


## Chapter 16

# Global Regionalization of Consumer Neuroscience Behavioral Qualities on Insights From Google Trends

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### ABSTRACT

*This chapter uses Google Trends search query volume data to perception-based regionalize consumer neuroscience behavioural indicators. To determine consumer neuroscience behaviour, the study examined Scopus research from 2010 to 2023. The most common keywords were then analysed. The study found five behavioural variables: emotion, attention, memory, perception, and decision-making. Between October 2022 and 2023, global Google Trends data for five consumer neuroscience phrases was collected. The data was analysed using time series and geographic units. The analysis found correlations between each indicator using time series units. K-means clustering was used to propose global regionalization using Google Trends. The ideal four clusters were found using the elbow approach. Through a thorough analysis of terms from derived clusters 1 to 4, the study made significant discoveries and implications that would improve consumer neuroscience's behavioural knowledge. Finally, perception-based global*

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*regionalization was introduced. In conclusion, this novel method of classifying global regions using Google Trends data and people's perceptions of behavioural topics like emotion, attention, perception, memory, and decision-making provides valuable insights for consumer neuroscience research. Analyzing the importance of specific groups and indicators within each cluster improves research in this field.*

## **INTRODUCTION**

Consumer neuroscience (CN) has experienced remarkable growth in recent years, accompanied by a substantial increase in studies utilizing neuroscience methods in marketing academic journals (de Oliveira & Giraldi, 2017; Lee et al., 2018). However, during its early stages, there was considerable debate among researchers regarding the benefits of this interdisciplinary field for its parent disciplines, namely consumer psychology and neuroscience (Rawnaque et al., 2020). Furthermore, questions arose about how the research findings from neuromarketing would be effectively reintegrated into these established disciplines. The application of consumer neuroscience adds a scientific dimension to the marketing field by demonstrating its potential to predict consumer behavior more effectively than traditional marketing measurement methods (Lee et al., 2018; Krampe et al., 2018; Motoki et al., 2020). The combination of neuroscientific methods and traditional measurement methods can predict consumer behavior more accurately (Motoki et al., 2020). This study focused on behavioral attributes widely studied in consumer neuroscience to understand the global and regional interest in the subject.

Changes can influence people's reactions and perceptions of physical events, such as modifications in online search behaviors (Lang, 2014). Recent studies have highlighted a connection between a particular real-world phenomenon and the volume of internet searches, underscoring the significance of comprehending this relationship (Dietzel, 2016; Jurić, 2021). Google Trends (GT) examines public interest and assesses comprehension (Jun et al., 2018; Gizzi et al., 2020; Durmusoglu, 2017). Google Trends was a publicly accessible software that allowed users to analyze data from web browsing, offering valuable insights into the information search behavior of users (Nutti et al., 2014).

By collecting data based on public search interest in CN-related keywords through GT, we can harness its potential to enhance predictions, improve assessments, and proactively address ongoing interests in consumer-related studies and invaluable data, we can take future actions and look at how the public perceives CN-related subjects globally. The regions were categorized using the k-means clustering approach, and the link between terms was determined by correlation analysis of the time series data collected over a certain period. This study categorizes global interest into four clusters (1 to 4) using global GT data about CN. The study enhances the existing body of literature by offering valuable insights into the worldwide understanding of consumer neuroscience's behavioral characteristics and proposing potential avenues for future research.

## **METHOD**

The analysis of consumer neuroscience literature within marketing disciplines involved the utilization of bibliometric tool keyword analysis to identify widely studied attributes of consumer neuroscience. This study intended to identify only behavioral attributes associated with consumer neuroscience. The initial

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