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THE INFLUENCE OF PRICE CHANGES ON CONSUMERS' PURCHASE DECISIONS

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Abstract

The development of an effective pricing strategy requires the acquaintance of consumers' price perception as well as the range of elements that influence the price sensitivity. This paper analyses the relationships between product features, individual characteristics and the level of price increase/decrease that induces the consumers to change their purchase decisions. The results of a dedicated survey show, that price sensitivity, individual preferences, type of product and direction of price change and individual characteristics of consumers (gender, age, professional situation) have a significant impact on a threshold at which people are willing to choose the less attractive, but cheaper alternative to their favorite product or give up the variety in consumption. From a consumer behavior perspective, these findings play a fundamental role in pricing.

Keywords: Price sensitivity, Purchase, Decision Making, Consumer Behavior

Introduction

A seminal study that gave rise to the analysis of pricing and its influence on consumers' purchase decision making was conducted by E.H. Weber (Miller, 1962). According to his law, consumers' perception of difference is limited and any change in given stimulus can be observed only when it exceeds a threshold, presented as a percentage of the initial value. Weber's Law can also have an application to pricing strategies in which the just noticeable difference for price reduction equals to about 20% (Falkowski et al, 2009) and is lower for price increase. This theory suggests, that it is sufficient for successful pricing strategy to stay below the Weber's fraction while increasing the price and to exceed the fraction when the price is being reduced. However, reality shows that following this kind of rules does not necessarily triggers the desired consumer behavior, as the decision making process in terms of buying is influenced by wide number of factors.

From a practical point of view, just being aware of price reduction or increase does not have to lead to the change of buying habits. Moreover, Weber's fraction should vary depending on the customer, product and many other situational elements. However, the correct management of customers' price perception can lead to improved value perception of the products and increased willingness to buy (Varki et al., 2001). Therefore sales managers are not as much concerned with the just noticeable difference, as with the change in price that would motivate the customers to change their purchase decisions. This is the main issue being explored in this paper, with a purpose to serve the marketers in analyzing the market and setting the prices for their products.

This research is focused not only on looking for the most probable price changes that would induce the customers to change their preferences, but also on analyzing all

internal and external factors that influence the customers' perception of prices and their final purchase decisions. Some of them summarize previous research and existing literature about this topic, the others are based on the hypotheses stated in the dissertation and on results of the dedicated survey. All the most important regularities and conclusions observed are presented in the last part of the paper.

Literature review and research hypotheses

According to the economic theory, price of the product reflects its value for the consumer. Each person is characterized by individual level of price sensitiveness and will react differently to prices' changes. Rudnicki (2000) singles out main elements, related to consumer, market and product, that determine those reactions: (i) number of existing substitutes; (ii) type of product; (iii) time that has elapsed from the change; and (iv) consumer's income level. Duvvuri et al. (2007) also suggests that consumers' price sensitivities are strongly and positively correlated across product categories. Additionally, they can vary depending on some social aspects of transactions, such as buyer-seller interaction (Hsieh et al., 2004). Based on this information and predicting that more price sensitive customers will be more susceptible to decision changes under the influence of money incentives, the first hypothesis of this research was formulated:

H1: The higher the price sensitivity of the buyer, the lower price change is needed to change purchase decision.

Another key factor which constitutes 50 percent of total price perception (D'Andrea et al., 2006) and participates in decision making process is a reference price. It can be both internal, in other words based on consumer's memory (mainly implicit), preferences and subjective evaluation, as well as external, taking into consideration price comparisons

with other products (Santana, 2011). Danes et al. (2012) emphasizes the role of perceived substitute effect according to which the price sensitivity increases when the product's price is high relative to substitutes. The internal reference price of consumers and the strength of own preferences can increase significantly (in contrast to the price sensitivity) in case of products consumed in public and conspicuous consumption (O'Cass et al., 2004). The social status is worth a lot for many people and they are willing to pay extra for it. The growing attention being paid to the consumers' internal associations with products and motives that influence the willingness to pay gave rise to another hypothesis:

H2: The stronger the consumer's preference, the bigger price change is required to change the purchase decision.

A large number of academic papers focus on the influence of buyers' personal characteristics on the perception of discounts, such as already mentioned price sensitivity, consumer's involvement (Rohani et al., 2012), loyalty to the brand, consumer's level of experience in purchasing from the particular product category and the most important one – budget constraints (Campo et al, 2007). Some of them (Scheer et al., 2010) prove, that the choice between percentage-off or dollars-off format should be made according to the wealth of the target: \$-off discounts are more effective in case of lower-income customers, and %-off should be used to attract higher-income customers. Moreover, the latter source mentions the common belief, according to which attractiveness of an absolute discount is inversely proportional to the initial price of the product. That gave rise to another assumption:

H3a: The lower the initial price, the higher percentage change is needed to influence the decision.

However, according to Hoyer et al, (2008), an important theory contradicts the previous assumption. It states, that the lower the value of the particular product, the less effort the consumers make while making a purchase decision and more prone they are to use price as a simplifying strategy. That means, that in case of such inexpensive and frequently purchased products, consumers tend to choose the cheapest brand or the one on sale to make the decision making process easier and shorter. Therefore, the alternative hypothesis has been formulated, to see which tendency is stronger or whether they balance each other:

H3b: The lower the initial price, the lower the decision making effort and the lower percentage change is needed to influence the decision.

From the point of view of Bolton et al, (2003), consumers tend to claim that the selling price of good or service is considerably higher than its fair price. This is most probably an effect of limited knowledge about profits, costs and inflation and their contribution to the market. Therefore, it is highly understandable, that consumers perceive price discounts as definitely fairer than price increases, and are considerably less perceptive when the numbers on the labels go down than in the opposite situation. This effect is even intensified when consumers believe that a firm had a negative motive for price increase, what leads to lower shopping intentions (Campbell, 1999) or when competing brands introduce intense price promotion (Han et al., 2001). A company's reputation and clients' loyalty can have a positive effect on fairness perception, however this effect does not exist when price increases are high (Martin et al., 2008). Moreover, fairness is also crucial in terms of evaluation of lower pricing results – the differential promotion can be perceived negatively by non-targeted customers, who refer their benefits to those of other segments and are dissatisfied with the discrepancies (Darke et al., 2003) Such

across-consumer price comparisons and their effects can also vary depending on the culture (Bolton et al., 2009). The research hypothesis related to fairness phenomenon looks as following:

H4: The consumers are more sensitive to price increase than to the analogous price reduction.

Some other price-related issues will not be analyzed in the form of hypotheses, but cannot be ignored in the research due to their importance to the topic. First of all, a lot of pricing practices are deliberately used by marketers to influence consumers' price perception and willingness to buy. Ahmetoglu et al. (2010) mentions drip pricing, opt in/opt-out, reference pricing, the use of word free, bait pricing, complex pricing and time-limited offers among the most effective and common ones. Additionally, consumers tend to favor monetary-value framed promotions in case of high price items and percentage-of-price framed discounts when purchasing low price products (Jaber et al., 2013). Format of the price also matters in consumer's decision making process – Coulter et al., (2007) shows that buyers report larger perceived discounts when the right digits are small (below 5) and they associate greater value with those greater perceived discounts. On the other hand, consumers perceive odd prices (ending with 0,99) as considerably lower than even ones (Hoyer et al, 2008), but only when such one cent reductions lead to the change in the leftmost digits (Thomas et al., 2005). As a rule, none of special pricing practices should be used too often, otherwise the consumers will treat and perceive special prices as the regular ones, giving up the purchase unless the promotion occurs. In some cases, the effects of price changes are impossible to predict in advance due to imperfect consumer' rationality, reflected by the fact that not all of consumers' choices are economically efficient (Balakrishnan et al, 2000). Moreover,

some experiments (Gaur et al, 2004) show that in some situations demand can increase with price or sale can drop when the price decreases. The well-known examples of such situation are Veblen luxury goods or the inferior Giffen goods, which violate the law of demand. This phenomenon can be also explained by existence of the other, besides utilitarian, function of price, called informational. Price is often used as a value indicator, what means that without any quality assurance and when discounts are manipulated in the everyday manner, the negative price-quality effect is likely to occur, dominating consumer perception (Darke et al, 2005). Therefore, some research (Sigurdsson et al, 2010) undermine the effects of price reductions on consumers' decisions, emphasizing the necessity to examine all marketing mix factors in sales forecasting.

Survey and results

- Methodology

In order to test the hypotheses and proceed with the research, an online anonymous survey has been created. All the respondents participated in it voluntarily, not being driven by any personal benefits. 154 people between 18 and 34 years old, 95 women and 59 men filled in the questionnaire, of whom 94 were Polish, 44 Portuguese and 16 belonged to other nations.

All the participants were asked to specify their professional situation and try to evaluate their price sensitivity using 1-5 scale. After that, they were being redirected to the main part of the survey, concerning the situations of purchase and the scale of price changes needed to change their buying decisions while choosing between two available products. This section consisted of two core conditions – reduction of price and price

increase and each respondent had to face both of them. Moreover, the participants were suggested to associate different level of preference to the products in each pair presented. The questions included in the main section have been formulated in the following way: “What is the minimal value of price reduction/increase that would induce you to buy product B instead of product A?”, while A was initially preferred, or “What is the minimal value of brand B price reduction (or brand A price increase) that would induce you to become loyal to brand B and give up (in a long term) buying products of brand A?” in case of lack of preferences. The price changes were presented in both nominal (€) and percentage values and no odd prices were used to avoid potential undesirable biases. All the products in a questionnaire are commonly used and familiar for average consumer and no associations to any real brands have been provoked. The character of the survey is strictly hypothetical, however all the efforts had been made to focus respondents’ attention on the role of price values in their decision making process. To read the original survey form, see the Appendix.

- Verification of hypotheses

Hypotheses testing required creating a numerical value for each respondent (Average_for_respondent) which reflects the mean percentage change of price needed to influence the purchase decision of particular consumer. To enable the calculations, all answers displaying lack of willingness to change the buying decision even in the face of 50% price change have been perceived as a sign of strong price insensitivity and evaluated 100%. This step is additionally justified by the fact that the price changes of more than 50% do not happen often on real markets, so this group of price insensitive consumers probably would not have an opportunity to change their purchase decisions at all.

H1: The higher the price sensitivity of the buyer, the lower price change is needed to change purchase decision.

	Mean	Std. Deviation	N
Price_sensitivity	3,44	,792	154
Average_for_respondent	31,4628	16,98055	154

Table 1: Price sensitivity: Descriptive statistics

		Price_sensitivity	Average_for_respondent
Price_sensitivity	Pearson Correlation	1	-,553**
	Sig. (1-tailed)		,000
	N	154	154
Average_for_respondent	Pearson Correlation	-,553**	1
	Sig. (1-tailed)	,000	
	N	154	154

** . Correlation is significant at the 0.01 level (1-tailed).

Table 2: Correlation: Price sensitivity and Average for respondent

The results of the analysis show that respondents tend to evaluate their price sensitivity as medium or above the average – the mean for all 154 surveyed is 3.44 on 1 to 5 scale. Moreover, the respondents expect on average 31.46% price change to buy the product different than the one that they would choose without such price incentive, however the standard deviation proves, that the number varies considerably among consumers.

According to Pearson Correlation, the relationship between the price sensitivity and average answers is moderate and statistically significant ($p = 0.000 < 0.01$). The r-value amounts to -0.553 what indicates the negative dependency between the variables – the more price sensitive the consumer is, the smaller change of price is enough to influence his/her purchase decision. It confirms entirely what has been stated in the first hypothesis of this report and shows, that the respondents' assessment of their own price sensitivity was generally correct.

H2: The stronger the consumer's preference, the bigger price change is required to change the purchase decision.

Verification of the second hypothesis required inserting three new variables – the average percentage change of price quoted by each respondent with a distinction between questions according to the suggested preference.

	Strong_preference	Slight_preference	Lack_of_preference
Mean	42,2403	29,3723	22,7760
N	154	154	154
Std. Deviation	20,79518	18,73721	18,21512

Table 3: Preferences: Means comparison

Generated report reflects the substantial differences between the mean answers in three given categories. In case of lack of preference, an average respondent is willing to become loyal to the cheaper product in the long term if its price decreased by 22.78%, or if the price of the competitive product increased by the same percentage (assuming the equal initial price of both products). However, when respondents prefer slightly one of the products for its characteristics unrelated to price (such as brand familiarity), the price incentive needed to change their buying decision in favor of the other product has to be stronger and amounts on average to 29.37% (even though the general quality of the products is the same, and the preference is an effect of the subjective evaluation). The situation becomes even clearer, when people believe, that the key characteristics of one product suit their needs much better, so that their preference is strong. In this case, the average respondent is not willing to choose the less-preferred product, unless its price decreases by 42.24% or more (or the price of the favorite product increases by analogous fraction). This observation is in line with the analyzed hypothesis and proves that people are loyal to their preferences. Because choosing the favored option usually

translates into the higher level of satisfaction during the moment of purchase and while using the product, consumers are not willing to compromise on it. The stronger the preference, the bigger price advantage is required to compensate the loss in satisfaction.

H3a: The lower the initial price, the higher percentage change is needed to influence the decision.

H3b: The lower the initial price, the lower the decision making effort and the lower percentage change is needed to influence the decision.

By analogy to the verification of the previous hypothesis, testing of the next two would be impossible without three new variables – the average percentage change of price quoted by each respondent divided into three categories according to the type (and also the initial price level) of the product. The products used in the survey were cereals (with initial price of 3.50€), jeans (50€) and a smartphone (300€).

	Cereals	Jeans	Smartphone
Mean	26,2175	34,3182	33,8528
N	154	154	154
Std. Deviation	17,13639	19,95967	23,81621

Table 4: Products: Means comparison

Looking at the results placed in the table, it is easy to notice, that the cereals were given the lowest mean answer among all the products. On average, the 26.22% change in price is enough to change the consumers purchase decision while buying them. It could be explained by the hypothesis 3b: cereals are relatively cheap, people buy them often and use each package for the short time. The decision making process in this case is usually quick and of low effort and the risk related to the wrong choice is small - therefore, the price becomes important and easy-to-use decision making factor.

On the other hand, the results for two other products do not confirm 3b hypothesis, as jeans (product of the medium price) gathered the highest average value, namely 34.32%. This is slightly more than the result of the smartphone which equals 33.85%, what denies the linear relationship between the value of the product and expected price change.

This observation can be explained by the influence of the hypothesis 3a, which states that people need stronger percentage incentives in case of cheaper products to notice the substantial nominal change in price. It would indicate that both opposing hypotheses partially neutralize each other. The other possible reason is the importance of some other, unforeseen factors, such as type of consumption and other than pure pragmatic functions of the product. Jeans, as a part of human's external appearance do not only satisfy the need of covering the body and providing personal comfort, but also co-create the style of the person and have an impact on the way in which he or she is perceived and appraised by the others. In case of such "publicly consumed" goods people are more concerned about how they suit them and their image, what leads to lower price sensitivity. What is more, clothes is the category of goods for which the variety is potentially more important than for two other categories, so the consumers are not willing to become loyal to just one brand. People usually have two or more pair of jeans at the same time, but use one smartphone and do not buy new cereals until the previous package is empty.

H4: The consumers are more sensitive to price increase than to the analogous price reduction.

For the sake of the last hypothesis, two new variables have been created – the average percentage change of price expected by each respondent, separately for situations of

price reduction and price increase. It enabled the comparison of means for both categories, which confirms the validity of the hypothesis.

	Price_decrease	Price_increase
Mean	36,6162	26,3095
N	154	154
Std. Deviation	18,72525	17,75765

Table 5: Price decrease and increase: Means comparison

The results of the analysis reflect the fact, that people notice the increase of the price much easier than the analogous decrease, and relatively small percentage increase is required to influence their purchase decisions. The average for the price reduction amounts to 36.61%, while the same value for price rise equals 26.31%, so over 10% less. However, the significant standard deviation shows that the answers vary a lot depending on the respondent.

This kind of phenomenon occurs, because price increase is perceived as something more controversial and unfair in consumers' opinion than price decrease. On the modern market, the consumers are the ones that set the rules, so they are being accustomed to the discounts, special offers and favorable bargains. At the same time, the price increases are introduced in the way that is not so easily noticeable by consumers (for example by changes in packages size), so usually the buyers are not so much aware of price fluctuations as in the case of the survey.

- Other observations and relationships

To take the maximal advantage of data gathered in survey, the dependencies between the Average_for_respondent variable and personal characteristics of respondents (gender, age, nationality and professional situation) have been analyzed.

○ Gender

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Average_for_respondent	Female	95	33,8099	19,03347	1,95279
	Male	59	27,6836	12,24480	1,59414

Table 6: Gender: Group statistics

	Levene's Test for Equality of Variances	t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference
Average_for_respondent	Equal variances assumed	9,252	,003	2,204	152	,029	6,12633	2,77983
	Equal variances not assumed			2,430	151,784	,016	6,12633	2,52085

Table 7: Gender: Independent samples test

One of the results that have not been clearly intuitive from the early beginning of this research is the dependency between gender and average answer of respondents. However, the means in the first table above differ considerably for female and male, what suggests that this kind of relationship actually occurs. It turns out, that women need stronger price incentives to give up their initial purchase intentions and choose the less preferred, but cheaper product – the average value amounts to 33.81%. The same value for men equals 27.68%, what shows that men are more price sensitive.

The above mentioned conclusions are supported by the results of independent samples test. For obtained significance level (0.003), which is lower than 0.05, we have to reject the hypothesis that the variance for both samples are equal, what implies the existence of statistically significant differences.

Owing to the fact that the explanation of registered dependency between gender and average answer can create some difficulties, some more detailed analysis has been

made. It considers the differences between men and women for each preference and each product separately.

Gender		Strong_preference	Slight_preference	Lack_of_preference	Cereals	Jeans	Smartphone
Female	Mean	44,8070	31,8421	24,7807	27,2807	38,0439	36,1053
	N	95	95	95	95	95	95
	Std. Deviation	22,34695	21,15109	20,58189	19,04650	22,55829	25,87632
Male	Mean	38,1073	25,3955	19,5480	24,5056	28,3192	30,2260
	N	59	59	59	59	59	59
	Std. Deviation	17,41346	13,22908	13,09624	13,48612	12,91689	19,73291
Total	Mean	42,2403	29,3723	22,7760	26,2175	34,3182	33,8528
	N	154	154	154	154	154	154
	Std. Deviation	20,79518	18,73721	18,21512	17,13639	19,95967	23,81621

Table 8: Gender: Means comparison

The results of means comparison indicate, that the level of preference is not important for the explanation, as for each of them the difference between female and male answers amounts to about 6% of initial price. However, the differences vary discernibly depending on the product: for cereals it is 2.78%, for smartphone 5.88% and for jeans even 9.72%. The possible conclusion of this data is that woman in general (and particularly for some product categories, such as clothes) devote more time to decision making process, analyze more products' characteristics and are more attached to looking for the products that suit the whole range of their needs. In the meantime men are more focused on the core features of products, make their purchase process quick and consider price as the more important decision making factor.

○ Age

	Age	N	Mean	Std. Deviation	Std. Error Mean
Average_for_respondent	'18-24	97	28,8173	14,35745	1,45778
	'25-34	57	35,9649	20,04130	2,65454

Table 9: Age: Group statistics

	Levene's Test for Equality of Variances		t-test for Equality of Means				
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Average_for_respondent	11,085	,001	-2,568	152	,011	-7,14762	2,78350
Professional_situation			-2,360	90,091	,020	-7,14762	3,02848

Table 10: Age: Independent samples test

Age of respondents is another variable which influence the average decrease/increase of price required to change the purchase decisions. For the younger group of people surveyed (18-24 years old), the mean answer amounts to 28.82%, while the analogous value for the group of 25-34 years old is 7% higher (35.96%). This tendency is also confirmed by the results of the independent samples test with p value (0.001) lower than 0.05 and relatively high F value. In this situation the assumption about equal variances of the samples cannot be maintained.

The above presented results are understandable and potentially related to the financial situation of respondents from different age groups. Younger people usually do not have their own and stable source of income yet, so they are often forced to base the buying decisions primarily on price. This, in turn, is an effect of the professional situation that will be analyzed next.

o Professional situation

	Sum of Squares	df	Mean Square	F	Sig.
Average_for_respondent * Between Groups (Combined)	3143,355	3	1047,785	3,836	,011
Professional_situation Within Groups	40972,547	150	273,150		
Total	44115,902	153			

Table 11: Professional situation: ANOVA table

	Eta	Eta Squared
Average_for_respondent * Professional_situation	,267	,071

Table 12: Professional situation: Measures of association

A few different professional statuses have been considered in the survey: “I study”, “I work”, “I work and study”, “I’m unemployed/looking for a job” and “Other” (this category remained empty). The results of ANOVA test ($p = 0.011 < 0.05$) suggest that the alternative hypothesis, assuming the significant differences between the means in groups, should be accepted. The modest value of Eta Squared (0,071) proves that this effect is moderate.

Average_for_respondent			
Professional_situation	Mean	N	Std. Deviation
I study	27,3527	66	13,59320
I work	38,1755	44	20,22514
I work and study	31,2573	38	16,69839
I’m unemployed/looking for a job	28,7500	6	14,53152
Total	31,4628	154	16,98055

Table 13: Professional situation: Means comparison

According to the results presented in the table above, the average answer is the lowest for students and unemployed (27.35% and 28.75% accordingly). On the opposite side there is a group of respondents who work (38.18%), while the students employed are placed in the middle, with the mean value of 31.26%.

By analogy to the case of age, such results are probably caused by the differences in budget at disposal for above mentioned groups. The wealthier the person, the less fundamental the price is for him/her during the purchase decision making and the less willing he/she is to give up the personal preferences. Of course it cannot be assumed that all students and unemployed belong to the poorest group of people (they can have

other than employment sources of income, such as family or inheritance), however the general trend between the groups of difference professional situation is visible.

○ Nationality

		Sum of Squares	df	Mean Square	F	Sig.
Average_for _respondent *	Between Groups (Combined)	83,900	2	41,950	,144	,866
	Within Groups	44032,001	151	291,603		
	Total	44115,902	153			

Table 14: Nationality: ANOVA table

	Eta	Eta Squared
Average_for_respondent * Nationality	,044	,002

Table 15: Nationality: Measures of association

Average_for_respondent

Nationality	Mean	N	Std. Deviation
Other	33,5764	16	18,14377
Polish	31,0993	94	15,16004
Portuguese	31,4710	44	20,30016
Total	31,4628	154	16,98055

Table 16: Nationality: Means comparison

Nationality appeared to be the only one of the analyzed personal characteristics that does not have an impact on the average answers given by respondents. The large value of p (0,866) in ANOVA test, marginal F value and the small value of Eta Squared constitute a clear proof that there are no significant differences between the nationalities in terms of influence of price on consumers' decision making.

The comparison of means for nationalities shows, that the average answer for Polish and Portuguese respondents was almost equal (31.10% vs. 31.47%), with just slightly higher value for other nationalities (33.58%). This is apparently the result of economic and social similarities between Poland and Portugal (such as level of development,

disposable income, prices, propensity to save) which lead to comparable price sensitivity and similar purchase behavior.

Conclusions and general discussion

This research analyzed important price-related issues that determine the purchase decisions of consumers. The survey results prove, that each person requires price incentives (increase or decrease) of different strength to choose another product than the one initially preferred, depending on personal and situational factors. Most of the hypotheses stated in the first part of the report have been confirmed and some additional regularities in the gathered data have been observed.

First of all, more price sensitive buyers actually need lower price change to change their purchase decision. Also, if the consumer has a strong preference towards one of the products, the bigger reduction or increase is required to induce him/her to choose the less preferred option. No regularity has been noticed between the initial price of the product and the percentage price decrease/increase that motivates the consumers to verify their shopping basket. Moreover, people are significantly more sensitive to price increase than to the analogous reduction, what should be considered in all managerial decisions concerning pricing strategy.

Basic personal characteristics, such as gender, age and career standing have a considerable impact on consumer's price sensitivity, which turned out to be stronger for men, younger people, students and unemployed. At the same time, no big differences have been observed in the survey in terms of nationality. Here there is much space for further research, to see how price sensitivity differ between other, possibly more economically diversified nations.

The main limitation of the conducted research is the fully hypothetical character of the survey – it remains uncertain whether the declared purchase decisions have a chance to happen in reality. What would change if the consumers were exposed to the marketing stimuli that are normally present in the shopping environment, such as publicity, brands, packaging? What would happen if the customers knew about the price change before coming to the shop? Most probably, a big number of other, not considered factors exists, that could influence the results of the survey but would require the detailed analysis of respondents: Is the buyer the user of the product? Is he/she the main person responsible for doing shopping for the household? Were suggested initial prices for given product categories average in his/her opinion? Moreover, for nationalities from outside the Eurozone (such as Polish) the degree of familiarity with euro currency could be considered, as well as the differences between the price levels in different countries. To create an effective pricing strategy, a manager of a company should not only know the product perfectly, but also have a complex profile of target group of customers. The more factors are considered, the more likely the consumers are to react positively to company's moves, what translates into higher profitability.

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Appendix

- Questionnaire

Price changes & purchase decisions

Introduction

This survey is a part of the work project, developed by a student of Nova School of Business and Economics in Lisbon. It's addressed to every adult (>18 y.o) person and it shouldn't take you more than 10 minutes. Each completed survey will contribute to finalization of this academic research, so your support will be highly appreciated. Thank you.

Part I: General information about respondents

1. **Gender:**

- Male
- Female

2. **Age:**

- 18-24
- 25-34
- 35-50
- 50+

3. **Nationality:**

- Polish
- Portuguese
- Other

4. **What is your professional situation?**

- I study
- I work
- I work and study
- I'm unemployed/looking for a job
- Other

5. **On the 1-5 scale, how much do base your purchase decisions on price? (1 = I don't care about the prices at all, 5 = price is the most important incentive)**

- 1
- 2
- 3
- 4
- 5

Part II: Price decrease - strong preference

6. **The situations presented are hypothetical, but if you can associate them with your preferences regarding the real products, feel free to do it.**

Imagine that you want to buy cereals. In the supermarket you find two kinds of cereals of similar quality, produced by two different brands - A and B. They both have the same regular price - 3,50€. For some reasons (e.g. taste) you strongly prefer product A to product B and you always buy cereals A. However, you've just noticed that the price of product B has dropped. What is the minimal value of price reduction that would induce you to buy cereals B instead of cereals A?

- 5% (new price of B = 3,33€)
- 10% (new price of B = 3,15€)
- 20% (new price of B = 2,80€)
- 30% (new price of B = 2,45€)
- 40% (new price of B = 2,10€)
- 50% (new price of B = 1,75€)
- I wouldn't buy cereals B for any of those prices

7. **Now we have the analogous situation, but while buying the pair of jeans. You have strong preference to the jeans A over jeans B (e.g. they look much better on you), however they are both of a good quality. Their regular price is 50€. What is the minimal value of brand B price reduction that would induce you to buy jeans B instead of jeans A?**

- 5% (new price of B = 47,50€)
- 10% (new price of B = 45€)
- 20% (new price of B = 40€)
- 30% (new price of B = 35€)
- 40% (new price of B = 30€)
- 50% (new price of B = 25€)
- I wouldn't buy jeans B for any of those prices

8. **The same situation again, but you want to buy a mobile phone. You have strong preference to the smartphone A over smartphone B (e.g. its functions suit your needs better), however they are both considered as very good devices. Their regular price is 300€. What is the minimal value of brand B price reduction that would induce you to buy smartphone B instead of smartphone A?**

- 5% (new price of B = 285€)
- 10% (new price of B = 270€)
- 20% (new price of B = 240€)
- 30% (new price of B = 210€)
- 40% (new price of B = 180€)
- 50% (new price of B = 150€)
- I wouldn't buy smartphone B for any of those prices

Part III: Price decrease - slight preference

9. **You are buying cereals again. In the supermarket you find two kinds of cereals of similar quality, produced by two different brands - A and B. They both have the same regular price - 3,50€. For some reasons (e.g. brand awareness) you slightly prefer product A to product B and you usually buy cereals A. However, you've just noticed that the price of product B has dropped. What is the minimal value of price reduction that would induce you to buy cereals B instead of cereals A?**

- 5% (new price of B = 3,33€)
- 10% (new price of B = 3,15€)
- 20% (new price of B = 2,80€)
- 30% (new price of B = 2,45€)
- 40% (new price of B = 2,10€)
- 50% (new price of B = 1,75€)
- I wouldn't buy cereals B for any of those prices

10. **Now we have the analogous situation, but while buying the pair of jeans. You have slight preference to the jeans A over jeans B (e.g. you are more familiar with brand A), however they are both of a good quality and look good. Their regular price is 50€. What is the minimal value of brand B price reduction that would induce you to buy jeans B instead of jeans A?**

- 5% (new price of B = 47,50€)
- 10% (new price of B = 45€)
- 20% (new price of B = 40€)
- 30% (new price of B = 35€)
- 40% (new price of B = 30€)
- 50% (new price of B = 25€)
- I wouldn't buy jeans B for any of those prices

11. **The same situation again, but you want to buy a mobile phone. You have slight preference to the smartphone A over smartphone B (e.g. they have the same functions, but you used to use phones of brand A), however they are both considered as very good devices. Their regular price is 300€. What is the minimal value of brand B price reduction that would induce you to buy smartphone B instead of smartphone A?**

- 5% (new price of B = 285€)
- 10% (new price of B = 270€)
- 20% (new price of B = 240€)
- 30% (new price of B = 210€)
- 40% (new price of B = 180€)
- 50% (new price of B = 150€)
- I wouldn't buy smartphone B for any of those prices

Part IV: Price decrease - lack of preference/loyalty

12. **Now it's the third time when you are buying cereals. In the supermarket you find two kinds of cereals of similar quality, produced by two different brands - A and B. Because they both have the same regular price - 3,50€, you don't prefer any of them, and you used to buy them interchangeably (to have variety). However, you've just noticed that the price of product B has dropped. What is the minimal value of brand B price reduction that would induce you to become loyal to brand B and give up (in a long term) buying cereals A?**

- 5% (new price of B = 3,33€)
- 10% (new price of B = 3,15€)
- 20% (new price of B = 2,80€)
- 30% (new price of B = 2,45€)
- 40% (new price of B = 2,10€)
- 50% (new price of B = 1,75€)
- I wouldn't become loyal to cereals B for any of those prices

13. **As a big fan of jeans, you are buying them once more. You don't have any preference neither to jeans A nor to jeans B, they are both of a good quality and look good. Their regular price is 50€. You used to buy jeans of both brands interchangeably (to have variety). What is the minimal value of brand B price reduction that would induce you to become loyal to brand B and give up (in a long term) buying jeans of brand A?**

- 5% (new price of B = 47,50€)
- 10% (new price of B = 45€)
- 20% (new price of B = 40€)
- 30% (new price of B = 35€)
- 40% (new price of B = 30€)
- 50% (new price of B = 25€)
- I wouldn't become loyal to jeans of brand B for any of those prices

14. **The same situation again, but you want to buy a mobile phone. You don't have any preference neither to smartphone A nor to smartphone B, they are both considered as very good devices. Their regular price is 300€. You used to buy smartphones of both brands interchangeably (to have variety). What is the minimal value of brand B price reduction that would induce you to become loyal to brand B and give up (in a long term) buying smartphones of brand A?**

- 5% (new price of B = 285€)
- 10% (new price of B = 270€)
- 20% (new price of B = 240€)
- 30% (new price of B = 210€)
- 40% (new price of B = 180€)
- 50% (new price of B = 150€)
- I wouldn't become loyal to smartphones of brand B for any of those prices

Part V: Price increase - strong preference

15. **As you've probably already noticed, you like cereals and you want to buy them again. In the supermarket you find two kinds of cereals of similar quality, produced by two different brands - A and B. They both have the same regular price - 3,50€. For some reasons (e.g. taste) you strongly prefer product A to product B and you always buy cereals A. However, you've just noticed that the price of product A has increased. What is the minimal value of price increase that would induce you to buy cereals B instead of cereals A?**

- 5% (new price of A = 3,68€)
- 10% (new price of A = 3,85€)
- 20% (new price of A = 4,20€)
- 30% (new price of A = 4,55€)
- 40% (new price of A = 4,90€)
- 50% (new price of A = 5,25€)
- I would still buy cereals A for any of those prices

16. **Now we have the analogous situation, but while buying the pair of jeans. You have strong preference to the jeans A over jeans B (e.g. they look much better on you), however they are both of a good quality. Their regular price is 50€. What is the minimal value of brand A price increase that would induce you to buy jeans B instead of jeans A?**

- 5% (new price of A = 52,50€)
- 10% (new price of A = 55€)
- 20% (new price of A = 60€)
- 30% (new price of A = 65€)
- 40% (new price of A = 70€)
- 50% (new price of A = 75€)
- I would still buy jeans A for any of those prices

17. **I'm sure that you don't expect it, but you want to buy a mobile phone. You have strong preference to the smartphone A over smartphone B (e.g. its functions suit your needs better), however they are both considered as very good devices. Their regular price is 300€. What is the minimal value of brand A price increase that would induce you to buy smartphone B instead of smartphone A?**

- 5% (new price of A = 315€)
- 10% (new price of A = 330€)
- 20% (new price of A = 360€)
- 30% (new price of A = 390€)
- 40% (new price of A = 420€)
- 50% (new price of A = 450€)
- I would still buy smartphone A for any of those prices

Part VI: Price increase - slight preference

18. **You are buying cereals again. In the supermarket you find two kinds of cereals of similar quality, produced by two different brands - A and B. They both have the same regular price - 3,50€. For some reasons (e.g. brand awareness) you slightly prefer product A to product B and you usually buy cereals A. However, you've just noticed that the price of product A has increased. What is the minimal value of price increase that would induce you to buy cereals B instead of cereals A?**

- 5% (new price of A = 3,68€)
- 10% (new price of A = 3,85€)
- 20% (new price of A = 4,20€)
- 30% (new price of A = 4,55€)
- 40% (new price of A = 4,90€)
- 50% (new price of A = 5,25€)
- I would still buy cereals A for any of those prices

19. **Now we have the analogous situation, but while buying the pair of jeans (sounds a bit familiar?). You have slight preference to the jeans A over jeans B (e.g. you are more familiar with brand A), however they are both of a good quality and look good. Their regular price is 50€. What is the minimal value of brand A price increase that would induce you to buy jeans B instead of jeans A?**

- 5% (new price of A = 52,50€)
- 10% (new price of A = 55€)
- 20% (new price of A = 60€)
- 30% (new price of A = 65€)
- 40% (new price of A = 70€)
- 50% (new price of A = 75€)
- I would still buy jeans A for any of those prices

20. **The same situation again, but you want to buy a mobile phone. You have slight preference to the smartphone A over smartphone B (e.g. they have the same functions, but you used to use phones of brand A), however they are both considered as very good devices. Their regular price is 300€. What is the minimal value of brand A price increase that would induce you to buy smartphone B instead of smartphone A?**

- 5% (new price of A = 315€)
- 10% (new price of A = 330€)
- 20% (new price of A = 360€)
- 30% (new price of A = 390€)
- 40% (new price of A = 420€)
- 50% (new price of A = 450€)
- I would still buy smartphone A for any of those prices

Part VII: Price increase - lack of preference/loyalty

21. **It's another time when you are buying cereals (the last one, I promise). In the supermarket you find two kinds of cereals of similar quality, produced by two different brands - A and B. Because they both have the same regular price - 3,50€, you don't prefer any of them, and you buy them interchangeably (to have variety). However, you've just noticed that the price of product A has increased. What is the minimal value of brand A price increase that would induce you to become loyal to brand B and give up (in a long term) buying cereals A?**
- 5% (new price of A = 3,68€)
 - 10% (new price of A = 3,85€)
 - 20% (new price of A = 4,20€)
 - 30% (new price of A = 4,55€)
 - 40% (new price of A = 4,90€)
 - 50% (new price of A = 5,25€)
 - I wouldn't become loyal to cereals B even if the price of cereals A went up by 50%
22. **Now we have the analogous situation, but while buying the pair of jeans. You don't have any preference neither to jeans A nor to jeans B, they are both of a good quality and look good. Their regular price is 50€. You used to buy jeans of both brands interchangeably (to have variety). What is the minimal value of brand A price increase that would induce you to become loyal to brand B and give up (in a long term) buying jeans of brand A?**
- 5% (new price of A = 52,50€)
 - 10% (new price of A = 55€)
 - 20% (new price of A = 60€)
 - 30% (new price of A = 65€)
 - 40% (new price of A = 70€)
 - 50% (new price of A = 75€)
 - I wouldn't become loyal to jeans of brand B even if the price of jeans A went up by 50%
23. **The same situation again, but you want to buy a mobile phone. You don't have any preference neither to smartphone A nor to smartphone B, they are both considered as very good devices. Their regular price is 300€. You used to buy smartphones of both brands interchangeably (to have variety). What is the minimal value of brand A price increase that would induce you to become loyal to brand B and give up (in a long term) buying smartphones of brand A?**
- 5% (new price of A = 315€)
 - 10% (new price of A = 330€)
 - 20% (new price of A = 360€)
 - 30% (new price of A = 390€)
 - 40% (new price of A = 420€)
 - 50% (new price of A = 450€)
 - I wouldn't become loyal to smartphones of brand B even if the price of smartphones A went up by 50%