Introduction

Keywords: innovation management, economic innovations, physiological measurement, neuromarketing, eye-tracking

The nature of innovation management is based on understanding the innovation process, which implicates necessary resources, the structure of an organization and expected outcomes. This process of innovation management is grounded on the assumption of a gradual opening up towards external sources of information that is necessary for the effective implementation of an invention on the market. One must also remember that the idea of innovation management is centred around shortening the process of invention with cost reductions and making the outcome of innovation successful by market acceptance (Romanowski, 2019). This search for assumptions concerning the introduction of a new product should be guided by market logic over those that are technical in order to reduce the risk.

Due to rapid advent of the Internet, it is necessary to use e-marketing tools to diagnose consumer behaviour in their interactions with the digital environment. This is all the more important in today's academic sphere where more focus is given to the holistic steps involved in innovation and not towards the diagnosing of physiological reactions and preferences in the purchasing process. This book, therefore, is devoted to selected methods used within the research and development stage of the innovation process.

All described methods and instruments are part of the Innovation Management Master Study Programme, provided by Poznań University of Economics and Business through two laboratories dedicated to testing consumer behaviour in marketing innovations: ConsumerLab and ShopLab. The described methods include measuring consumer behaviour on the Internet, physiological, electrodermal activity measurements and neuroscience research methods to test reactions on innovation.

The first chapter will see a review of tools related to Search Engine Marketing (SEM), Content Marketing, E-mail Marketing, Marketing automation, Social Media Marketing, data collection and research. The data presented in this chapter clearly indicates the

importance of understanding the behaviour of modern consumers on the internet and undertaking e-marketing to match it. It also highlights the importance of staying updated on the latest trends and technologies on the internet if one is to continue being successful (Keeley, Pikkell, Quinn, Walters, 2013).

The second chapter is devoted to content marketing and the significance of social media, with a particular emphasis on Instagram as a promotional tool and a channel for selling goods and services. Such a review, in our opinion is vital as social networks are becoming the leading instrument for promotion and image creation, with companies using it for creating an optimal self-image whilst consumers use it for posting original illustrations, photos and videos.

The third chapter presents the essence and specificity of physiological measurements that can only be performed using appropriate apparatuses. It also reviews how physiological data that cannot be directly observed by humans (e.g. brainwaves, eye fixations) are advantageous due to its objectivity, continuity and non-invasiveness of measurement. The chapter then classifies the methods of physiological measurements, taking the human nervous system structure as a point of reference.

The fourth chapter is dedicated to neuroscience research methods that help understand cognitive processes and underlying mechanisms of consumer behaviour. The aim of this systematic review is to summarize the techniques, contributions and limitations of several key neuromarketing methods.

The fifth chapter takes a closer look at the measuring of electrodermal activity (EDA), its essential elements, assumptions related to the concept and possibilities in marketing research. The chapter also discusses examples EDA use, together with other measurement methods.

The final chapter is dedicated to reviewing eye-tracking as a neuromarketing tool, enabling scientists to measure subconscious reactions in response to stimuli, thereby giving insight into decision-making processes, consumer preferences or motivations. It also presents the main research areas and possibilities of using eye-tracking in marketing research as per previous research.

We hope this publication will be useful for students studying Innovation Management, its enthusiasts as well as for those working in R&D.

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2. Romanowski, R. (2019). *The Nature of Innovation Management*. [In:] Romanowski R. (Ed.) *Managing Economic Innovations – Ideas and Institutions*. Bogucki Wydawnictwo Naukowe, Poznań, pp. 6–21, DOI: 10.12657/9788379862764-1.