

РАЗДЕЛ 2. ИННОВАЦИОННАЯ ДЕЯТЕЛЬНОСТЬ ПРЕДПРИЯТИЙ

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INNOVATIVE METHODS FOR THE ASSESSMENT OF DIGITAL ADVERTISING EFFECTIVENESS

One of the main elements in organizations' marketing activity is advertising. Many companies use advertising to achieve their marketing goals: inform consumers about their products, persuade potential buyers to purchase a product or service, attract competitors' customers, elicit brand awareness, etc. However, considering the World Wide Web's and the Internet's caused technological revolution, Aslam and Karjaluoto (2017) emphasize that «the advertising paradigm is now shifting from traditional advertising medium (TV, outdoor, direct marketing etc.) to more a digital-centric approach and advertisers are investing increasingly in digital at the expense of those traditional formats». Moreover, overabundant advertisements and saturated consumer interest in today's marketplace have prompted marketers to pay extra attention to the advertising effectiveness (Li, Huang, & Christianson, 2017).

According to Hamelin, El Moujahid and Thaichon (2017), there are two main methods for measuring advertising effectiveness: 1) measurement of indicative marketing metrics (such as awareness, preference, customer satisfaction, and loyalty); 2) measurement of tangible marketing metrics (such as sales, market share, profits, return on investment, cash flow, and firm value). According to the authors, traditionally advertising effectiveness is assessed using five independent dimensions: 1) the target audience attitude toward the advertisement itself; 2) the audience's attitude toward the brand; 3) the audience purchasing intention; 4) actual purchase behaviour; and 5) recall for the brand and product being advertised. As it can be understood, mainly questionnaire surveys are used to indicate whether advertisement will succeed (or has succeeded). However, Lewinski, Ransen, and Tan, (2014) argue that asking consumer opinion requires quite an effort and brings along undesired effects such as self-awareness and social-desirability in the questioned participants. Summarising it can be stated that traditional marketing research methods are not always sufficient for the complete assessment of advertising effectiveness, thus neuromarketing research methods are often applied to clarify it (Grigaliūnaitė & Pilelienė, 2017).

Considering the importance of a proper determination and forecasting of advertising success and the particularity of digital advertising, the **scientific problem** is raised by a question: what innovative research methods can be applied for an assessment of digital advertising effectiveness? The main **aim of this study** is thus to determine and analyse neuromarketing research methods suitable for the assessment digital advertising effectiveness.

As the Internet advertising offers precise location-based targeting, and data-driven user's profiling, segmenting the target market according to preferences, likes and hobbies, as well as retargeting, easy interpretation of results, and more reasonable pricing models (Aslam & Karjaluoto, 2017), companies shift their attention from traditional marketing measures used in a conventional markets to the ubiquitously unavoidable digital world. However, consumer behaviour online is different from that which occurs offline (Ye, Li, & Gu, 2011). An assumption can be made that consumer reactions to the advertisements they face online are also different because of different circumstances: related digital content, inevitability of exposure, etc.

Therefore, an effectiveness of online advertising can be assessed in three levels:

1) *Internal or message-specific level*. At the internal level, an effectiveness of advertisement's content has to be analyzed. Different elements of advertising layout and different compositions of those elements can cause different consumer attention to an advertisement and lead to different reactions.

2) *External or context-specific level*. The placement of an advertisement on a web-page, its size and position, also relation to other contextual elements of the webpage can also become a determinant of advertising effectiveness.

3) *Personal or consumer-specific level*. Advertising is often supposed to affect consumer emotions. Different kinds of emotions and their different strength can also cause different consumer reactions.

Achieving to create an appealing and effective advertisement and reach organization's goal, all the three levels are important. The failure in one level can downsize advertising effectiveness even if other levels are performed perfectly. However, different research methods have to be applied to assess advertising effectiveness at every level.

At the internal level, the effectiveness of message-specific elements is assessed. To be more precise, at this level the research focuses on the structural elements of an ad, their composition and the message strategy. The traditional research methods at the first level would be content analysis and questionnaire survey. However, both methods are quite subjective, and mostly rely on researcher interpretations. As innovative marketing research methods, electroencephalography (EEG) and evoked potential (ERP) research could be provided in order to measure the bioelectric activity of the brain as a reaction to a particular stimulus. On the other hand, an eye-tracking experiment could be provided to determine which elements of the advertisement could cause the observed brain activity. Moreover, as reported consumer behavior often differs from the actual one, Implicit Association Test (IAT) can be performed to assess consumer attitude toward the advertisement and its particular elements.

At the external level, the determination of the impact of contextual information on advertising effectiveness has to be assessed. Moreover such elements like position of the advertisement in a web-page (side of the web-page), and its size pay the role of high importance. Traditionally, to assess advertising effectiveness at this level, advertising and brand recall, and brand recognition are

measured. As an innovative marketing research method, eye-tracking experiment could be applied to complement the results of latter methods.

Finally, at personal level, consumer emotional and cognitive reactions to an advertisement are determined. Traditionally, consumers are asked to indicate their emotions and future purchase behavior by filling the questionnaire. If company decides providing neuromarketing research, such methods as heart rate measurement, galvanic skin response, and facial expressions could be applied to indicate actual consumer reaction to an ad.

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CONCEPTS OF NEUROMARKETING AND GUIDELINES FOR CONDUCTING NEUROMARKETING RESEARCH

The trend of the combination of prefix *neuro-* with the specific scientific fields is obvious and growing each year since the early XXI century. The interdisciplinary subfields like neuroeconomy, neuromarketing, neuroinformatics, neuroeducation, neurolaw and many more which applied neuroscience in their context have developed. Moreover, the emerging field of neuromarketing became relevant not only from the academic point of view, but also from the business point of view. Ruangguttamanun (2014) figuratively stated, that «the equation $E=mc^2$ has changed the world, possibly, neuromarketing could make some different in marketing world as well». However, the term neuromarketing, even if it logically seems as application of neuroscience to marketing, is much more complicated. As Schneider and Woolgar (2015) indicated, neuromarketing can mean different things at different times and to different people. Hence, the basic generic concepts of neuromarketing, which would be generally recognized, are scarce.

Furthermore, neuromarketing raised ethical, professional and academic issues as it constitutes a bridge between two worlds, that of neuroscience and that of economics (Sebastian, 2013), or more precisely, marketing. Ducu (2017) implied, that there are overlapping ethical concerns between neuromarketing ethics, bioethics and what is now called «neuroethics». Consequently, not only ethical and socially responsible marketing practices and methods have to be applied in the field of neuromarketing, but all of the ethical decisions and methods applicable to neuroscience, psychology, economics and all of the related fields have to be taken into consideration in order to implement ethical neuromarketing practice or research. Therefore, the **scientific problem** is raised by a question: what are the main generic concepts of neuromarketing and what guidelines are relevant for conducting neuromarketing research? The **aim of this study** is to determine the basic generic concepts of neuromarketing and the guidelines for conducting neuromarketing research.

According to Sebastian (2014), *neuromarketing* reflects the *fusion of two fields — neuroscience and marketing*. Agarwal and Dutta (2015) specified that *consumer neuroscience* refers to academic research at the *intersection of neuroscience, marketing, and psychology* while *neuromarketing* generally refers to popular interest in *neurophysiological tools which are used for conducting commercial market research*. Nevertheless, Daugherty, Hoffman, and Kennedy (2016) pointed out that *consumer neuroscience* is «the utilization of neurological and physiological measurement tools to analyze and understand human behavior in relation to markets and marketing exchanges». As it can be seen, consumer neuroscience as well as neuromarketing refers to the intersection of neuroscience and marketing, moreover, consumer neuroscience as well as neuromarketing applies neurological and physiological measurement tools to analyze and understand human behavior in marketing context. Hereafter, Daugherty and Hoffman (2017) stated that among marketing scholars, the concepts *consumer neuroscience* and *neuromarketing* are often used interchangeably. Hence, the distinction of these concepts becomes more definite only at the theoretical level as both concepts refer to application of neuroscience theories and / or measurement tools to marketing theory and / or practice. Consequently, ***consumer neuroscience (usually denote to academic perspective) or neuromarketing (usually denote to practical perspective) are interchangeable concepts referring to the intersection of neuroscience, marketing, economics, and psychology while applying neurological, physiological, psychological, and traditional marketing measurement tools to analyze and understand conscious and unconscious consumer response to marketing.***

Due to the reason that neuromarketing refers to the intersection of many distinct scientific fields while applying research methods from latter fields, it raises overlapping ethical concerns. Consequently, in order to implement ethical and transparent