Shopping Intelligence as a New Concept in Analyzing Consumer Behaviour

Marek Lachowicz

Warsaw School of Economics

Marek Dietl

Department of Business Economics, College of World Economy, Warsaw School of Economics

Although existing models describing consumer behaviour offer a great deal of insight into the patterns and heuristic behind every customer's buying decisions, they are not without serious limitations and operate as standalone units. Shopping intelligence, a completely new concept in economic psychology, not only attempts to merge the existing concepts into one, but to add value by allowing researchers to objectively assess respondent's shopping style and capabilities in quantitative manner. Knowledge of these factors will allow the companies to be more competitive, by better tailoring their product, price and marketing strategies to the needs of its customers. It will also help entrepreneurs avoid losses due to inappropriate choice of the aforementioned strategies. Customers will too be beneficiaries, as they will receive a product that meets their demands better.

Keywords: shopping intelligence, shopping, consumer behaviour, consumer psychology, purchase, buying

Introduction

With the abundance of choice, consumption has reached unprecedented stages. Customers have a choice of products, which forces companies operating the supply side of the market to constantly battle among themselves to gain consumer appreciation in a process called competitiveness. There exist two different types of competitiveness, quality competitiveness or price competitiveness and each company has to make its individual decision, what proportion of these two types should it utilize in order to gain maximum favor. Sometimes, the decision is influenced by the market, for example, basic goods usually force a company to engage in cost competitiveness. Apart from the obvious impossibility of eternal cost cuts, the primary drawback to this approach is that little customer loyalty is gained and should a competitor bring the price even lower, customers will probably change their minds. Therefore, many companies try to incorporate the second approach into their strategy by increasing quality of the products provided. This involves broadening the product range and increasing quality. Still, there is more to sales than just that. Customers need to be aware of the existence of such products (marketing) and become convinced that they should buy them (selling). Building brand loyalty is another essential tool, which ensures, that even if competition launches a better product, clients will not drift away.

These issues and attempts to deliver suitable solutions to them have brought the desire to understand consumer behaviour. A logical approach was that should a behavioural pattern be established, it would be far easier for a company to understand its target market and plan accordingly, thus limiting the probability of making a wrong decision, as its consequences could vary from financial losses to collapse of the entire company. On the other hand, correct assumptions regarding the target customer can bring increased sales, improved brand loyalty and greater profits. Two approaches toward consumer behaviour exist, one economical, which explains consumer behaviour via socioeconomic factors and one psychological which aims to explain it through psychology. Both encompass various models and concepts, all aiming to understand consumers.

Analyzing consumer decision making

The classic theory of microeconomics operates around the concept of the demand and supply curves. Consumers create demand, manufacturers and middlemen create supply. Both curves intersect and an equilibrium point is reached. The supply curve operates under rather simple principles – as long as it is profitable for the companies, any increase in demand will result in an increase in supply and a decrease in demand triggers a drop in supply, as the supply side companies adjust to the market. The demand curve, however, is much more complex. It is formed by individual decisions of each of the target customers. First of all, a customer needs to make a decision whether to buy a product at all, or refrain. Only after this decision is made, customer decides whether to buy a certain product, or refrain, based on a set of factors (which can also make them

EDUKACJA EKONOMISTÓW I MENEDŻERÓW | 4 (42) 2016 |
| Marek Lachowicz, Marek Dietl | Shopping Intelligence as a New Concept in Analyzing Consumer Behaviour | 29–43

refrain from the purchase altogether). Therefore, the foundation of the demand curve is individual choice and the most important question for the suppliers is: "Can this choice be influenced?".

For years, the prevailing opinion among economists was that every customer makes rational decisions, based on the utility theory, a concept first introduced by the Austrian school of economics in the nineteenth century. Even now many economists believe that customers, in their decision making, operate under the principle of maximizing the expected value. The rationality of choice, however, has been put to question as early as in 1950. In 1979 Tversky and Kahneman in their prospect theory show empirically, that customers very rarely seek to maximize the expected return. For example, given the choice between obtaining 2,400 for sure or entering a lottery with the payoffs 2,500 (probability 0.33), 2,400 (probability 0.66) and 0 (probability 0.01) the majority of respondents (82%) chose option one, despite the lottery having a higher expected return. Interestingly, after presenting the respondents with the choices: 2,400 with probability 0.34 and 0 otherwise and 2,500 with probability 0.33 (0 otherwise) the preferred option was the second one (as indicated by 83% of respondents). This is inconsistent with the preferences shown in the first pair of lotteries, as the second pair is created by removing a 0.66 probability of earning 2,400 from both lotteries. Further in the paper, researchers show, that while respondents prefer a certain gain rather than a lottery with higher expected return, the preferences are reversed in case of losses (eg. respondents would prefer to enter a lottery with 0.8 chance to lose 4,000, 0 otherwise rather than lose 3,000 for certain), a phenomenon called reflection effect (reflection of prospects around 0 reverses the preference order). Generally, respondents have exhibited risk aversion for positive prospects and risk seeking for negative ones. Additionally, the researchers have questioned another aspect of the utility theory, which does not differentiate between wealth levels (that is $1,000 has the same worth for a construction worker as it has for a billionaire). Kahneman and Tversky propose the introduction of subjective probabilities to the utility theory, that may differ from objective ones. For example, one may believe that their chances of winning a lottery are 20% higher and make a choice based on this assumption (Kahneman, Tversky, 1979).

Another interesting contribution to the decision making theory by Brandstätter, Gigerenzer and Hertwig, who propose, basing on empirical research, a set of rules to determine the heuristics used in decision making. The first one is the priority rule, which sets preferences in the following order: minimum gain, probability of minimum gain and maximum gain. Respondents in their choice of lotteries first look at the minimum gain, then they evaluate the probability of obtaining the minimum gain, and finally they look at the maximum gain possible. The second rule, the stopping rule, states that evaluation is stopped if the minimum gains differ by more than 10% of the maximum gain or if the probabilities differ by more than 10% of the probability scale. Finally, decision rule states that a chosen gamble should be the one with the more attractive loss (Brandstätter, Gigerenzer, Hertwig, 2006).

Tversky and Kahneman have also presented interesting research into making decisions under uncertainty. This is more applicable to the concept of shopping, where it is nigh impossible to have perfect information regarding the product and its alternatives. Thus, it can be assumed that consumers make shopping choices under uncertainty. In their analysis, the researchers have reached some very interesting conclusions. First of all, respondents make their decisions regarding objects on the basis of the representativeness heuristic, that is how well a description of an object fits their own image of a model object. In such assessments respondents completely disregard objective probabilities. In the original experiment, Tversky and Kahneman have given the 70/30 proportion of the objects in a sample, but respondents invariably disregarded this information. Second, respondents disregard sample size, believing it to be irrelevant or secondary to their assumptions. Third, respondents use a mistaken notion of probability, believing independent events to be somehow linked to each other. For example, respondents have assessed that the outcome of 6 coin tosses being H-T-H-T-H-T is higher than H-H-H-H-T-H, despite the two being equally probable. This leads to the so called gambler's fallacy, where it is believed that independent events such as roulette spin have a tendency to self-correct to the expected value. Fourth, respondents are insensitive to predictability and in an experiment a positive description of a company resulted in higher valuation, whereas a mediocre one brought only mediocre valuations. Fifth, respondents have faith in their predictions (illusion of validity). Should a description fit their image of a subject, other concerning issues, such as unreliability of description or it being out of date, are usually ignored. Finally, respondents have trouble recognizing patterns of regression and correctly identifying it (Tversky, Kahneman, 1974).

The implications of the aforementioned study are of tremendous importance for suppliers. From the results it can be concluded that should a customer be presented with a product or service that matches his or her stereotypical expectations, a purchase is far more likely. Furthermore, consumers would be willing to pay more for a product with more favorable description. Once an opinion is set in the customer's mind, reversing it may be impossible. Thus, if a product has a positive image, it is likely to retain it (and reversely, negative image is likely to hold).

Tversky and Kahneman further describe availability heuristic, under which decisions and assumptions are made under information that is available. The

EDUKACJA EKONOMISTÓW I MENEDŻERÓW | 4 (42) 2016 |
| Marek Lachowicz, Marek Dietl | Shopping Intelligence as a New Concept in Analyzing Consumer Behaviour | 29–43

easier the information to recall, the more likely it will be used in the decision process. Another factor influencing availability heuristics is the search procedure. The easier it is to search for data, the more likely it is going to be used. In a classic experiment, respondents were asked to ascertain whether the English language has more words beginning with r or words with r as the third letter. Common opinion was that there are more words beginning with r, but this opinion is not true. Another influencing factor is imagination of the test subject. When evaluating risk, the probability of a negative incident may be very low, but if the effects are spectacular, risk is usually overestimated. The best known example is overestimating the safety of travelling by car vs by plane, with automobiles considered safer, despite planes being the safest means of transportation. Respondents are also likely to estimate the final answer based on the initial value. Underestimation occurs when the initial values analyzed are low (Tversky, Kahneman, 1974).

This views are supported by a study by Schwarz, Bless, Strack, Klumpp, Rittenauer – Schatka and Simons, where researchers confirm, that indeed, ease of recall plays a significant role in information seeking. Attempts to influence it, for example by mentioning that the previous group of respondents has found the task daunting, has no effect on the heuristic (Schwarz et al., 1991). The impact of the availability heuristic on the shopping process is simple and obvious. Customers make purchase choices between items they are familiar with (easy to recall), making it paramount for the companies to engage in such marketing activities, as to familiarize consumers with their offer.

Neither the utility theory together with its critique nor the presented heuristics, however, fully describe shopping patterns and preferences. There exist numerous psychological factors, impulses, affects, selling techniques, etc., all influencing the final decision whether to buy or to refrain. These intertwine with each other and can be crucial to the purchasing process. Thus, simplifying shopping to the simple decision making would be a mistake.

The aforementioned issues are partially addressed in a series of behavioural theories, devised by psychologists and economists to analyze consumer behaviour. Numerous models have been created. In this article only a few will be mentioned, due to space constraints.

Existing consumer behaviour models

The most classic of all behaviour models is the EKB model. Its authors, Engel, Kollat and Blackwell identify five stages of buying process: problem identification, information search, evaluation, shopping decision and ex post analysis. The major issue with this model is that it assumes rationality of behaviour. A consumer is expected to follow five steps almost to the letter. While the model allows for a wide variety of shopping incentives (for example, someone might wish to replace their cellphone because the old one is broken or because he/she simply wants to change) it does not take impulses and irrational behaviour into the picture (Maison, Stasiuk, 2014).

It is, however, a mistake to exclude such a powerful factor as emotions when describing shopping patterns. Both integral and incidental emotional states can affect one's behaviour. Bodenhausen describes chronic integral affect as positive or negative responses to certain objects learned through conditioning and other learning processes. These affects are very hard to deal with, as respondents are unaware that they are influenced by them, have no desire to change them, probably do not possess the necessary skillset to correct them and have the tendency to put even negative biases in positive light (Bodenhausen, et al., 2000). Episodic integral affect is defined as an affective state experienced in particular situations within a group and is caused by immediate interaction, not by feelings or attitudes lodged in subconsciousness (Bodenhausen et al., 2000). These affects are particularly important as they influence the immediate decision. For example, one might have a chronic dislike for products manufactured in Germany but fall in love with the latest BMW model. In addition to this, Bodenhausen describes incidental affect, where judgments are affected by the preexisting mood. Interestingly, advertisements presented during a film which triggered negative emotions were analyzed better in terms of product advantages. On the other hand, advertisements presented during a movie that triggered positive emotions gained positive image through association (Maison, Stasiuk, 2014). Therefore, it is beyond question that incidental affect influences emotions, but the extent of this influence is neither strictly positive nor negative, and it depends on salespeople and marketers to exploit it.

Another set of theories divides customers into groups depending on their heuristics of behaviour. For example, customers can be split into patricians (ones with high wealth but little need for status), parvenu (high wealth and high need for status), poseurs (low wealth, high need for status) and proletarians (low wealth, low need for status) (Han, Nunes, Drèze, 2010). In this model, shopping patterns are defined both by wealth and the need to present wealth to others. Four consumer types have different shopping patterns and, for example, a parvenu will look for an expensive item with visible logo, a patrician will look for a quality item but one that does not attract unnecessary attention and a poseur may opt for a fake Rolex watch to give an impression that he or she is wealthier than it would

EDUKACJA EKONOMISTÓW I MENEDŻERÓW | 4 (42) 2016 |
| Marek Lachowicz, Marek Dietl | Shopping Intelligence as a New Concept in Analyzing Consumer Behaviour | 29–43

seem. VALS model, similar in its concept, divides customers into eight categories, which are:

- thinkers (higher material status) and believers (lower material status), both ideals oriented and characterized by lack of interest in the prestige or status. Thinkers operate within certain benchmarks of conduct. They plan carefully and are rarely influenced by trends, though they sometimes overanalyze. Believers rely more on spirituality, dislike ambiguity and respect stability;
- achievers (higher material status) and strivers (lower material status), both achievement oriented, seeking to present their high social position to others. Achievers are goal oriented and believe in the importance of money. Me first attitude is often encountered. These people are hard working and peer conscious. Strivers are the heart of street culture, prefer to carry their wealth on them, like to have fun and are characterized by high revolving employment;
- experiencers (higher material status) and makers, self-expression oriented, and aiming to experience something new or being self – sufficient. Experiencers usually are the first to follow a new trend, but also the first to leave it. They are sociable and spontaneous and tend to go against the mainstream. Makers usually do not trust government, believe in gender roles, have a desire to own land and possess a strong interest in cars. While they describe themselves as straightforward, others can perceive them as anti – intellectual;
- survivors, people with low material status, continuously looking for savings and cutting costs, often buying the least expensive products and seeking to exploit any promotion. Survivors are usually the oldest customers. They are loyal to their brands;
- Innovators, people with very high material status, who, thanks to their wealth can afford almost anything and buy with accordance to their own liking. These people possess enough confidence to experiment, are very receptive to new ideas and technologies, while putting faith in R&D and science. They also have a wide variety of interests. Advertising in this social group tends to be problematic, as innovators are well aware of various tricks used by marketers and tend to behave skeptically (Maison, Stasiuk, 2014).

Consumers can also be divided into four groups based on their need for uniqueness and belonging to a group (Ruvio, Shoham, Makovec-Brenčič, 2008). Other models can be devised equally easily as it is entirely up to the researcher to put one heuristic on the x axis and a second one on the y axis, thus creating his or her own model.

One of the milestones in analyzing consumer behaviour has been the identification of two primary shopping patterns: utilitarian and hedonic. Hedonic consumption is usually defined as related to multisensory, fantasy and emotive aspects of one's experience with the products (Hirschman, Holbrook, 1982). Hedonic gratification would concentrate on sensory attributes, such as pleasant taste or good overall design of a product. Utilitarian approach would concentrate on the utility of analyzed item. Many researchers have looked into the matter, with notable names including Hirschman, Holbrook, Ahtola and Tse. For a long time, it has been believed that a customer shops with accordance to one of the patterns, i.e. he or she is either utilitarian or hedonic. However, Batra and Ahtola have shown that individuals can display both approaches and both are equally viable. Hedonic and utilitarian motivations have been found not mutually exclusive. In fact, analyzing these two approaches separately results in flawed empirical models, whereas assessing them together is valid. Consumers may be utilitarian while purchasing one product (for example a cleaner) and hedonic when purchasing another (a soft drink). However, behaviours which are beneficial to the respondent can be associated with the utilitarian option, whereas fun and self-indulgence triggers hedonic option (Batra, Ahtola, 1990).

A very interesting extension to this theory has been made by Mano and Elliott in their concept of smart shopping, which they define as "the tendency to invest … time and effort in seeking and utilizing promotion – related information in order to achieve price savings". The authors also distinguish three elements essential to shop smartly: marketplace knowledge, acquiring promotion – related information and being aware of the consequences of using a price promotion to one's benefit. In addition to this, smart shoppers need to exhibit several behaviours: awareness regarding promotions in certain marketplaces, items on sale, cheaper stores, etc.; the ability to evaluate prices; general price knowledge and a sense of responsibility for price savings.

These four behaviours allow clients to seek out promotions, analyze them, and if they are deemed reasonable, making a purchase. First, a promotion is sought through actions such as viewing commercials. Then, an evaluation is made. This evaluation can be performed in two ways, hedonic and utilitarian. Hedonic focuses on emotional and entertainment connected to the purchase of a specific item or service. Utilitarian is concentrating on shopping efficiency, particularly financial efficiency. Most customers use a mixture of these two approaches, with proportions varying, depending on the individual in question. Finally, a smart shopper needs to feel responsibility for achieving price savings. This is a crucial component, after all he or she has devoted considerable time to seek and evaluate promotions. Now if he or she would fail to buy cheaper, or simply be granted a discount regardless of effort, they would feel disappointed (Mano, Elliott, 1997).

EDUKACJA EKONOMISTÓW I MENEDŻERÓW | 4 (42) 2016 |
| Marek Lachowicz, Marek Dietl | Shopping Intelligence as a New Concept in Analyzing Consumer Behaviour | 29–43

Hirschman and Stern have analyzed the influence of emotions on consumer stands and preferences. They propose a personal emotional range for every person, varying from extremely sad to extremely happy. They also postulate that current personal events can influence the emotional range and, depending on their magnitude, have a lasting effect on the individual's emotions. The model also includes responses and consumption behaviours, often feedbacking into emotion. The researchers have also included prevailing cultural norms as a factor influencing consumer choices. Moreover, it has been shown that positive mood enhances the effectiveness of advertisements and even increases the information processing ability. For subjects in a positive mood, information processing relies more on heuristics. Swinyard has found that mood had no direct influence on shopping intentions, but did influence involvement level. Usually, though, moods influence perception. Hirschman and Stern divide consumers into four categories on a biaxial model.

- contented consumers exhibit positive affect and low arousal. They are calm, serene and placid. They are happy with the current state of things, brand loyal, do not desire to experiment. They are receptive to warm advertisements, which reinforce their peace. They may use heuristic processing to simplify decisions in order to save energy;
- happy consumers exhibit high arousal and positive emotions. They seek out new products and services, as long as they assume they will find pleasure in them. Their cognitive capabilities are enhanced. Their processing and recall speed is high and they exhibit consumption creativity;
- sad consumers exhibit low arousal and negative emotion. They are risk averse and pessimistic and probably will not try new products. Their display of brand loyalty is due to limitations in cognitive ability. Their decision making is slow and aimed at minimizing disappointment. They are unlikely to express dissatisfaction;
- angry consumers exhibit high arousal and negative emotions. They are demanding and complaining (Hirschman, Stern, 1999).

O'Donoghue and Rabin in their research distinguish between two different types of human behaviour: sophisticated, when a person is aware of the fact that it might have self-control problems in the future (i.e. they possess higher intrapersonal intelligence and believe their preferences might change in the future) and naive, who do not foresee such problems (lower intrapersonal intelligence and belief, that their preferences will stay the same). Furthermore, the researchers argue, that, contrary to popular belief, "A preference for immediate gratification, … implies time inconsistent preferences" (Donoghue, Rabin, 2000). The most important example the authors give is the choice whether to do something now, or later. In case of shopping, it is the choice of buying now and receiving an immediate gratification and rise in the utility level, or holding on to the money. Being a naive person makes the client vulnerable to persuasion, promotions, psychological pricing tricks, advertisements, etc. It does not necessarily mean that a bad purchase is going to be made, but rather shows, that in order to achieve significant shopping efficiency, some degree of intrapersonal intelligence is required.

While often very innovative and imaginative, the aforementioned models are not without its limitations. Economic ones, based on utility and decision making have a notoriously hard time dealing with psychological factors, multiple goods and services. Psychological models on the other hand tend to exhibit oversimplification, with most of them being biaxial and distinguishing only four distinct behaviours, without taking proportions into account.

Shopping intelligence definition

We propose an alternative model to the existing ones, where one's shopping behaviours would be measured by his or her **shopping intelligence**. Since many factors influence shopping processes and many techniques are employed in order to make a purchase, we believe, that shopping intelligence should be analyzed in a multilayer way, similar to Garnder's concept of multiple intelligences[1]. Several aspects of Gardner's intelligence can also be incorporated into the shopping intelligence concept. For example, intrapersonal intelligence can make an individual aware of the fact that he or she is emotional and make him/her employ a rule never to shop when happy or angry.

Having considered all of the above, we propose a multi-aspect model of shopping intelligence, that would encompass and quantify all of the aforementioned models and theories. Our theory would comprise of three aspects, which would analyze how well does a respondent cope with the activities related to shopping processes.

Aspect 1 – decision making

As we have previously stated, shopping is essentially a matter of choice. Other factors can influence the decision making process of each individual, but ultimately, it comes down to making a decision whether to buy or not, and if to buy

[1] Gardner distinguishes between the following types of intelligence: linguistic intelligence, logical – mathematical intelligence, spatial intelligence, bodily – kinesthetic intelligence, musical intelligence, interpersonal intelligence, intrapersonal intelligence and natural intelligence.

EDUKACJA EKONOMISTÓW I MENEDŻERÓW | 4 (42) 2016 |
| Marek Lachowicz, Marek Dietl | Shopping Intelligence as a New Concept in Analyzing Consumer Behaviour | 29–43

then what to buy. Therefore, when evaluating one's score in this area, we analyze the following:

- whether the customer is able to make a justified and rational initial decision, that is to buy or not to buy. Note that high material status sometimes justifies an irrational initial decision (for example buying a pair of shoes simply because they look good), therefore we aim to provide correcting factors such as only analyzing purchases that are larger than a certain percentage of respondent's income;
- whether the customer is making rational shopping decision, that is whether is he or she capable of choosing a product that best meets his or her expectations. Here we understand, that different approaches work for different products and one purchase may be based on utilitarian reasons and the other on hedonic. What is important is whether the customer is able to evaluate his or her needs and seek a product that best meets those needs;
- whether the customer is able to change his or her original decision, should no appropriate product be found and refrain from a bad purchase.

Aspect 2 – market research

Market research is innately related to decision making, though we have decided to analyze it under a separate category. Willingness to invest time and effort into analyzing offers, information seeking, haggling and negotiating prices is, after all, not exactly the same as decision making. Under market research we analyze the tendency to invest time and effort info seeking out the product that best fits the customer's demands. Here it needs to be noted, that in order for market research to be employed, value of the product in comparison to customer's disposable income needs to exceed a certain threshold. In more specific terms, deciding to invest into market research rather than buying on the spot is a gamble. The buyer sacrifices time and in return hopes to achieve some measurable gains, which come in two variations. First one is strictly financial and involves buying the same product for a lower price. Second is indirectly financial and means buying a higher quality product for the same price. Here, the customer has not achieved direct price savings, but by obtaining a product belonging to a higher quality basket, the customer feels price savings have been made, because had he or she wanted a higher quality product, more money would have to be spent. However, such gains are not bound to happen. Sometimes, the customer invests time and effort into research only to find out that there is no better deal than the one initially found. Here, the only benefit of engaging into market research is self-satisfaction and the feeling of doing everything in one's power in order to make the best purchase and can strengthen the conviction that a purchase should be indeed made. Naturally, the value of such conviction depends on the individual and whether it is worth the invested time remains an open question.

Aspect 3 – emotional control

Emotions play a large part in any decision making process. Impulse based and hasty decisions are usually made under the influence of strong emotions. The more an individual is able to restrain oneself when emotional, the more rational his or her decisions are likely to be. However, it has to be noted, that Hirschman and Holbrook indicate the importance of emotions in hedonic shopping. The researchers state that in some cases emotions can override utilitarian reasoning, consumers can subjectively enhance product's objective qualities, and even conjure positive images of themselves should they make a purchase. Hirschman and Holbrook cite the famous example of "Marlboro man", which attracted many people to smoking due to the association with a masculine, macho cowboy (Hirschman, Holbrook, 1982). Therefore, emotions need to be carefully taken into consideration. When analyzing one's emotional control, we evaluate:

- one's self-control and awareness of being in emotional upheaval. This is closely related to Gardner's intrapersonal intelligence. The more one is able to realize that his or her current state is far from serenity and the more control he or she has over his behaviour during such period, the less likely is he or she to make irrational decisions, but rather calm down and analyze the situation again with a clear head;
- overall susceptibility to emotions. This point encompasses various character traits such as empathy, patience, eagerness to anger, nervousness, etc. The more one is susceptible to emotions, the more probably these emotions are going to be used against him or her. A careful salesperson can manipulate these emotions in order to trigger a purchase and the entire spectrum of psychological tricks is used to convince customers to make a purchase. Elements of such psychological pricing include ending the price of the product with 9, which usually triggers a higher number of purchases than even a lower price, but ending with a different digit (Simester, Anderson, 2003);
- degree of subconsciously rooted affects and effects of nurturing. These long lasting emotions have a profound impact on shopping, as indicated by Bodenhausen. If an affect is particularly strong, a customer can straight out reject even a good, and objectively reasonable purchase, simply due to a subconscious dislike. This influence is very hard to remove, as even if the customer is aware of the existence of such affects (though they often exist subconsciously). Cultural and social factors play an enormous part and even

EDUKACJA EKONOMISTÓW I MENEDŻERÓW | 4 (42) 2016 |
| Marek Lachowicz, Marek Dietl | Shopping Intelligence as a New Concept in Analyzing Consumer Behaviour | 29–43

high intrapersonal intelligence may be insufficient to exclude them from ones shopping patterns.

Therefore, we define shopping intelligence as **the ability to make reasonable decisions, assisted by the process of market research and control of one's emotions, aimed at obtaining a product that would best cover the customer's requirements, which started the shopping process.** In accordance to shopping intelligence idea, should no appropriate product be found, the reasonable decision would be to withdraw from the purchase completely. Shopping IQ would be a numerical measure of this ability, analyzed via specific tests.

Summary

While existing models describing consumer behaviour offer a great deal of insight into the patterns and motives every customer uses in his or her buying decisions, they are not without serious limitations and operate as standalone units. Shopping intelligence, a completely new term in economic psychology, attempts to not only merge the existing concepts into one, but to add shared value and for the first time allow the researchers to objectively assess respondent's shopping style and capabilities in quantitative manner. This very promising idea shows great room for empirical studies, which should form a natural continuation of this article.

The importance of this concept is significant, especially in the field of management. Shopping intelligence determines customer choice, directly influencing demand. When a company is aware of its customers' shopping intelligence, it can make appropriate adjustments to promotional activities, marketing, final form of the product and price. This makes the product more attractive to the customers, increasing profits and making the company more competitive. It also reduces the risk of a potentially expensive mistake such as offering an inappropriate product, price or marketing. From the customers' perspective, high shopping intelligence should trigger an increase in the quality of products delivered. This would be a from-the-bottom shock, with a highly positive influence on the competitiveness of a country or a region, without state involvement.

References

Batra, R., Ahtola, O. (1990). Measuring the hedonic and utilitarian sources of consumer attitudes. *Marketing Letters* 2(2), 159–170.

Bodenhausen, G., Mussweiler, T., Shira, G., Moreno, K. (2000). Affective influences on stereotyping and intergroup relations affective influences on stereotyping and intergroup relations. *Handbook of Affect and Social Cognition*. Erlbaum, 321–343.

Gigerenzer, E.G., Hertwig, R. (2006). The priority heuristic: making choices without trade-offs. *Psychological Review*, 113(2), 409–432.

Han, Y., Nunes, J., Drèze, X. (2010). Signaling status with luxury goods: the role of brand prominence. *Journal of Marketing*, 74, 15–30.

Hart, P.E., Nilsson, N.J., Raphael, B. (1968). A formal basis for the heuristic determination of minimum cost paths. *IEEE Transactions of System Science and Cybernetics*, SSC-4, No. 2, 100–107.

Hirschman, E., Holbrook, M. (1982). Hedonic consumption, emerging concepts, methods and propositions. *Journal of Marketing*, 46(3), 92–101.

Hirschman, E., Stern, B. (1999). The roles of emotion in consumer research. *Advances in Consumer Research,* 26, 4–11.

Kahneman, D., Tversky, A. (1979). Prospect theory: an analysis of decision under risk. *Econometrica,* 47(2), 263–292.

Maison, D., Stasiuk, K. (2014). *Psychologia konsumenta*. Warszawa: Wydawnictwo Naukowe PWN.

Mano, H., Elliott, M. (1997). Smart shopping: the origins and consequences of price savings. *Advances in Consumer Research,* 24, 504–510.

O'Donoghue, T., Rabin, M. (2000). The economics of immediate gratification. *Journal of Behavioral Decision Making,* 13(2), 233–250.

Ruvio, A., Shoham, A., Makovec-Brenčič, M. (2008). Consumers' need for uniqueness: short form scale development and cross – cultural validation. *International Marketing Review,* 25(1), 33–53.

Schwarz, N., Bless, H., Strack, F., Klumpp, G., Rittenauer-Schatka, H., Simons, A. (1991). Ease of retrieval as information: another look at the availability heuristic. *Journal of Personality and Social Psychology,* 61(2), 195–202.

Simester, E., Anderson, D. (2003). Effects of $9 price endings on retail sales. Evidence from field experiments. *Quantitative Marketing and Economics,* 1, 93–110.

Tversky, A., Kahneman, D. (1974). Judgment under uncertainty: heuristics and biases. *Science*. *New Series,* 185(4157), 1124–1131.

EDUKACJA EKONOMISTÓW I MENEDŻERÓW | 4 (42) 2016 |
| Marek Lachowicz, Marek Dietl | Shopping Intelligence as a New Concept in Analyzing Consumer Behaviour | 29–43

Marek Lachowicz

Is a Master's student at the Warsaw School of Economics as well as a double Bachelor's graduate in Management and Finance & Accounting therein. He is the originator of the shopping intelligence concept.

Marek Dietl, PhD

Is an assistant professor at the Warsaw School of Economics – SGH (Faculty of Economics). He was a visiting fellow at the University of Essex (UK) in the years 2012–13. He earned his MA in Economics at the Warsaw School of Economics (SGH) and his PhD at the Institute of Economics, Polish Academy of Sciences. During his PhD studies he was a Junior Fellow at the University of Glasgow. He published three books, authored chapters in four monographies and eight reviewed articles. He is also active participant of economic debate in Poland with over fifty press articles, dozens of interviews for different media. He is also involved in the policy design as an expert for a think-tank Sobieski Institute and employers' association Business Centre Club. Mr Dietl was appointed economic advisor to the President of Poland in February 2016.