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THE POTENTIAL OF USING BLUETOOTH-BASED SYSTEM AS A PART OF PROXIMITY MARKETING IN THE SLOVAK REPUBLIC

Abstract. *Proximity marketing is considered as a tool of creating a personal relationship between a customer and a vendor at the time of in-store physical purchase through modern, personalized, timely and relevant communication. It eliminates the ever-deepening decline in purchases made in retail stores, increases customer satisfaction and helps to create a positive brand image. Last but not least, it contributes to gaining feedback and helps to meet the company's marketing goals. Bluetooth low energy beacons, called BLE (Bluetooth Low Energy), are currently one of the most widely used proximity marketing technologies. Based on the literature review, it has been identified significant shortcomings in the area of proximity marketing not only on the Slovak market but as well in general context of marketing innovations and their implication in contemporary marketing practice. Therefore, there is a need to provide revision of traditional strategic concepts with emphasis on innovative approach contained in proximity marketing concept. Up to now, the theory has been limited mainly to state the general need of incorporation of proximity marketing into managerial practice across markets but there is still missing exact detection of specific tools of proximity marketing in the scope of consumer's preferences. So, the aim of the paper is to propose recommendations for the practice of enterprises based on the survey of perception of proximity marketing activities by tools of Bluetooth technologies, with regard to the specifics of its implementation in the Slovak Republic. For this reason, a questionnaire survey of the perception of proximity marketing activities by consumers has been provided. The data used in the presented paper were obtained by our own survey carried out on the sample of 568 respondents (citizens of the Slovak Republic older than 15 years). We've statistically evaluated the given data by hypotheses verification provided by relevant statistical tests. Therefore, the important groundwork for making proposals and recommendations for business practice in the scope of implementing proximity marketing in the Slovak Republic has been created. We have found out that 1) respondents who have interest in proximity marketing show more positive buy-in response and 2) respondents who prefer to shop in the store before buying through the Internet based on a promised reward also have a higher level of loyalty. So, we can conclude that there is a great assumption that Bluetooth technology-based activities provided in the scope of proximity marketing will trigger in practice higher conversion rate in comparison with other theoretically recommended. To exploit this competitive advantage fully, there is a prior need to develop the relevant theory of proximity marketing with respect to consumer's specifics in the perception of this marketing innovation.*

Keywords: Bluetooth, in-store, mobile phones, proximity marketing, Slovakia.

Introduction. Technological possibilities and lack of free time of customers cause the increase of purchases made via the Internet (Durana et al., 2019). However, this trend leads to a decrease in in-store purchases, which creates a barrier between the seller and the customer. Dealers have to deal with inadequate customer feedback and manage online customer communications, which is many times more complicated than face-to-face communications. Oftentimes, the mode of communication leads to misunderstandings, misinterpretations or even to the loss of customers (Kral et al., 2018). However, businesses and especially retailers themselves can benefit from technological advances in this case as well. Just by selecting the right marketing tool to meet the goals and create the right conditions (Robson,

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2018; Golec, 2018). Such tools are undoubtedly tools of proximity marketing and location-based marketing that are used as a channel of communication in in-stores. However, many businesses only monitor their competition, their presence on the market and they do not focus on innovative marketing tools (Valaskova et al., 2018). Moreover, if they do the proximity marketing concept in marketing practice, they avoid respecting consumer's specifics. This is also one of the factors why proximity marketing tools do not work as much in practice as it is stated in the scientific literature. For this reason, it was important to conduct a survey of the perception of proximity marketing activities through Bluetooth-based systems by consumers. Based on the problem specification, we set the following goal of the marketing survey: Identification of current state of perception of proximity marketing activities in the Slovak Republic. To ensure the fulfilment of the objective of the marketing research, we have set the main research assumption that there is a potential for using proximity marketing through Bluetooth technologies in the business practice of the Slovak Republic.

Literature Review. Since the beginning of the 21st century, traders were increasingly initiating a placement-targeted ad. It was likely that the privacy of consumers who received advertising messages in specific locations played an important role in determining how consumers responded to this type of marketing communication (Kovacova et al., 2018). At that time, physical surroundings and places formed consumer actions and responses and represented an important element of the context. A place can influence man's behaviour and his perception of various information as well (Dholakia et al., 2004). This was one of the reasons, why mobile marketing began to focus more closely on proximity issues. Because it has happened many times, that a customer who was not interested in buying from a particular merchant received from his ad on his device. On the one hand, the customer could perceive such advertising as annoying and, on the other hand, the trader made unnecessary efforts to reach the customer. It was more efficient for the trader to reach the customer who was in close proximity to his store or directly in the shop and concentrate on communicating with him (Cheng et. al., 2009; Yeh, 2013). In 2008, the concept of proximity marketing was defined for the first time. This concept was based on the need to develop location-based marketing. While location-based marketing communication ensures the quantity of communication with potential customers, the implementation of proximity marketing communication focuses on the quality of communication with potential customers (Arnold et al, 2009). The combination of geographical, spatial, socio-demographic and consumer behavioural information with sophisticated data search tools and market analysis has led to the emergence of proximity marketing. Despite the transformation from mass media to media geographic targeting and media geographic localization, as well as the use of geographic visualization and analysis of marketing techniques and data, marketing activities were still designed to achieve financial goals, increase market share and increase consumer loyalty (Goel, 2007; Peleckis, 2018; Imahashi, 2018). According to Curtin et al. (2007), proximity marketing has became the missing link needed to close the last gap between customer and merchant due the fact that the idea of proximity, physical placement of the product in relation to the consumer has highlighted a new dimension that has not been used in the past because of technology constraints. Their theory has been developed by Salto (2018) and Cress et al. (2018). They highlight that the main role of proximity marketing is to communicate with customers. Simultaneously they take into account another very important issue of proximity marketing – security issues. The theory of digital security in the scope of innovations in marketing practice has been discussed by Roy et al. (2017). These authors have stated that smart retail technologies have the potential to improve the customer retail experience by providing superior and personalized retail services. However, when shoppers have to deal with technologically sophisticated retail services, concerns arise regarding the customers' adoption and their psychological reactions towards smart retail technologies. Their study explores the factors which constitute customers' experience with the smart retail technologies and examines an innovative construct (i.e. smart customer experience) in retailing. The development of a

conceptual model explores smart customer experiences and their consequences on smart technology, customer, and retailer-level outcomes. Guided by technology adoption research, this research examines the relationships between smart customer experience, customer satisfaction, perceived risk, behavioural intentions, word-of-mouth intentions, stickiness to retail store, shopping effectiveness, and consumer well-being. Findings indicate that smart customer experience directly enhances satisfaction and reduces perceived risk towards smart retail technologies. Customer satisfaction increases behavioural intentions, word-of-mouth intentions, stickiness to the retailer, shopping effectiveness, and customer well-being. The perceived risk reduces behavioural intentions, word-of-mouth intentions, shopping effectiveness, and stickiness to the retailer. Finally, customer satisfaction and perceived risk both mediate the relationships between smart customer experience and outcome variables. Foroudi et al. (2018) have stated that the perception of security issues of proximity marketing varies across consumer categories. Thus, the aspect of the importance of consumer's specifics in the scope of proximity marketing perception has been discussed based on the presumption that increased use of smart technologies by customers is leading to recognition of their influence on the shopping experiences of customers by practitioners. On the other hand, they point out that the academic literature fails to acknowledge the influence of smart technology usage, combined with the behavioural intention of the customer, on the dynamics and experience of customers. Findings of this research also reflect on the role of customer dynamics and the customer experience in embracing the innovative application of smart technologies in a retail setting. The results and implications included in their study also contribute to the understanding of the determinants that affect customer dynamics and customer experience when making use of smart technologies. Recently, it has been stated mainly the fact that the proximity marketing tools implementation is the way how to reach competitive advantage in dynamically changing marketplace (Kallas, 2016; Kramarova et al., 2016) as well as the need of its specifics consideration. Unfortunately, the intersection of the details of proximity marketing tools implementation with respect to specifics of their perception by consumers is still missing. This deficiency is removing step by step nowadays. Based on the data shared by the customers, customers can be divided into several segments, making it easier for the merchant to make decisions and select marketing strategies in the scope of implementation of specific proximity marketing tools. Such knowledge can lead to an even stronger relationship between the seller and the customer and thus increase the competitive advantage of the seller (Cress et al., 2018; Mala et al., 2018; Drugau-Constantin, 2018). Garaus and Wagner (2019) identify the leading position of Bluetooth based tools in the portfolio of proximity marketing. They state that despite the growing interest in waiting for perception management, no study has yet explored how environmental distracters in retailing waiting areas influence overall store satisfaction. This field experiment revealed that digital signage mounted at the checkout area of a grocery store positively influenced overall store satisfaction by distracting shoppers from monitoring queuing time. The presence of a digital signage system reduced the perceived waiting time while also creating favourable waiting experiences. However, only the latter influenced store satisfaction. Their research highlights the importance of creating favourable waiting experiences. The process of using the Bluetooth system is based on the setting of the broadcasting device, the so-called a beacon at a particular location, and subsequently on posting information that may be text, image, sound, or video to devices that support Bluetooth within range of a beacon (Cockrill, et al., 2011). The limitations that have caused the suspension of proximity marketing development via Bluetooth have eliminated by the development of mobile devices as well as Bluetooth. Low energy Bluetooth beacons, called BLE (Bluetooth Low Energy), are currently one of the most widely used proximity marketing technologies (Beaconstac, 2018). The role of beacons lies in the use of accurate location data, especially in interiors, in order to engage the customer personally and on time.

Based on this fact, there is a need to revise previously stated theoretical background of proximity marketing implementation patterns focusing on the specifics on its individual tools and their perception

by consumers. Thus, it is vital to verify two main issues of this innovative marketing concept – it's potential to stimulate positive buy-in response and its willingness to create an increase in the level of consumer's loyalty. The aspect of loyalty has been analysed by Dennis et al. (2014) as a main competitive potential of proximity marketing in general. Their research investigates the role of digital signage as an experienced provider in retail spaces. The findings of a survey-based field experiment demonstrate that digital signage content high on sensory cues evokes the affective experience and strengthens customers' experiential processing route. In contrast, digital signage messages high on «features and benefits» information evoke the intellectual experience and strengthen customers' deliberative processing route. The affective experience is more strongly associated with the attitude towards the ad and the approach behaviour towards the advertiser than the intellectual experience. The effect of an ad high on sensory cues on shoppers' approach to the advertiser is stronger for first-time shoppers, and therefore important in generating loyalty. The findings indicate that the design of brand-related informational cues broadcast over digital in-store monitors affects shoppers' information processing. The cues evoke sensory and affective experiences and trigger deliberative processes that lead to attitude construction and finally elicit approach behaviour towards the advertisers. Willems et al. (2017) present an exploratory study on the effectiveness of in-store marketing communication appeals via digital signage applying the construal level theory (CLT) in a field experiment. According to this theory, the authors hypothesize that shoppers will, on the one hand, respond more favourably to messages focusing on the desirability of the offering, when they are further distanced from the actual purchase decision. On the other hand, the authors expect more favourable responses toward messages containing feasibility appeals, positioned closer by to the purchase decision. Thus, they have determined appropriate location-based content for in-store proximity marketing. Based on these two leading motives in the research of proximity marketing tools, there have been set two main hypotheses of the provided research. First of them focused on the issue of buy-in response and second one investigating consumer loyalty. It is because we consider these two topics as a basic presumption of future study of proximity marketing tools specifics in consumer's perception as it has been identified by contemporary literature (Bacik et al., 2018; Kolnhofer Derecskei, 2018; Turner & Szymkowiak, 2019).

Methodology and research methods. The basic problem of our marketing research is to assess the perception of proximity marketing activities through Bluetooth technologies and to identify areas for optimizing proximity marketing activities through Bluetooth technologies for business practice in the Slovak Republic. Based on the problem specification, we set the following goal of the marketing survey: Identification of the specifics of implementation and consumer's perception of proximity marketing through Bluetooth technologies in the Slovak Republic. To ensure the fulfilment of the objective of the marketing research, we have set the main research assumption that there is a potential for using proximity marketing through Bluetooth technologies in the business practice of the Slovak Republic.

Based on the set problem and the goal of the marketing research, we decided to carry out the marketing research on a sample of consumers of the Slovak Republic, i.e. a selected set of statistical units that we select from the whole set of consumers of the Slovak Republic (Valaskova et al., 2015). We chose a deliberate choice as a sample selection method. We set the conditions on the basis of which the sample of respondents forms a suitably selected sample (Rimarcik, 2007). The size of the representative sample was determined by the following equation:

$$n = \frac{z_{\alpha}^2 * p * (1-p)}{c^2} \quad (1)$$

where n is the minimum number of respondents, z_{α} is the critical value of the normal distribution, p is the likely sample proportion, expressed as a decimal, and d is the confidence interval, expressed as a decimal (Moravcikova et al., 2017).

The confidence level was set at 95%. The critical value of the normal distribution at confidence level α = 0.05 was 1.96. This is based on the fact, that 95% of the area of the normal distribution is within 1.96 standard deviations of the mean. For those cases where the likely sample proportion was not known, p was set at 50%. The confidence interval was set at 5% (Lehutova et al., 2013, Kollar, 2015). In order to conduct a marketing survey of the perception of proximity marketing activities via Bluetooth technologies by consumers in the Slovak Republic, it is necessary to provide a sample of at least 385 respondents. In order to carry out a qualitative survey, a questionnaire was chosen as a tool for data acquisition. The questionnaire ensured finding the perception of proximity marketing activities in Bluetooth technologies by consumers in the Slovak Republic. The task of the questions was to provide information about the perception of proximity marketing activities in general and through Bluetooth technologies by Slovak consumers as well. The survey was conducted in April 2019. The 568 respondents participated in the questionnaire survey. The questions in the questionnaire were closed, so respondents chose from pre-offered options to achieve exact evaluation. One question identified the degree of customer loyalty was determined by a Likert scale of 0-10. This scale was determined on the basis of «The one number you need to grow». Loyalty variable was detected by a straightforward question by Reichheld (2003) in the questionnaire («How likely are you to recommend to s friend or colleague? »). Respondents answered using 11-point scale (0-10), where a number 0 indicates not at all likely and 10 means is extremely likely. According to these values, respondents can be divided into 3 basic groups – promoters, passives and detractors. The respondent, who indicated the 9 or 10 option on the scale, is marked as the promoter, so it is very likely that she/he will really recommend you to other people. Respondents who have indicated their willingness to recommend as 7-8 would be described as passives. Other critics (detractors), or those who have indicated a willingness to recommend by a number of 0-6 on the scale, are unlikely to recommend you to other people. For closed questions, the frequency of responses to each of the options offered for the entire research set is usually evaluated. The frequency is expressed in relative numbers, i.e. in per cent. Respondents' responses were used to statistically testing of hypotheses as well. Statistical hypothesis testing is one of the most important statistical inference procedures. The role of statistical inference is to decide on the basis of information from the available choice whether we accept or reject certain hypotheses regarding the basic set. In verifying the correctness or incorrectness we proceeded in accordance with the methodology of statistical hypothesis testing, which consists of the following steps: 1) formulation of the null hypothesis (H0); 2) formulation of the alternative hypothesis (H1); 3) determination of the level of significance (α); 4) calculation of test statistics and probability and 5) decision (Rimarcik, 2007). In our research, the significance level was determined at 0.05 and corresponded to a 95% confidence interval. Because our primary data is of a nominal nature, the test statistic is a Chi-square test for independence. To calculate the test statistic of the hypothesis, we used the IBM SPSS Statistics software. This software also calculates the correlation coefficient. In our case, as we examine the nominal variables in the number of 3+x2+, it is appropriate to investigate the force of dependence between variables using Cramer's V measure of association. Cramer's V is the most common strength test used to test the data when a significant Chi-square result has been obtained.

Correspondence Analysis is a multivariate graphical technique designed to explore relationships among categorical variables. When the study variables of interest are categorical, correspondence analysis is an appropriate technique to explore relationships amongst variable response categories and can play a complementary role in analysing data (Sourial et al., 2010). We can use this method in marketing surveys, discovering customer preferences and attitudes, assessing brand attractiveness. Examining the internal structure of the variables makes sense only if there is a dependency between the observed characters (factors). Use correspondence analysis must, therefore, be preceded by testing hypotheses about the independence of the observed characters. The essence of the correspondence analysis is the transformation of the points of the multidimensional space, which represent the examined

categories, into a space of lower dimension, most often in the plane (2 dimensions). This transformation is unambiguous and allows us to focus on revealing a certain type of relationship between categories (variables). The transformation quality based on the rates derived from the total inertia was estimated (Kral, 2010).

Results. We created a questionnaire for the purpose of conducting a survey of the perception of proximity marketing activities through Bluetooth technologies by consumers in the Slovak Republic. For the overall evaluation of the questionnaire survey, we determined the main research assumption. The questionnaire contained questions that help provide a comprehensive insight into the issue of proximity marketing in the Slovak Republic, while also focusing on proximity marketing activities through Bluetooth technologies. In the questionnaire, we were interested in what mobile phone is owned by consumers. Up to 86% of consumers own a smartphone. The other 14% of consumers own another mobile device, which is usually called a non – smart mobile phone. Just a smartphone is a device through which proximity marketing is most commonly implemented in the store. In addition, we wondered what operating system prevails among smartphone users. Slovak consumers are dominated by the Android operating system, which is used by up to 63% of consumers. 20% of consumers use the iOS operating system. 2% of consumers use Windows Phone and only 1% of consumers use BlackBerry. The remaining 14% of consumers do not own a smartphone. Through another question, we investigated whether consumers had ever encountered proximity marketing or location-based marketing tools in the store. Only 27% of consumers have encountered this form of communication. The remaining 73% of consumers did not encounter these types of mobile marketing during their shopping at the store. This question is naturally followed by another question, where we investigated with which form of mobile marketing the communication at the point of sale was realized. 19% of consumers encountered proximity marketing tools and 8% of consumers were approached via location-based marketing tools. Based on the previous analysis of the current status and the use of proximity marketing based on interviews with marketing specialists in selected agencies, we assumed that the number of experienced users with this kind of marketing would be very low. For this reason, we wanted to find out if those same customers would like to use this form of communication with the seller in the future. And whether proximity marketing would be likely to trigger a buying response by them. The answers to both questions were mostly positive. 81% of respondents would like to use proximity marketing communication in the future, and this communication would trigger 69% of respondents to purchase. In a further analysis of the answers to these two questions, we focused on determining the existence of statistical dependence between the interest in proximity marketing and the buy-in response. The zero and alternative hypothesis were set as follows:

H0: There is no significant relationship between the interest in proximity marketing communication by Slovak customers and inducing a buying reaction from them.

H1: There is a significant relationship between the interest in proximity marketing communication by Slovak customers and inducing a buying reaction from them.

Calculation of test statistics is shown in Table 1.

Table 1. Chi-Square Test Results of the hypothesis

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	53.071a	8	0.000
N of Valid Cases	568		

Source: developed by the authors according to SPSS.

Based on the comparison of the significance level with the P-value (Asymptotic Significance), the null hypothesis was rejected and we can confirm an alternative hypothesis, so there is a statistical

dependence between the examined variables. The intensity of the interdependence of variables by Cramer's V (0.868) indicates a strong dependence. Based on the existence of dependence between variables it makes sense to examine the internal structure of the contingency table by correspondence analysis. We processed the result using the IBM SPSS Statistics software and is shown in Figure 1.

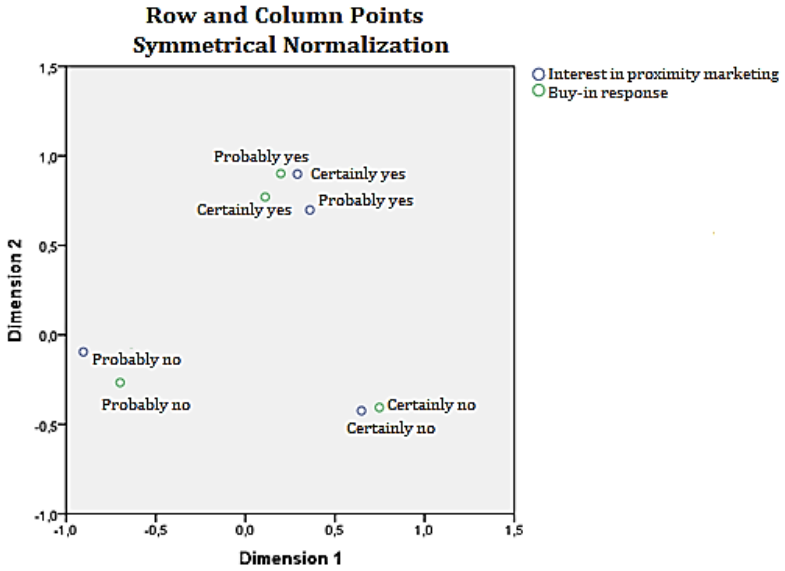

Figure 1. Correspondence analysis of Interest in proximity marketing and buy-in response
Source: developed by the authors according to SPSS.

Interpretation of the correspondence map we have obtained in this way is relatively simple. If the points are closer to each other, so the categories are more similar, they correspond more to each other. There are three groups of similar categories of Interest in proximity marketing and Buy-in response. From the correspondence analysis, we can conclude that respondents who have interest in proximity marketing show more positive buy-in response. In the questionnaire, we asked consumers about their attitude to mobile communication between the merchant and the customer in the store. From the results, only 15% of consumers do not have a positive attitude towards this form of communication. 16% of consumers have indicated that they appreciate this kind of communication. The 30% of consumers have expressed a neutral attitude since they have not yet encountered this type of communication and 39% of consumers have not expressed their attitude because they have not encountered this type of communication. On the basis of these results, it can be said that the potential of using proximity tools as a form of communication between the seller and the customer exists in the store.

Consumer involvement in the concept of proximity marketing or location-based marketing includes a form of reward. We also looked at how consumers were rewarded for participating in this form of communication. Approximately 70% of consumers do not have experience with this type of communication, mainly because they have not yet met or participated in such communication. 14% of consumers did not receive any form of remuneration for their participation in mobile communications, and only 17% of consumers received some form of remuneration for joining mobile communications.

Subsequently, we found out whether the consumers had taken the remuneration they received during the purchase at the store. Up to 37% of consumers have not encountered this form of

remuneration and 11% of consumers have not spellbound about this type of remuneration. On the other hand, 17% of consumers always take advantage of such an offer. 35% of consumers have already encountered the purchase rewards but have not always used it. Following the previous question, we asked if consumers are willing to buy in a store rather than through e-shop in case they get a reward or a discount to buy in a store. Proximity marketing anticipates a consumer reward that comes from participating in mobile communications while shopping at the store. The 33% of consumers have said «certainly yes» and 53% of consumers have said, «probably yes». As a result, up to 86% of consumers have a positive attitude towards advantageous purchases in the store. Thus, by properly setting up proximity marketing activities, it is possible to increase the number of physical purchases made in a stone shop. Only 3% of consumers, despite the benefit, would not prefer shopping in the store before e-shop and 11% of consumers would probably not favour such an advantageous purchase.

Respondents' answers to this question have clearly expressed a very high weight of reward or discount when deciding customers to buy online or directly in the store. Therefore, the next question was to find out whether customers would recommend a shop based on such a beneficial purchase. According to Reichheld (2003), we incorporate respondents into three customer groups according to their assigned degree of loyalty. By further analysing the data thus obtained, we have determined to find by testing the hypothesis if there is a statistical relationship between the benefit related to proximity marketing purchase and the level of loyalty. In other words, does the provision of remuneration and reward have an impact on the recommendation to other subjects (customers), and thus the loyalty of customers in proximity marketing? The zero and alternative hypothesis were set as follows:

H0: There is no significant relationship between the loyalty level of Slovak customers and incentive impact by proximity marketing.

H1: There is a significant relationship between the loyalty level of Slovak customers and incentive impact by proximity marketing.

Calculation of test statistics is shown in Table 2.

Table 2. Chi-Square Test Results of the hypothesis

	Value	Df	Asymptotic Significance (2-sided)
Pearson Chi-Square	52.195a	8	0.000
N of Valid Cases	568		

Source: developed by the authors according to SPSS.

Based on the comparison of the significance level with the P-value (Asymptotic Significance), the null hypothesis was rejected, and we can confirm an alternative hypothesis, so there is a statistical dependence between the examined variables. The intensity of the interdependence of variables by Cramer's V (0.9179) indicates a strong dependence. Based on the existence of dependence between variables it makes sense to examine the internal structure of the contingency table by correspondence analysis. We processed the result using the IBM SPSS Statistics software and is shown in Figure 2.

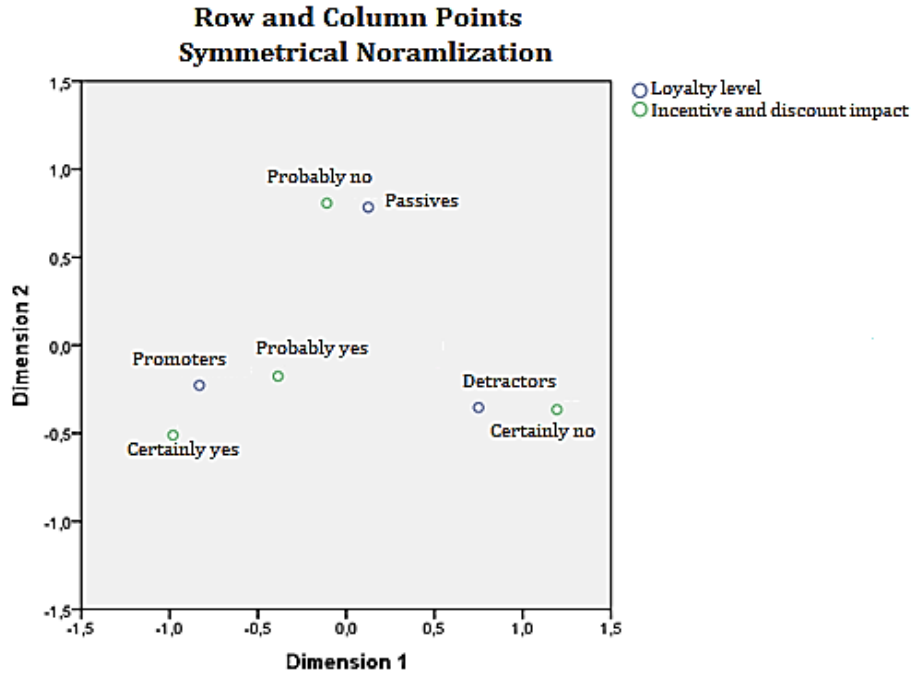

Figure 2. Correspondence analysis of Loyalty level and Incentive impact
Sources: authors according to SPSS

There are three groups of similar categories of Loyalty level of Slovak customers and Incentive and discount impact. From the correspondence analysis, we can conclude that the respondents who prefer to shop at the store before buying through the Internet based on a promised reward also at the same time have a higher level of loyalty.

The following question was about using Bluetooth. The 21% of consumers use this feature very often and 54% of consumers rarely. 19% of consumers do not use Bluetooth and 6% of consumers do not have a Bluetooth mobile phone. Following the previous question, we investigated the reason why consumers most often use Bluetooth in their mobile phones. Most consumers have identified the possibility of pairing with other devices, up to 51% of consumers. 26% of consumers use this feature to transfer media. 17% of consumers do not use this feature and 6% of consumers do not own a Bluetooth mobile phone. Another question was about Bluetooth technology again. We were wondering in what mode consumers keep the Bluetooth function after using it. Only 14% of consumers keep Bluetooth on permanently. The 64% of consumers turn off Bluetooth on their mobile phone after use and 15% of consumers do not always turn off Bluetooth immediately after use. Only 7% of consumers do not own a mobile phone with this feature. From evaluating questions about Bluetooth functionality, which examine the frequency and use of this feature by consumers, it can be said that Slovak consumers do not use Bluetooth in the same way as foreign consumers. For the practice of business in Slovakia, there is a significant constraint to deal with in relation to Bluetooth-based proximity marketing activities. Consumers are not accustomed to using Bluetooth functionality in the required range and mode to instantly detect by Bluetooth beacons in stores.

Based on all the data obtained from the above-mentioned sources, we have prepared proposals and recommendations for the practice of enterprises with regard to the specifics of its implementation in the Slovak Republic. Bluetooth beacons are currently one of the most widely used proximity marketing technologies in the world. However, this statement is not confirmed by the results of the analysis of the current situation and the results of the questionnaire survey. It is necessary to know the behaviour of consumers to enable Slovak businesses the effective investment in proximity marketing tools based on Bluetooth technology. However, it should be noted that Slovak customers express enormous interest in proximity marketing communication, as up to 81% of respondents would like to use proximity marketing in the future. At the same time, 69% of Slovak customers claim that this form of communication will cause them a buying reaction. This has been confirmed by testing the hypothesis that there is a strong statistical dependence between the two variables under consideration. On the basis of the correspondence carried out, it is clear that the Slovak customers who have interest in proximity marketing show more positive buy-in response. And so in the Slovak Republic, it is a great assumption that activity proximity marketing will trigger a high conversion rate as it is in the world.

As part of the questionnaire survey, we focused on identifying the way and frequency of using Bluetooth functionality in consumers' mobile phones. More than 70% of consumers use Bluetooth on their mobile phone. In addition, we were interested in why consumers most often use Bluetooth on their mobile phone. More than 50% of consumers use this feature to pair with other devices and this technology is used for media transmission as well. The last important issue for making suggestions and recommendations was to find out whether consumers have Bluetooth enabled on their mobile phone when they are not using it. Up to 63% of respondents turn this feature off immediately after use. Only 14% of consumers keep Bluetooth enabled permanently and approximately 15% of consumers do not turn it off immediately after use. All the information we have obtained through the evaluation of these questions provides a view of the specifics of using Bluetooth functionality by Slovak consumers. Businesses that decide to initiate communication with their customers in a store via Bluetooth beacons must bear in mind that the customer needs to be alerted to the presence of a Bluetooth beacon in the store and the need to turn on Bluetooth in his mobile phones. Especially because more than 60% of Slovak consumers turn off the Bluetooth feature of their mobile phone after use.

As consumer participation in the concept of proximity marketing is accompanied by a consumer's reward for its willingness to the presence in such communication, it is necessary that consumers who have been informed about the possibility of engaging in Bluetooth communication are motivated to do that. This means that the company should determine the form of remuneration it will provide for engaging in communication through this technology. The most widely used forms of reward include a discount on purchase, a discount on another purchase, a gift, a loyalty program, or a prize competition. From the evaluation of the question, in which we determined the consumer's willingness to prefer a rewarded purchase in a store before buying through the e-shop, it follows that more than 70% of consumers in the Slovak Republic would prefer such kind of purchase. It is therefore obvious that when designing a Bluetooth beacons proximity campaign, businesses should not forget on consumer rewards, which can increase the overall success of using this proximity marketing tool, as well as increase the number of purchases made in the store, leading to a more efficient business acquisition of feedback from consumers and building a relationship with consumers. Based on the statistical testing of the hypothesis, the fact that another benefit of providing consumer rewards within proximity campaign is also a higher level of customer loyalty in the Slovak Republic has been confirmed.

The questionnaire survey shows that more than 60% of consumers have not yet encountered advertising, discount or information that would be addressed to consumers via their mobile phone. It is therefore very important that consumers become accustomed to this form of communication, create a positive relationship with it and start using it. Bluetooth beacons can be used in stores of each type, in

companies providing services as well. Especially important is the concept of use and the justification for consumers.

Through a questionnaire survey, we investigated what operating system prevails among consumers. The answer to this question provides important information especially for businesses that choose to use Bluetooth beacons to implement proximity marketing. From information obtained from marketing agency representatives, we know that the proximity campaigns implemented in Slovakia in recent years have been using iBeacons. These beacons were designed by Apple, and if businesses want to use them to communicate with consumers who do not own an iOS mobile phone, special setup of these Bluetooth beacons is required. The survey shows that more than 63% of consumers own Android smartphone. Only 20% of consumers in the Slovak Republic use the iOS operating system. The practice of a number of marketing and digital agencies have shown that Bluetooth beacon technology has great potential in Slovakia, but there is no interest in businesses to implement Bluetooth beacons-based proximity marketing. It is therefore very important that businesses should also ask for these solutions to marketing and digital agencies. Only in this way can businesses benefit from the proximity marketing capabilities of Bluetooth beacons.

Due to the results of the provided research, we can confirm the theory of Garaus and Wagner (2019) who have identified the leading position of Bluetooth based tools in the portfolio of proximity marketing. Its importance has been clearly confirmed as well as the competitive potential of this tool in the scope of specifics in Slovak consumer's perceptions. Thus, we can also enrich the findings of Foroudi et al. (2018) who have stated that there is significant importance of consumer's specifics in the scope of proximity marketing perception. However, these specifics do not vary across consumers in the scope of the potential of conversion of buying behaviour and their loyalty as it has been detected in our research which has confirmed the traditional theory of Dennis et al. (2014) and Willems et al. (2017). Thus, the original assumption that the regional specifics of consumers affect the perception of proximity marketing and its tools have been not confirmed. This situation evokes the need for future research focused on the detailed confirmation of the inapplicability of the theory of national specifics. The possible reason of this marketing abnormality is the fact that proximity marketing tools have been created as a logical consequence of a global technological boom with impact on the phenomenon of global consumer who is characterized by the rejection of regional specifics and its strong uniformity in perceptions, attitudes and behaviour. From a managerial point of view, this finding is even more important as it confirms the usage of generally recommended patterns of proximity marketing implementation without the need for acceptance of regional specifics. Thus, the phenomenon of this innovative marketing tool can be fully and widely implemented across markets form the regional point of view. On the other hand, there is still the need for confirmation its general applicability across product categories focusing on the traditional quadratic typology of buying behaviour.

Conclusions. The topic of proximity marketing usage has been recently discussed not only in managerial practice but also in the scientific literature. The intersection of these two platforms has created the need to investigate the current situation of implementation and subsequent perception of this innovative marketing concept in the Slovak marketplace. Originally, we have assumed, that there is a significant difference in the perception of core proximity marketing tools and their benefits, but finally, we have found that the main foreign theoretical concepts have been verified also in specific conditions of Slovak Republic. The data used in the presented study were obtained by our own survey carried out on the sample of 568 respondents (citizens of the Slovak Republic older than 15 years). We´ve statistically evaluated the given data by hypotheses verification provided by relevant statistical tests. We have found out that 1) respondents who have interest in proximity marketing show more positive buy-in response and 2) respondents who prefer to shop in the store before buying through the Internet based on a promised reward also have a higher level of loyalty. So, we have confirmed that there is a great

assumption that Bluetooth technology-based activities provided in the scope of proximity marketing will trigger in practice higher conversion rate in comparison with other theoretically recommended. But to exploit this competitive advantage fully, there is prior need to develop relevant theory of proximity marketing with respect to consumer's specifics in perception of this marketing innovation in details as it has been found out that general theory is due to the global nature of proximity marketing fully applicable across markets while confirmation of its general applicability across product categories is still missing.

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Потенціал використання Bluetooth-системи як інструменту проксіміті-маркетингу: досвід Словацької Республіки

Проксіміті-маркетинг – це сучасний інструмент комунікації між клієнтом та постачальником, що забезпечує персоналізовану та своєчасну реакцію на запити споживачів у процесі придбання товару. Використання проксіміті-маркетингу призводить до підвищення рівня задоволеності споживачів товарами та формує позитивний імідж бренду. Авторами наголошено, що однією із ключових переваг проксіміті-маркетингу є забезпечення зворотного зв'язку від споживачів. У статті сформовано теоретичний базис поширення інструментів проксіміті-маркетингу в Словацькій Республіці. Авторами визначено, що низькоенергетична Bluetooth технологія, яка визначається як BLE (Bluetooth Low Energy), в даний час є однією з найбільш широко використовуваних технологій проксіміті-маркетингу. При цьому аналіз наукової літератури з досліджуваної тематики дозволив авторам виявити суттєві недоліки у сфері проксіміті-маркетингу не лише на словацькому ринку, але й у загальному контексті маркетингових інновацій та визначити їх вплив на сучасну маркетингову практику. Таким чином, авторами визначено, що існує необхідність перегляду традиційних стратегічних маркетингових концепцій з акцентом на інноваційний підхід, що є в основі концепції проксіміті-маркетингу. Авторами наголошено на необхідності включення проксіміті-маркетингу в управлінську практику компаній. Однак наразі даний процес є сповільненим через відсутність конкретного набору інструментів проксіміті-маркетингу та єдиного

трактування їх сутності. Головною метою даної статті є формування рекомендацій щодо імплементації проксіміті-маркетингу у практику компаній, з урахуванням специфіки функціонування бізнес-середовища Словацької Республіки. Авторами проведено анкетування для визначення рівня сприйняття споживачами заходів проксіміті-маркетингу. Емпіричне дослідження проведено на основі панельних даних, сформованих для вибірки із 568 респондентів (громадян Словацької республіки старше 15 років). Для аналізу панельних даних авторами використано статистичні тести. Отримані результати дослідження свідчать про те, що: 1) респонденти, які є зацікавленими у проксіміті-маркетингу, демонструють більш позитивну купівельну реакцію; 2) респонденти, які схильні купувати у магазині, також мають високий рівень лояльності. Таким чином, на підставі отриманих результатів дослідження, авторами доведено, що Bluetooth технології в рамках проксіміті-маркетингу на практиці мають коефіцієнт конверсії вище, аніж інші теоретично рекомендовані маркетингові інструменти. У свою чергу, з метою підвищення ефективності використання проксіміті-маркетингу, необхідним є розробка відповідної теорії з урахуванням специфіки сприйняття споживачами даної маркетингової інновації.

Ключові слова: Bluetooth, склад, мобільний телефон, проксіміті-маркетинг, Словацька республіка.

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