Visitor segmentation of heritage tourist attraction in Indonesia using google trend analysis

I Gusti Bagus Rai Utama[1*)], Ni Putu Dyah Krismawintari[1], I Wayan Ruspendi Junaedi[1], PA Andiena Nindya Putri[2], I Made Sumartana[3]

[1]Universitas Dhyana Pura, Bali, Indonesia
[2]ITB Stikom Bali, Bali, Indonesia
[3]Universitas Ngurah Rai, Bali, Indonesia

Article Info

ABSTRACT

This study aims to determine the popularity of heritage tourist attractions, namely Borobudur, Prambanan, Besakih, and Tanah Lot using the Google Trends tool based on a historical database of the last five years. In addition to popularity, this study also determines the market segmentation of each tourist attraction based on the geographical origin of the tourists. The information and findings are expected to be used as consideration for the destination marketing strategy, and also to determine the promotion on the geographical origin of tourists. This analysis using Google trends yields several conclusions, in the beginning of 2020 to the end of 2021, almost all heritage tourist attractions have decreased in popularity, this is most likely due to a travel ban for tourists during the Covid-19 pandemic. Borobudur Template Heritage Tourism Attraction is the most popular heritage tourist attraction since the last five years, then Prambanan Temple, Tanah Lot, and Besakih. The segmentation of heritage tourism attractions in Indonesia is domestic tourists, and International tourists by Singaporean, Malaysian, Thai, Philippines, South African, Australian, Indian, Taiwanese, Italian, and French. The government should immediately open up opportunities for opening tourism, and tourist attraction managers will intensify the use of information technology, especially digital marketing to display the image of heritage destinations that are open space destinations. is a safe tourist attraction to visit.

Corresponding Author:

I Gusti Bagus Rai Utama,
Universitas Dhyana Pura
Email: raiutama@undhirabali.ac.id

Introduction

Currently, online reviews are important to get an idea of the popularity of a tourist attraction. Online reviews are a form of electronic word of mouth consisting of people who have purchased products or services, commented and posted who have previously used them (Al Mana & Mirza, 2013). This study uses the Google Trends Tool to determine the popularity of four heritages tourist attractions in Indonesia (Carneiro & Mylonakis, 2009); (Nafah & Purnaningrum, 2021). Four heritages tourist attractions are Borobudur Temple, Prambanan Temple, Besakih Great Temple, and Tanah Lot (Cuthbert & Suartika, 2017). Many people think that research must be done with a complicated process, even though with advances in information technology, especially the increasing number of smartphone owners connected to the internet, research can be done easily (Siau et al., 2001).

Comparing the popularity of cultural and heritage tourist's attractions such as Borobudur Temple, Prambanan Temple, Besakih Great Temple, and Tanah Lot, it is also easier to do using the google trend tool. The use of Google Trends is increasingly reliable because Google reads data using big data technology that comes from the history and track record of tourist visits who have visited the location. On the other hand, Google Trends can also measure the trend of enthusiasts who are more likely to visit the tourist destinations they are searching for from internet search engines (Katal et al., 2013). With the emergence of information and communication technology in this century, tourism is also starting to be pushed into online channels. Suppliers and intermediaries are now struggling in fierce competition to sell their services through e-commerce. As long as consumers are connected to the internet network, every consumer can access and get information about hotels or resorts wherever and whenever they want. As well as the ease of accessing all available information, be it through social media Facebook, Twitter, Instagram, and TripAdvisor (Vilarinho-Pereira et al., 2021).

Figure 1. Borobudur Temple, Source: Image Goggle, 2022

Figure 2. Prambanan Temple, Source: Image Goggle, 2022

Figure 3. Besakih Great Temple, Source: Image Goggle, 2022

Figure 4. Tanah Lot, Source: Image Goggle, 2022

This study aims to determine the popularity of heritage tourist attractions, namely Borobudur, Prambanan, Besakih, and Tanah Lot using the Google Trends tool based on a historical database of the last five years. In addition to popularity, this study also determines the market segmentation of each tourist attraction based on the geographical origin of the tourists. The information and findings from this research are expected to be used as consideration for the destination marketing strategy, and also to determine the promotion of effective advice on the geographical origin of tourists.

There are two sources of perception: direct perception and indirect perception. Indirect perceptions are formed from the various media used by producers to introduce their products in the form of human voices, beautiful words, and numbers printed in the mass media (Simamora, 2000). While direct perception is formed from the senses of sight, hearing, smell, taste, and touch. Direct perception can be further differentiated based on the source into three types of perception: (1) First, the perception of a product is derived from indicators that are directly related to a particular product. These indicators include, for example, how much crowd visits a heritage tourist attraction. (2) Second, the perception obtained after being compared with similar products or other similar attractions, is that Borobudur Heritage is considered to be better than Prambanan Heritage in a certain measure. (3) Third, perceptions are formed from direct observation, which is most important because it comes from direct observation and interaction of a person with certain situations (Suartika et al., 2020); (Swabawa et al., 2018).

Perception is a person's perspective on something, and a positive perception will encourage someone to buy a product, while a negative perception will prevent someone from buying the product (Rusmini, 2001). Helbing and Cooper (Belleflamme & Neysen, 2009) state that perception is the raw material for determining product positioning and then building a certain image of the product in the eyes of consumers in the target market, relative to similar products or competitors. Furthermore, Mowen defines perception as a process in which individuals are exposed to information, which is then processed in memory, and then interpreted as information. Perceptions are expected to be formed from direct observations by visitors or consumers of the attributes of heritage tourist attractions in Indonesia, which will provide positioning information for these heritage tourist attractions and also provide an overview of the positioning of heritage tourist attractions in Indonesia (Kartajaya, 2002)

Online reviews are a form of electronic word of mouth consisting of people who have purchased products or services, commented and posted who have previously used them (Mirza, 2013). Another definition of online consumer review is as a form of electronic word of mouth and can be said as a new and influential way of marketing also to play a role in the decision-making process (Aprianingsih et al., 2020). From several opinions, online reviews are reviews that have been posted on online media by consumers who have purchased or used products or services and can lead to potential purchases for the next consumer (Krisnayani et al., 2021); (Sulistyafani & Sastrawan, 2021).

In previous research, researchers (Marie & Widodo, 2019) used several online review indicators, namely General persuasiveness, General Credibility, Susceptibility to online product reviews, and Content. According to (Echtner, 2002) there are 6 requirements for Online Consumer Reviews to be effective, namely: Usefulness of Online Consumer Review is an online review that is useful to facilitate the process of making consumer purchasing decisions. Online Consumer Reviews are useful as a benchmark for other users to measure decision making. The amount of information is so large, only comments and opinions are of value that will influence consumer decision-making (Carlsen, 1999); (Choi & Varian, 2012).

Reviewer Expertise is one of the hallmarks of Online Consumer Reviews is that it is made by individuals anonymously. The amount of information from various sources, to filter information users can follow a market expert (market mavens) who are experts in certain fields. A person who has high expertise is someone who has more knowledge about a product or service. In social media or the internet, someone who writes or writes a review on the internet about information, it will make other people interested in discussing it because that person has felt and is considered expertise. Consumers can identify and follow market experts in purchasing decisions (Carneiro & Mylonakis, 2009); (Nafah & Purnaningrum, 2021).

Market experts are determined by the extent to which an information source is considered and determined by someone who has expertise in a particular topic of interest. Timeliness of Online Consumer Review is an information search process, consumers are faced with relevant information in large quantities associated with a certain period. Timeliness refers to a most recent message. The "spotlight review" message is a message that can display a review first before another review. The latest reviews will get more attention from potential customers. The volume of Online Consumer reviews is an important part of word-of-mouth communication and is useful for measuring the number of interactive messages. The volume of Online Consumer Reviews is the number of comments or reviews from a reviewer about a specific product or service. The number of reviews made is part of the word of mouth because it contains a collection of reviews from everyone who made it. Variations in the volume of online reviews are evidence that not all products and services are treated equally, so it is natural that not all consumer ratings are not the same (Carneiro & Mylonakis, 2009); (Nafah & Purnaningrum, 2021).

The valence of Online Consumer Review is the value of a message given in an Online Consumer Reviews which is divided into 2, namely messages that focus on positive things (benefit gain) and vice versa, namely messages containing negative things (benefit lost). The Online Consumer Review can provide negative and positive messages simultaneously. The comprehensiveness of Online Consumer Review is the Completeness of Online Consumer Reviews used to measure how detailed a review is. Online Consumer Reviews on social media or the internet vary, ranging from simple messages to more detailed and complex explanations based on facts, because in containing a decision in an unfamiliar situation, consumers need more detailed and specific information (Carneiro & Mylonakis, 2009); (Nafah & Purnaningrum, 2021).

Method

This study uses the Google Trends Tool to determine the popularity of four heritage tourist attractions in Bali. Google Trends is a tool to research keywords that are often used and hot topics that are being discussed. This service is especially for marketers who want to find Google search data to create interesting content. Google Trends was first released in 2006 and is still being developed (Mavragani et al., 2018). Google Trends is a fairly complete Google service because it has many interesting functions and features; display topics that are being discussed a lot, look for frequently used keywords, compare performance between keywords, display a simple and easy to understand (Springer et al., 2020). In addition, we can use Google Trends for free. This service can provide information about what people are looking for on the Google Search search engine (Carneiro & Mylonakis, 2009); (Nafah & Purnaningrum, 2021); (Utama et al., 2022); (Utama et al., 2022).

Google Trends provides fairly complete information. We can use the information we get from Google Trends to make the content as interesting as possible according to the appropriate keywords. Of course, this raises a sense of optimism that will be able to occupy the top position of search results (Ortiz-Martínez et al., 2020). However, it is not that easy. Keep in mind that not only do we use Google Trends as an analysis application, but those of our competitors, bloggers, AdSense seekers, and so on are also most likely to use Google Trends. This makes the data we get the same as the data they get (Carneiro & Mylonakis, 2009); (Nafah & Purnaningrum, 2021); (Utama et al., 2022); (Utama et al., 2022). The method used in this study only uses qualitative analysis based on a predetermined keyword mode. This method is different from the research of Feng et al., and Çekim 's research (Feng et al., 2019); (Çekim & Koyuncu, 2022).

Results and Discussions

Popularity of Borobudur Temple
When viewed from the frequency of searches using "Borobudur Temple", the popularity of Borobudur Temple has fluctuated from the beginning of 2020 to the end of 2021. In the indicator of the origin of tourists, those who seek information about Borobudur Temple come by Indonesian, Singaporean, Malaysian, Thai, and Philippines. This means that the market segment for the tourist attraction of Borobudur Temple is domestic tourists that also mentioned by (Canny, 2013) in their research finding (see Figure 5).
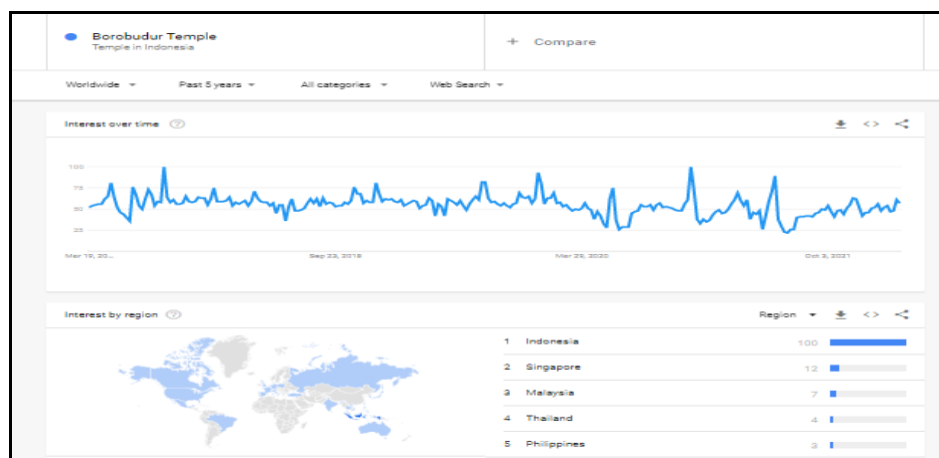

Figure 5. Google Trend Analysis Results for Borobudur Temple

The implication for Borobudur Temple managers is to maintain the quality of Borobudur Temple so that online consumer reviews are a form of electronic word of mouth and can be a new and influential marketing method in the decision-making process to visit domestic tourists as well as similar culture tourist from Asia in the future like Singaporean, Malaysian, Thai, and Philippinos (Divisekera, 2003).

Popularity of Prambanan Temple
When viewed from the frequency of searches using "Prambanan Temple", the popularity of Prambanan Temple has fluctuated from the beginning of 2020 to the end of 2021. In the indicator of the origin of tourists, those who seek information about the Prambanan Temple are predominantly Indonesian, then Singaporean, Malaysian, Thai, and Netherlands. This means that the market segment for the tourist attraction of Prambanan Temple is domestic tourists, also mention in preview research findings by (Parlindungan et al., 2021) (see Figure 6).

The implication for tourism destination managers is to maintain the quality of PrambananTemple so that online consumer reviews are a form of electronic word of mouth and can be a new and influential way of

marketing in the decision-making process to visit tourists in the future, especially for domestic tourists. One way to increase your online rating is to choose a spot for pictures that are interesting and eye-catching (Mukhtarom & Prasetio, 2020).
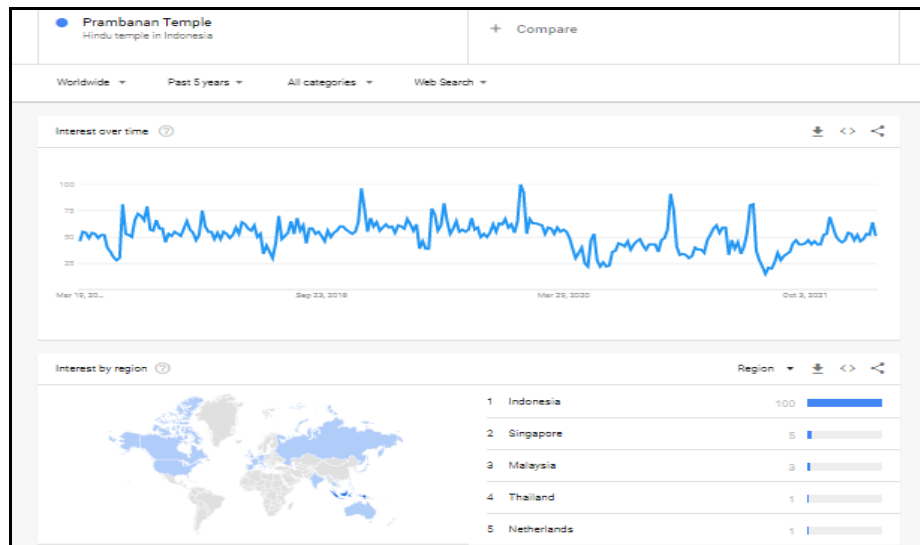

Figure 6. Google Trend Analysis Results for PrambananTemple

Popularity of Besakih Great Temple

When viewed from the frequency of searches using "Besakih Great Temple", the popularity of Besakih Great Temple has decreased a lot from the beginning of 2020 to the end of 2021. In the indicator of the origin of tourists, those who seek information about the Besakih Great Temple are predominantly visited by Singaporeans, Australians, Malaysians, and Belgians, as also mentioned by (Singh, 2015) (see Figure 7).
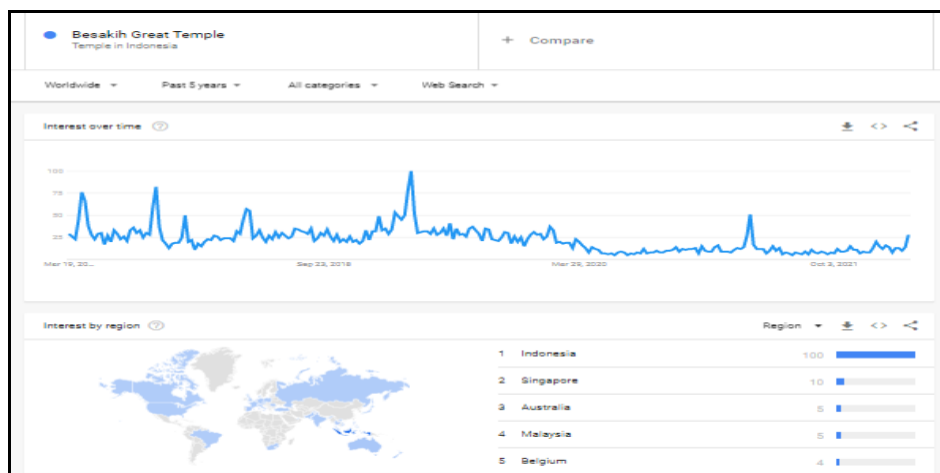

Figure 7. Google Trend Analysis Results Besakih Great Temple

The implications for Bali tourism destination managers are to maintain the quality of Besakih Great Temple which is currently a fairly popular heritage so that online consumer reviews are a form of electronic word of mouth and can be a new and influential marketing method in the decision-making process to visit tourists in the future come especially for domestic tourists, as well as internationally as also mentioned by (Seyidov & Adomaitienė, 2016).

Popularities Tanah Lot

When viewed from the frequency of searches using "Tanah Lot", the popularity of Tanah Lot had decreased a lot from early 2020 to the end of 2021. In the indicator of the origin of tourists, those who seek information about the Tanah Lot are predominantly Indonesians, Singaporeans, Malaysians, Australians, Taiwanese, as also mentioned by (Utama, 2018) (see Figure 8).
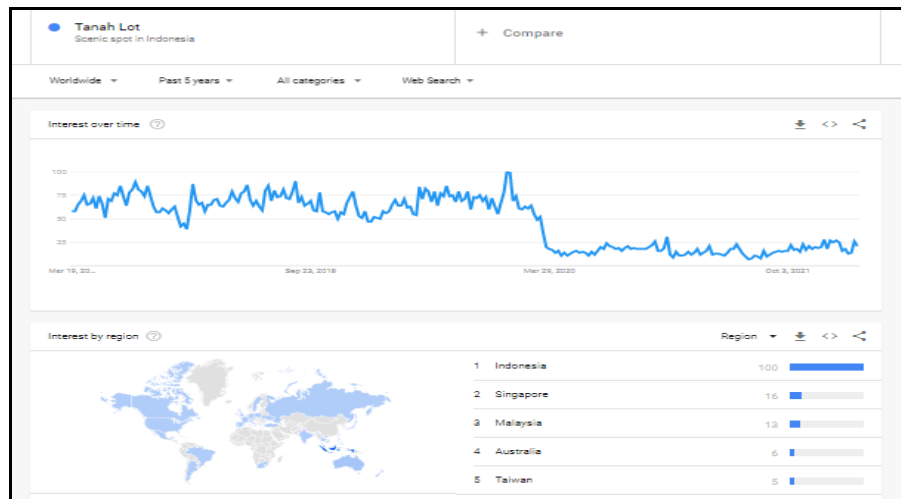
Figure 8. Google Trend Analysis Result of Tanah Lot

The implication for tourism destination managers is to further improve the marketing and promotion of Tanah Lot by providing online consumer review media as a form of electronic word of mouth and can be a new and influential marketing method in the decision-making process of visiting tourists. in the future, especially for local and domestic tourists, in line with the research of the preview by (Utama, 2018) (see Figure 9).

Comparison of Popularity of Heritage Tourist Attractions in Indonesia
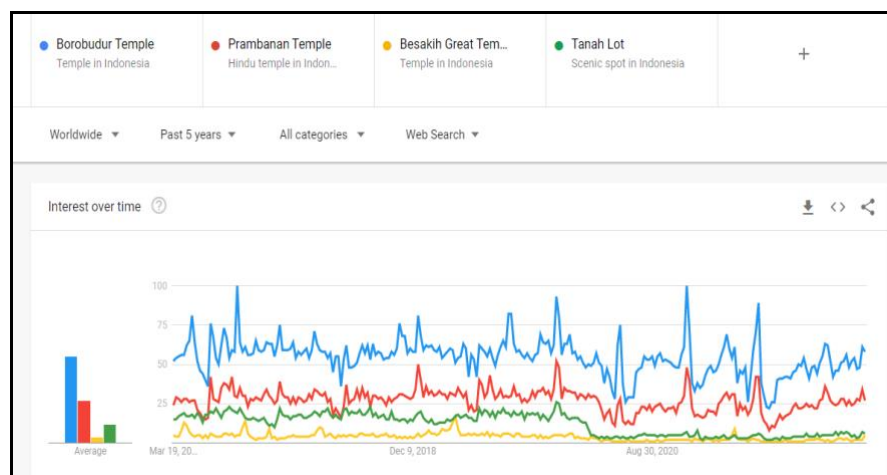

Figure 9. Results of Google's Analysis of Heritage Tourism Attraction Trends in Indonesia

When viewed from the popularity of heritage tourist attractions in Indonesia, Borobudur Temple is the most popular heritage among domestic tourists and ASEAN tourists. Prambanan Temple is also an attraction that is quite popular after Borobudur Temple. While Besakih Temple occupies the popularity after Tanah Lot.

Comparison of Segmentation of Heritage Tourist Attractions in Indonesia by Tourist Origin
When viewed from Figure 6 the popularity of heritage tourist attractions in Indonesia, Borobudur Temple is the most popular heritage among domestic tourists, and among International tourists like Thai, Philippines, Japanese, American, and Singaporean (see Figure 10).

When viewed from Figure 7 the popularity of heritage tourist attractions in Indonesia, Prambanan Temple is the most popular heritage among domestic tourists, and among International tourists like Spain, Italian, Singaporean, and Belgian (see Figure 11).

When viewed from Figure 8 the popularity of heritage tourist attractions in Indonesia, Besakih is the most popular heritage among domestic, and also Internationally by South African, Australian, Indian, Taiwanese, and Franch (see Figure 12).
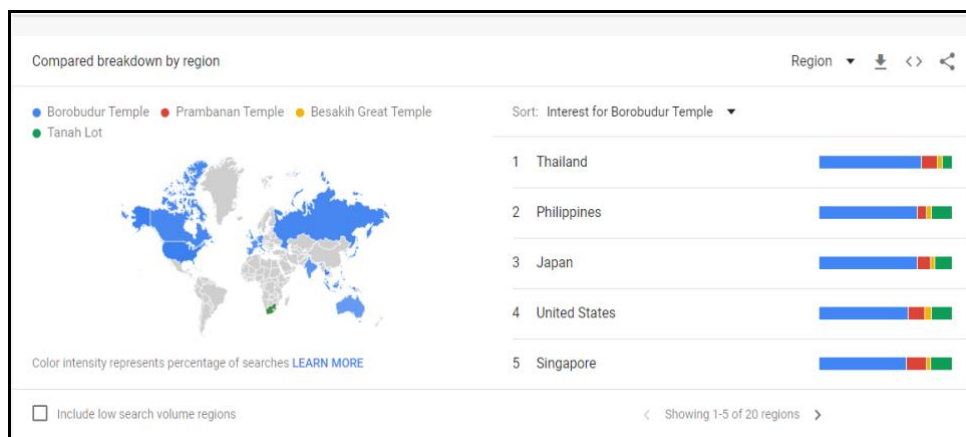
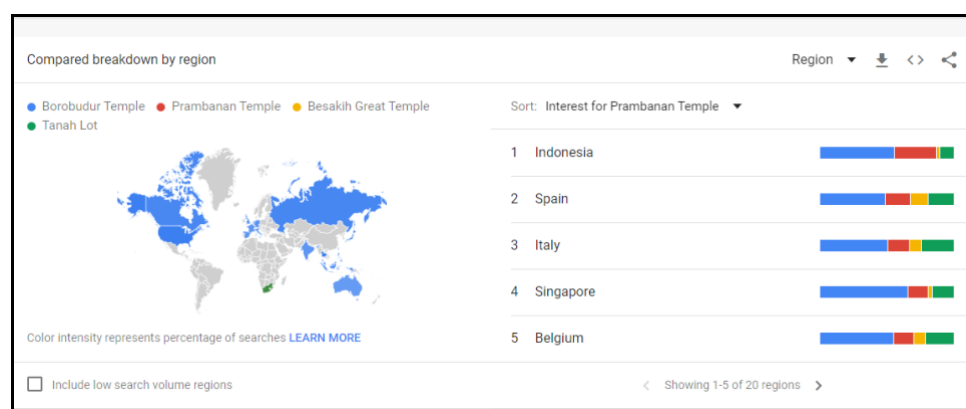**Figure 10.** Google Trend Segmentation Analysis Results for Borobudur Temple

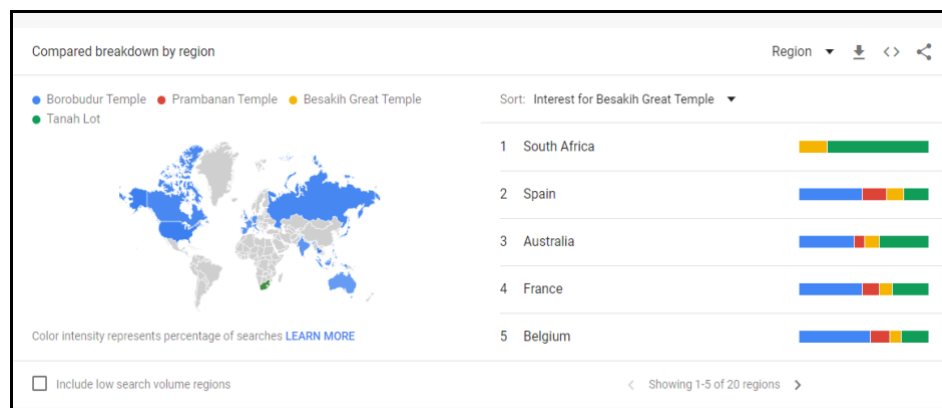**Figure 11.** Google Trend Segmentation Analysis Results for PrambananTemple

Figure 12. Google Trend Segmentation Analysis Results Besakih Great Temple

When viewed from Figure 9 the popularity of heritage tourist attractions in Indonesia, Tanah Lot is the most popular heritage among domestic, and also Internationally by South African, Australian, Indian, Taiwanese, and French. These results are in line with the results of research studies in South Africa, they like historical heritage sites. Likewise, with Australian, Indian, Taiwanese, and French tourists, they like historical heritage sites when traveling (see Figure 13) (Ashworth, 2004); (Delmont, 2004).
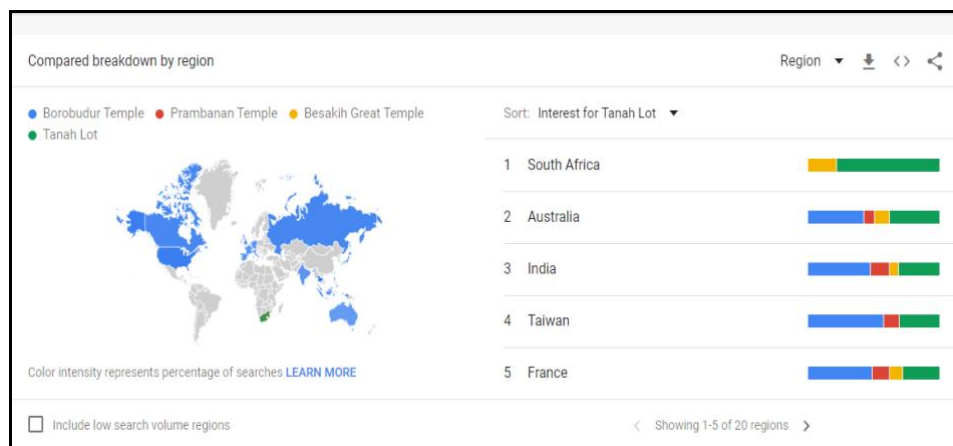
Figure 13. Google Segmentation Trend Analysis Result of Tanah Lot

Conclusions

This analysis using Google trends yields several conclusions, namely: From the beginning of 2020 to the end of 2021, almost all heritage tourist attractions have decreased in popularity, this is most likely due to a travel ban for tourists during the Covid-19 pandemic. Borobudur Template Heritage Tourism Attraction is the most popular heritage tourist attraction since the last five years, then Prambanan Temple, Tanah Lot, and Besakih. The segmentation of heritage tourism attractions in Indonesia is domestic tourists, and International tourists by Singaporean, Malaysian, Thai, Philippines, South African, Australian, Indian, Taiwanese, Italian, and French.

Almost all heritage tourist attractions have decreased in popularity, during the Covid-19 pandemic, the government should immediately open up opportunities for opening tourism, and tourist attraction managers will intensify the use of information technology, especially digital marketing to display the image of heritage destinations that are open space destinations. is a safe tourist attraction to visit. Borobudur Temple Heritage Tourism Attraction which is the most popular heritage tourist attraction for the last five years to maintain its good image so that when the pandemic conditions have decreased, its popularity will increase again in line as a suggestion in preview research (Carneiro & Mylonakis, 2009); (Nafah & Purnaningrum, 2021); (Utama et al., 2022); (Utama et al., 2022). In terms, of Borobudur, Prambanan, Tanah Lot, and Besakih tourist attractions to further increase the frequency of digital marketing to increase their popularity. Because the segmentation of heritage tourist attractions in Indonesia is Domestic tourists, managers of heritage tourist attractions in Indonesia should continue to provide services to domestic tourists so that their loyalty can be maintained. Managers of heritage tourist attractions also need to provide better services for domestic tourists, as well as international tourists namely Singaporean, Malaysian, Thai, Philippines, South African, Australian, Indian, Taiwanese, Italian, and Franch in line as a suggestion in preview research (Carneiro & Mylonakis, 2009); (Nafah & Purnaningrum, 2021); (Utama et al., 2022); (Utama et al., 2022).

References

Al Mana, A. M., & Mirza, A. A. (2013). The impact of electronic word of mouth on consumers' purchasing decisions. International Journal of Computer Applications, 82(9).

Aprianingsih, A., Setiawan, M., Affandy, F. B., Immanuel, B. C., & Fachira, I. (2020). Factors Affecting Celebrity Endorsement on Purchase Intention Through Instagram Fashion Online Shop: An Indonesian Perspective. International Journal of Marketing, Communication and New Media, 8(15).

Ashworth, G. J. (2004). Tourism and the heritage of atrocity: managing the heritage of South African apartheid for entertainment. In New horizons in tourism: Strange experiences and stranger practices (pp. 95–108). Cabi Publishing Wallingford UK.

Belleflamme, P., & Neysen, N. (2009). Advances in Tourism Economics. In Advances in Tourism Economics: New Developments. https://doi.org/10.1007/978-3-7908-2124-6

Canny, I. U. (2013). An empirical investigation of service quality, tourist satisfaction and future behavioral intentions among domestic local tourist at Borobudur Temple. International Journal of Trade, Economics and Finance, 4(2), 86.

Carlsen, J. (1999). A systems approach to island tourism destination management. Systems Research and Behavioral Science: The Official Journal of the International Federation for Systems Research, 16(4), 321–327.

Carneiro, H. A., & Mylonakis, E. (2009). Google trends: a web-based tool for real-time surveillance of disease outbreaks. Clinical Infectious Diseases, 49(10), 1557–1564.

Çekim, H. Ö., & Koyuncu, A. (2022). The Impact of Google Trends on the Tourist Arrivals: A Case of Antalya Tourism. Alphanumeric Journal, 10(1), 1–14.

Choi, H., & Varian, H. (2012). Predicting the present with Google Trends. Economic Record, 88, 2–9.

Cuthbert, A. R., & Suartika, G. A. M. (2017). Revisiting Reuter: Symbolic and material economies in Bali aga society. Jurnal Kajian Bali (Journal of Bali Studies), 7(1), 259. https://doi.org/10.24843/jkb.2017.v07.i01.p14

Delmont, E. (2004). South African heritage development in the first decade of democracy. African Arts, 37(4), 30.

Divisekera, S. (2003). A model of demand for international tourism. Annals of Tourism Research, 30(1), 31–49. https://doi.org/10.1016/S0160-7383(02)00029-4

Echtner, C. M. (2002). The content of Third World tourism marketing: a 4A approach. International Journal of Tourism Research, 4(6), 413–434.

Feng, Y., Li, G., Sun, X., & Li, J. (2019). Forecasting the number of inbound tourists with Google Trends. Procedia Computer Science, 162, 628–633.

Kartajaya, H. (2002). Hermawan Kartajaya on marketing. Gramedia Pustaka Utama.

Katal, A., Wazid, M., & Goudar, R. H. (2013). Big data: issues, challenges, tools and good practices. 2013 Sixth International Conference on Contemporary Computing (IC3), 404–409.

Krisnayani, N. K., Liestiandre, H. K., & Pranjaya, I. G. P. A. (2021). Pengaruh Media Sosial Dan Daya Tarik Wisata Terhadap Keputusan Berkunjung Wisatawan Domestik Di Pantai Melasti, Bali. Jurnal Kepariwisataan, 20(2), 134–143.

Marie, A. L., & Widodo, R. E. (2019). Pengaruh Online Reviews terhadap Online Hotel Booking Intentions, Study Kasus pada Traveloka. Jurnal Ilmiah Pariwisata, 24(3), 194–207.

Mukhtarom, H., & Prasetio, A. (2020). Rating Analysis of Service Quality, Comfort, Cleanliness, Food and Location of Hotels in DIY to Customer Satisfaction in Hotel Customers in Traveloka. International Journal of Multicultural and Multireligious Understanding, 6(6), 682–692.

Nafah, H. K., & Purnaningrum, E. (2021). Penggunaan Big Data Melalui Analisis Google Trends Untuk Mengetahui Perspektif Pariwisata Indonesia di Mata Dunia. SNHRP, 3, 430–436.

Parlindungan, H. H., Sukwika, T., & Manurung, H. (2021). Prambanan Temple Tourist Destination Development in Indonesia as World Cultural Heritage. European Journal of Science, Innovation and Technology, 1(3), 39–56.

Rusmini, M. (2001). Manajemen pemasaran. Andi Offset. Yogyakarta.

Seyidov, J., & Adomaitienė, R. (2016). Factors influencing local tourists' decision-making on choosing a destination: a case of Azerbaijan. Ekonomika, 95(3), 112–127.

Siau, K., Lim, E.-P., & Shen, Z. (2001). Mobile commerce: Promises, challenges and research agenda. Journal of Database Management (JDM), 12(3), 4–13.

Simamora, H. (2000). Manajemen pemasaran internasional. Jakarta: Salemba Empat.

Singh, R. P. B. (2015). Heritage value of religious sites and built archetypes: the scenario of Hinduism, and illustrating the riverfront Varanasi. Aatmbodh, the Journal of Knowledge of Self, 12(1), 21–40.

Suartika, G. A. M., Cuthbert, A. R., Putra, G. M., & Saputra, K. E. (2020). Public Domain and Cultural Legacy: The Governance of a Sacred and Vernacular Cultural Landscape in Bali. ISVS E-Journal, 7(2), 1–22.

Sulistyafani, A., & Sastrawan, I. G. A. (2021). Pengaruh Citra Destinasi Terhadap Minat Kunjungan Ulang Wisatawan Di Pantai Pandawa, Bali. Jurnal Destinasi Pariwisata, 9(1), 96–104.

Swabawa, A. A. P., Pemayun, I. D. G. A., & Sagitarini, L. L. (2018). Analysis of Creative Product Potentials of Pandawa Beach, Kutuh Village, Bali. Soshum: Jurnal Sosial Dan Humaniora, 8(2), 113–122.

Utama, I. G. B. R. (2018). Correlation Between Motivations Of Visit Tanah Lot Toward Interest With An Agro Farm Visit In Tabanan Bali. The 2 Nd Bali International Tourism Conference, 131.

Utama, I. G. B. R., Junaedi, I. W. R., Putri, P. A. A. N., & Krismawintari, N. P. D. (2022). Determining The Popularity of Island Tourist Destinations Using Google Trends Analysis. International Journal of Social Science, 2(2), 1257–1266.

Vilarinho-Pereira, D. R., Koehler, A. A., & de Souza Fleith, D. (2021). Understanding the use of social media to foster student creativity: A systematic literature review. Creativity. Theories–Research-Applications, 8(1), 124–147.