

THE PERCEPTION OF ASYMMETRY IN ONLINE ADVERTISING IN RESEARCH ON STUDENTS IN POLAND AND JAPAN

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INTRODUCTION

The aim of the article is to evaluate the perception of information asymmetry in online marketing communications by Internet users. The empirical plane of answering the title question is the authors' own research carried out in 2019 among students of business and management schools in Poland and Japan. The research presented in the article are the first? stage of the NCN grant implementation in Poland, *The asymmetry of information in on-line advertising and consumer behavior e-manipulation* [2018/29/B/HS4/00563]. The selection of research samples was purposeful and resulted from two conditions. Firstly, digital technology, as well as the development of Internet and its penetration, are not governed by the principle of space limitations. They cross national borders, legal systems and cultures, creating conditions for the convergence of information and communication technologies on a global scale making the development of the global information society crucial. Secondly, the cultural distance between Poland and Japan was seen as an important and at the same time cognitively interesting criterion for the sample choice, considering the numerous elements differentiating the economic and social development, historical heritage, etc. This category became an important variable allowing the recognition of the degree of perception concerning the similarities and diversity of information asymmetry function of on-line advertising as perceived by students of economics and management at universities in Poland and Japan. Collaboration with a Japanese Meiji University, was important for such selection of samples. We do not expand this issue in the article, however, at the same time we emphasize that the cultural distance may be the subject of in-depth research on the social dimension of advertising and the perception of marketing, including the impact of national culture on the reception of online advertising and market behavior of consumers (Brettel and Spilker-Attig, 2010).

The title issue of this article is multi-dimensional and multi-faceted. Two key issues are the basis for the theoretical setting of the problem. These are: 1) on-line advertising, including the field of its informative function reception, and 2) information asymmetry in advertising messages. The article's theoretical dimension analyses online advertising from the perspective created in the economic theory developed as the concept of *information asymmetry* by GA Akerlof (Akerlof, 1970). The presented theoretical structure of the article is synthetic and selective, emphasizing direct relationships and dependencies between the model concept of online advertising and circumstances, reasons, and consequences of asymmetric information in the advertising. It should be emphasized that this approach contributes to discussions held in economic theory on top of management and marketing

sciences. The presented issue is a particular *intersection* of the two sets, treated as separate sets of contemporary economics and marketing.

Economic theoretical literature does not dive into the world of marketing and marketing communications. There is a lack of such concrete considerations as presented within the science of marketing. In turn, marketing, creating a plethora of studies on the structure of market enterprise activities, including marketing communications, essentially ignores the issues of information asymmetry in the transmission of advertising. The degree of scientific recognition of the problems of asymmetric information in advertising is low. The work of E. Lehmann, *Asymmetrische Information und Werbung [Information Asymmetry and Advertising]* has a certain cognitive importance (Lehmann 1999). Despite the fact that on the international level, the issues of advertising have been studied for many years, there is a lack of studies on the manner, forms and conditions of the exercise of its functions and tasks, including prerequisites, conditions and consequences of information asymmetry in advertising messages. The idea that ‘advertising manipulates the consumer’ by the lack of transparency of information in advertising is relatively widespread, which is a common element of social awareness, a critical evaluation of the image and ethics of marketing, including the controversy surrounding the marketing activities of enterprises (Eagle and Dahl, 2015).

The article consists of three parts. The first one presents the theoretical structure (Theoretical framework and hypotheses), or, in a different methodological approach, the context of a theoretical justification of the problem. The second part includes a description of the research method used (Method). The third part presents the results obtained, the analysis of selected issues, a verification of hypotheses, a detailed assessment and conclusions of the comparative analysis and discussion. In the Conclusion, restrictions of the authors’ research are formulated and the directions of further possible research on the title issue are presented.

1. THEORETICAL FRAMEWORK AND HYPOTHESES

1.1. On-line advertising. The field of its informative function reception.

1.1.1. Advertising is a fundamental form of marketing mass communication in both the classical and network environments. According to the proposal of the American Marketing Association (AMA) “advertising is a massive, impersonal and paid form of presenting an offer of sale by a particular sponsor.”

Definitions found in the literature, for example (Russell and Lane 2002); (Kotler and Keller 2018) (Bruh 2013); (Hornák 2003); (Ромат and Сендероов 2018), refer to this approach directly or indirectly.

J. T. Russell and W. R. Lane wrote that “Advertising is a message paid for by an identified sponsor and delivered through some medium of mass communication. Advertising is persuasive communication. It is not neutral; it is not unbiased; it says, “I am going to sell you a product or an idea” (J. T. Russell, W. R. Lane, *Kleppner’s Advertising Procedure*, Prentice Hall, Englewood Cliffs).

This is undoubtedly a static and evaluative stance. The advertising message (a message with a defined reception field) is persuasive, and as such does not fully reflect the nature and complexity of content expressed through a dynamic approach, treating advertising as a form of mass communication.

Advertising takes the form of a one-step, two-step or more steps’ communication. As is well known, its basic elements are: the sender, the recipient and a particular set of information in the form of media, or slogans.

Each model of social communication, including advertising, is an indirect and mass expression, realized by means of mass communication between the “actors” of the communication process: the sender and the recipient of information in the specific context, in terms of noise and redundancy of information. The concept of advertising, referring to an implemented marketing strategy, includes some arrangements for the purpose of advertising, target groups of recipients and their characteristics, the budget, forms and means of advertising etc. These decisions determine the set of information, which in the coded form of a slogan or advertising appeal will be communicated to the market, the recipients, potential buyers.

The transmission uses different information channels and media as carriers of advertising. It may, however, come across, and it usually does, a variety of interference or noise from the environment. It can be of diverse nature and conditioning. Its emergence is influenced by the passage of the stream of information (advertising slogan) through a number of “filters” that can cause distortion of its meaning, along with the intent and intention of the sender. The very translation of the objectives of an advertising campaign to a particular medium and advertising slogan creates certain difficulties in encoding information. Semiotic (semantic) interference can occur, an improper selection information of the slogan information code or an imprecise, inadequate or word-for-word translation of “foreign advertising” in a given national and cultural setting. Interference can also include promotional programs, such as advertising campaigns of competitors whose “clout”, expressed, among others, by the degree of attractiveness of the advertising message, may impair the effectiveness of the sender’s advertising and distort the received signals. These remarks refer to the basic condition of effective communication, formulated at the level of theory as a postulate shared by the sender and the recipient of the advertising code, the concepts and principles of integrated marketing communications. This is an important part of the theoretical considerations to determine the structure of the issue (Kotler and Keller, 2018), (Eagle and Dahl, 2015).

Information provided by the sender in the form of slogans, advertising messages, having passed through a specific communication channel and defined filters, reach the recipient and trigger processes of perception, processing and assimilation of the media and shaping attitudes (Bruhn, 2013). As a result of these complex mental processes of decoding and evaluating information, a specific reaction (behavior) takes place, and in the long term, an attitude towards the advertised brand is shaped. It can be expressed by a decision to purchase or rather not purchase, or possibly to choose another variant, and a formation of the brand evaluation that transform into a company image and reputation.

The configuration and structure of the advertising function is complex. Among the three levels of marketing communication function: 1) the main function, 2) the basic functions, and 3) detailed function, the article focuses on the informative function. We adopt it as a leading theoretical justification for the title problem. In the analysis, we emphasize that the informative function of advertising creates the basic premises of transforming a marketing strategy into specific tactics of market activities. It provides current and potential buyers with information, which is designed to break the barriers of market ignorance. This makes it possible to see the information reception function field on two main levels; (current and potential) buyer education and creating brand awareness, its meaning, value and capital.

Advertising, in its informative function, plays an important role in educating the market consumer. This is the purpose of the transfer of a more or less extensive and “objectified” set of information by a company. If the

message includes a clear, fully readable and understandable message, characterizing the offered item in a comprehensive and sufficient way from the perspective of the consumer's information needs, it is direct. In turn, indirect advertising information is associated with references to connotations, associations, ambiguity and covertly expressed incentives and promises. Certain caution in recognition of information as fully objective, and therefore true, reliable, accurate and unambiguous, results from obvious goals and marketing intentions of the advertising message sender. These include presentation of broad information (facts, dates, numbers) about a product and the company, raising the awareness of the brand, but also a specific context, play on words, employing "incomplete truths", ambiguity, asymmetric information, as a way to encode it, leading to achieve a particular persuasive and competitive effect. These features of the advertising message may, in certain conditions, be a form of social engineering and manipulation of the consumer market behavior (Juska, 2017), (De Pelsmecker et al. 2007), (Taranko 2015).

Information in the advertising message carry a certain load of content, emotion, persuasion and competitiveness. This interpretation of the information in advertising messages is an obvious fact and it leads to specific actions and to making evaluations, to expressing attitudes, and to market behavior of recipients. The content and nature of the information function in a marketing communication system is closely linked to the mechanism of consumer market behavior. This applies to essentially all of the five basic stages of the process of buyer market behavior: feeling a need, searching for market information, assessing selection options, making purchase decisions and evaluating the purchase and formulation of after-purchase experience (Foxall and Goldsmith 1998).

The dynamism of the market and its competitive economic structure force companies to pursue an active advertising policy, based not only on more or less objective information, but also operating selective information profiled to form needs, demand, and reduce price elasticity. In this context, the informative function of advertising is closely connected with the persuasive and competitive function. It is expressed in creating strong incentives for buyer purchasing behavior and the creation of a set of instruments of non-price competition in the market. With the current state of economic development and visible changes in the competition mechanism, a product with a competitive price alone is no longer sufficient in market competition and customer acquisition. One needs a set of attractive information and strong incentives that could shape the buyer motivation and cross the threshold of their attention and sensitivity. As T. Levitt rightly pointed out, competition is not so much between what companies produce, as between what they add to their products in the form of packaging, services, advertising, etc. (Levitt, 1969, p. 61).

Information contained in advertising is expressed by the UPS (Unique Selling Proposition) category, formulated by R. Reeves (Reeves, 1961,2015). It can be extended to the category of Unique advertising value—UAV the latter expresses the need for a clear and precise definition of the fundamental value of the advertising message for the recipient (or, more broadly, a specific market segment). The argument for such a modification is the structure of the functions and tasks of advertising. As is known, these include the economic results of sales expected in short periods and the effects of communication and branding, shaped in the long run. An additional circumstance is undoubtedly the fact that advertising a brand on the Internet, including social networking sites, definitely puts the issues of image shaping through the creation of groups of brand supporters, circles of friends of the company and its products first (Sanak-Kosmowska, 2018). Advertising in such a form and in a hypermedia

communication environment does not present a “unique sales proposal”, but a proposal of “unique value”. Advertising, USP or UAV, should promote a clear brand identity: the sender and the advertised product, emphasizing those features and values that determine the credibility of the advertiser, on the one hand, and the attractiveness and set of value for the buyer, on the other. A proper way of communicating the main, unique value in the form of a creative, original advertisement, using the language, words and phrases, photography, film, and music, can shape the expected market image of a brand and company, and at the same time precisely place it on the buyer’s perception map. It is through advertising that a product is positioned in the awareness of its recipients, although at the same time the reverse is also important, because company decisions on positioning are an important prerequisite for shaping the general character and style of its advertising message. Advertising highlights those features of the “unique proposal” that are particularly significant for the purchaser preferences map and which may constitute the basis for purchasing decisions and criteria for selecting a specific brand and for forming attitudes towards it. Therefore, it requires unambiguity of the message to be considered information symmetry. A clear advertising message, with its unique value and sales proposal, expresses the fundamental promise of the enterprise, addressed to the target group (Ogilvy 2007). It is a kind of message that is linked, through two key differentiators of its identity (credibility and attractiveness) between the company and the market, and serves attracting buyers. This is an important issue in the analysis of the title problem, the perception of asymmetry of information in online advertising by Internet users, evaluation of the reliability and transparency of the message, sharing opinions with other network participants, submission to the promise made in advertising and the consequences of the lack of transparency of advertising information.

1.1.2. Hypermedia advertisements in the computer environment—a model approach

The hypermedia computer environment creates a completely new quality of communication compared to traditional media. The essential feature of the model proposed by D.L. Hoffman and T.P. Novak is communication of “many to many” (Hoffman and Novak, 1996) (Riedl and Busch 1997). This model accurately explains the nature of online marketing communication. It is an important element of the information technology and network society paradigm (Castells 2009), (Baney 2004). From many different aspects of online communication: types and specifics of virtual promotion tools, their classification, attributes, Web-analytics tools for the presentation of the title structure of the problem, we focus our attention on informational issues of online advertising, which are a detailed look at the issues presented above.

The hypermedia communication model proposed by D.L. Hoffman and T.P. Novak is not a mere synthesis models of interpersonal and mass communication, even though it combines and uses their categories and concepts. It is a model that describes a new type of communication: “many-to many.” It introduces not only a new meaning of the advertising message, but also a different type of interaction and a new interpretation of the medium’s functions. At the same time it creates a new information recipient, the Internet user, who, through their essential characteristics, digital competences, expectations, attitudes and capabilities becomes an active partner of the seller, the issuer of online advertising in the process of communication: a *comsumer* (a compound of the words communication and consumer) (Wiktor 2016). This applies especially to the Internet and other next-generation Web 3.0 and Web 4.0 environments (Kotler et al. 2018). The process of communication between the sender and the recipient is a continuous, interactive process, free of political, social and cultural boundaries. The communication model of this type creates a new information bond between the participants in the process, fully

in line with the category of the “global village” proposed by D. McLuhan. (McLuhan 1962), (Lombard 2008). It is communication technologies that have created such opportunities to communicate on an international and global scale that reflect the communication processes in small local communities. What is more, the Internet user is not a passive recipient of information, as in previous models, but has the opportunity to express his or her opinions, share comments and assessments. They have the possibility of evaluating, subjecting to social judgment, also modifying the information present in the network at a specific address, in a specific place. This is an important remark from the point of view of assessing the symmetry of advertising by Internet users and research on the perception of online advertising by Internet users.

Messages in online advertisement have multimedia forms, both static and dynamic, personal and technical (machine). Thus, is widely described in the world literature on information technology as well as e-marketing and virtual communication (Kotler et al. 2018), (Gregor and Kaczorowska 2018), (Mazurek et Tkaczyk 2016). Interactions in the process of virtual communication, including online advertising, have a qualitatively new character, because both personal and machine (technical) interactions are possible. The essential relationship between the participants in the communication: seller and buyer, sender and recipient of an advertisement, takes the form of interaction between each of them and the medium. As in previous communication models, the medium no longer serves as a link between the participants and as the transmission channel, but creates a completely new communication environment with two dimensions: real and hypermedia.

In a network environment, both the seller and the buyer can interact with the medium. They have a diverse and broad spectrum of forms and contents, just as the plane of relations expressed in the “Many-to-many” formula is broad. Among many, the essential feature of the relationship that we emphasize in the research project, which is the selectivity and personalization of the message to such an extent that it is in principle inaccessible to traditional mass communication media. The Internet environment gives the participants of the communication process full opportunities to implement the pull strategy: independent searching and pulling out only that information that is useful from the network related to satisfying their information needs in the process of purchase. The network environment creates opportunities for advertisers to enter the market by having their offer on the Web, but cannot “force” potential customers to accept it. It is the users who decide, if, what, and when to view, how to assess and comment, and to what extent to share their opinions with other Internet users. It is an area of independent decisions by an advertising recipient, who becomes a “seeker” of information in the hypermedia communication environment by means of an Internet search engine. He or she also becomes a critic, commentator and distributor. This feature of the model makes it possible to combine mass approach with individual, interpersonal communication. The hypermedia model of marketing communication is thus addressed to the individual purchaser and individualized marketing. Personalization of the advertising message, both real and apparent, becomes an important element distinguishing online advertising.

A network environment means a multitude of relations occurring in the process of communication between the company and the market. As follows from model of D. L. Hoffman and T.P. Novak, the basic relationship is the “many to many” formula, linking the seller with the potential buyer, and more generally, with the broadly understood environment. It is particularly important that relations with the medium may involve both the seller and the potential buyer, which means that the initiative in the communication process is available to both parties at the same time. This environment creates a new type of recipient of the message, as a *consumer*, i.e. a

recipient who enters broadly and deeply into the communication, interacts, searches for information and willingly shapes it through his or her own opinions, modifications of opinions expressed in forums, willing to integrate groups and micro-communities around a given problem, which is the subject of advertising. For consumers, online communication with friends, acquaintances and outsiders focused on an issue is a lifestyle, a form of expression of what an advertising campaign expresses. Internet users' opinions expressed online, e.g. in the form of YouTube videos, or comments on the company's social media profile, must be taken into account by the companies affected by the information, "showing an important lesson on the power of social media" (Kotler and Keller, 2018, p. 4).

The Internet is changing the traditional roles of the sender, the recipient, the content and forms of the advertising message itself. The participants of the communication process can exchange roles. The company can—and undoubtedly more and more will—take on a virtual form and that is also be the communication with the market. A visible change is taking place in the presentation of the offer: the place of existing advertising in traditional mass media will increasingly be replaced by virtual advertising.

1.2. Information asymmetry

The essence of information asymmetry is the "imbalance" or "lack of symmetry" between the information or knowledge possessed by the parties to an exchange in market relations: a business, an advertiser, and the recipient of advertising that it, the potential customer. The situation of information asymmetry is widespread in society, the sphere of economy, business, and exchange. Its characteristics, conditions, circumstances and consequences for "market efficiency" and the efficacy of resource allocation are discussed in numerous theoretical studies and research papers. Asymmetry is an important subject of discourse within the mainstream theory in economics, managerial economics, economics of information, neo-institutional economics, game theory, the study of market and market participants' behavior, on top of market regulation. It is also the subject of study and research in sociology, communication theory and social psychology, not to mention other areas (Samuelson and Marx 2014) (Dixit and Nalebuff 2010).

In particular, information asymmetry concerns of market relations and B2C. The consumer goods market, at the current stage of development and intensity of competitive systems, is an area of the economy in which the possibility of asymmetry of information is particularly visible. It is a market which, under conditions of excessive supply which may even be described as "manipulative supply", gives the seller clear indications of informational dominance over the consumer, the consequences of which are expressed, directly or indirectly, by a "compulsion" or "obligation" to purchase the advertised product. There are many conditions for such a marketing information management system, which consciously assumes asymmetry of information for the buyer. They are different in nature, dependent and independent of the company, while at the same time creating a justification for certain legal regulations on the part of the state, which will prevent the negative effects of information asymmetry.

In economic theory, interest in the issue of information asymmetry appeared in the 1960s. It resulted from the increasing criticism of the fundamental trends in the neoclassical approach, including general equilibrium models of Walras and Arrow-Debreu. Studies and research on this issue were performed by H. Simon, W. Vickrey, and J.A. Mirrlees (Sandmo, 1999).

Research on asymmetric information was developed by G.A. Akerlof in the article *The Market for Lemons: Quality Uncertainty and the Market Mechanism* (Akerlof, 1970, pp. 488-500). A look at the market

proposed by A. Akerlof was expressed by its participants: sellers and potential customers, having different amounts of information. *The market for lemons*, which is a popular name for the used cars' market, was an apt example of such a market, with all its consequences for its functioning. The article inspired research on the problems and the importance of information in the market, both in general terms and in specific sectors of the economy, such as the stock market, insurance, government contracts, M&A, labor market, capital market, credit and others. The work of G.A. Akerlof, taken up in the 1970s, together with M. Spence and J.E. Stieglitz, created the basis for a general theory of markets characterized by asymmetry of information (Barkley Rosser 2003). The problem of incomplete information models in the market has been the subject of research for many scholars, including G. Stieglitz, J. Harsányi, and R. Lucas. Each of them, like the previously mentioned authors, was awarded the Nobel Prize, for making a significant contribution to the emergence and development of information economics and game theory. Asymmetry of information has become an important concept of institutional economics and managerial economics (Hiller 1997).

Identification of the phenomenon which is the possibility of occurrence and at the same time determining the strength and meaning of the non-transparency of information at the disposal of market participants significantly modified previous concepts of macro-analysis, market theory and determined a new, different way of explaining the causes of unreliability or illegality of a market mechanism. Analysis of information asymmetry (this category includes various states of participants in the exchange: imperfect, incomplete, uncertain information) obviously applies to wide and even all areas/sectors and segments of the market (Deshmukh 2005) (Forlicz 2001), (Blajer-Gołębiowska 2012), (Garbe 2017), (Nesterowicz 2017), (Czaplewski 2016). It is undertaken in various cross-sections and dimensions, both in terms of identifying conditions conducive to non-symmetric information in market relations and in terms of its consequences expressed by the category of transaction costs (Williamson 1987). In this article, the relations are referred to the relationships in the process of online advertising as marketing communication.

In classical terms, the sender of information (in G.A. Akerlof's article a car salesman was used) has a substantially higher amount of sales information in relation what they transfer to the recipient (the potential customer). At the same time, they have the advantage of full awareness of the "quality" of information (the condition of the car) and its detailed interpretation, often related to the contextuality of communication, the lack of equivalence of meanings, the measures, the categories. The lack of transparency of information is fully understood and probably natural. Advertising on the market today is mass communication, hypermedia, entailing the need for specific funding. Such character and use of communication and media produces consequences for businesses (advertisers) and buyers (recipients). They are usually both positive and negative (Juska 2017).

Detailing this reflection, it should be clearly emphasized that the essence of potential asymmetry of information in marketing communication is expressed in the differences between the quantity and quality of information given by the enterprise (the seller) in the form of advertisement and its interpretation by the recipient. It is a question of encoding seller's intent in the form of advertising of a particular style, character and UPS or UAV category. Asymmetry of information in advertising activities is associated with the interpretation of the message by the addressee which is different than assumed by the sender in a particular creative advertising strategy. That interpretation can lead to having improper information (in terms of quantity and quality), leading to irrational market decisions. Advertising should in fact contain necessary information sufficient to solve "the problem of the

sources of purchasing information” for the customer to make the right decision and purchase. This condition regarding information in advertising and its importance for the recipient has two important additional dimensions of analysis. They are: subjectivity of and selectivity of human perception on top of the assumption about how to maintain a buyer’s market, in the process of searching for information and making purchase decisions (Foxall and Goldsmith 1998). These dimensions are associated with the assumption on how to proceed in the consumer market, which is either rational or emotional behavior. Each of these elements creates an important component of the model identifying the conditions and forms of information asymmetry in the functioning of a specific market, including the implementation of a specific function and activities, which is marketing communication. They are indeed important in the discussion of the asymmetry of information in general, also in each of the specific areas of research.

For an enterprise (an advertiser) the requirements for transmission of communication to the market to be fully “readable” and transparent, means that it is necessary to present in a specific precise, comprehensive description of the sales offer and purchase conditions in the advertisement. This area and requirement, so closely connected with the asymmetry of information, excludes the transmission of incomplete, erroneous, falsified, or ambiguous information, which could mislead and prejudice the fundamental economic interests of recipients. By raising this issue, it should be also noted that information contained in advertising does not constitute an offer to sell. It is only an “invitation” to enter a transaction. The situation in both these aspects—model expectations concerning the quality of information and legal regulations—sharpens the problem non-transparency and creates, in the face of strong market competition in every sector of the economy, a field for “informative abuse”, which is reflected in a specific advertising creation strategy. It creates the conditions for doing what M. Castells, while analyzing the network society paradigm and the paradigm of information technology described as the desire to “obtain information superiority” (Castells, 2009, p. 79).

For the recipient, an Internet user and e-consumer, a transparent, “reliable” message thus not creating an asymmetry of information, is a premise and criterion for a rational purchasing decision based on trust in the information contained in advertising; a decision without the risk of error (or more precisely, without excessive, unacceptable risk), without negative, potential consequences postponed in time. Only such a situation is transparent and serves the development of the market, creating trust, promoting the dissemination of ethical standards in business (Eagle and Dahl 2015).

The effects and consequences of information asymmetry were described by G.A. Akerlof, J. Spence, J.E. Stiglitz and other representatives of information economics and neo-institutional economics are clear and significant. They are, at a high level of generalization and synthesis, the circumstances that express market failure and inefficient allocation of resources. They are quite commonly described in the literature as *moral hazard* and *adverse selection* (Samuelson, Marx 2014, Chapter 15) (Hillier 1997). The consequence of the first kind, *moral hazard*, indicates a threat of information abuse from the seller/advertiser. It may involve concealment of relevant information in commercial advertising, a too complex, ambiguous advertising slogan, or an unreadable social and cultural context. On the other hand, effects of the second type, *adverse selection*, imply the possibility of a “negative selection” by the recipient between advertised options for possible purchases. Such opportunities may be created by advertising, its character, style, way of creation, the power of persuasion and argumentation of the message. The consequences of such selection are explained by reference to the law of Gresham. It is a relevant

and appropriate metaphor. Through asymmetry of advertising information, the consumer's poorer decision from the point of view of the possible consequences of interpretation of the message will result in making a "worse" purchase instead of a "better" one.

A concrete manifestation of negative consequences of the lack of symmetry between the seller's and buyer's information is, e.g., the impossibility to conclude a transaction, manipulation of the potential customer's behavior, violation of legal and ethical rules of the market functioning through misleading advertising, etc. In particular, asymmetry of information, its premises and consequences are a subject of research and analysis in many sectors of the consumer goods market, the financial and capital markets, the banking and medical services market, insurance, tourism and others.

Asymmetry of information, its diversity and non-transparency, and in particular situations, distortion it causes, deficiency, excess or falsification, was the basis of these concepts, which strongly emphasized the need to protect the market from its negative consequences. The concepts of this nature were associated with the need for a strong state intervention in the market mechanisms and its functioning. The sphere of legal regulation became their area of expression, imposing specific information obligations on market players, which in its preventive and protective function should limit the opacity of information and falsification of the market. They are, of course, general in nature and concern the economy as a whole and all its sectors, although, naturally, the degree of sectoral differentiation and international regulation may be considerable. The detailed scope of market regulation is an expression of the clash between two basic concepts of state and economy functioning. On the one hand, an active, significant role is expressed through the doctrine of state interventionism, and on the other hand, the promotion of the idea of liberalism and a wide range of economic freedom for all market participants.

1.3. Hypotheses

The above theoretical analysis of the structure of the issue allowed us to formulate the following hypotheses:

H-1. According to the Polish and Japanese students of business faculties, e-consumers are willing to use the opinions of other Internet users in the assessment of online advertising.

H-2. Personalization of online advertising is not treated by the surveyed group of respondents as a form of manipulation of e-consumer behavior.

H-3. The Polish students are more willing to share their personal data than the Japanese students.

H-4. The Polish students share their personal information in exchange for discounts offered in advertising campaigns, while the Japanese students made it available only when making online purchases.

2. METHOD

2.1 Sample and data collection

Due to the indicated title goal of the research, students of economics in Poland and Japan were the participants in the study. The study was conducted in May 2019. Originally, the questionnaire was developed in the Polish language. The next version of the tool was developed in English, in order to meet the requirements of content validity (McGorry, 2000). The next step after constructing the research tool was to conduct pilot studies using the

Polish version of the questionnaire. The aim of the pilot (Bryman, 2008) was to check if the questions were understandable by respondents, whether the number of questions was adequate and whether any of the questions were skipped by them. The pilot study involved 20 Polish students.

The result of the pilot was the reconstruction of selected questions. They were simplified, so that they became easier to understand. The final version of the questionnaire was published online, in Polish and English.

2.2 Measures

The questionnaire of choice consisted of 4 parts, and a few demographic questions:

1. Questions introducing the experience and methods of Internet use
2. Rating of advertisers' intentions and advertising messages
3. Evaluation of the impact of advertising on e-consumers
4. The role of advertising in the process of online shopping
5. Evaluation of respondents' knowledge in the field of online marketing

The aim of the introductory questions was to discover how and how often the students used the Internet, social networking sites and made purchases online. To learn about the respondents' experiences with the Internet, they were asked to rate statements regarding the use of the Internet in the scale of 1-5.

In the second part of the research tool, the respondents made an assessment of the intentions of advertisers and advertising messages. In particular, they assessed the credibility of the various forms of online advertising, such as online video advertising, online reviews, sponsored articles, banner ads, websites, bloggers' and celebrities' opinions.

3. RESULTS

3.1 Descriptive statistics of the sample

Analysis of demographic data on the respondents allowed us to conclude that the majority of the respondents were people between the ages of 18 and 25 years old. This applies to both Polish (95.6%) and Japanese students (99.5%).

3.2 Main results

In the second part of the questionnaire, the students were asked to assess the credibility of various sources of consumer information, including online user reviews. The Polish students assessed this credibility higher than the students from Japan. 84.8% of the respondents declared that such opinions are reliable or very reliable. In the case of the students from Japan, such response was indicated by less than half of the subjects (36.87%). The responses are statistically significant, as demonstrated by the results obtained in the U-Mann Whitney test ($p < 0.05$). Interestingly, similar differences occurred in the evaluation of other sources of online consumer information: in the case of bloggers' and influencers' opinions, the Polish students also declared a greater confidence (49.28% declared they rated such opinions as "reliable" or "very reliable") than those from Japan (31.81%). In this case, the differences were also found to be statistically significant ($p < 0.05$).

Table 1 Sums up the demographic profile of the respondents

Measure	Value	Frequency	%
Gender	Female	109	79
	Male	29	21
Age (years)	18-25	132	95.6
	26-35	6	4.5

Measure	Value	Frequency	%
Gender	Female	77	39.3
	Male	119	60.7
Age (years)	18-25	197	99.5
	26-35	1	0.5

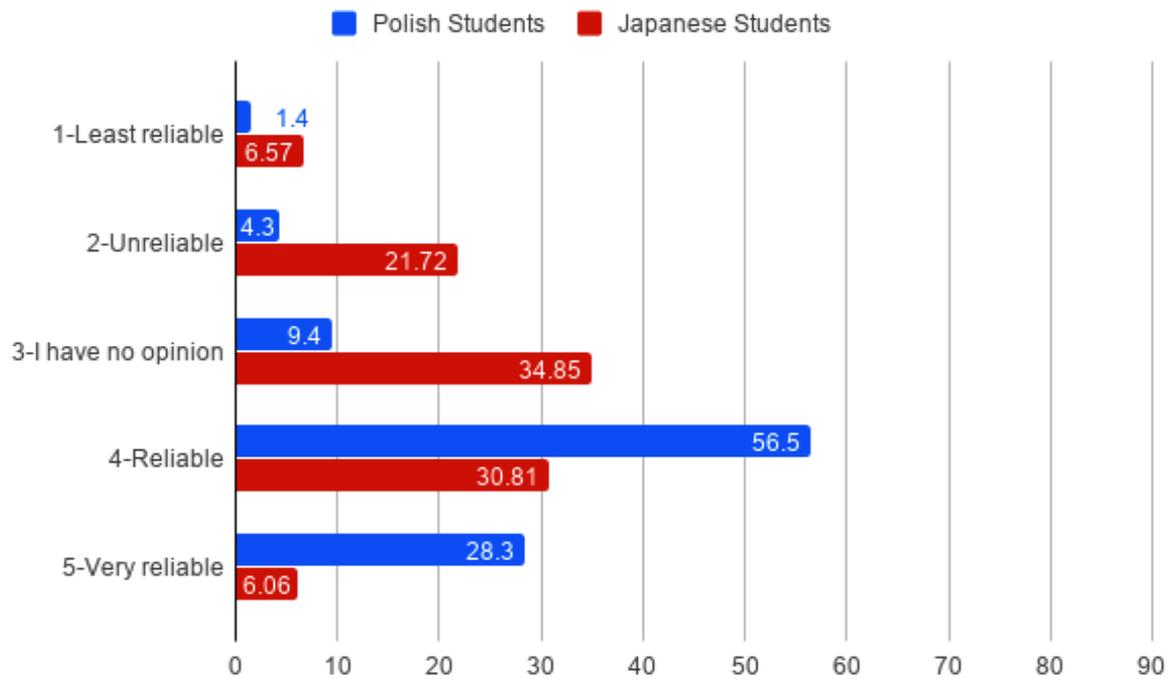


Chart 2. Assessed credibility of various sources of consumer information

It can be concluded that only Polish students recognized the opinions of other Internet users are reliable. The first hypothesis was therefore not confirmed.

It is worth noting that Polish students more often declared searching for product information online when making purchase decisions (90.58%) than the students from Japan (67.17%). The results of the U-Mann Whitney test indicate that these differences are statistically significant ($p < 0.05$). This means, therefore, that the Polish students had more confidence in product reviews posted online, and more often sought information about the purchased product.

The respondents were also asked if they agreed with the statement that the opinions of other Internet users are a valuable source of information about products. Also, in this case, the responses indicated statistically significant differences between the students from Poland and Japan (U-Mann Whitney test, $p < 0.05$). Almost 80% of the respondents from Poland (78.9%) agreed with the indicated statement. In the case of the Japanese students, over half of the respondents (58.59%) agreed with the opinion.

Interestingly, answers to the question referring to trust for online stores did not differ according to the respondents' country of origin. Both Polish and Japanese students declared moderate trust. In both samples, less than 30% of the respondents declared full trust in online shopping.

When making a purchasing decision, I am looking for information about the product online

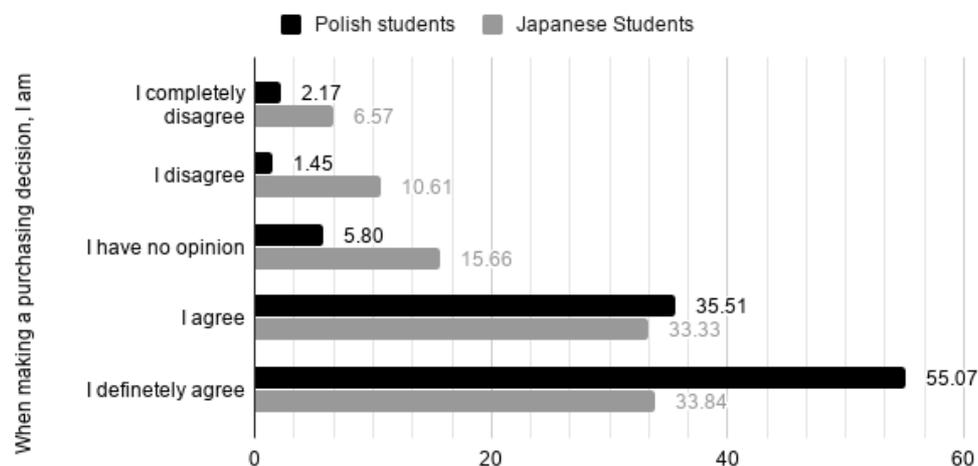


Chart 3. Frequency of searching for product information online

On the basis of the results obtained, it can be concluded that the surveyed students from Poland had greater trust towards the opinions of other Internet users published online, celebrities and private individuals alike. At the same time, the Polish students assessed such opinions as valuable. Searching for information about a product in the online environment was a commonly used strategy in the consumer buying decisions. In the case of the students from Japan, the trust in reliability of published reviews was much lower, as well as their importance in making purchasing decisions. It should be noted, however, that regardless of the country of origin, confidence in online shopping is limited.

One of the research questions posed concerned the personalization of online advertising. First of all, the surveyed students were asked to express opinions on personalized newsletters. 69 out of the 198 Japanese respondents identified their attitude as strongly negative or negative (35%). A very positive assessment was declared by only 8 respondents. The same was the case with the Polish students. Less than 2% of the respondents expressed a very positive opinion, while nearly 45% evaluated newsletters poorly or very poorly. The indicated differences between the studied groups are not statistically significant. This means, therefore, that the young consumers did not like personalized email advertising, and therefore it can be suspected that the effectiveness of this tool in this age group may also be limited. In the following questions, the respondents were asked to rate to what degree personalization of on-line advertising is perceived by them as a form of manipulation. For this purpose, such phenomena as retargeting or abandoned baskets were asked about. The Polish students more often than not (57%) declared that they see advertising in social media that are in line with their interests compared to the students from Japan (39.3%, U-Man Whitney test, $p < 0.05$). Both students from Japan and Poland are aware of the fact that personal data, on the basis of which advertising is personalized can be used to manipulate behavior in the future, which was indicated by more than half of the respondents in each sample.

As regards Hypothesis 2 concerning personalization of online advertising, the young students have a negative or indifferent attitude towards the specific type of personalized advertising represented by newsletters and are aware that the traces they leave online and that make it easier to personalize advertising can also lead to manipulation of their behavior in the future.

In the following analysis we asked the respondents about the reasons for which they would share their personal information online. On the basis of the detailed verification of the results obtained, it was indicated that Polish students are much more willing to provide their personal data in exchange for discounts. This is what 46% of the surveyed Poles and only 25% of the Japanese indicated. This difference is statistically significant (χ^2 of Pearson $p < 0.05$). The results indicate that the willingness to provide personal information in exchange for a discount in exchange for signing up for a newsletter depends on the country of the student's origin. The contingency coefficient thereof was 0.21.

Statistics	Polish vs Japanese Students		
	Chi-square	df	p
Chi ² Pearson	16.18787	df=1	p=.00006
Chi ² NW	16.09674	df=1	p=.00006
Fi for tables 2 x 2	.2194953		
Tetrachoric Correlations	.3471921		
Contingency Factor	.2143916		

It was also examined whether there is a link between the country of origin and willingness to provide personal data in exchange for other benefits or when setting up an online shop account. The responses did not confirm the existence of such a link. Hypothesis 3 and 4 have thus been confirmed partly: Polish students were more willing to share their personal information in exchange for a discount than students from Japan.

One should also refer to the answers given by the respondents relating to the assessment of the legitimacy of state intervention in the advertising market, including regulation of the online advertising market. Both students from Poland (72.46%) and Japan (65.9%) were unequivocally in favor of such a regulation. Despite the limitations of research resulting from the small sample, it is worth noting unequivocal responses. The young people, aware of the “temptation to abuse” the information and the possible manipulative action by advertisers, expect the state to provide greater protection for e-consumers in the virtual environment.

Evaluation of the results, verification of hypotheses

The research presented in this article was a pilot of wider research on perception of asymmetry in online advertising. The research was conducted among Polish and Japanese students - future experts in the field of advertising.

The presented results show significant differences between searching for information about an online product, trust in content published in the virtual world and readiness to share personal data online. In the light of the results obtained, Polish students have much more confidence in opinions found on the Internet and are eager to search for information about the product online. Hypothesis 1 has been confirmed only partly, for Polish students.

The obtained results allowed the verification of research hypotheses. Some of the results obtained turned out to be surprising: despite the popularity of online shopping and online advertising, the surveyed young people have a negative opinion about the personalization of advertising and are aware that it leads to manipulation of customer behavior. Therefore, hypothesis 2 has not been confirmed.

The results allowed to state that students from Poland are more willing to share their personal data online - being aware that they will serve sales purposes. Hypothesis 3 and 4 have thus been confirmed partly: Polish students were more willing to share their personal information in exchange for a discount than students from Japan.

Managerial implications:

The research presented in the article focusing on online advertising among a specific group of Internet users: students of economics and business studies at universities in Poland and Japan, allowed us to recognize the problem of information asymmetry in advertising messages and to evaluate it.

The issue is an open-ended scientific problem. The degree of scientific recognition of the issue and empirical verification of the thesis of the manipulative nature of advertising or, to put it another way, manipulation of the addressee market behavior through the asymmetry of information in advertising is negligible. The thesis that “advertising manipulates” is relatively common as an element of social consciousness. It is also present in economics within the study of the *economics of manipulation and fraud* (G.A. Akerlof, R. J. Shiller, 2017). However, it is not an object of empirical verification based on a specific methodological workshop. It is not what the important current and direction in research in contemporary economics expresses, namely, an evidence-based theory. The importance of the results of the presented research is therefore connected with an important hypothesis concerning the manipulation of consumer behavior through the asymmetry of information in advertising and its empirical verification. The study results can therefore make a contribution to management and marketing sciences, enterprise sciences and communication sciences.

Managerial implications of the research are also seen at the educational level. The results will be available to researchers working in the field of information economics, information management and marketing

communication, as well as to students of economics, management, marketing and related fields. The results of the research can be used by companies and non-profit organizations advertising their activities, institutions in the advertising industry such as advertising agencies and their associates, as well as media and public institutions, including formal regulation entities.

Limitations and suggestions for further research

The research was limited by the targeted selection, limited to the academic communities in two countries, Poland and Japan. Therefore, future research should be conducted in more countries and in other e-consumer groups, based on the principles of representative surveys and methodological triangulation. They should make it possible to understand the subjective sense of information asymmetry in online advertising, the differences in the informational advantage of online media broadcasters and recipients over traditional media, and responses to manipulation in advertising based on asymmetry of information. Consumer research can be performed in the form of a full factorial experiment. Research should also cover businesses, their advertising strategies, cooperation with advertising agencies and their attitudes towards the use of manipulation in online advertising. This is important for learning how advertising slogans are encoded and asymmetric information communicated.

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