

# CUSTOMER AWARENESS LEVEL OF COFFEE PRICE FLUCTUATIONS

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## Abstract

Based on what we have witnessed in the last two years from several uncontrollable factors, such as natural disasters, disease pandemics and wars, it is worth exploring the potential rising prices of coffee-based products in the future. This research aims to find out people's perceptions about the actual prices of coffee and their reasoning for their continuous financial contribution to the coffee-based industry. It is also looking for solutions regarding a suitable increase in the price range to maintain customer interest in coffee-based products in the Romanian market. Presuming that the target customers have already noticed the change in prices, different data-gathering methods come into effect to determine the level of awareness that a regular customer has regarding said price fluctuations. This will aid in providing answers to our research problem: How much can the prices be increased before profits drop significantly? The research sample consisted of 22 international people and the data found was processed to obtain the best accuracy of the results, in SPSS.

**Keywords:** coffee prices, market, customer experience, lei currency.

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## 1. INTRODUCTION

This paper aims to determine the customers' awareness level of coffee price fluctuations proving how much the prices can be increased before profits drop significantly.

This research began counting on the fact that a noticeable change in coffee prices has been made in an attempt to determine that regular customers are aware of the price swings and the factors that prompted such an outcome.

After a deeper understanding of the coffee market flows, it resulted that among climate change, one of the most important factors that led to an increase in prices is the shipping supply chain which adds up more value to the prices. Therefore, we developed two main objectives: *Exploration of the suitable increase in the price range to maintain customer interest and their financial contribution to buy coffee-based products*

*and finding out people's perceptions about the actual prices of coffee and also their reasoning for continuing to support despite the potential price inflation.*

To gather the necessary knowledge to formulate the answers to the established objectives and to our research problem, the research sample was represented by 22 international subjects. Their answers showed us a severe lack of knowledge of the price shift in the coffee industry. Only one thing proved affirmatively the research hypothesis: people understood that coffee prices have increased but are not aware of the factors that led to that.

Furthermore, after a deeper analysis of all the collected information was processed in SPSS, the previously formed opinion, which showed that people lack interest in this field, was approved by the computed data. While 22% of the people stated it as one of the main reasons for the increase in coffee prices, only 9% affirmed that it is also the shipping cost that adds value to the market prices.

Through the statistical analysis, the awareness of the coffee market our respondents were subjected to and their tolerance to price changes was investigated. The sample seems to be relevant as most of the people interviewed stated that they are daily coffee consumers.

## **2. LITERATURE REVIEW**

Due to its numerous positive effects, coffee served and prepared in a variety of manners, is widely drank around the world.

About 80 tropical nations, more than 50 countries and around 125 million people in continents such as South America, Africa and Asia (Osorio, 2002) base their substantial income on coffee agriculture, leading to approximately 9 million tons of coffee beans produced every year (Lewin et al., 2004; NCA, 2017).

The maximization of profit, which represents the core goal of every economic company and should be the focus of all company departments' functional strategies, may be the final significant goal of the strategic method for pricing substantiation (Deac, V., Dobrin, C., Dima, A., & Voicu, L. V, 2016).

Even though lately the price fluctuation in the coffee market skyrocketed, it hasn't always been that way. Supply and demand dynamics as well as international coffee commerce were regulated up until 1989 by a series of International Coffee Agreements, whose goals were to maintain prices and restrict the supply of said products. At the beginning of the 1990s, supply and demand have been completely free to fluctuate in the coffee market.

There have been two periods of low pricing throughout the time that this open market has been in effect (1989-1993 and 1999-2004), with the latter being known as the coffee crisis (ICC, 2014).

According to historical pricing data, prices have improved since the conclusion of the crisis (2004) in comparison to prices during the two previous crises. However, the ICC reports substantial price fluctuation due to increased expenses of living.

Nevertheless, in the past five years, the coffee market seems to have suffered a lot of changes again due to a series of predictable but uncontrollable factors: market instability and poor access to it, ineffective legislative frameworks, weak access to better technology and services, lack of different incentives regarding the matter, and unstoppable and aggravated climate change.

In coffee-producing regions, noticeable consequences of climate change, such as a hotter climate and less and more unpredictable precipitation, have already been reported. (Kufa, 2010)

Droughts have been increasingly common in coffee-growing regions in recent years, and they are expected to become more severe in the twenty-first century. Changes in temperature and rainfall will reduce the areas suited for coffee production, causing the crop to move up the altitudinal gradient, and increase pest and disease occurrences, extending the altitudinal range in which pests and diseases may live. Coffee plants will experience stressed growth as a result of climate change, with restricted blooming and berry development, low yield, and poor-quality beans. (Krishnan, S., 2017).

Moreover, in addition to the bad climate changes, the inefficient international transportation is combined with rising oil prices, thus making coffee beans become more expensive. Green bean prices are rising as a result of this issue, which affects importers, roasters, and finally cafes.

Futures contracts are essential commitments to buy coffee at a certain price at a future date. A futures contract is agreed-upon price is based on the expected price at the delivery date. As a result, speculation determines a large portion of the price.

For example, if individuals believe the coffee's price will rise in the future due to poor harvest, they will begin purchasing futures contracts today in order to sell for a profit when the price rises closer to the delivery date. The present price is rising due to increased demand for coffee futures based on conjecture about future conditions.

It is also accurate in the other direction. People will begin selling coffee and any futures contracts if there is suspicion that the price will fall. As a result, the present price will fall.

This implies that the price of coffee is not determined by actual market conditions. The coffee price is not connected to production costs, which has a significant influence on manufacturers.

### 3. METHODOLOGY

For this study, the chosen methodology to approach in the most objective way the subject in discussion, was a survey. Accordingly, we chose an international sample to back up the objective overview of the problem.

#### 3.1. General working data

An online questionnaire was created and internationalized involving 22 respondents from the following countries: Romania (10), Spain (1), Iran (1), France (7), Italy (3).

Gathering information this way facilitated a cumulus of answers in a short period of time. Furthermore, in order to demonstrate the established objectives, there were included in the questionnaire not only nominal items but also demographical and type scale items.

Starting the survey, one of the most important questions regarding the topic in discussion was addressed: How frequently do you drink coffee? The variable is measured on a nominal scale and was mentioned in the beginning in order to maintain the accuracy of the study that is: regular customers' awareness of coffee prices fluctuation. In addition to this, another question was queried: "Do you think that the price of coffee has increased in the last 5 years?". This was meant to strengthen the idea that all people, in fact, have noticed a change.

Several inquiries were regarding the amount of money that one was, is and will be willing to pay for a cup of coffee. This was asked in order to find an answer for both of the formulated objectives. Moreover, to determine people's awareness, an open question asking the interviewees to state two of the main factors of the coffee price fluctuation was included.

Lastly, the survey was concluded with a demographic question that built up our research sample and proved the global extent of the research.

#### 3.2. Variables

Considering the fact that a noticeable change in coffee prices has been made, this paper aims to prove that regular customers are aware of the price swings and the factors that have prompted such a result. Thus, our correlated variables are price and coffee consumption. Resulting of the study, four main categories of research variables were identified: 1. coffee prices, 2. coffee consumption, 3. customer awareness, and 4. demographic features.

TABLE 1. VARIABLE AND QUESTION USED

Variable categories	Coffee prices	Coffee consumption	Customer awareness	Demographic features
Types of variables	- Maximum pay - Price change	- Coffee frequency - Coffee importance for the people	- Increase in prices - Percentage of the increase - Actual price - Coffee awareness	- Age - Sex - Country
Dimensions	- Money - Percentage of difference between current and past prices	- Times/Week - Demand	- Difference between current and past prices - Willingness to buy	- Years - Gender - Residency
Questions asked	1. What is the maximum price you would pay for a cup of coffee?  2. If coffee prices drop, will you buy more coffee/if coffee prices soar, will you buy less coffee?  3. If yes, how much do you think it has increased?	1. How frequently do you drink coffee?  2. From 1 to 5, how much coffee is important in your daily life?	1. Do you think that the price of coffee has increased in the previous 5 years?  2. What do you think of the actual coffee price?  3. From 1 to 5 how much do you think you are aware of the coffee market dynamics?  4. What do you think are the main factors of coffee price fluctuations? Please state at least 2 main factors	1. How old are you?  2. What is your gender?  3. Where are you from?

Source: Author

#### 4. RESULTS AND DISCUSSIONS

The generated answers were surprising and reflected the following values:

**How frequently do you drink coffee?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Never	5	22,7%	22,7%	22,7%
Occasionally	3	13,6%	13,6%	36,4%
Sometimes	2	9,1%	9,1%	45,5%
Often	7	31,8%	31,8%	77,3%
Always	5	22,7%	22,7%	100,0%
Total	22	100,0%		

**FIGURE 1. ANSWERS TO: HOW OFTEN DO YOU DRINK COFFEE?**

Source: SPSS

54,5% of the research sample is composed of people who drink coffee “often” or “always”. The most common answer was “often” and the mean is 3,18 meaning that, on average, the respondents drink coffee a little more than “sometimes”. The median is “often” (same as the mode, higher than the mean) and reflects the fact that more than half of our distribution drink coffee “often” or “usually”. The standard deviation is high (1,53) because the data acquired swings quite widely from the mean.

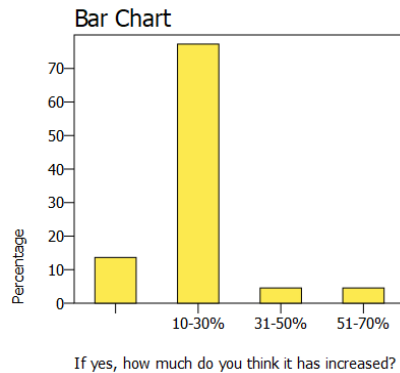
**Statistics**

		Do you think that the price of coffee has increased in the previous 5 years?
N	Valid	22
	Missing	0
Mean		1,95
Median		2,00
Mode	Yes	
Std Dev		,21
Minimum	No	
Maximum	Yes	

**FIGURE 2. ANSWERS TO THE QUESTION: DO YOU THINK THE PRICE OF COFFEE HAS INCREASED IN THE PREVIOUS 5 YEARS?**

Source: SPSS

Almost all of the respondents correctly identified that coffee prices have increased in the past 5 years. The mean (1,95) shows that the average of the answers is very close to yes, as the median (2) does.



**FIGURE 3. RESULTS OF HOW MUCH DO YOU THINK COFFEE PRICES HAVE INCREASED?**

Source: SPSS

The majority of respondents think that coffee prices have increased by 10-30% in the past 5 years. The low standard deviation (0,62) confirms that the sample's answers don't diverge much from the mean ("10-30%). In addition to that, the median is 2 (median=mode=mean), so we can say that the distribution of this variable is normal. This reaffirms that the answers don't diverge much from the mean. They don't seem aware of the coffee price fluctuations. Coffee prices have increased by around 60%.

**Statistics**

		What is the maximum price you would pay for a cup of coffee?
N	Valid	22
	Missing	0
Mean		3,95
Median		4,00
Mode		>15 lei I will stop
Std Dev		1,46
Minimum		<7 lei I will stop
Maximum		over 15 lei

**FIGURE 4. ANSWERS TO: WHAT IS THE MAXIMUM PRICE YOU WOULD PAY FOR A CUP OF COFFEE?**

Source: SPSS

With this question, it was investigated the willingness to buy coffee taking into consideration the increase in prices. The mean is very close to "if it's more than 12 lei I will stop", but the most common answer was "if it's more than 15 lei I will stop". The answers are widely dispersed (standard deviation = 1,46). The respondents seem ready to keep buying coffee even if the prices increase.

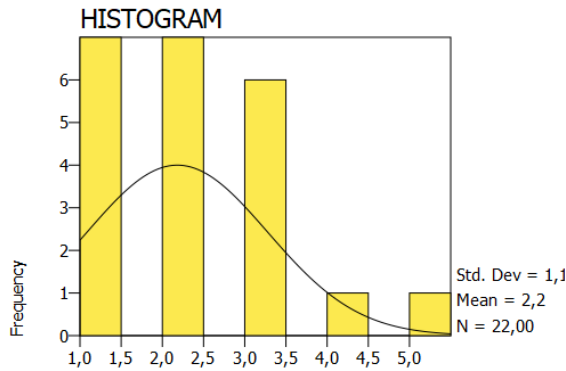


FIGURE 5. RESPONSES TO THE QUESTION: ON A SCALE FROM 1 TO 5 (1 IS THE MINIMUM AND 5 IS THE HIGHEST) HOW MUCH DO YOU THINK YOU ARE AWARE OF THE COFFEE MARKET DYNAMICS?

Source: SPSS

The respondents don't feel very confident about the coffee price dynamics. The most common answers were "1" and "2" and the mean is "2,18". The median is 2, very close to the median and mode, meaning that the answers don't diverge from the mean. To carry out a deeper investigation, we asked which factors have more impact on the coffee price fluctuation. Only 22,7% of the respondents detected the main cause (climate change). In addition to that, when they tried to identify which costs had the higher influence, they failed to mention the shipping costs (just 9,1%).

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid climate change	5	22,7%	22,7%	22,7%
cost of energy	1	4,5%	4,5%	27,3%
high demand	3	13,6%	13,6%	40,9%
inflation	1	4,5%	4,5%	45,5%
import costs	1	4,5%	4,5%	50,0%
labour costs	1	4,5%	4,5%	54,5%
production costs	3	13,6%	13,6%	68,2%
quality	1	4,5%	4,5%	72,7%
raw materials' price	3	13,6%	13,6%	86,4%
supply costs	1	4,5%	4,5%	90,9%
transportation costs	2	9,1%	9,1%	100,0%
Total	22	100,0%		

FIGURE 6. RESPONSES REGARDING THE MAIN FACTORS OF COFFEE PRICES FLUCTUATIONS?

Source: SPSS

Just one answer was correct ("51-70%") and was made by someone who thought to be highly aware ("5"). The majority of our respondents stated to be not that aware of the coffee market fluctuations and their answers were wrong. People that drink coffee "occasionally" and "always" seem to have a comparable tolerance to the increase in prices. Furthermore, people who drink coffee "sometimes" and



“often” seem keener to spend more on coffee. While the majority of respondents (“54,5%”) believe that coffee is overpriced. it is interesting to notice that 80% of the people who regularly drink coffee feel that the price of coffee is adequate.

## 5. MAIN FINDINGS AND CONCLUSIONS

The research sample is composed of habitual coffee consumers as only 22,7% of the people that have answered never drink coffee. Because of that, it could be stated that the sample represents the opinion of coffee drinkers. The main purpose of the research was to investigate their awareness of the coffee market and identify their tolerance to price changes. The findings suggest that coffee consumers are unaware of the dynamics that rule the coffee world. Just 4,5% knew that coffee prices have increased by 60% in the past 5 years and they failed to identify the main reasons for such a change. Only 22,7% of them were able to name the main cause (climate change) and 9,1% of the respondents knew that the second most important factor was the increase in shipping costs. The people in question demonstrated a decent tolerance for coffee price changes. 63,6% will spend more than 10 lei. People who drink coffee “sometimes” and “often” seem keener to spend more on coffee, while “always” consumers are more susceptible to price changes. Generally speaking, the respondents feel that coffee is overpriced, but “always” drinkers state that it has the right price. “Always” consumers believe that coffee is correctly priced and they are less willing to spend more on it. On the other hand, usual drinkers feel that coffee is overpriced, but they are more willing to spend more to buy it.

In other words, our latest findings halfway invalidated our research hypothesis: regular customers are aware of some changes in the price fluctuations of coffee-based products, but aren't capable of detailing its aspects and responding to the main questions: “why?” and “how much?”. Diving into these conclusions proves several facets: a lack of knowledge in the field is possessed by all the coffee consumers in question, not even the ones that are having it regularly being interested in the price increase. This led us to think that people are either getting used to the current inflation and don't mind spending some extra 2 lei for the same cup of coffee that they used to have it for less or because of their wages, they have a higher tolerance of the prices.

In conclusion, the average price that people are still comfortable paying for a coffee is 10 lei, but anything more than that isn't necessarily a problem as it leaves the coffee shop owners a 5 lei gap to increase the prices and still get some profit.

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