

USE OF INTERNET PERSONALIZATION IN CRISIS COMMUNICATION

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Abstract

Personalization as an instrument to support communication between a salesperson and a customer is already a widespread element in practice. This communication has a two-way effect. A salesperson can present his offer to a customer in a way that he considers effective in terms of implicit and explicit effect on the customer's needs and benefits. On the contrary, a customer can, thanks to personalization, directly influence the salesperson's behaviour and his offer. Personalization is therefore advantageous for both participants in the business transaction, but it also carries risks, such as the risk of misuse of customers' personal data. However, in times of crisis, such as the coronavirus crisis, when a significant proportion of business activities are moved to the Internet, personalization is one way for a salesperson to increase his competitiveness. The thesis deals with the personalization of the Internet, its benefits for users and its impact on the success of a salesperson. It presents the approaches used for its implementation, categorizes them and analyses the theoretical foundations. It also examines whether and how individual personalization techniques are used in crisis communication in practice between marketing specialists. The main benefit of the work is a comprehensive view of personalization and its use in the real environment of today's world.

Key words:

Communication. Competition. Competitiveness. Consumer. Crisis. Customer. Information Technology. Internet. Personalization. Salesperson.

Introduction

Whenever a crisis comes, regardless of its cause, companies have to respond promptly if they want to maintain the prosperity of their business. Management communication with customers¹ plays an important role in the post-crisis period. The determining element is not only the communication itself, but mainly at what level the company will involve the customer in it.² The current coronavirus crisis is specific for its sudden onset and immediate impact on the economies of individual states and thus on the economy of the globalized world. One of the opportunities to keep existing customers in a situation where the economy has been hit hard³ by state interventions is to move business activities to the online environment in case that the entrepreneur was no longer active there. Due to the fact that even before the crisis, more than three quarters of the Czech population aged 16 to 75 used the Internet daily⁴, the move from the off-line environment to the online environment represents a chance even for those companies that have so far resisted moving or they postponed it due to other investment opportunities. However, because competitors are also moving to the online environment, it is necessary to look for adequate instruments that will make it easier for entrepreneurs to access and communicate with a customer. At such a time, personalizing the Internet is an instrument that can help an entrepreneur increase its competitiveness, bring

¹ JAQUES, T.: Issue and crisis management: quicksand in the definitional landscape. In *Public Relations Review*, 2009, Vol. 35, No. 3, p. 281-285.

² LEE, S., KIM, S.: The buffering effect of industry-wide crisis history during crisis. In *Journal of Communication Management*, 2016, Vol. 20, No. 4, p. 348-361.

³ PAVEC, J.: Jak nouzový stav přiškrtil ekonomiku: přinášíme unikátní data o „nákupní panice“ i obřích ztrátách hospod a hotelů. Released on 6th May 2020. [online]. [2020-09-10]. Available at: <<https://denikn.cz/355583/jak-nouzovy-stav-priskrtil-ekonomiku-prinasime-unikatni-data-o-nakupni-panice-i-obrich-ztratach-hospod-a-hotelu/?ref=list>>.

⁴ *Informační společnost v číslech – 2019*. Released on 26th March 2019. [online]. [2020-08-20]. Available at: <<https://www.czso.cz/csu/czso/informacni-spolecnost-v-cislech-2018>>.

benefits in the form of improved communication with existing customers and help gain new customers. Internet personalization is often discussed in terms of the threats that affect end users and as a result of society as a whole.⁵ However, properly applied personalization of the Internet can be benefit for both parties to the transaction, a salesperson and a customer.⁶ The development of information technology that we have been facing in the last three decades has made personalization measures and personalization techniques more sophisticated and their use having expanding potential. The company is therefore offered an instrument that can significantly help it succeed in online competition, which, however, must be handled with caution and awareness of all risks.

1 Literature Review

Customer needs and preferences are evolving along with the development of the use of information and communication technologies. The current customer, who is already ordinarily online, is no longer a passive recipient of the information provided by a salesperson.⁷ A customer is actively interested in and desires to interfere in the sales and production activities of a salesperson and various platforms such as social networks are used for this. Salespersons should take this situation into account if they want to remain competitive. One of the methods is to involve a customer in communication about products, the method of their production, distribution channels, etc.⁸ A customer therefore wants to feel that a salesperson is communicating with and listening to him or her. Internet personalization serves to target the communication with an end customer, and its importance and impact can be crucial.⁹ Internet users provide their personal data (whether consciously or unconsciously), and at the same time data mining is an important factor in the success of personalization¹⁰. Personalization of the Internet then helps the company to overcome the problem of how to distribute its information with respect to a huge number of specific characteristics of a potential end user. From the data extraction, a salesperson will gain knowledge about customer preferences A salesperson can then target a customer in detail.¹¹ Personalization from the customer's point of view then offers flexibility of the environment, targeting of various advertising techniques, recommendation of a specific product, comparison of prices of specific and substitute

⁵ SCHLAGER, T., HILDBRAND, Ch., HAUBL, G., FRANKE, N., HERMANN, A.: Social Product-Customization Systems: Peer Input, Conformity, and Consumers' Evaluation of Customized Products. In *Journal of Management Information Systems*, 2018, Vol. 35, No. 1, p. 320-348.

⁶ LI, C., JIANGMENG, L., CHENG, H.: The Effect of Preference Stability and Extremity on Personalized Advertising. In *Journalism & Mass Communication Quarterly*, 2019, Vol. 96, No. 2, p. 407-426.

⁷ ZIEMBA, E., EISENHARDT, M., MULLINS, R., DETTMER, S.: Prosumers' Engagement in Business Process Innovation – The Case of Poland and the UK. In *Interdisciplinary Journal of Information, Knowledge, and Management*, 2019, Vol. 17, No. 5, p. 25-38.

⁸ MONTEIRO, T., GIULIANI, A., PIZZINATTO, N., LARIOS-GOMEZ, E.: Managing the Digital Consumer: Insights From Brazil and Spain. In *Journal of Manufacturing Technology Management*, 2019, Vol. 30, No. 2, p. 1197-1214.

⁹ GARRIGÓS, I., GOMEZ, J., HOUBEN, G.-J.: Specification of personalization in web application design. In *Information and Software Technology*, 2010, Vol. 52, No. 9, p. 992-1009.

¹⁰ WANG, J., LIU, J., HIGGS, R., ZHOU, L., ZHOU, C.: The Application of Data Mining Technology to Big Data. In *IEEE International Conference on Computational Science and Engineering*. Los Alamitos, CA : IEEE Computer Society, 2017, p. 285-287.

¹¹ CHENG, Y., CHEN, K., SUN, H., ZHANG, Y., TAO, F.: Data and knowledge mining with big data towards smart production. In *Journal of Industrial Information Integration*, 2018, Vol. 17, No. 1, p. 2-13.

products, localization and other information that make it easier for a customer to make decisions.¹²

However, there can be a problem with the use of the Internet personalization because as users use the Internet in their daily lives, the amount of information to be processed (on the basis of which a salesperson has to make decisions) is increasing. Programmers and managers using personalization should respond and adapt to this. However, with increasing data volumes the risk is that it may not always be possible to anticipate all the situations that data mining applications will encounter, which may then give misrepresented results, which may be counterproductive for an end user.¹³ But it can be said that properly managed personalization in the online environment increases the customer's willingness to buy, as evidenced by scholarly texts on this topic.¹⁴ Of course, personalization can also be used in the off-line environment, where the goods are modified according to customer's wishes during the personal contact.¹⁵ However, this method of personalization cannot be used as a competitive advantage in the current crisis, in which the off-line personalization is becoming a disadvantage. In contrast, the online personalization enables to provide comprehensive services to a customer based on data that is provided by a customer in the Internet environment¹⁶, so it is suitable for the current coronavirus crisis. Studies prove that a customer perceives personalized content in positive way, both in the case of clearly explicitly personalized information and in the case of implicit¹⁷ personalized information. This means that personalization brings salesperson an advantage even in two specific situations. If a customer only assumes that he or she is the target of personalized communication, but faces only well-established general communication that creates the impression of personalization. And when a customer does not realize that he or she is the target of personalized communication.¹⁸

However, personalization is not just about direct communication between salesperson and customer. It can be seen as an element of comprehensive marketing processes of the company, into which the personalization enters in some specific areas. For example, Murthi and Sarkar¹⁹ state that it greatly facilitates the market research. They complement the Brandenburger-Nalebuff²⁰ Value Net Model, which helps to complement the company's

¹² KALAI GNANAM, K., KUSHWAHA, T., RAJAVI, K.: How Does Web Personalization Create Value for Online Retailers? Lower Cash Flow Volatility or Enhanced Cash Flows. In *Journal of Retailing*, 2018, Vol. 94, No. 3, p. 266-278.

¹³ GHIANI, G., MANCA, M., PATERNO, F., SANTORO, C.: Personalization of Context-Dependent Applications Through Trigger-Action Rules. In *ACM Transactions on Computer-Human Interaction*, 2017, Vol. 24, No. 2, p. 1402-1432.

¹⁴ PAPPAS, I. O., KOUROUTHANASSIS, P. E., GIANNAKOS, M. N., CHRISSIKOPOULOS, V.: Shiny happy people buying: the role of emotions on personalized e-shopping. In *Electronic Markets*, 2014, Vol. 24, No. 1, p. 194-205.

¹⁵ SHEN, A., BALL, A.: Is personalization of services always a good thing? Exploring the role of technology-mediated personalization (TMP) in service relationships. In *Journal of Services Marketing*, 2009, Vol. 23, No. 2, p. 81-91.

¹⁶ ADOMAVICIUS, G., TUZHILIN, A.: Towards the Next Generation of Recommender Systems: A Survey of the State of the Art and Possible Extensions. In *IEEE Transactions on Knowledge and Data Engineering*, 2005, Vol. 17, No. 6, p. 735-748.

¹⁷ For more information, see: ROBERTS, M. L., ZAHAY, D.: *Internet Marketing: Integrating Online and Offline Strategies*. Boston : Cengage Learning, 2012.

¹⁸ LI, C.: When does web-based personalization really work? The distinction between actual personalization and perceived personalization. In *Computers in Human Behavior*, 2016, Vol. 54, No. 1, p. 26-32.

¹⁹ MURTHI, B. P. S., SARKAR, S.: The Role of the Management Sciences in Research on Personalization. In *Management Science*, 2015, Vol. 49, No. 10, p. 1345-1361.

²⁰ See also: BRANDENBURGER, A., NALEBUFF, B.: *Co-opetition*. New York : Currency Doubleplay, 1996.

customer-supplier relationship. At the same time, it also helps to complement the relationship between the company and its competitors. Murthi and Sarkar use three basic outputs of personalization to do this: personalization allows the company to effectively become acquainted with the customer's preferences; personalization can be used to match the offer to the customer's request; personalization enables effective evaluation, comparison and improvement of the offer. Similar conclusions are drawn by other authors.²¹ Xo et al.²² adds that in terms of marketing processes, the personalization is important, especially in marketing management, competition marketing and innovation marketing, because personalization techniques allow almost instantly to identify a customer, gives the company more ability to capture more information about a customer and more ability to retrieve information about once captured and identified customer through a database. A significant advantage of the personalization for marketing processes is the ability to respond in real time to any changes in customer behaviour and requirements.

2 Methods

The aim of this text is to find out the connection of the Internet personalization to communication during the coronavirus crisis in the context of the marketing environment of the Czech Republic. It should contribute to the texts on personalization by focusing on employees who should use the Internet personalization in practice, i.e. middle and senior management of a particular category of companies, and in the form of a questionnaire survey will find out whether they consciously use the Internet personalization and if so, which of identified and categorized methods are most often used and how the coronavirus crisis manifested itself in the use of personalization. The researched topic here is the personalization of the Internet, more precisely its form, which can be used by companies in crisis communication to reach the target group of customers. The performed literature research in connection with the author's previous research, which is presented in the text, helps to provide a new view of already existing knowledge, or to combine it with previous knowledge. During the synthesis of individual views on a given topic, important links between contexts within individual components of a certain phenomenon are observed.²³ This fact then leads to the discovery of the internal functioning and possible development of the phenomenon.²⁴ Research in the form of a questionnaire survey, which examines on the basis of a categorization created by the author, which methods of personalization are used by marketing specialists in practice in the context of the ongoing crisis and why. Furthermore, how the crisis affected the use of personalization and how the coronavirus crisis affected customer requirements for the Internet personalization, more precisely the online communication. Research limitations enter the work significantly, in this case they are given by several factors. The questionnaire survey is limited to marketing specialists operating mainly in Prague, because Prague has a specific position in the context of the Czech Republic

²¹ GARRIGÓS, I., GOMEZ, J., HOUBEN, G.-J.: Specification of personalization in web application design. In *Information and Software Technology*, 2010, Vol. 52, No. 9, p. 992-1009.

²² XU, H., LUO, X., CARROLLA, J. M., ROSSONA, M. B.: The personalization privacy paradox: An exploratory study of decision making process for location-aware marketing. In *Decision Support Systems*, 2011, Vol. 51, No. 1, p. 43-51.

²³ For more information, see: BRYMAN, A., BELL, E.: *Business Research Methods*. Oxford : Oxford University Press, 2011.

²⁴ JERSÁKOVÁ, J.: *Literární řešerše*. [online]. [2020-09-25]. Available at: <http://kbe.prf.jcu.cz/sites/default/files/diplomky/Literarni_reserse.pdf>.

as the most economically developed region.²⁵ At the same time, it is one of the most economically developed regions in the entire EU and makes up approximately a quarter of the total GDP of the Czech Republic.²⁶ In the preparatory phase of the research, it was found out that there is no research in the literature and texts that would examine the relationship of Czech marketing specialists to the use of the Internet personalization with regard to communication in times of crisis. There is therefore room for the implementation of such research (research gap). To select marketing specialists suitable for questionnaire survey, the Mediář database – Katalog komunikačních Agentur²⁷ and the APRA database - Asociace public relations, z. s.²⁸, where 70 companies were selected to ensure return of the questionnaires and the availability of experts²⁹, were used. Thanks to this, 108 respondents to the questionnaire survey were selected. Suitable participants in the questionnaire survey are employees from sales, marketing or IT departments of agencies, who all potentially encounter the personalization of the Internet. The questionnaire survey took place in the form of semi-structured questionnaires³⁰ and with regard to theories about finding information in target groups and their numbers³¹ supplemented by the theory of finding business information³².

3 Results

The work focuses on the personalization of the Internet, more precisely on its types, which are available to marketing specialists. It is therefore important to focus on current and past trends in the Internet personalization and to sort them out based on the technologies they use. Personalization is taken for the needs of marketing processes as a set of instruments and algorithms that can be applied in the online environment and thanks to which it is displayed to a user as filtered, limited or otherwise affected virtual space, or information. The division of personalization techniques is based on the author's previous work³³ and corresponds to current trends and knowledge about personalization. This categorization therefore divides personalization techniques into four main categories: recommender systems; collaborative filtering; contextualization; customization. The given categories are subsequently used in the questionnaire survey, as they are sufficiently giving a clear picture about personalization techniques in their categories. These main categories of personalization include various techniques, the general list of which, based on previous author's research, is as follows:

- Recommender Systems: Rule-based Systems; Content-based Filtering; Remarketing; Pers. Newsletters; Hybrid Recommender Systems.
- Collaborative Filtering: Memory-based Collaborative Filtering; Model-based Collaborative Filtering.

²⁵ *Analýza vývoje ekonomiky ČR 2019 – Ministerstvo průmyslu a obchodu*. 2019. [online]. [2020-08-09]. Available at: <https://www.mpo.cz/assets/cz/rozcestnik/analyticke-materialy-a-statistiky/analyticke-materialy/2019/4/Analýza-vyvoje-ekonomiky-CR_duben-2019.pdf>.

²⁶ BÁČOVÁ, P.: *Praha patří k ekonomicky nejrozvinutějším regionům EU*. Released on 15th Decemeber 2017. [online]. [2020-08-09]. Available at: <<https://www.czso.cz/csu/czso/praha-patri-k-ekonomicky-nejrozvinitejsim-regionum-eu>>.

²⁷ *Mediář – Katalog komunikačních agentur*. [online]. [2020-07-12]. Available at: <<https://mediar.cz/agentury/>>.

²⁸ *Seznam agentur*. [online]. [2020-07-12]. Available at: <<https://apra.cz/agentury>>.

²⁹ See also: DISMAN, M.: *Jak se vyrábí sociologická znalost*. Prague : UK in Prague, 2002.

³⁰ For more information, see: MAREŠ, J.: *Dotazník sociální opory u dětí a dospívajících*. Prague : Institut pedagogicko-psychologického poradenství ČR, 2005.

³¹ See also: BOONE, L. E., KURTZ, D. L.: *Contemporary Marketing*. Boston : Cengage Learning, 2011.

³² For more information, see: CHURCHILL, G. A., IACOBUCCI, D.: *Marketing research: methodological foundations*. Nashville, Tenn : Earlie Lite Books, Inc., 2018.

³³ KUPEC, M.: Using the Concept of Diversity in Personalization of the Internet on the Labour Market. In *Slovak Journal of Public Policy and Public Administration*, 2019, Vol. 6, No. 2, p. 101-111.

- Contextualization: Responsive Websites; Communication of the Server with the Costumer; Localization.
- Customization: Content Customization; Price Adjustment; Product Configuration; Task Perform Support.

3.1 Designing the Questionnaire

When designing the questionnaire, it was necessary to take into account the fact that the larger the questionnaire, the more information can be obtained from it. However, the concentration of the respondent also decreases, which can significantly affect the quality of the obtained data. Since in this case it was necessary to address the employees of middle and senior management, who are often busy regarding time and work, there was a real risk that respondents will have a problem with a larger questionnaire and will not fill it in at all. The questionnaire was therefore designed with an effort to minimize it. The questionnaire was distributed in printed and electronic form. It was structured into four parts. The first contained an introductory text that informed respondents about the content and purpose of the questionnaire. The second part followed, the purpose of which was to exclude questionnaires filled in by respondents who were not the target respondents of the research. It contained a closed question: Do you work in marketing? With the possibility to answer yes/no. Another semi-closed question: What specific area does the agency department in which you work deal with? With possible answers: IT department, marketing department, sales department, others with an open answer option. Other open-ended questions: How many employees does the agency you work for have? What is your position in the agency you work for?

This was followed by the research part of the questionnaire, which contained semi-closed, closed-ended, open-ended and scaling questions. This part was divided into two areas. The area dealing with personalization generally included the first two closed questions with possible answers yes/no were: Are you familiar with the principle of personalization of the Internet? Do you use personalization of the Internet in any of its forms in your work? The other question was: Which of the following categories of personalization techniques do you currently use in the company? Respondents had the opportunity to state yes/no for individual categories of customization, recommender systems, contextualization, collaborative filtering. The questionnaire included brief explanations listing four categories (as mentioned above), including their individual techniques, with each technique containing a simple explanation of what its principle was to help respondents better orient themselves. The possibility of stating yes / no for individual categories was always followed by an optional open-ended question: Which specific techniques from the given category of personalization do you use and why? The second area of the third part of the questionnaire contained questions aimed at personalization with respect to crisis communication. The first question was scaling: How did the coronavirus crisis affect the number of your clients? Respondents mentioned the following possibilities: a significant decrease; slight decrease; it did not manifest itself; slight increase in number; large increase in number of customers. Another question was: How did your customers become interested in any of the personalization techniques after the outbreak of the coronavirus crisis? With scaling answers: reduced interest; it did not manifest; increased interest. The following question was: Do you use personalization in your work compared to the time before the onset of the coronavirus crisis: more/same/less. In the third part of the questionnaire, there is a content space for comments, where respondents could add a comment to the questionnaire, or complete their answers. The fourth part of the questionnaire contained the already mentioned explanations of individual techniques in four given categories and a final thanks.

3.2 Evaluation of the Questionnaire

Within the questionnaire survey, 57 questionnaires were evaluated, which represents a 53% return of the questionnaires. Of the addressed individuals and agencies with a size of up to 10 employees, a total of 67 % of questionnaires were returned. Of the larger agencies with more than 10 employees, 33 % of questionnaires were returned. In addition to the questionnaires themselves, the respondents were also provided with simple explanations of individual categories of personalization techniques to ensure a sufficiently clear understanding of the questions by the respondents.

3.2.1 Questionnaire – Part Dealing with Personalization in General

The questionnaire survey based on the obtained results can be evaluated as follows. The vast majority, specifically 95 %, of the addressed marketing specialists are acquainted with the personalization of the Internet, as a technique usable in the marketing processes of their company. While their use in practice was confirmed by 87 %. It can be stated that the rate of using personalization in the Czech marketing environment is high. But because the personalization of the Internet is divided into four categories, a more comprehensive view is provided by evaluating which categories are used and to what extent. The most common method of personalization among respondents is some of the methods of customization, which is already used by 68 % of respondents. This result reflects the fact that customization is the technologically simplest personalization technique, i.e. it places the least demands on acquisition costs. At the same time, it does not require fundamentally complex IT background and does not place high demands on IT and marketing department employees. As part of the open-ended questions of the questionnaire survey, respondents most often mentioned the use of the configuration method for customization, i.e. their website had a product configurator. They also mentioned a responsive website with the addition that a non-responsive website is an element that discourages a potential customer and deprives him or her of the desire to return to the website. In practice, 64 % of respondents to the questionnaire survey use recommender systems. If the respondents responded to open-ended questions, they usually added that they use simpler techniques from this category, especially remarketing and rule-based. As they stated the contextualisation was used by 41 % of respondents and the smaller representation of this category in practice can be attributed to the fact that, for example, the localization is not as important a factor of personalization for the automotive industry as can be expected in other sectors. Collaborative filtering as a technique used in the company is mentioned by 5 % of all respondents. This low number can be attributed to the cost of implementing collaborative filtering, as well as the complexity of qualified IT staff that collaborative filtering assumes. However, this technique appears to be potentially the most effective³⁴, so such a low result seems surprising. However, in the context of personalization techniques, it is the youngest and is subject to constant development³⁵, which may be the reason for its low use in practice.

³⁴ KARABADJIAB, N. E. I., BELDJOU DIAB, S., SERIDIB, H., SABEUR, A., DHIFLI, W.: Improving memory-based user collaborative filtering with evolutionary multi-objective optimization. In *Expert Systems with Applications*, 2018, Vol. 18, No. 1, p. 154-164.

³⁵ ABBASCHIAN, B. J., KHORSHIDI, S.: A review of hybrid recommender systems. In *Ad Alta : Journal of Interdisciplinary Research*, 2017, Vol. 7, No. 2, p. 260-264.

3.2.2 Questionnaire – Part Dealing with Personalization in the Context of the Ongoing Crisis

According to the respondents, the coronavirus crisis had a significant decrease (21 %) and slight decrease (40 %) in the number of clients. This together makes a customer a 61% drop for marketing agencies, which can be explained by the fact that clients first cut marketing costs when they are in need of sudden savings. At 15 % of agencies, the coronavirus crisis did not affect clients' mail at all. Only 17 % of them recorded a slight increase and 4 % of them a high increase in clients. Behind these numbers are those clients who took the coronavirus crisis as an opportunity to improve their communication with customers and tried to respond flexibly to the situation by moving to new instruments. Regarding clients' interest in the Internet personalization, only 6 % of respondents answered that their clients responded to the coronavirus crisis with reduced interest in the personalization. Another 36 % of them said that the coronavirus crisis did not affect interest in the personalization. However, 56 % of respondents said that their clients were interested in some personalization technique. This can be explained, among other things, by the fact that personalization is being talked about more in the media and that general awareness of it is gradually increasing. Clients then apply this knowledge in crisis situations in their requirements for marketing communication. The lower use of personalization techniques compared to the pre-coronavirus crisis was not confirmed by any of the respondents. 72 % of marketing specialists use personalization to the same extent, 28 % of respondents started to use personalization more after the outbreak of the coronavirus crisis. The situation that a large proportion of marketers use personalization to the same extent as in the pre-coronavirus crisis, although clients show increased interest in it, can be explained by the fact that marketers as knowledgeable experts included personalization in their work even before the coronavirus crisis, whereas the clients either did not know or did not realize it, or did not understand the principle of personalization.

4 Discussion

This research must be responsibly confronted with other facts. At the same time, it is necessary to mention the fact that the topic reflects highly current issues, so the results of comparable work in the Czech environment is not widely available. What can be perceived as a limitation of the research by the questionnaire solution is a lower number of respondents. For this reason, the results of the investigation cannot be generalized. In the next survey, it would also be appropriate to deal with marketing workers outside the Prague area, or to expand research beyond the borders of the Czech Republic, which could bring a new perspective on the use of personalization in crisis communication. The questionnaire could be further focused on individual techniques of the four categories, but a researcher is exposed to the risk of a large questionnaire, which could lead to a lower rate of return of questionnaires and increased demands on the processing of such research. Another topic that could be taken into account in the research is the issue of risks associated with the protection of personal data and privacy of the user in general, as Toch³⁶ discussed it, for example, when he states that personalization has the potential to amplify and complicate inherent risks and privacy concerns in the Internet. The complexity of the whole topic is increased by the fact that the development of the field of information technology, especially in comparison with some sectors is enormously intensive. As technologies, hardware, software, and algorithms improve, so do the techniques and accuracy of the Internet personalization, to which not only developers but also marketers must respond. This opens up space for further scientific research.

³⁶ TOCH, E., WANG, Y., CRANOR, L. F.: Personalization and privacy: a survey of privacy risks and remedies in personalization-based systems. In *Springer Science+Business Media*, 2012, Vol. 22, No. 1, p. 204-219.

Conclusion

The development of information technology brings new opportunities for salespersons, but also for customers, which was significantly reflected in the current coronavirus crisis, when a significant part of business activities moved to the online environment. In such a situation, it finds its use of personalization as an effective instrument for increasing the competitiveness of a salesperson. It can even be said that the conditions for the use of personalization are more favourable than ever in history, from a technological, economic and social point of view. Developments in technology facilitate the implementation of personalization measures and personalization techniques are becoming more sophisticated with a wider potential for use. The presented text seeks a comprehensive view of all the instruments and techniques of personalization that are currently available. It also comes up with the research into which of the personalization techniques are used in communication between a salesperson and customer from the point of view of marketing experts with regard to the current coronavirus situation. Personalization is a complex and broad topic that will be constantly evolving in parallel with the development of information technology. Because it can be said that personalization enters the lives of every Internet user, personalization appears to be an effective instrument to support the business activities of a company of which, strengths are gaining in importance in times such as the coronavirus crisis. On the other hand, for the same reason, it is desirable to constantly monitor it and subject it to professional critical examination.

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