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REFLECTIONS ON THE USE OF CONJOINT ANALYSIS AS A DUAL METHODS IN NEUROMARKETING RESEARCH

Nik Nur Azhani Anuar¹, Salmi Mohd Isa^{2*}

¹ Graduate School of Business, Universiti Sains Malaysia, Malaysia
Email: hanieazhani@gmail.com

² Graduate School of Business, Universiti Sains Malaysia, Malaysia
Email: salmi.mohd.isa@usm.my

* Corresponding Author

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Abstract:

Neuromarketing techniques provide valuable insights regarding consumer's subconscious decision-making experience. However, there are traditional methods well-favoured for its ability to explain consumer's conscious trade-offs known as conjoint analysis. Although the two methods differ greatly, both possess qualities that benefits and limits researchers the entire duration of a study. Therefore, comparison of the methods could provide opportunities for improvement. Recently, integration of neuromarketing techniques and conjoint analysis are utilized under one study simultaneously and resulted in a more holistic understanding of a controlled situation. Further analysis on neuromarketing techniques, conjoint analysis, and dual method may enlighten researchers on an effective and efficient alternative of data collection to obtain higher quality of information. This mini review articulate characteristics of both methods and identifies significance of a dual method in research efforts.

Keywords:

Neuromarketing Techniques, Conjoint Analysis, Dual Method.

Introduction

Neuromarketing has since been the field of choice for various marketers to not only gain knowledge on; consumers' perceived value (Eser, Isin, and Tolon, 2011) and cognitive triggers (Alsharif et. al., 2020) on a brand or product from different stimuli, additionally, the knowledge is further enhanced with the use of technological advancements which provides additional depth to the current understanding and opened new possibilities within the neuromarketing field (Alsharif et al, 2021). The goal of neuromarketing is to understand the initial efforts

needed to create an internal push for consumers' recognition of stimuli by triggering the brain cortex (Chow et al., 2018) that analyses emotional and psychological input (Lee et al., 2017) which then translates into quantifiable measurements such as the identification of the exact point of cognitive interest, the interest towards stimuli based on the frequency and duration line of vision and the visualization of the brain activity during exposure to stimuli. These discoveries are made possible with scientific applications such as electroencephalogram (EEG), eye tracking, fMRI and the equivalent. Due to the output presented by these technologies, marketers are able to obtain clear and specific results, further increasing the quality of the knowledge and future decisions.

However, would these advancements lead to the obsolescence of previous methods that is arguably one of the preferred methods in the marketing research field known as conjoint analysis? The conjoint analysis methodology allows marketers to understand the factors which are able to influence the decision-making process by introducing different products within a similar group and introduce different attributes for consumers to choose. This method is favoured for its ability to indicate the perceived value of consumers towards a product based on the sequential importance of each presented attribute. Therefore, reviewing both methods will identify the effectivity of the applications which are conjoint analysis and the neuromarketing tools in expanding the grasp of the marketing knowledge.

Conjoint Analysis

The conjoint analysis method has been used in many different fields of study such as medicine (Ozdemir et al., 2021), market research (Grubor and Djokic, 2016), and general marketing by assigning value to each measured attribute known as partworth utility. The concept of this method is to provide a guide for marketers to efficiently assign resources towards the marketing mix of a product or brand, ensuring sufficient return on investment. Although this method has a rising popularity for its benefits, there are still limitations that deter marketers to employ this methodological research.

Benefits and Limitations of Conjoint Analysis

In Table 1, it is explained that the conjoint method is often preferred by researchers due to cost-effective and ease of distribution (Wang et al., 2016), invaluable insight (Grubor and Djokic, 2016; Boatwright and Stamps, 1988) and versatility (Ozdemir et al., 2021) of the method which assist most marketers to understand their consumer market and making informed decision in constructing their marketing strategies. The conjoint analysis is foremost a quantitative method that encourages active participation from respondents as it involves personalized perceptions and beliefs which reflects or differs from one another. Consequently, brands are able to benefit from the utilization of conjoint analysis as has been done by Apple whereby conjoint analysis method was used to provide valuation of a patent infringement case against Samsung amounting to more than two billion dollars; further investigation were conducted and found that it is plausible to utilize this method in the court of law, it is also deemed to be manipulative and irrational, both in the standpoint of the law as well as the business valuation of the issue (Chao and Donovan, 2021; Sidak and Skog, 2015). This highlights that although the method is helpful and used by most, limitations can be identified. Generally, the issue with this method lies in its method structure whereby increased complexity (Martini and Olmastrani, 2021) will both complicate the process as well as the engagement and comprehension of respondents towards the questionnaire (Bansak et al., 2018, 2021). Table 2 summarizes the general limitations of the method shared throughout the research community. This implies that

improvements can be made or integrations leading to the effective utilization of the conjoint analysis method.

Neuromarketing Techniques

The neuromarketing field is not only novel in the integration of neurosciences, psychology, and marketing, but also introduced new and complex neuro-linked tools that is able to identify and observe consumer internal and subtle responses towards marketing stimuli. Some of the most used tools includes the eye-tracking tool, electroencephalogram (EEG), fMRI and although the method is helpful and used by most, limitations can be identified.

Benefits and Limitations of Neuromarketing Techniques

Generally, the issue with this method lies in its method structure whereby increased complexity (Martini and Olmastrani, 2021) will both complicate the process as well as the engagement and comprehension of respondents towards the questionnaire (Bansak et al., 2018, 2021). Table 2 summarizes the general limitations of the method shared throughout the research P300. These tools are connected to respondents to capture brain waves and eye placements during the showcasing of advertisements to identify which stimuli or feature best stimulate the respondent's cognitive and effective receptors. This is made possible due to technological advancements especially in the neurology department which brought way to how people can understand and perceive visual data based on the sensory activities. Table 3 provides some of the benefits and contributions the neuromarketing technique introduced. Collectively, it is believed that neuromarketing techniques are fair and unbiased as it is free from the societal pressure (Li et al, 2018; as cited by Sung et al., 2019), detailed and isolated findings on hidden cues (Lee et al., 2017; as cited by Sung et al., 2019), and materializing internal buying decision processes of consumers (Pozharliev et al., 2015; as cited by Sung et al., 2019). These benefits were highlighted after each research which uses neuromarketing tools are completed. The scientific contribution of these techniques paved the way for a better understanding on consumer's perception and responses towards marketing stimuli.

However, neuromarketing is still considered young and growing societal pressures force researchers to improve and ensure the security of both the respondents and accumulated knowledge from malicious threats. The implication of neuromarketing to marketing research allowed higher and deeper volume and knowledge in understanding consumers' perception of marketing efforts. Research which intends to use neuromarketing techniques are often qualitative in nature as the process is lengthy and availability of collection is slow. Table 4 indicates the current issues of neuromarketing techniques which are the current standard volume of respondents in one study (Michael et al., 2019), superficial forecast as results does not take into account the entire buying process within the consumer's journey as considerations of personal constraints such as consumers with diabetes are attracted to high fructose foods which indicates higher cognitive stimulation by sugary foods but these consumers would not purchase the item under the pretense of a diabetic ailment (Booth and Freeman, 2014; Ruanguttamanun, 2014), as well as the cost and ethicality of the neuromarketing techniques (Ruanguttamanun, 2014; Sung et al., 2019). These limitations could be detrimental to the quality of future findings if left to its current state.

Dual Method

It is imperative that the benefits and limitations are highlighted to understand that similar evaluations for both methods will not provide a definite answer to which method is more

effective and efficient. It is clarified earlier that the concern was, if with the introduction of neuromarketing tools will push the conjoint analysis method to obsolescence. Therefore, it can be understood that each method brings their own input towards the understanding of the marketing field as such that the conjoint analysis provides conscious perception of consumers towards the product or brand (Wang et al., 2016), while neuromarketing tools such as fMRI and eye-tracking provides a definite indication of attention and cognitive stimulation towards the stimuli (Alsharif et al., 2020). Due to this, discrimination between the two methods will not suffice, contrarily, evaluating both methods' benefits and limitations expressed that unification of the two balances the limitation.

Recently, there are emergence of studies which employ a dual method whereby the conjoint analysis method compliments the findings from an fMRI or eye-tracking tool and vice versa; compensating the limitations of both methods. This indicates that the marketing field is slowly accommodating ambiguities which are common when connecting the influence of marketing stimuli in generating sales. Before the introduction of neuromarketing, traditional approaches were able to prove hypotheses regarding the use of stimuli to the perception of the consumers. Over the years, considerations of external influences and internal bias requires a more distinct and absolute way of reflecting actual responses to stimuli. Neurosciences provide the needs of these issue and subsequently introduced new subfields throughout multiple areas. The increase of neuro-technological tools contributes to vast knowledge gain which proves to be a beneficial investment for any marketer (Sung et al., 2019).

The pattern of outcomes that can be seen from these dual method researches are the differences of findings from the two methods. The conscious and subconscious evaluation of 20 different wines showed that there are stark discrepancies from the perceived value of the wine to the cognitive responses for each wine (Robertson et al., 2021). Another found that attention grabbing advertisements are not sufficient in promoting buying behaviors, instead it showed the opposite of what was perceived and the actual behavior towards purchasing the product (Gómez-Carmona et al., 2021). However, it can be argued that this phenomenon occurs due to the concept of the liquor industry whereby purchases are not made based of superficial identification. This could also be related to the instance whereby cognitive and affective responses of diabetic patients towards unhealthy foods are higher despite the actual buying decisions made by the segment. Therefore, implementation of the conjoint method contributes to the actual decision-making process undergone as it investigates consumers' needs and wants. The utilization of the dual method will be great investment for future marketers in understanding consumers in a holistic view to be able to meet their expectations.

Conclusion

New advancements have opened a path to a wider understanding of the behaviors as well as the attitudes of the consumers in their buying decisions. Utilizing the necessary tools such as the conjoint analysis method and neuromarketing tools has the potential to help marketers to adapt to the rapid changing markets as conjoint analysis is able to portray the conscious perceived value of consumers towards purchasing decisions (Wang et al., 2016) and neuromarketing tool assists in attracting and retaining interest of consumers towards the product or brand (Alsharif et al., 2020). The two methods inherently balance each limitation by filling missing links from the other such as the internal thought process of conjoint analysis to the known initial trigger of considerations through neuromarketing tools. New researches

and reviews on the dual method technique encapsulate the need and merit of employing the method to both marketers and the overall marketing field.

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