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# THE EFFECT OF PSYCHOLOGICAL AND MARKETING KNOWLEDGE ON THE VALIDITY OF QUESTIONNAIRE RESULTS

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## **Abstract**

This paper defines the effect of psychological and marketing knowledge on the validity and relevance of questionnaire results. It points out that respondents might answer two identical questions in different ways as the interviewing is neither a real, nor a simulated situation for the respondent. In the paper, we shall compare the contradictory responses to almost identical questions in the field of consumer buying behaviour and decision making within one questionnaire. By applying the quantitative method to the questionnaire, we shall point out the indecisiveness and vagueness of respondents' answers, which are currently used by marketing companies to assess their products, brands or when launching products and services. The validity of respondents' answers sought for by the questionnaire is low, which is also proved by the survey on a sample of respondents who were interviewed using an electronic questionnaire. The main objective of this paper is to ascertain whether consumers decide rationally or emotionally, and based on the survey results to determine whether the electronic questioning adequate techniques and methods for determining consumer behaviour. The main aim of this paper is to find out the answers to the following questions: What is the real relevance of questionnaire results? Do customers (respondents) really know what they want and what their needs are? Can such surveys serve as a suitable basis for marketers within particular organizations? Do customers behave and make decision consciously and rationally when shopping?

*Keywords:* psychology, questionnaire, respondents, consumer behaviour, stimuli

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## **1. Introduction**

The field of marketing has had a broader dimension than inventing creative ideas and brand strategies since its beginnings. Marketing connects consumers and brands with the aim of meeting customer needs on the market to the best extent possible. Subsequently, marketing as science is influenced by those sciences which are not concerned with brands but the most important element of the buying process and decision making - the customers - and their

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buying behaviour and decision making. Marketing is directly influenced by its related sciences such as Psychology, Neuroscience, Behavioural economics and others.

Most companies, organizations or institutions gain information about their customers by asking them questions, i.e. standardized or non-standardized surveys in the form of a questionnaire. Using questionnaires has become the most important and the most common form of primary data collection of most companies when getting information about their customers. There are several types of survey methods used by companies to gain feedback and customer and client satisfaction when it comes to their products and services. These are face-to-face questionnaires, telephone surveys or electronic surveys using electronic questionnaires. For the companies behind the surveys, a large number of respondents equal high validity and relevance of responses, which are generalized to cover the general population.

One of the things most companies do not do is verification of actuality and veracity of the data stated by the respondents when giving their responses. There can be substantial differences between the actual consumer buying behaviour and habits and the statements they give when answering the survey questions, which can be revealed only by costly and lengthy experiments and observing the real buying process of customers and consumers. The relevance and validity of responses can also be verified using simulated control questions in the survey, which can reveal that respondents answer the questions of companies based on what they would like their buying behaviour and decision making to be (rational and conscious) rather than what it is really like (unconscious and irrational buying). At the moment of making the choice while standing in front of the shelf, consumers and customers do not realise the reasons why they choose the particular product or brand. They might be affected by advertising which reached them in the street before entering the shop. They might have been affected by the product design, which was more noticeable and interesting than that of other brands or products satisfying the same need. Equally, they might have unconsciously noticed what the customer before them put in their shopping basket. Although all these impulses and stimuli are not spotted by the human consciousness, the human subconsciousness processes them and uses them as a guide when making decisions and taking an action.

## **2. Literature review**

Currently, there is an increasing trend of companies and organizations in interviewing respondents when analysing consumer behaviour. Potential and existing consumers and customers are asked questions using the electronic or traditional forms with the aim of companies and organizations being to find out and anticipate the consumer behaviour in the real life situation. Based on the responses from such surveys, companies and organizations are determined to create or alter their marketing strategies and set the prices of their products or services hoping that customers and consumers behave and decide with the same

level of rationality and consciousness during the buying process as when they were answering the survey questions.

Blackwell, Engel and Miniard define consumer behaviour as the activities of people which relate to acquiring, consuming or owning products or services [1].

Solomon, Marshall and Stuart in their book called 'Marketing through the eyes of world's leading marketing experts' claim that consumer behaviour is a process in which individuals or groups choose, purchase, use and dispose of products, services, ideas or experiences in order to satisfy their needs and desires [2].

Dan Ariely, a professor of Behavioural economics asserts in his book that when buying and in other crucial situations, people behave unconsciously and irrationally to a great extent. In his publication full of experiments, he defines how a person behaves when they don't decide rationally and what stimuli can cause irrational behaviour in humans.

He claims that "everyone knows that getting something for free is a great feeling. Zero is not only a mere price – it is more extraordinary than that. Zero is an emotional hot button – a source of irrational excitement." [3]

In his experiments, he found out that if you lower the price of two products by the same amount, with one of them ending up having the zero price, consumers will tend to buy the free (zero-price) product despite the fact that before the reduction, they chose the other product. When you compare the two products, they both have the same value as before (1<sup>st</sup> product = 1.30 euro, 2<sup>nd</sup> product = 1.00 euro); however, after the reduction by 1 euro, consumers tend to think irrationally and opt for the product which is free. They base their decision on emotions instead of rationally choosing the product which seemed more favourable, better and of higher quality. Dan Ariely defined that, "classical economics supposes that people are rational beings who weigh up the pros and cons of every situation before making the choice and selecting the optimal path. This theory claims that our decisions are logical and sensible. Even if we ever make a mistake when making a decision, according to classical theory, we learn our lesson and will make a better decision next time. Either we tackle it on our own or we will be forced to do so by the so-called market prices." [3, p. 192]

In Ariely's view, based on this optimistic theory, economists and marketers make decisions on how to sell products in shopping centres. Ariely's book defines man and his decision making completely different from the behavioural economics, which is also due to numerous experiments which he had conducted. Ariely claims that people are susceptible to irrational influences which come from their surroundings, „emotions and feelings, short-term planning and other various sources" [3, p. 193].

Simon Sinek states that „there are only two ways how to influence human behaviour: manipulating it (by helping to reach certain decisions) or inspiring it (by making people take some action on their own)" [4]. Manipulation is a quite common and harmless method.

He views the behaviour and decision making process from the point of view of a company which offers its products or services on the market. He considers the price and other price and non-price related techniques as highly effective manipulation, which, in his view, represents positive aspirational communication with the consumer.

Simon Sinek distinguishes between aspiration and inspiration by taking a point of view of a successful company: „You can get someone to buy a gym membership with an aspirational message, but to get them to go three days a week requires a bit of inspiration“ [4, p. 33].

Furthermore, he goes on to recommend that companies should choose whether they want the consumer to simply buy their product or service, which can be achieved by manipulation and price and non-price incentives, or they want their customers to trust their product, in which case they must inspire rather than stimulate them.

Moreover, the author Sinek claims, that „decision making and the ability to justify the decision are separate processes which take place in different parts of the brain“ [4, p. 68]. Therefore, if the companies ask their respondents why they opted for one product over the other, the customers tends to justify the decision but are not able to explain the motivation for the particular decision. It does not mean that the customers do not know, it is simply because it is hard for them to explain why they bought the things which they bought.

Contemporary research into the human brain reveals that only 10% of the decisions, including the buying decisions, are associated with rational thinking. It means that 90% of the reasons why we decide in a particular way are irrational [5].

Paco Underhill describes the current research into retail outlets which suggest that more than a half of purchases in 60-70% of American supermarkets are not planned for and there is an increasing trend of customers deciding on what to buy directly in the shop [6].

Georg Lowenstein, who is an economist analysing the human behaviour, confirms: „The human brain functions automatically rather than consciously. A lot of what goes on in the brain is based on emotions, not thoughts.“ [G. Lowenstein, *Time and Decision: Economic and Psychological Perspectives of Intertemporal Choice*, [http://bit.ly/ebook\\_Time\\_and\\_Decision](http://bit.ly/ebook_Time_and_Decision)]

The marketing manager of Microsoft defines rationality and irrationality of customers and consumers in the same way when he says: “Human beings are often unfortunate commentators of their own actions”.

Daniel Kahneman, a distinguished psychologist and a Nobel Prize laureate in Economic Sciences, together with his colleague Amos Tversky were concerned with questions connected with cognitive illusions. Kahneman describes them in his book ‘Thinking, fast and slow’.

He divides the human mind into two systems, where System 1 represents the irrational and fast thinking part of the human mind and System 2 represents the slow thinking and rational and analytical part of our mind. The author defines the way how the human brain works when making a decision using the

metaphor of two subjects, which he calls System 1 – intuitive thinking and System 2 – intentional thinking. According to latest research, the intuitive System 1 has a much bigger effect than our experience and it quietly accompanies numerous judgements and decisions we make on a daily basis. A good example of using quick thinking, and therefore the irrational part of the mind of System 1 along with intuitive heuristics, might be interviewing in the form of questionnaires and respondents' decision making at the particular moment. If the respondents are asked a difficult question (Would you invest in Ford stock?) and there is not a skilled solution available at that moment, it is the time when our intuition – System 1 - very rapidly intervenes. The answer might readily come to mind, although it might not be the answer to the original question. As the original question (Would you invest in Ford stock?) was too difficult, the respondent was instantly struck by an answer to an easier question (Do you like Ford cars?), which subsequently determined the respondent's choice [7].

This is how Daniel Kahneman describes one of the cognitive illusions called cognitive heuristics: „when faced with a difficult question, we often answer an easier one instead, usually without noticing the substitution” [7, p. 19].

Only a few Slovak authors are viewed on the issue of consumer behaviour and decision-making through Psychology and Behavioural economics, even though it is of great importance to marketing itself and the thinking on the consumer. Consumer behaviour and decision-making are dealing with authors Kusá or Hraščková in Slovakia.

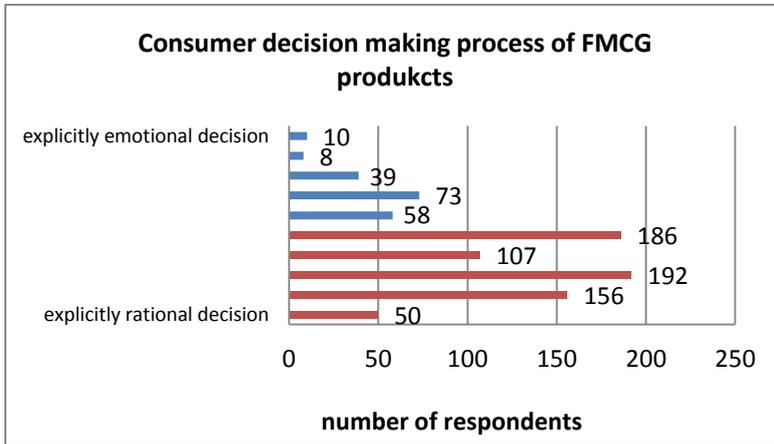
Hraščková is devoted to the influence of age and gender on consumer behaviour, pointing to the interesting observation that the higher the education, the greater number of offers searches the Slovak average consumer [8]. Kusá is largely devoted to consumer behaviour and decision-making, and for the impact on the consumer and his decision is considered actual human values. Values may significantly influence the purchasing decision of the consumer, given to their personal preferences to satisfy the needs of one over another [9].

### **3. Survey results**

The electronic questionnaire was conducted over the period of 3 months, from the middle of July to the middle of October. The respondents from the sample were asked several questions regarding the purchase of fast-moving consumer goods. The main aim of the questionnaire was to determine the relevance of electronic questionnaires as such as well as the validity respondents' answers. This was done based on questions regarding the influences and stimuli during the decision making process when shopping. Another point which was analysed was the respondents' opinion on spontaneous and intended, conscious or unconscious decision making before and during the buying process. The answers to the questions determining the rational decision

making or the decision making based on the price or other stimuli were mutually compared.

The choice of the representative sample of respondents was random and an online electronic questionnaire was chosen as the method of questioning. In total, there were 879 respondents, with 211 being men (24%) and 668 of them being women (76%). The average age of respondents was 22. The youngest respondent was 19 years old and the oldest was 28.



**Figure 1.** Do you decide rationally or irrationally when buying fast-moving goods?

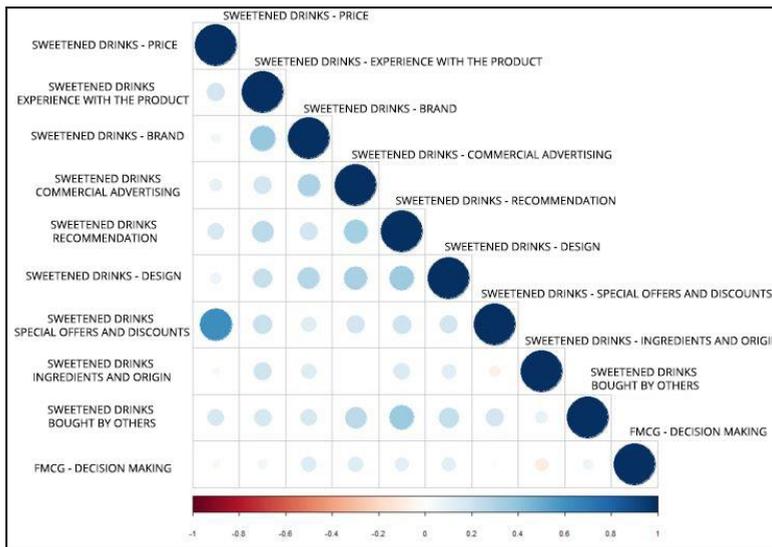


**Figure 2.** The influence of rational stimuli for the purchase of sweetened drinks

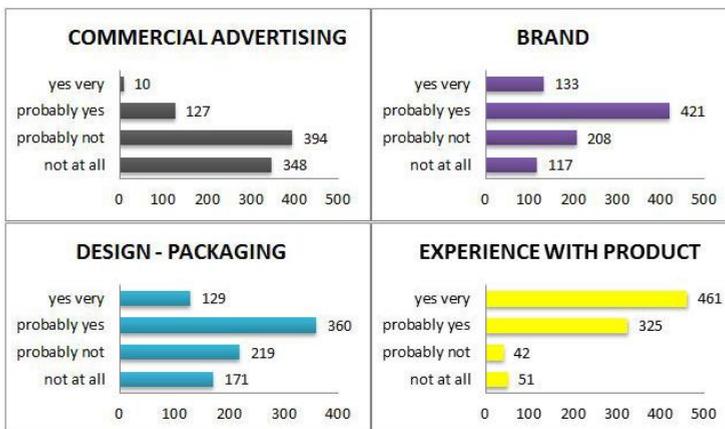
The correlations of age in connection with preferences and stimuli while shopping were very weak and therefore, we will not deal with them in much detail in this paper. The survey showed that with such a specific target group of

respondents, who are 19-28 years old, the dependency rate of the responses is not directly related to the age and the responses do not correlate with the age.

More than  $\frac{3}{4}$  of the respondents claim that when buying fast-moving goods they decide rationally rather than emotionally (Figure 1). These statements indicate that with the following questions ‘Do you decide rationally or irrationally when buying fast-moving goods?’ regarding the influence of the particular stimuli in the category of sweetened drinks and sweets, rational reasons like the price, special offers or recommendations for purchase should be prevailing over the emotional reasons such as advertising, design, brand or experience with the product.



**Figure 3.** Correlations of the sweetened drinks category.



**Figure 4.** The influence of emotional stimuli for the purchase of sweetened drinks.

When asked question (How do particular stimuli influence you when buying sweetened drinks?), we found out that the respondents are influenced by rational stimuli. The findings can be seen in Figures 2 and 3. Out of the total 879 respondents (100%) 47% are influenced by the price of the sweetened drinks, 66% are influenced by special offers and discounts on the sweetened drinks, 68% are influenced by recommendations from their friends or acquaintances and 54% are influenced by the ingredients and origin of products.

With the same question (How do particular stimuli influence you when buying sweetened drinks?) asked in the electronic questionnaire, we found out that some of the emotional stimuli influence the buying behaviour and decision making of the respondents significantly, while the others influence the respondents only to a very limited extent. The findings can be seen in Figures 3 and 4. Out of the total of 879 respondents (100%) only 15% claim they are influenced by commercial advertising when choosing and purchasing sweetened drinks. Contrariwise, as many as 63% of the respondents claim they are influenced by the brand and 56% are influenced by the design (packaging) of the products. The last stimulus influencing the respondents when buying sweetened drinks is the most significant, with as many as 89% of the respondents claiming they are influenced by the experience with the product, i.e. they create some so-called emotional ties with the product and they tend to buy the product or brand of sweetened drinks repeatedly.

Looking at the correlations among particular stimuli in Figure 3, we can see the strongest correlation between the stimuli of the price and special offers and discounts on the sweetened drinks, with both of the stimuli being rational. The more influenced the respondents are by the price, the more influenced they are by the special offers and discounts of the products. An interesting fact is that the emotional stimuli such as advertising, brand and design (packaging) of the products show a stronger correlation than the other rational stimuli among each other, excluding the stimuli of price and special offers and discounts.

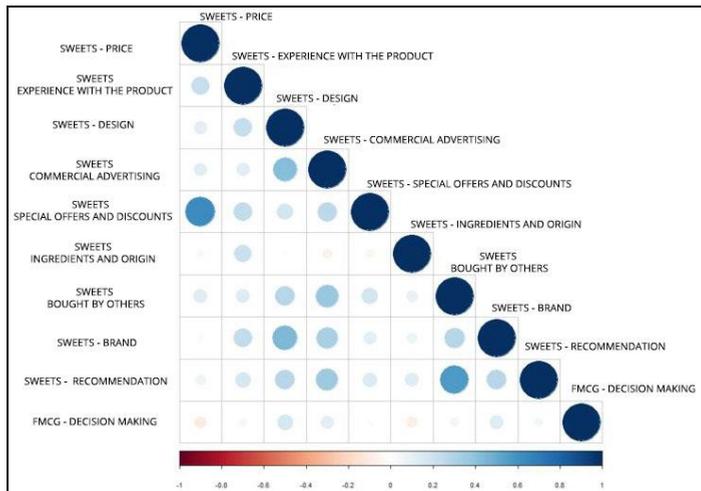
In the last line of the correlation graph, we compared the correlation of particular stimuli for the buying decision when buying sweetened drinks in the question of the category of sweetened drinks from category FMCG products (How do the particular stimuli influence you when buying SWEETENED DRINKS?), with the question about the respondents' decision making (Do you decide rationally or emotionally when buying fast-moving consumer goods?). This was done in ascending order on a scale from 1 to 10, where the scale of options for the question graphically indicated that 1 means exclusively rational decision making and 10 means exclusively emotional decision making.

Looking at Figure 5 we can conclude that the rational stimuli are weak or they show an indirect correlation with the question about decision making. On the other hand, the emotional stimuli are somewhat more powerful and they express a direct correlation with the question about decision making. Subsequently, based on the correlations and despite the respondents' prevailing claim that in the question of decision making (emotional versus rational) they decide rationally, we can assert that our assumption stating that the emotional

decision making has a stronger and more direct correlation was confirmed. This means that in the decision making process, the respondents tend to be influenced by emotional stimuli (brand, design, etc.) rather than rational stimuli (price, ingredients and origin, special offers and discounts).



**Figure 5.** The influence of rational stimuli when buying sweets.

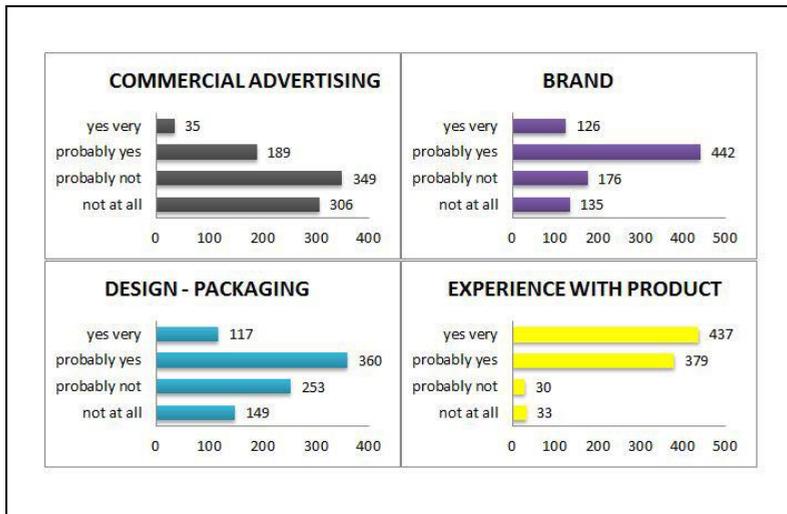


**Figure 6.** Correlations of the category of sweets.

Besides the survey and analysis of the decision making of respondents when buying sweetened drinks, we will also focus on the influences and decision making when purchasing sweets. With the question (How do particular stimuli influence you when buying sweets?) we found out that the respondents are somewhat influenced by rational stimuli (Figures 5 and 6). Out of the total of 879 respondents (100%), 55% are influenced by the price of the products, as many as 67% are influenced by special offers and discounts on the sweets, only

42% are influenced by the recommendations from their friends and acquaintances and 54% are influenced by the ingredients and origin.

With the same question (How do particular stimuli influence you when buying sweets?) we discovered bigger differences in the influence of particular emotional stimuli; a phenomenon similar to the one seen with sweetened drinks (Figures 6 and 7). Out of the total of 879 respondents (100%), 25% claim they are influenced by commercial advertising when choosing and buying sweets, which is more than with sweetened drinks but it still constitutes only ¼ of all respondents. On the contrary, as many as 65% of the respondents claim they are influenced by the brand and 54% are influenced by the design (packaging) when buying sweets. As many as 93% of respondents claim they are influenced by their experience with the product, i.e. they create an emotional tie with the product, based on which they are likely to buy the particular sweets repeatedly.



**Figure 7.** The influence of emotional stimuli for the purchase of sweets.

We can see the strongest direct correlation between the stimuli of special offers and discounts on sweets and the price of sweets, in the same way as it was manifested in the correlations of sweetened drinks. Strong and direct correlations can be seen particularly among emotional stimuli, especially between the advertising and design, or the brand and design. In the last line of the correlation graph, we again compared the two questions about the decision making during the purchase (emotional versus rational) and the question about the influence of particular stimuli on the buying process of consumers. Once again, we can see that our assumption that the respondents (consciously) think that, when buying, they decide rationally, although from the correlation graph and respondents' answers we can conclude that the consumer is influenced by emotional stimuli rather than rational stimuli. This is also confirmed by the direct and indirect correlations in the graph.

#### **4. Conclusions**

Based on the results of the questionnaires and the correlations of the sweetened drinks and sweets, we can assert that the data within both categories was nearly identical. This means we can generalise the behaviour of respondents (consumers) from the category of products and apply it on fast-moving goods.

Interestingly, the respondents are convinced about the way they make their decisions and purchases. However, the decision making process and purchasing are both activities during which consumers are influenced by several stimuli and they decide subconsciously. The same opinion is given by several authors whom we have quoted above. Consumers are influenced by not only emotional, but also rational stimuli, although they are not fully aware whether they decide rationally or emotionally when buying a product. Moreover, they are also unable to consciously consider other factors when making the buying decision.

Thanks to the electronic questionnaire, we managed to confirm that not every method is suitable for every kind of research or survey. In addition, the results of questionnaires regarding consumer decision making and behaviour are not relevant, since consumers (respondent) are often able to answer the question (What did you do?), however, they are unable to answer the question (Why did you do it?). Using Psychology and Marketing knowledge, we managed to create a set of basic questions and their control questions, whose comparison implies that respondents' statements regarding the reasons for their behaviour and decisions are irrelevant and incorrect.

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