumer market. (Wedel, & Leeflang, 1998)

(Coulter, 2001), in laboratory experiments are presented to consumers prices odd hair dryers, concluding that individuals who participated more easily remembered numbers appearing on the left.

Instead, (Schindler, & Chandrasekaran, 2004) used in their research like products microwave ovens and electric toasters. They used tests to measure the ability to recall prices. Stressing the importance of



setting the attention to read prices from left to right.

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