

## Exploring the Impact of Neuromarketing Exposure and Content on tourists' Emotional Response Leading to Destination Marketing Attention

استكشاف تأثير التعرض للتسويق العصبي ومحتواه على الاستجابة العاطفية للسائحين مؤدياً الي الانتباه لتسويق الوجهة

Dalia Fahmy Amara\*

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### Abstract

الملخص

In today's changing market, the world is no longer using same conventional marketing that depend on the rational consumers' behavior. Neuromarketing provides techniques contributing in understanding tourists' brains in terms of preference, memory, or emotions and supports the promotion of new developments for tourism destinations strategies. As tourists' fascination of different destinations is important in defining strategies. This study sheds light on the impact of neuromarketing exposure on tourists' emotional responses, which leads to marketing message attention. The study pursued to answer the research question: how neuromarketing exposure can be used to help in promoting future tourism demand. Consumers need more reassurance to take their travel decisions especially post COVID-19. This deductive quantitative research develops a research model that illustrates neuromarketing exposure outcomes. Data are collected through administrated questionnaires during July and August 2022 among travelers, making the study cross-sectional research. Path coefficient analysis of SEM is used to test the hypotheses. Results show that there is a positive significant relation between exposure to destination's neuromarketing and the feeling of pleasure; and there is a positive significant relation between exposure to destination's neuromarketing and the feeling of excitement. Consequently, pleasure and excitement as well as stimulation and motivation caused by neuromarketing significantly impacts consumers attention to the marketing message. Research implications illustrate constructive use of neuromarketing in the field of tourism, guiding scholar and practitioners to consider emotional and sensory responses of consumers toward marketing messages, applying neuroimaging technologies via creating images or pictures of activity inside the brain.

في سوق اليوم المتغيرة، لم يعد العالم يستخدم نفس سبل التسويق التقليدية التي تعتمد على سلوك المستهلكين العقلاني والتقليدي. يوفر التسويق العصبي تقنيات تساهم في فهم عقول السائحين من حيث التفضيل أو الذاكرة أو العواطف بالإضافة فهو يدعم الترويج للتطورات الجديدة لاستراتيجيات الوجهات. نظراً لأن إفتتان السائحين بالوجهات المختلفة، أصبح مهم في تحديد الاستراتيجيات. استكشفت هذه الدراسة كيف يمكن للمنظمات السياحية استخدام مفهوم التسويق العصبي في الترويج للمنتجات السياحية. فقد سلطت الدراسة الضوء على تأثير التعرض للتسويق العصبي على الاستجابات العاطفية للسائح، مما يؤدي إلى اهتمام بالرسائل التسويقية. تابعت الدراسة للإجابة على سؤال البحث: كيف يمكن استخدام التسويق العصبي للمساعدة في تعزيز الطلب السياحي في المستقبل. يحتاج المستهلكون إلى مزيد من الطمأنينة لاتخاذ قرارات السفر الخاصة بهم خاصة بعد جائحة كورونا. يطور هذا البحث الكمي الاستنتاجي نموذجاً بحثياً يوضح نتائج التعرض للتسويق العصبي. يتم جمع البيانات من خلال الاستبيانات المدارة خلال شهري يوليو وأغسطس ٢٠٢٢ بين الرحلات، مما يجعل الدراسة بحثاً مقطوعياً. يستخدم تحليل معامل المسار ل SEM لاختبار الفرضيات. تظهر النتائج أن هناك علاقة إيجابية ذات دلالة إحصائية بين التعرض للتسويق العصبي للوجهة والشعور بالمتعة. وهناك علاقة إيجابية ذات دلالة إحصائية بين التعرض للتسويق العصبي للوجهة والشعور بالإثارة. وبالتالي، فإن المتعة والإثارة بالإضافة الي عوامل اخري مثل التحفيز والناجمة عن التسويق العصبي تؤثر بشكل كبير على انتباه المستهلكين إلى الرسالة التسويقية. توضح الدراسة الاستخدام البناء للتسويق العصبي في مجال السياحة، والتي أهمية توجيه العلماء والممارسين للنظر في الاستجابات العاطفية والحسية للمستهلكين تجاه الرسائل التسويقية، وتطبيق تقنيات التصوير العصبي من خلال إنشاء صور للنشاط داخل العقل.

**Keywords:** Neuromarketing; Tourism Product; Destination Marketing; Emotional response; Attention.

**الكلمات الدالة:** التسويق العصبي؛ المنتج السياحي؛ تسويق الوجهة؛ الاستجابة العاطفية؛ الانتباه.

\* Assistant Professor, Arab Academy for Science and technology and maritime transport.

## 1. Introduction

Before covid-19, the tourism industry was accounted as one of the most significant sectors in the world economy, making up 10-percent of global GDP and more than 320 million jobs worldwide (Behsudi, 2020). Once, covid-19 hit the world 2020, this sector temporarily discontinued its commercial operations (Smykova et al., 2020). UN News (2020) indicated that: “96% of all worldwide destinations have put into place travel restrictions in response to the pandemic. Some 90 destinations have completely/ partially closed their borders to tourists, while another 44 are closed to certain tourists depending on their country of origin” (p.1). Currently, the tourism is picking up, but much marketing effort is needed to build consumer confidence in traveling again; much effort is needed to promote domestic tourism as well as to support safe return of international tourism (Smykova et al., 2020) According to OECD (2020), covid-19 is an opportunity for the tourism industry to rethink tourism for the future. Tourism is at a crossroads and the measures put in place today will shape the tourism of tomorrow (Behsudi, 2020).

Research have declared that more academic studies are needed so to provide insights that are lacked to scholars and practitioners, guiding consideration regarding the longer-term implications of the crisis (Gaafar and Al-Romeedy, 2022), while capitalizing on promoting the structural transformation needed to build a stronger, more sustainable and resilient tourism economy (OECD, 2020). In practice, the tourism industry and its related businesses are always looking for innovative and better methods to distinguish, identify, comprehend, and appreciate consumers so to be able to generate a desired emotional response toward their touristic products and services, leading to generation of revenues (Mishra and Shukla, 2020). Currently, scholars have claimed that neuromarketing, a marketing method that employs neuroscience in the marketing stimuli, has considerable advantage over more conventional methods of marketing (Zahopoulos, 2020). Thus, Smykova et al. (2020) call for more studies on neuromarketing so to allow marketers to develop their marketing tactics that are influential on tourists’ behavioral aspects and priorities. Therefore, more research is needed for extensive insights to emerge about neuromarketing and its importance in tourism marketing, filling in the academic gap (Mishra and Shukla, 2020). The emerged insights can act as a guideline on how to improve tourism demand.

Many researches have been conducted when it comes to the effect of neuromarketing (Zahopoulos, 2020). Nevertheless, despite the practical benefits of neuromarketing that research had clarified, it has infrequently been employed in the tourism field (Touchette and Lee, 2017); research on the use of neuromarketing in tourism is less developed and requires more analysis (Gaafar and Al-Romeedy, 2022). Scholars hinted that neuromarketing is a wholesome opportunity for marketing destinations and their tourism components to tourists, as massive competition exists among destinations (Smykova et al., 2020). Thus, this study seeks to fill in this academic gap by contributing in empirical evidence about exploring neuromarketing application and what content should tourism marketers adopt in order to understand tourists’ preferences and to influence their mindset attention.

## 2. Literature Review

Research clarifies that marketing is a significant support for many businesses in various fields; businesses should use different marketing strategies to increase profits (Gaafar and Al-Romeedy, 2022). Marketing research has been oriented towards four components of consumers as physical body, mind, heart and spirit with the help of practices of neuromarketing. It is an effective tool for marketers in new era of markets research for our today’s intelligent buyer. Neuromarketing, which makes use of brain research in a managerial context, has gained increasing popularity in the academic literature as well as the practical world. Neuromarketing, that caught fancy of imagination of advertisers in early 2002, aptly cuts down the path and process probing minds and makes it

considerably simpler for the advertisers (Kumar, H., and Singh, P., 2015). Various companies worldwide had already adopted the neuromarketing as a tool of market research. Such as; BBC, Coca Cola, Ford, Heinz, Intel and L'Oréal, P&G, Hyundai, Microsoft, Yahoo, EBay (Kumar, H., and Singh, P., 2015). As advanced technology and digitalization emerges and expands throughout business operations and consumer behaviors, marketers no longer, apply just the conventional marketing strategies to get an advantage over competitors (Zahopoulos, 2020). Meanwhile, research highlights that consumers hold hedonic and emotional values when it comes to buying behavior; their purchases are based on the subject experience of pleasure, enjoyment, playfulness, etc. (Kotler et al., 2022). Therefore, it is significant that marketers focus on digital marketing strategies that focuses on consumer behavior seeking sensory hedonistic benefits provided by interaction with goods or services (Smykova et al., 2020). Current study has hinted that neuromarketing is an impactful marketing tool these days to attract and influence consumer behavior, especially in the tourism industry (Gaafar and Al-Romeedy, 2022). If businesses in the tourism industry apply neuromarketing (creating content that attracts emotional and sensory responses of consumers toward marketing messages), it can impact significantly the destination image, and different tourism products, picking-up tourism revenue (Mansor and Isa, 2020). Thus, the following section includes literature review on the concept of neuromarketing, its benefits, its application, and its usage in the tourism industry.

Marketing research show, that communication should be continuous to consumers, seeking to build long-term relationships during a crisis (Kotler and Armstrong, 2018). As a result, destination marketers start to work on neuromarketing techniques to prepare for recovery, communicating various messages that give optimism and assure people safety. Marketing a destination during a time of turmoil should emphasize humanity, constructive spirit and community of places – “content that will spread strength and positivity (Fortune, 2020). When it comes to image building and increase in tourism demand, tourist’s destinations are requesting to be strategically managed in terms of having a strong digital marketing presence to achieve great search results, based on a positive online reputation. “Any information or image about a country, region or city available online can influence the perception of its Place Brand in the real world” (Fortune, 2020). According to the Pew Research Center (2018), 91% of people trust what they see and read in search engine results. Thus, using marketing and social media strategies during COVID-19 pandemic is important (Gates, 2020).

## **2.1 Destination Marketing**

Destination marketing has become vital practice after covid-19 to improve the tourism industry; with tourism marketing, it improves the reputation and increases interest of the promoted location and travel experiences (Smykova et al., 2020). Previous research clarify that tourism destinations are always looking for innovative and better methods to know the customer and generate a desired emotional response toward the product /service (Zahopoulos, 2020), to increase their market share. It has been proven that a large proportion of consumers make their travel decision on an emotional basis (Nadanyiova, 2017). Destination image which is, “the sum of beliefs, ideas, and impressions that a person has of a destination” (Crompton, 1979, p.18), plays a central role in the potential tourist decision-making process; it is a significant construct in destination marketing research (Zhang and Niyomsilp, 2020). UNWTO defined a tourism product as “a combination of tangible and intangible elements, such as natural, cultural and man-made resources, attractions, facilities, services and activities around a specific center of interest which represents the core of the destination marketing mix and creates an overall visitor experience including emotional aspects for the potential customers. According to Gaafar and Al-Romeedy (2022), marketing that promotes destination image in a constructive manner can lead to desirable tourist behavior outcomes, such as visit preferences, intentions, and recommendations. Neuromarketing allows destination marketers to obtain valuable knowledge of the tourists’ subconscious mind, with which they will be aware of tourists’ behavior

and better understand their preferences, this, in turn, may properly support destinations to modify their marketing strategies (Isa & Masor, 2020).

Existing research explain that potential tourists develop destination images through cognitive and emotional interpretations (Zhang and Niyomsilp, 2020). Zhang et al. (2020) states that; “cognitive component of destination image is based on the tourist’s perceptions, beliefs and knowledge of destination attributes such as attractions and natural resources. The affective image component refers to the emotions elicited by the destination, more specifically the emotional responses toward the various features of a place” (p.215). Therefore, scholars and practitioners rationalize that destination marketing should focus on these two elements when promoting the specific location and its benefits so to be effective on tourists; this will encourage more tourism and boost the area's local economy (Seyfi et al., 2021). Nevertheless, current study clarified that emotion is a more significant drive to tourists behavior; and neuromarketing is the trend in marketing strategy formulation as it allows marketer to create marketing strategies that effectively triggers the right emotional reaction, leading to individuals developing travel desires (Gaafar and Al-Romeedy, 2022). Also, research by Li et al. (2014) states that “unconscious emotional responses that can provide unbiased portrayal of individual's initial emotional reactions when exposed to a stimulus have been largely ignored,” especially in the tourism literature (Gaafar and Al-Romeedy, 2022).

## **2.2 The neuromarketing concept**

By the end of the nineties, the concept of neuromarketing emerged by Smits in 2002 (Alsharif et al., 2021). Neuromarketing is commercial marketing communication generated after studying consumers' sensorimotor, cognitive, and affective responses to marketing stimuli (Lee et al., 2007). Neuromarketing is the linkage between neuroscience and cognitive science to marketing (Barbasso et al., 2018). It is defined as the study of the customers’ brain's processes to figure out the customers’ behavior and to develop marketing strategies (Alsharif et al., 2021). The brain is considered as a “black box” that contains customers’ preferences and emotions, and neuroscience is the “window” that can better describe the purchasing decision process, which takes place in the subconscious zone, and identify customer’s motivations (Barbasso et al., 2018; Nyoni & Bonga, 2017). The core of neuromarketing is to know better and understand the consumer's preferable choices, motivations, way of their thinking, or suggestions. It is a tool to identify their responses to specific stimuli (Mishra & Shukla, 2020; Singh, 2021).

The conventional market research methods are incapable to learn about the subconscious zone of the tourists' mind. They can only explore the conscious part of the tourist purchasing-decision process (Spanjaard et al., 2014). Consequently, it causes a misprediction of the tourist behavior, as well as a mismatch between the market research results and the real purchasing behavior shown by the tourist (Agarwal & Dutta, 2015). Many companies all over the world have started to provide neuromarketing, to identify which stimuli affect the customers’ preferences (Nilashi et al., 2020). Neuromarketing assesses responses of the tourist's brain toward marketing messages applying neuroimaging technologies via creating images or pictures of activity inside the brain (Mansor & Isa, 2020). It uses technological devices to collect real-time neural data (e.g.; blood pressure, brain activity, heart rate, facial expression, eye movement, and electro dermal activity) (Fortunato et al., 2014). Neuromarketing technologies provide neuroscience and cognitive science research to aid marketing strategies to be created in a way that allows customers to react at non-conscious level (Mishra and Shukla, 2020). According to Dooley (2022): “The potential benefits to marketers include more efficient and effective marketing campaigns and strategies, fewer product and campaign failures, and ultimately the manipulation of the real needs and wants of people to suit the needs and wants of marketing interests” (p.1).

### 2.3 Neuromarketing Techniques

Neuromarketing is a marketing tool that provides theorization of emotional aspects of consumer behavior, using the insights in the marketing practices (Morin, 2011). Morin (2011) claim that there are several technologies that are used to study consumer behaviors in neuromarketing. They include devices that examines physiological functions (heartbeat, blood pressure, etc.) and reflexes (pupil dilatation, face expression, etc.); these technologies reveal information about consumers' impressions, reactions and emotional responses when exposed to the marketing stimuli (whether positive or negative). With these tools, the marketing researcher is able to collect information on how consumers would respond to a product or an advertising of a product (Zahopoulos, 2020).

Destination marketers can use among the following techniques such as Eye-tracking (ET), facial Electromyography (f EMG), and Electro encephalography (EEG) machine that records brain activity. Small sensors are attached to the scalp to pick up electrical signals produced by the brain, Galvanic skin response(GSR) and electro dermal response measures (are machines that records and measures skin conductance, resistance, or potential by use of sensors placed on the fingers of one hand. It monitors changes in the internal emotionality of an individual) and other neuro- technologies. and Face emotion analysis(FEA) to explore deeply the tourists' subconscious minds to well understand their needs, preferences, emotions, and behavioral reactions. By obtaining this data, tourism marketers can create more desirable tourist products, display better promotions and advertising, and design more effective marketing strategies, which lead to an increase in the volume of sales and bookings.

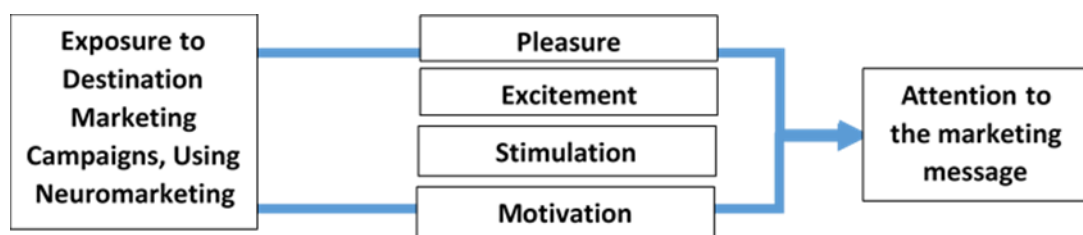
**Eye Tracking:** Eye tracking technology is used to track the eye positioning as its focus shifts along the surface of a visual trigger. Eye trackers are used in research on product design and software design in the field of neuromarketing. The most popular method of measuring eye movement is using a camera, which tracks the movements of the pupil. **Facial Coding:** Neuromarketing has converted the art of interpreting facial expressions into a science. Just as neuromarketing techniques can be used to measure eye movements and brain activity, they can also be used to "read faces" with unprecedented precision. The way it works is simple; when we smile, display anger or make any other kind of facial expressions, muscles move to do it. Using sensors, these minute muscle movements can be accurately measured to detect expressions and emotions that people are not even aware they are feeling. **Empathic design:** Another method where human beings are being analyzed without making use of any devices is called 'empathic design'. The meaning of the word 'empathic' can be also referred to as sensitive. Within this method, observation is made in the consumer's own environment so that it can take place in the normal course of daily routine (Postman, 2012). **Sensory Marketing:** In addition to the techniques mentioned above, neuromarketing has more practical and functional applications, like sensory marketing. There are several forms of sensory marketing, such as through touch, sound, or smell. All of them, however, are based on influencing the consumer to think of a certain product or service in the presence of sensory stimulations.



**Figure 1:** Eye tracking device

## 2.4 The Impact of Neuromarketing on Consumer Behavior

Zahopoulos (2020) explains that the concept of neuromarketing is to examine various human reactions to stimuli in the form of feelings and emotions. This category of research is significant to marketers as it allows the creation of effective marketing products and campaigns that has the power to develop positive “mental processes such as emotions, mood, attitude” (Bagozzi et al., 1999, p.184). Marketing strategies and tactics that used on neuromarketing foresaw consumers’ reactions and understood what kind of emotions were to be triggered; they would then adjust the strategies so to lead to a positive impact on consumers (Morin, 2011; Alsharif et al., 2021). Neuromarketing seeks to employ consumers’ emotions; and according to Solomon (2020), Zahopoulos (2020) explains that the concept of neuromarketing is to examine various human reactions to stimuli in the form of feelings and emotions. This category of research is significant to marketers as it allows the creation of effective marketing products and campaigns that has the power to develop positive “mental processes such as emotions, mood, attitude” (Bagozzi et al., 1999, p.184). Marketing strategies and tactics that used on neuromarketing foresaw consumers’ reactions and understood what kind of emotions were to be triggered; they would then adjust the strategies so to lead to a positive impact on consumers (Morin, 2011; Alsharif et al., 2021). Neuromarketing seeks to employ consumers’ emotions; and according to Solomon (2020), emotions are a significant trigger to behavior that is rooted in the consumers’ conscience. Emotion is “a mental state of readiness that arises from appraisals of events or one’s own thoughts... it is essentially bodily excitement plus a cognitive label one provides to diagnose his/her felt excitement” (Bagozzi et al., 1999, p.192). Earlier researchers explained that when studying emotions and how it influences consumers’ behavior, excitement and pleasure should be of focus as they represent the level of bodily and mental ratification; and can be measured through neuromarketing tools (James, 1950; Bagozzi, 1999; Zahopoulos, 2020). Bagozzi (1999) explain that neuromarketing that triggers excitement and pleasure prove to have the ability to allow the marketed message to catch consumers mind, and consumers’ openness to receive inputs (level of attention and memorization to the marketing message). Excitement is a state of heightened physiological activity; “a bodily change following directly the perception of an existing fact” (James, 1950 pp. 449). Pleasure refers to experience that feels wholesome, that involves the enjoyment of something. The reward system of consumers’ brain provokes subjective feelings of positive emotions, bringing about addiction (Touhami et al., 2010). According to these research findings, this study developed a proposed conceptual model, illustrating the outcome of the exposure to destination marketing campaigns using neuromarketing (Figure 2).



**Figure 2:** The Proposed Research Model

Based on the proposed research model, five hypotheses are formulated to be tested in this study.

(H1) there is a positive significant relation between exposure to destination’s neuromarketing and the feeling of pleasure.

(H2) There is a positive significant relation between exposure to destination’s neuromarketing and the feeling of excitement.



(H3) There is a positive significant relation between pleasure caused by neuromarketing and consumers attention to the marketing message.

(H4) There is a positive significant relation between excitement caused by neuromarketing and consumers attention to the marketing message.

((H5) There is a positive significant relation between motivation caused by neuromarketing and consumers attention to the marketing message.

### 3. Research Methodology

This study is a quantitative research design using survey questionnaire to collect data from travelers. The purpose of this study is descriptive as the aim of this study is to know the extent of impact neuromarketing has on creating pleasure and excitement among individuals, leading to their attention to the marketing message. The research holds a positivism philosophy as the approach to the study relies specifically on statistics to create empirical scientific evidence. The period of this research, is two months, July and August 2022, making this study cross-sectional research. Based on the research conducted by Kayoko et al. (2021), they performed a neuromarketing experiment on emotional responses to Japan's destination marketing stimuli by using electroencephalography (EEG). They found that emotional responses to the destination stimuli, (photos and videos that they showed to the participants) were significant; brain activities responded optimistically to the stimuli, causing stimulation. Thus, this study used the same ads as they are already tested previously, to test the concept of destination neuromarketing reactions to the viewers. The respondents are required to watch these ads before being the questionnaire. Table 1 illustrates the images used in this study.

**Table 1:** The Neuromarketing Destination Stimuli



Source: Kayoko et al. (2021)

Egypt is the region of choice as the government seeks to create substantial marketing campaigns to promote and attract visitors to the country; according to reports, the government believes that with developing the right campaigns, the situation will return to normal and tourists will come back to Egypt as they were before and much better (International Monetary Fund, 2021). The sampling and questionnaire distribution were conducted at Egypt international airports (Cairo, Sharm el sheik and Hurghada).

Travelers are the unit of analysis, as these individuals have overcome their fear of covid-19 and are actually traveling during post covid-19 era. Thus, the research sought to see their emotional reactions to the neuromarketing campaign. The researcher uses Krejci and Morgan sample size table to identify the needed sample, making the researcher to try to target 384 samples - to collect and analyze the data to develop empirical evidence. A non-probability sampling was undertaken to select the participants in this study. The researchers relied on their own judgment when choosing members of the population to participate in their study, ensuring study eligibility criteria.

The questionnaire in this study consisted of three sections. Section 1 was an introduction to the research study. It contained a paragraph explaining the research topic and confirming the ethical procedures that are taken by the researcher to conduct the study. Section 2 contains several five-point Likert type scales (one representing strongly disagree and five representing strongly agree) that are used to measure each variable. These scales are taken from past studies. Table 3 illustrates the source of the scale and the number of items that each scale holds. The final section contains several nominal questions that measures the respondents' socio-demographic traits. The questionnaire is in the English language as it is the universal language known in many countries. Before the actual distribution of the questionnaire, a pilot test of 55 questionnaires were conducted to check the reliability and the validity of the scales. Once the data collection is finalized, statistical analyses are applied to achieve the research objectives.

#### 4. Research Results

The researcher collected 400 completed questionnaires to be analyzed. The research used **IBM SPSS 19** and **IBM SPSS Amos 16** to conduct various statistical analysis and test hypotheses through structural equation modeling (SEM) Path coefficient analysis. The respondents in this study came from different sociodemographic traits as shown in table 2.

**Table 2:** Socio-Demographics Traits of the Respondents

Item	Category	Frequency	%	Item	Category	Frequency	%
<b>Age</b>	Below 18	10	2.500	<b>Education</b>	Elementary School	92	26.000
	18 to 25 years old	361	90.300		High School	94	25.500
	26 to 35 years old	104	26.000		College Degree	101	54.000
	36 to 45	13	3.300		Postgraduate	97	53.600
	46 to 55	16	4.000		Other	16	4.500
	Above 55	63	15.800				
<b>Gender</b>	Female	299	74.750	<b>Relationship status</b>	Single	198	49.500
	Male	101	25.250		In a relation	202	50.500
<b>Average household Income</b>	2,000 – less than	85	21.300	<b>Occupation</b>	White Collar	168	42.000
	5,000 – less than	129	32.000		Blue Collar	165	41.250
	Over 10,000	186	46.500		Other	67	16/750

This study conducted the reliability analysis to assess the properties of measurement scales and the items that compose the scales; calculates and provides information about the relationships between individual items in the scale, checking the internal consistency between items. Cronbach's Alpha is used. Based on this analysis, in order for the scale to be considered reliable, the internal consistency of each construct is quite good; the alpha should be above 0.65. Thus, according to this study's analysis (shown in table 2) all of the constructs employed held good reliability analysis, as they were based on well-established instruments from past studies.

The next analysis that is conducted is the validity, which seeks to show how accurately a scale measures what it is intended to measure; high validity reflect that the scale yields result that



correspond to real properties, characteristics, and variations in the social world. The average variance extracted (AVE) is used to assess constructs validity, which represents the amount of variation in the item explained by the construct compared to the amount assigned to measurement error. Accordingly, the validity analysis in this study (shown in table 3) shows that the factor loading for all items is greater than 0.5. The composite reliability values of all constructs are above the necessary threshold of .70. AVE values of all constructs exceeded the suggested value (0.50). According to Fornell and Larcker (1981), these results indicate good validity.

**Table 3:** Scale Descriptive Statistics, Reliability and Validity analysis

Variable	Conceptual Definition and Scale Source	Items in the scale	Factor Loading	Standard deviation	Cronbach Alpha	Composite Reliability	AVE
Exposure	The scale assess one's involvement in an advertisement.  <b>Source:</b> Kim, 2017	The exposed ad made me	0.814	0.9558	0.8773	0.809	0.772
		I was moved from within by the exposed ad	0.885				
		I was affected enthusiastically by the exposed ad	0.888				
		I connected with the exposed ad.	0.902				
		This ad hooked you with	0.873				
Pleasure	The scale assesses one's affective reaction to an ad with an emphasis on its degree of pleasantness.  <b>Source:</b> Raghunathan	The ad made me feel happy	0.797	0.8068	0.8703	0.889	0.766
		The ad made me feel satisfied	0.834				
		The ad made me feel pleased	0.863				
		The ad made me feel content	0.901				
		The ad made me feel hopeful	0.902				
		The ad made me feel relaxed	0.888				
		The ad made me feel joyful	0.897				
Excitement	The scale assesses one's excitement-related emotional reaction to an ad  <b>Source:</b> Morrin and Ratneshwar, 2003	The ad made me stimulated	0.900	0.6115	0.8610	0.881	0.798
		The ad made me feel excited	0.879				
		The ad made me feel frenzied	0.899				
		The ad made me feel jittery	0.834				
		The ad made me wide-awake	0.869				
		The ad made me feel aroused	0.888				
	The scale assesses the extent to which a	How much attention did you pay to the ad	0,901			0.823	0.788
Attention to the Ad	Was motivated to watch the ad.  <b>Source:</b> Moore et al., 2005	How much did you concentrate on the ad	0.876	0.6971	0.8320		
		How involved were you with the ad	0.899				
		How much thought did you put into evaluating the ad	0.870				
		How much did you notice form the ad	0.839				

In order to test the hypotheses, structure equation model is used, specifically path analysis. However, before the testing of the model, the research had to confirm the model fit. Thus, confirmatory factor analysis (CFA) is used to illustrate a confident expectation regarding the design of the data obtained. The model fit of the confirmatory factor analysis are computed. Table 4 illustrates the results; According to the analysis, the results indicate a good fit indices and threshold for the measurement model as specified by Fornell and Larcker (1981). The analysis shows that the data depicts the suggested ranges of some model fit indicators:  $X^2/df$  equals 2.234, GFI equal 0.953, NFI equal 0.984, CFI equal 0.934, TLI equal 0.926, TLI equal .926 and RMSEA= .006. All these values fell within the recommended ranges according to past studies (Hair et al., 2016).

**Table 4: Fit Indices and Thresholds for Measurement Model**

Measure	Results	Threshold	Measure	Results	Threshold
Chi-square/df	2.234	< 3 good	TLI	0.926	> 0.85
P-value	0.000	> 0.05	CFI	0.934	> 0.80
GFI	0.953	> 0.80	RMSEA	0.006	< 0.10
NFI	0.984	> 0.80			

Path analysis is applied next to test the research hypotheses. Table 5 displays the results of the path analysis regarding the impact neuromarketing exposure on tourist pleasure and excitement, which affect the attention of the marketing message. Based on the analysis, the hypotheses are supported, as the value of the standard estimate is significant.

**Table 5: SEM Path Analysis**

Hypotheses			Estimate	P	Hypothesis supported
1. Neuromarketing exposure	→	Pleasure	0.252	***	Supported
2. Neuromarketing exposure	→	Excitement	0.277	***	Supported
3. Pleasure	→	Attention	0.033	***	Supported
4. Excitement	→	Attention	0.042	***	Supported

*Note: \*\*\* reflects Hypothesis is significant*

## 5. Research Discussion and Conclusion

Neuromarketing is considered an innovative method and opportunity for developing and improving the tourism industry during the post-pandemic (Gaafar and Al-Romeedy, 2022). Existing studies claim that destination marketers should apply modern marketing methods and techniques in their marketing strategies to increase their market share and competitiveness (Seyfi et al., 2021). Neuromarketing excels over traditional marketing in examining and pinpointing the significant marketing elements that would influence tourists' purchasing decisions. With neuromarketing, in the context of tourism, it is able to enhance communication campaigns that builds the level of tourists' confidence in the presented tourist products, increasing traveling demand and the frequency of revisits (Smykova et al., 2020). Accordingly, this quantitative study sheds light that neuromarketing exposure affects individuals' emotional reactions (pleasure and excitement), which will make them pay attention to the marketing message.

Based on the path analysis of structure equation modeling, this study illustrates that there is a positive significant relation between exposure to destination's neuromarketing and the feeling of pleasure; and there is a positive significant relation between exposure to destination's neuromarketing and the feeling of excitement. Correspondingly, pleasure and excitement caused by neuromarketing significantly impacts consumers attention to the marketing message. These outcomes lead to theoretical and managerial implications. These outcomes imply that when individuals are exposed to neuromarketing, it emphasizes emotional information, making the marketing message effective in gaining individuals' attention; when consumers pay attention to the marketing message, the insights communicated is deemed necessary in tourist decision-making process. Neuromarketing creates better promotions and advertising, building the destination image and experiences among consumers. Past researchers support the insights that emerged in this study. For example, Singh (2021) research states that the use of neuromarketing trigger the needed responses to specific marketing campaigns. Nilashi et al. (2020) states that neuromarketing assesses emotional and sensory responses of consumers toward marketing messages, applying neuroimaging technologies via creating images or pictures of activity inside the brain. Isa and Masor (2020) research clarifies that neuromarketing allows destination marketers to obtain valuable knowledge of the tourists'

subconscious mind, with which they will be aware of tourists' behavior and better understand their preferences; so, marketers are able to modify their marketing strategies to be successful in consumers' consideration. Accordingly, it is recommended that tourism marketers may use neuroscience technologies, as it contributes to a better and more accurate understanding of the tourist's emotional and cognitive processes to consumer behaviors.

## 6. Research Limitations:

Several limitations have appeared while conducting this study, in which future studies can approve upon. For example, this study focused on specific neuromarketing ads made to promote Japan. Future researches are suggested to test other neuromarketing communication and check its applicability in triggering emotions and consumers' attentions. This study sampled people that Several limitations have appeared while conducting this study, in which future studies can approve upon. For example, this study focused on specific neuromarketing ads made to promote Japan. Future researches are suggested to test other neuromarketing communication and check its applicability in triggering emotions and consumers' attentions. This study sampled people that have already decided to travel. Future researches are suggested to test this study on individuals that have not yet made the decisions to travel after post covid-19 pandemic. As for the sociodemographic analysis, referring to respondents' nationalities in the questionnaires this may result in many further indications that may serve the research objectives .This study is quantitative research. In order to explore the concept of neuromarketing effect in the future, further studies are suggested to conduct research through a laboratory experiment and survey research. The lab experiment can further aid in understanding whether there is a correlation among biometrical measurements and declared-in-questionnaires responses.

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