

## INFLUENCE OF PRICE AND QUALITY TO CUSTOMER SATISFACTION: NEUROMARKETING APPROACH

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**Annotation.** The purpose of this article is to analyze literature and find out empirical evidence on product price and quality influence on customer satisfaction through neuromarketing approach. Customers' satisfaction on their purchase is a significant factor that leads business to success. In recent times, customer satisfaction has gained new attention within the context of the paradigm shift from transactional marketing to relationship marketing. Even it is agreed in the literature that price and quality has high effect on customer satisfaction; still there is little empirical evidence exploring this relation. Almost nothing is known about the human neural mechanisms through which it affects the decisions made by individuals. So, in this article there are reviewed two neuromarketing study cases as neuromarketing provides qualitatively different information, ostensibly better quality comparing to that obtained by traditional methods. The whole article reveals that price and quality is an important factor for customer satisfaction which leads to marketing managers' decisions complexity nowadays as markets are becoming more and more complex and overloaded.

**Keywords:** marketing, neuromarketing, customer satisfaction, quality, price.

### Introduction

Customers' satisfaction on their purchase is a significant factor that leads business to success. In recent times, customer satisfaction has gained new attention within the context of the paradigm shift from transactional marketing to relationship marketing (Grönroos 1994; Sheth & Parvatiyar 1994). Customers who are satisfied with a purchased product will buy the same product again, more often (Reichheld 1996), and will also recommend it to others (Oliver and Swan 1989). Customer satisfaction is commonly related to two fundamental properties (Ostrom & Iacobucci 1995), including the customer's judgment of the quality of the product and his evaluation of the interaction experience he or she has made with the product provider (Crosby *et al.* 1990). Kotler sums this up when he states: "The key to customer retention is customer satisfaction" (Kotler 1994). Even it is agreed in the literature that price and quality has high effect on customers satisfaction; still there is little empirical evidence exploring this relation. Almost nothing is known about the human neural mechanisms through which it affects the decisions made by individuals.

**The purpose** is to analyze literature and find out empirical evidence on product price and quality influence

on customer satisfaction through neuromarketing approach.

The market environment is certainly complex for the customer and poses huge problems for them. Maynes (1985) characterizes most markets as informationally imperfect where there are extensive price dispersions, even when quality is constant. In such markets, consumers may pay too much for products. Maynes suggested three key factors underlie the present-day shopping environment:

- The overabundance of brands in the marketplace leads to information overload.
- The technical complexity of many products makes quality assessment virtually impossible for the average consumer.
- The urbanization of our society creates an environment where there are too many stores offering similar goods.

The situation has got even worse as information technologies came, markets had spread, and now there is too many products available at too many stores and too little time.

Marketers have used the mantra of "customer satisfaction" for at least the last four decades; assuming the Marketing Concept had accurately captured a prime consumer motivator. Unfortunately, satisfaction is a short

lived phenomenon. Surveys indicate that even satisfied customers leave the firm on a regular basis. The explanation to this conundrum may lie inside the brain. The striatum in the brain quickly gets used to new stimuli and tends to react only to the unexpected (Coy 2005). This provides a neural-based explanation why marketing experts now exhort us to “delight” our consumers instead of simply satisfying them.

During last years it became essential to understand customers' behavior and neuromarketing is a big step closer to it. As Martin Lindstrom points out in *Buy-ology*, our purchase decisions are not as rational as people think, and they never have been. Walking through a supermarket, customers pick products from the shelves based on thoughts and emotions of which they are largely unaware. In a split second, they are drawn to a particular brand of shampoo or toothpaste without really knowing why (Lindstrom 2008).

### **Neuromarketing as a field of marketing**

In this section I am going to review what is neuromarketing, what are its goals and what is its contribution to marketing.

The term ‘neuromarketing’ identifies a new field of research championed by both academics and self-labeled companies using advances in neuroscience that permit powerful insights into the human brain’s responses to marketing stimuli (Renvoise, Morin 2007).

The equipment capable of performing neurological studies has been around only for several decades. There are 3 ways to get necessary data from brains for neuromarketing researches:

1. functional magnetic resonance imaging (fMRI),
2. electroencephalography (EEG)
3. magneto encephalography (MEG)

These devices were and still are used primarily as medical diagnostic devices. These instruments provide colorful film images of real-time brain activity based on changes in ion polarity, temperature, or electronic impulses. But this data can be used in field of marketing to gather precise information about customers' behavior.

The goals of neuromarketing studies are to obtain objective information about the inner workings of the brains of consumers without resorting to the subjective reports that have long been the mainstay of marketing studies. Thus, neuromarketing provides qualitatively different information, ostensibly better quality comparing to that obtained by traditional methods, about the economically valuable topic of consumer preferences. Know-

ledge of the areas in a consumer’s brain that are activated when they are shown a particular product can be a much more ‘honest’ indicator of their cognition compared with other traditional measures such as focus groups where responses can be biased.

According to an industry executive, “we can say goodbye to those endless expensive bloody research groups where consumer either lie their heads off or tell us what they think we want to hear” (Walton 2004).

Neuromarketing is a new field of marketing that studies consumers' sensors, recognition and affective response to marketing stimulus. Researchers use technologies such as functional magnetic resonance imaging to measure changes in activity in parts of the brain, electroencephalography to measure activity in specific regional spectra of the brain response, and sensors to measure changes in one's physiological state (heart rate, respiratory rate, galvanic skin response) to learn why consumers make the decisions they do, and what part of the brain is telling them to do it.

### **Empirical evidence of influence of price and quality to customer satisfaction**

In this section I am going to review two neuromarketing researches results that reveal the influence of price and quality to customer satisfaction through their brain activity in parts responsible for this experience.

First research investigates quality and customer satisfaction relation. This research demonstrates the role of the subconscious mind in consumer decision-making by a 2004 study by researchers at Baylor College of Medicine. The researchers offered 67 committed Coke and Pepsi drinkers a choice, and in blind testing, they preferred Pepsi. When they were shown the company logos before they drank, however, 75% preferred Coke. The researchers scanned the brains of the participants during the test and discovered that the Coke label created wild activity in the part of the brain associated with memories and self-image, while Pepsi, though preferred by most, did little to these feel-good centers in the brain. In the blind test half the subjects choose Pepsi, and it tended to produce a stronger response than Coke in the brain's, but when the subjects were told they were drinking Pepsi three-quarters said that Coke tasted better. Their brain activity had also changed. According to Prof. P. Reed Montague, director of the Brown Foundation Human Neuroimaging Laboratory, “there’s a huge effect of the Coke label on brain activity related to the control of actions, the dredging up of memories and self-image.

Therefore, as a better taste can be considered as a better quality, the research reveals crucial proof how people are misled about it through properly chosen marketing strategy.

The second research was made for investigating relation between price and satisfaction. According to researchers at the Stanford Graduate School of Business and the California Institute of Technology, if a person is told he or she is tasting two different wines – and that one costs \$5 and the other \$45, when they are, in fact, the same wine – the part of the brain that experiences pleasure will become more active when the drinker thinks he or she is enjoying a more expensive vintage.

“What we document is that price is not just about inferences of quality, but it can actually affect real quality,” said Baba Shiv, a professor of marketing who co-authored a paper titled “Marketing Actions Can Modulate Neural Representations of Experienced Pleasantness”, published online Jan. 14 in the Proceedings of the National Academy of Sciences. “So, in essence, price is changing people's experiences with a product and, therefore, the outcomes from consuming this product.”

In the study there were recruited 11 male graduate students who said they liked and occasionally drank red wine. The subjects were told that they would be trying five different Cabernet Sauvignons, identified by price, to study the effect of sampling time on flavor. In fact, only three wines were used – two were given twice. The first wine was identified by its real bottle price of \$5 and by a fake \$45 price tag. The second wine was marked with its actual \$90 price and by a fictitious \$10 tag. The third wine, which was used to distract the participants, was marked with its correct \$35 price. The wines were given in random order, and the students were asked to focus on flavor and how much they enjoyed each sample.

After the study the participants said they could taste five different wines, even though there were only three, and added that the wines identified as more expensive tasted better. The researchers found that an increase in the perceived price of a wine did lead to increased activity in the brain because of an associated increase in taste expectation.

Therefore, this research reveals crucial evidence on price and satisfaction relation. Hence we may conclude that higher customer satisfaction is based not on real quality, but the price as they use it as an indicator of product quality.

On the one hand, it is a fact that when people perceive that a product is overpriced they are less likely to make a purchase. But, on the other hand, now we have

multiple studies showing that people enjoy a product more when they pay more for it. That is why marketers' decisions become more complex and marketing researching needs to step forward to neuromarketing. With each discovery comes the opportunity for correction and improvements in marketing management decisions.

### **Neuromarketing in services**

Neuromarketing can be also used to help service researchers even that services are largely intangible and more difficult to evaluate both pre- and sometimes post purchase. This is because service products that exhibit no immediate rewards (e.g. home protection systems, insurance policies, preventative medicine, etc.) do not generate much emotional involvement and, therefore, may receive relatively low processing priority – unless emotional rewards can be invoked. One of the distinguishing characteristics of services is simultaneous production and consumption. While this allows for greater customization of services, matching capacity levels to demand levels, and the like, it also increases the probability that a service customer will perceive some level of relative unfairness when comparing the service performance they received to that received by another. When customers think they are being treated unfairly, a small area called the anterior insula becomes active. It means that transactions between a service provider and a service customer are presumed to be based on trust. When trust is high, a hormone called oxytocin fills different areas of the brain. As a result, service marketers could theoretically experiment with different levels of trust to see which generates satisfying levels of oxytocin given services production parameters. It would also allow the services marketer to determine how quickly these levels are internalized; meaning the level of trust might need to be increased to maintain that sense of pleasure. This information would allow the services product marketer to determine which critical incidents are most damaging so he could plan more efficient and targeted recovery effort for service failure, and thus reduce customer loss.

### **Neuromarketing penetration and future**

Neuromarketing is spreading widely in many countries, especially in innovative countries. There are now more than 100 neuromarketing consultancies in the US and major corporations regularly using their insights include Procter & Gamble, GM, Coca-Cola and Motorola. There are many more in Europe. Agency clients include

Fortune 500 manufacturers and notable service firms like McDonald's, movie studios, several large banks, and at least a few political campaigns. The leading UK exponent is the Oxford-based Neurosense, which conducted the Viacom Brand Solutions study. It has undertaken projects for many high-profile UK brands.

Even there are groups believing that neuromarketing is (or could lead to) the ultimate invasion of privacy and distract customers' purchase choices; still it is and going to be used in many companies marketing researches to make better marketing strategies, advertising campaigns and brand building.

## Conclusions

1. Market complexity leads consumers to paying too much for the products. As well our purchase decisions are not rational as there is virtual understanding of product quality based on unreliable information.

2. Higher customer satisfaction is not the result of a better quality because quality may be influenced by over weighted information.

3. Price is used as an indicator of product quality, which results in better expectations from the product and determines higher satisfaction.

4. Both quality and satisfaction have subordination to price; therefore, quality and satisfaction are also related.

5. Marketing decisions should be more concentrated on price rather than quality, as quality is more objective and should be conveyed through other marketing instruments.

6. Neuromarketing is used widely now and has a lot of future prospects in companies marketing researches to make better marketing strategies, advertising campaigns and brand building.

## Literature

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## KAINOS IR KOKYBĖS ĮTAKA VARTOTOJŲ PASITENKIMUI: NEUROMARKETINGO POŽIŪRIS

### A. Dapkevičius

#### Santrauka

Šio straipsnio tikslas – išanalizuoti literatūros šaltinius ir surasti praktinių įrodymų, kaip produkto kaina ir kokybė veikia vartotojo pasitenkinimą neuromarketingo požiūriu. Vartotojų pasitenkinimas yra svarbus veiksnys, vedantis verslą į ilgalaikę sėkmę. Nors yra daug teorinių modelių, kaip tai veikia vartotoją, tačiau mažai praktinių įrodymų. Šiame straipsnyje apžvelgiami du neuromarketingo tyrimai, kurie atskleidžia kainos ir kokybės svarbą vartotojų pasitenkinimui. O tai atskleidžia ir marketingo specialistų priimamų sprendimų sudėtingumą, pobūdį ir svarbą.

**Reikšminiai žodžiai:** marketingas, neuromarketingas, vartotojo pasitenkinimas, kokybė, kaina.