

CONSUMER PREFERENCES IN TERMS OF PRODUCT QUALITY AND PRICE

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Abstract

The article examines the relationship between product quality and price from the consumers' perspective. It emphasizes that customer preferences are primarily influenced by their income but also by factors such as age, education, and region. Based on the classification of consumers into four groups according to income and purchasing behavior (snob, demanding, standard, and undemanding customer), the article demonstrates that higher-income groups place greater emphasis on quality. A study conducted on a sample of 380 respondents compares quality preferences across nine types of products (food, clothing, and drugstore goods), and statistical analysis confirms that individuals with higher incomes choose quality significantly more often. The results indicate that quality preference increases with income, yet price remains a key decision-making factor for lower-income groups.

Keywords

Quality, Price, Consumer, Income, Purchasing Preferences, Statistical Analysis

1. Introduction

In today's world, the vast majority of the population has access to quality products across various domains. Excluding the poorest countries, most individuals have the opportunity to purchase what they like or enjoy, albeit within the financial constraints of their budget. In some countries, consumers can acquire a desired item immediately, while in others, they may need to save up for some time. However, even individuals with lower incomes can gradually afford their dream car, washing machine, or television for their household, take an exotic vacation, or indulge in other desired products or services, thanks in part to various credit options.

It is logical that most consumers behave rationally and, therefore, seek high-quality products on the market that are available at a reasonable price.

Manufacturers, therefore, strive to ensure that the features and functions of their products meet the appropriate standards according to customer requirements. Each manufacturer must aim to create a level of quality that aligns with the expectations of their target customer group. It is essential to recognize that the overall path to achieving the appropriate quality begins with marketing. Initially, it is necessary to determine in which markets the product will be sold, who the target customers are, and what their specific requirements are. The level of quality and pricing must then correspond accordingly.

For instance, if a laptop manufacturer offers a model with exceptionally high-end specifications and a corresponding premium price—perhaps three times the average salary—it is targeting professionals who use demanding applications for their work. This product is certainly not intended for the average consumer. A typical user, who primarily uses a laptop for writing emails, browsing the internet, engaging with social media, or drafting simple texts, will be adequately served by a significantly lower-priced laptop with average or even below-average specifications. For such users, extremely high quality does not provide any additional benefit.

In summary, not every customer requires the highest possible quality; rather, they are satisfied with a level of quality that meets their needs at a reasonable price relative to that quality. In other words, customers select products in a way that maximizes their perceived utility.

This paper further examines consumer preferences concerning quality and price. Since these preferences vary across different product categories (and sometimes even within specific product types), the research takes a deeper approach, focusing on individual products in greater detail.

2. Quality and Price

Let us begin by explaining the basic concepts. What is quality? In the literature, we can find many different definitions. Here, we will select two. ISO 9000 defines quality as: “Quality is the degree to which a set of inherent characteristics of an object fulfils requirements” (ISO 9000:2015, part 3.6.2). Another definition of quality is presented by Juran (1999): “Fitness for use.”

Now, let us define the term price: “Price is the amount that a customer pays for a product or service. Price is considered a key factor in the decision-making process of a purchase and can influence the perceived value of the offering by the customer.” Kotler (2017), p. 94. Can also be said "Price is the amount that the customer relinquishes or sacrifices to obtain a product or service" (Zeithaml, 1988).

Kotler (2017) further describes the typical relationships between price and quality. Price can be an indicator of quality, as consumers often associate higher prices with higher quality. On the other hand, a lower price may signal lower quality, but this depends on the consumer's perception of value. However, nowadays, the relationship between price and quality in the market is often distorted, and frequently, a higher-quality product may be cheaper. This means that relying on price as an indicator of quality is becoming less reliable, and it is necessary to turn to other sources, such as consumer reviews.

The recipient of quality is the customer. The customer can be either the end consumer or a company that purchases components, materials, or services as inputs for its processes. In the following, we will focus on final consumers, where we are interested in how much or how little the consumer prefers quality or price.

3. The Influence of Income and Other Factors on Quality Preference

Let us examine the relationship between consumers and quality. From the perspective of both income and mentality, consumers can be categorized into the following groups (Blecharz, 2023):

- **Snob** (typically with significantly above-average income, selects products based more on price than quality, must demonstrate to their social circle that they possess the most expensive items),
- **Discerning Customer** (above-average income, can afford expensive products but expects above-average quality),
- **Standard Customer** (average income, occasionally indulges in expensive products with excellent quality, but prefers to purchase advantageously above-average quality at a reduced price (sale), or is satisfied with average quality at an average price),
- **Undemanding Customer** (below-average income, primarily purchases based on price, i.e., seeks out products with the lowest price tags on the shelves).

It is evident from the above classification that the level of financial income likely influences purchasing decisions, and income correlates with quality preferences. However, purchasing preference is a more complex issue influenced by a range of other factors:

Influence of Income:

- Individuals with lower incomes generally prioritize price due to their more limited budget.
- Individuals with higher incomes can afford to place greater emphasis on quality and brand.

Age, Education:

- Age: Younger generations often prefer trends and brands, while older generations emphasize durability and practicality.
- Education: More educated individuals tend to be better informed about the quality of products and services.

Region:

- Larger cities with higher living standards typically exhibit greater demand for high-quality products.

Product Type:

- For certain products, such as food or electronics, quality plays a more significant role than for others.

Current Trends:

- In recent years, particularly due to inflation, consumer price sensitivity has increased. Simultaneously, there is a growing interest in local products and sustainability, which can lead to a preference for higher-quality, albeit more expensive, goods.

In conclusion, the preference between price and quality is individual and depends on numerous factors. Income is likely one of the most important, although not the sole determining factor. The following section will examine research on customer preferences concerning their income.

4. Research on Customer Preferences Regarding Quality and Price

For simplicity, let us consider only two population groups. The first group will have incomes lower than the median value, and the second group will have incomes higher than the median value. The median is a statistical value that represents the middle value in an ordered data set. In simple terms, it is the number that divides the dataset into two equal halves – half of the values are less than or equal to the median, and half of the values are greater than or equal to the median. The median is more robust than the arithmetic mean because it is not influenced by extreme values (outliers). This means that even if significantly high or low values occur in the dataset, the median remains relatively stable. Therefore, the median is often used to describe the distribution of data that may be skewed by outliers, such as wages or real estate prices.

The median for 2023 was CZK 39,518 (Kurzy (2025)). According to data from the Czech Statistical Office (ČSÚ) for the third quarter of 2024, the median wage was CZK 40,482; more recent data are not yet available. Therefore, we will use this figure as the median, which will divide respondents into two groups based on income.

Of course, income could be further discussed. Someone may have a high income but a large family at home, e.g., a wife who cannot yet work because she has three young children. Conversely, someone may have a lower income but is single and childless, and thus all income is essentially for their consumption. However, such research, which considers how many people someone supports, is beyond the scope of this study, and moreover, with a larger sample of respondents, this aspect will be evenly distributed among the results and will not have a major impact.

Respondents will tell us the percentage they prefer quality and the percentage they prefer price. Since $\text{quality in \%} + \text{price in \%} = 100\%$, it is sufficient to record only the percentage preference for quality. However, customers will not generally answer how much they prefer quality in percentage terms. This question must relate to a specific product category (e.g., food, electronics, etc.), and for each product category, the product must be further specified using a typical representative. For example, in the food category, we can choose ham, cheese, etc. And when we ask the customer what percentage they prefer quality in ham, we will get a well-founded answer.

How will the customer (respondent) perceive/evaluate quality in products? They will use commonly known information about products that indicate quality. That is, a product with proven quality (generally recognized brand, information from acquaintances or the media, personal previous experience).

Thus, 190 respondents with lower incomes and 190 respondents with higher incomes were surveyed. Three suitable product categories were selected, each category with 3 selected representatives:

- Food (ham, table oil, chocolate),
- Clothing (underwear, t-shirt, jacket),
- Toiletries (soap, shampoo, toothpaste).

Furthermore, we will establish hypotheses for the research:

- Null hypothesis H_0 states: There is no statistically significant difference between groups with lower and higher incomes regarding quality preferences when purchasing.
- Alternative hypothesis H_A states: There is a statistically significant difference between groups with lower and higher incomes regarding quality preferences when purchasing.

Analysis of Variance (ANOVA) for Hypothesis Testing

To assess which hypothesis holds true, a one-way ANOVA (analysis of variance) will be employed. MS Excel software will be used for the computation. The resulting ANOVA table contains two crucial metrics for hypothesis evaluation, namely F and P (see Table 2). If the calculated F value is greater than the critical F value, we accept the alternative hypothesis. Similarly, using the P-value, i.e., if the P-value is less than 5%, the alternative hypothesis holds true. (We adopt the terminology of Wonacott (1993), who recommends using accessible vocabulary for practical purposes, i.e., "accept" a hypothesis rather than "fail to reject" a hypothesis). More detailed information on ANOVA can be found, for example, in Roy (1990), Wonacott (1993).

The processed results are shown in Table 1. Lower income is below the median value of CZK 40,482, while higher income is above this value. The percentages shown express the preference for purchasing based on quality, i.e., how much out of 100% the customer gives to quality (the remainder to 100% is the preference for price).

Product	Lower income – quality preference in %	Higher income - quality preference in %
Food - Ham	51	73
Food – Table Oil	41	54
Food - Chocolate	50	81
Clothing – Underwear	52	67
Clothing – T-shirt	46	76
Clothing – Jacket	43	69
Toiletries - Soap	34	59
Toiletries - Shampoo	46	68
Toiletries - Toothpaste	47	69
Average	45.56	68.44

Table 1: Preference for Quality in Purchasing Selected Commodities

Factor						
	<i>Sample</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>	
	Column 1	190	8661	45,58421	28,40292	
	Column 2	190	13009	68,46842	59,68947	
ANOVA						
	<i>Source of variability</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P value</i>
	Between samples	49750,27	1	49750,27	1129,502	1,4E-115
	Within samples	16649,46	378	44,0462		3,866177
	Total	66399,74	379			

Table 2: Table ANOVA

The ANOVA table presents the results of comparing data between groups with lower and higher incomes (labeled 'between samples' in the table), where the SS (sum of squares) is 49,750.27, and the degrees of freedom are equal to 1. The calculated F-value is 1,129.502, and in comparison, with the critical F-value, which is 3.87, it is unequivocally clear that we accept the alternative hypothesis, i.e., there is a statistically significant difference in quality preferences between groups with lower and higher incomes. Similarly, the comparison of the P-value also yields the same conclusion, where the calculated value is significantly below the 5% threshold, and therefore, according to this comparison as well, the alternative hypothesis is valid.

5. Conclusion

In this text, we have demonstrated that consumer preference for quality is dependent on income level. Individuals with higher incomes generally prefer quality significantly more than customers with lower incomes. However, this does not imply that people with low incomes do not appreciate higher-quality products. Rather, it means that they must pay closer attention to price when making purchases to stay within their household budget.

Upon a more detailed examination of individual products, other factors can have a significant influence – particularly age, gender, education, and even location. For example, when considering a product such as mobile phone headphones, younger generations will hardly consider the price, and their preference for quality will be around 80-90%. In contrast, older generations in this case will prefer a lower price over quality, meaning that the expected quality preference will be around 50%. Another example is the high preference for television quality among men, while a lower preference is expected among women. We could continue with similar examples. Nevertheless, it does not change the fact that, in general, the preference for quality and price is primarily dependent on income

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