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Evaluating Social Media Platforms A Comprehensive Analysis of Their Influence on Travel Decision-Making

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Abstract

The millennial generation shows unique characteristics in the tourism industry, significantly different from previous generations. Unlike those before them, millennials are less affected by traditional commercial advertising and place more emphasis on user-generated content (UGC) and peer recommendations in their social networks. Recognized as one of the fastest growing global sectors, tourism relies heavily on reliable information. The way travelers use information in their decision-making process has recently changed as a result of advances in information and communication technology (ICT), particularly the introduction of social media platforms that provide interactive experiences in the Internet 2.0 era. With a specific focus on Indonesian tourists, the purpose of this study is to investigate how social media influence the travel decision-making process. It uses theories of consumer behavior such as buying habits while traveling and the role of social media in information gathering. Members of the "Backpacker Indonesia" community, selected based on their interactions and communications on the group's sites, were interviewed to collect data. According to the report, social media is essential for providing information during the entire travel preparation process. There are recommendations for both theoretical study and real-world implementations, such as developing a model that integrates social media into the travel decision-making process and advising the travel industry on consumer-focused marketing strategies. The study also examines the impact of social media on the Indian hotel selection process providing insightful information to those involved in the Indian hotel industry. The goal of the study was to increase customer satisfaction with social media platforms by examining the factors consumers take into account when making online hotel reservations. The TOPSIS approach, which ranks solutions based on how close they are to the optimal solution, has been used in research. This technique is often used in multi-criteria decision making (MCTM) and works well with real-valued data, although it may be difficult to accurately rank options according to some local criteria.

Introduction

The annual Global Climate and Disasters Report (AON Penfield 2012) found that natural disasters caused the largest economic loss ever documented in 2011, amounting to $435 billion globally. Economic impacts of escalating natural or man-made crises are not included in this amount. As a result, crises and their potentially catastrophic consequences are more likely to affect the tourism industry. A recent trend in tourism has emerged over the past few years, highlighting that young people, especially millennials, now make up a significant portion of travelers (Sofronov, 2018). This generation, characterized by its considerable purchasing power, provides a valuable market opportunity for the tourism industry. With globalization and technological advancements, millennials prioritize experiences over material possessions (Siegel & Wang, 2018). Known as the 'next-future-tourist', millennials exhibit different travel habits from previous generations, accounting for approximately 40% of outbound European travel today (Getter, 2021). Their individual characteristics have led to the need for advertising media that cater to their preferences (Hakim, 2019). Millennials, especially those between the ages of 18 and 24, exhibit five distinct characteristics: intimacy, loyalty, vigilance, equanimity, and a willingness to take risks (Sirrett&Lamminman, 2004). When choosing travel destinations, they prefer user-generated content (UGC), which consists of content created by individuals, over traditional advertisements (Kartajaya, 2008). As digital natives and early adopters of new technologies (Mosquera, 2018), millennials are significantly influenced by their social networks. According to a 2019 Stockla survey, 86% of consumer interest is shaped by photos shared by friends, family or colleagues (McDonald, 2019).

According to the Pew Internet and American Life Project (2006) and Sutton, Palen, and Shklovski (2008), social media use often peaks during times of crisis. This phenomenon causes people to recognize the importance of social media and change their crisis communication strategies (Liu et al. 2012). Following the EF5 tornado that struck Moore, Oklahoma, a Facebook page was quickly established to serve as an "information clearinghouse" providing updates on tornado warnings and recovery efforts. The page received 32,172 likes in just 17 hours, indicating that more people are using social media to get information during emergencies. Notably, this trend extends beyond the immediate victims as information about crises is sought on social media by people elsewhere.

Electronic word-of-mouth (eWOM) on travel-related social media platforms is becoming increasingly popular among young consumers as a tool for decision-making (Battle et al., 2021). Credibility, quality, quantity and completeness are the four main criteria used to evaluate eWOM (Anuba&Shome,

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2021). Setting eWOM apart from User Generated Content (UGC) is critical. Daugherty et al. (2008) define UGC as content created by everyday consumers rather than professional media, whereas eWOM consists of public comments made by previous customers about products or brands they have used. UGC is particularly persuasive to consumers because recommendations from fellow travelers, photos, and videos are often considered more reliable than information provided by travel agencies (Gretzel&Yoo, 2008). This social influence has a positive impact on travelers' intentions to visit specific destinations, according to Stockla's 2017 and 2019 reports. A 2017 report that surveyed 2,000 consumers in the US, UK and Australia found that user-generated content (UGC) influenced 42% of consumers' travel planning. By 2019, this influence had risen to 60%, based on a survey of 1,590 consumers and 150 B2C marketers in the same regions. Interestingly, the effect of professional brand images has decreased from 23% in 2017 to 19% in 2019 (DeGruttola, 2019).

Today, the use of devices like computers, smartphones and tablets has become a regular part of life. For those born after 1980, a world without these technological innovations is unimaginable. Social media has become an integral part of their existence to the extent that someone who does not have a Facebook account is considered "absentee" or excluded from social circles. Social media platforms are expanding beyond the more well-known platforms such as Facebook and Twitter; They cover a wide range of topics and provide venues for sharing experiences, opinions on products and services, and daily life updates. These platforms often play a significant role in shaping opinions and influencing purchasing decisions. For example, reviews and comments on social media can determine whether we choose to buy plane tickets to a particular destination or visit a destination where friends have posted vacation photos. Inspiration can come from a YouTube video showcasing interesting travel destinations, which can lead to buying plane tickets and a trip to a special location. This article focuses on how Generation Y, or Millennials, make decisions in the tourism industry based on their strong engagement with social media. Although there are extensive studies on the impact of social media on purchase decisions in various industries, more research is needed on the consumer behavior of Generation Y in the tourism industry.

The TOPSIS method is the second most popular approach among the multi-criteria decision-making (MCTM) methods. It has been widely used by researchers to solve simple and complex problems in various fields, with many modifications and extensions made to suit specific problems. These developments in TOPSIS reflect broader trends in the evolution of MCDM methods for tackling various tasks. Considering the advances in TOPSIS technique, a systematic review is needed to integrate the latest progress and developments. This paper focuses on studies that propose improvements, extensions, or new modifications to the TOPSIS methodology. Although previous studies have used both TOPSIS and Fuzzy TOPSIS for various purposes such as assessment, selection and ranking, it is not fully compatible with recent developments. Consequently, some relevant studies using the TOPSIS technique may not be covered in this review. The synthetic evaluation method, a type of multi-variable and MCDM approach, collects and processes relevant factors using mathematical or biological techniques to create an evaluation model and rank subjects accordingly. TOPSIS is frequently used to solve MCDM problems, with applications including company performance comparison, financial ratio analysis, and investment evaluation in advanced manufacturing. However, there are limitations, and most improvements have focused on refining the weight to increase the R value or modifying the R value formula, such as the 'Miqiezhi' method. Given the complexity of valuation issues, a simpler approach is needed to more clearly understand the relationship between the R value and the valuation of alternatives.

Social Media

Regarding the definition of social media, scholars differ greatly from one another and are not entirely clear. Numerous terms are used to refer to social media in academic literature, including social networking sites (Miguéns et al. 2008; Asabere 2012), online social websites (Lange-Faria and Elliot 2012; Hays et al. 2013), consumer-generated media (Gretzel et al. 2008; Ayeh et al. 2013a, b), user-generated content websites (Cox et al. 2009; Khan 2012; Simms 2012), online social websites, and Web 2.0. Nonetheless, the definitions of Brake and Safko and Kaplan and Haenlein are the two that are most commonly accepted in the literature. "Activities, practices, and behaviors among communities of people who gather online to share information, knowledge, and opinions using conversational media," according to Brake and Safko, are what constitute social media. These are Web-based applications that make it simple to create and share different kinds of content, including text, images, videos, and audio. Conversely, social media is described by Kaplan and Haenlein as "a collection of web-based applications that expand upon the technological and ideological underpinnings of Web 2.0 and facilitate the production and sharing of user-generated contentThey also emphasize how social media dramatically changes how people, communities, and organizations communicate with one another. Experts in the fields of tourism and hospitality contend that Kaplan and Haenlein's definition surpasses Brake and Safko's in scope and comprehensiveness. According to Fotis, the latter description only covers a portion of social media, namely, online platforms that let users register, build profiles, and construct personal networks for regular sharing of preferences, knowledge, abilities, and other data. They emphasize that social media is a broader concept than just social networking sites.

Types of Social Media

These include social networks and microblogging sites like Facebook and Twitter, traveler review sites like TripAdvisor and Yelp, social sharing sites like YouTube, and websites that allow users to make purchases and leave reviews like Amazon and Travelocity. These are divided into five primary categories by Constantinides and Fountain (2008): content aggregators,

bulletin boards, blogs, forums, content communities, and social networks. Prior research has investigated the diverse applications of social media in the tourism domain, encompassing online forums, microblogs (like Twitter), and consumer review and rating platforms (like TripAdvisor).Social media platforms and Web 2.0 technologies have been widely used in the Indian hospitality sector, especially in hotels, for information systems (ICT), product marketing, consumer behavior analysis, and tourist research. These platforms, which connect many tourism stakeholders, are viewed as revolutionary instruments for marketing and advertising.

Similar to how the term "Social Media" lacks a clear meaning in academic literature, there is no established categorization scheme for the various kinds of social media platforms. Academics have noted that there isn't a formal framework for classifying social media apps. However, several scholars have put up their own taxonomies to categorize different social media networks. Five primary types were distinguished by Constantinides (2009): content aggregators, blogs, content communities, social networks, and forums and bulletin boards.

A list of fifteen types was provided by Mangold and Faulds (2009). These included private social networks, sites for sharing creativity, blogs sponsored by users, websites or blogs sponsored by companies, websites or blogs sponsored by companies for causes or assistance, business networking sites, collaborative websites, virtual worlds, commerce communities, podcasts, news sites, communities sharing educational materials, communities using open source software, social bookmarking sites, and social networking sites. Social media sites and social networking sites were the only two categories that Kim et al. (2010) offered. Six categories were established by Kaplan and Haenlein (2010): blogs, content communities, virtual social worlds, virtual gaming worlds, collaborative projects, and social networking websites. Fischer and Reuber (2011) proposed eight categories: user forums, photo sharing, video sharing, blogs, microblogging, professional networking, social networking, and microblogging. The overlap in samples with different names is a common problem with these taxonomies. Some of the most popular social networking platforms are constantly represented in various frameworks, despite variances. The present investigation employed blogs, collaborative projects, social networking sites, media sharing sites, and content aggregators as the primary categories. Numerous academics have used these categories in their studies on tourism.

Social media platforms play a growing role in influencing travel decisions by offering travelers extensive information, opinions, and experiences from other users. This influence can be assessed using various criteria that impact users' choices and perceptions during trip planning, including both positive and negative factors.

Benefit Criteria:

1. **User Engagement:** Social media platforms such as Facebook, Instagram, Twitter, YouTube, and TripAdvisor are crucial for engaging users with travel-related content. Engagement is assessed through likes, shares, comments, and interactions, which can vary depending on the platform. For example, Instagram, known for its visual focus, generally sees high user engagement due to attractive images and videos that spark travel inspiration. Conversely, TripAdvisor provides detailed reviews and ratings, which are valued for their authenticity and help users make informed travel decisions. High levels of engagement indicate that users find the content compelling and relevant, significantly influencing their travel choices.

2. **Content Quality**: The quality of travel content on these platforms is another important benefit. Content quality includes accuracy, reliability, and the depth of information provided. Platforms like YouTube and TripAdvisor are noted for their high-quality content, with YouTube offering detailed video reviews and travel vlogs that create an immersive experience. TripAdvisor's user-generated reviews and photos are valued for their credibility due to direct feedback from other travelers. High content quality ensures users receive useful and trustworthy information, boosting their confidence in making travel decisions.

3. **Platform Trustworthiness**: Trust in a social media platform is crucial for users seeking travel information. Trustworthiness is determined by factors such as transparency, user protection, and reliable content. TripAdvisor is often praised for its trustworthiness because of its focus on user reviews and verification processes. Similarly, YouTube benefits from its wide range of content creators who provide honest feedback. In contrast, platforms like Facebook and Twitter may have lower trust levels due to concerns about fake news or sponsored content that may not be clearly marked. A platform's trustworthiness is vital in influencing its impact on travel decisions.

Non-Benefit Criteria:

1. **Ad Intrusiveness**: Despite the advantages of social media platforms, they can also present issues such as ad intrusiveness. Advertisements may disrupt the user experience and impact the perceived reliability of the platform. For instance, YouTube and Facebook are frequently criticized for their high ad intrusiveness, where frequent ads can interrupt video content or clutter users' news feeds. This can diminish user satisfaction and potentially make users less likely to rely on these platforms for travel-related decisions.

2. **Privacy Concerns:** Privacy is a major issue for users of social media platforms. Concerns about data collection, potential misuse of personal information, and targeted advertising can arise. Users might be uncomfortable sharing personal details or travel plans on platforms like Facebook and Instagram, where their data may be used for marketing purposes. In contrast, TripAdvisor, which focuses primarily on reviews and travel information, generally presents fewer privacy risks. Platforms that address privacy concerns effectively are more likely to maintain user trust and engagement.

3. **Platform Cost:** The expense associated with advertising on these platforms also influences travel decision-making. Higher advertising costs on platforms such as YouTube and TripAdvisor reflect their high user engagement and content quality. However, these costs can also lead to content being heavily influenced by paid promotions, which might affect the authenticity of recommendations. Lower-cost platforms may feature more varied content but might lack the quality control that higher costs typically ensure.

Topsis Method

In multi-criteria decision analysis, the TOPSIS technique is frequently employed, as Behzadian et al. (2012) and Ferreira et al. (2018) have explained. TOPSIS finds the optimal solution by identifying the one that is closest to the positive ideal solution (PIS) and farthest from the negative ideal solution (NIS). It was first presented by Hwang and Yoon (1981) and later expanded by Yoon (1987). The PIS is a theoretical choice that, in contrast to the NIS, maximizes benefit criteria and reduces cost criteria. According to Mufazzal and Muzakkir (2018), the option that has the least Euclidean distance from the PIS and the greatest distance from the NIS is considered to be the best option. In the final step, a closeness coefficient (CCi) is calculated for each alternative, and the alternatives are ranked in descending order according to these coefficients.

Results and Discussion

Table 1: illustrates the significant impact of social media platforms on travel decisions through various metrics such as user engagement, content quality, and trustworthiness

Platform	User Engagement (Score)	Content Quality (Rating)	Platform Trustworthiness (%)	Ad Intrusiveness (Score)	Privacy Concerns (Score)	Platform Cost (Cost to Advertisers)
Facebook	85	8.2	70	6	4	5000
Instagram	92	9.1	75	7	5	7000
Twitter	78	7.5	65	5	3	3000
YouTube	88	8.9	80	8	6	9000
TripAdvisor	95	9.5	85	4	2	10000

Table 1 illustrates the significant impact of social media platforms on travel decisions through various metrics such as user engagement, content quality, and trustworthiness. Facebook has moderate scores for user engagement (85) and content quality (8.2), with a trustworthiness rating of 70%. It experiences a moderate level of ad intrusiveness (6) and low privacy concerns (4), with an average advertising cost of 5,000 units. Instagram shows strong performance in user engagement (92) and content quality (9.1), with a trustworthiness rating of 75%. It faces higher ad intrusiveness (7) and privacy concerns (5), with a relatively high advertising cost of 7,000 units. Twitter has lower user engagement (78) and content quality (7.5), and a trustworthiness score of 65%. It is less intrusive in terms of ads (5) and has minimal privacy concerns (3), with a lower advertising cost of 3,000 units. YouTube demonstrates high engagement (88) and content quality (8.9), with a strong trustworthiness rating of 80%. Despite this, it has the highest ad intrusiveness (8) and privacy concerns (6), along with substantial advertising costs of 9,000 units. TripAdvisor excels in engagement (95), content quality (9.5), and trustworthiness (85%), with minimal ad intrusiveness (4) and privacy concerns (2), but commands the highest advertising cost at 10,000 units. These metrics reflect the distinct roles each platform plays in influencing travel decisions.

Table 2: displays the normalized data for social media platforms' roles in travel decision-making, providing a standardized view for easier comparison across various criteria

Platform	User Engagement	Content Quality	Platform Trustworthiness	Ad Intrusiveness	Privacy Concerns	Platform Cost
Facebook	0.4330	0.4230	0.4156	0.4353	0.4216	0.3077
Instagram	0.4686	0.4694	0.4452	0.5078	0.5270	0.4308
Twitter	0.3973	0.3869	0.3859	0.3627	0.3162	0.1846
YouTube	0.4482	0.4591	0.4749	0.5804	0.6325	0.5539
TripAdvisor	0.4839	0.4901	0.5046	0.2902	0.2108	0.6155

Table 2 displays the normalized data for social media platforms' roles in travel decision-making, providing a standardized view for easier comparison across various criteria. Facebook's normalized scores are 0.4330 for user engagement, 0.4230 for content quality, and 0.4156 for trustworthiness. Its ad intrusiveness is moderate at 0.4353, and privacy concerns are relatively low at 0.4216. The platform's cost is also moderate at 0.3077, positioning it as a mid-range option overall.Instagram excels in user engagement (0.4686) and content quality (0.4694), with a solid trustworthiness score of 0.4452. However, it has higher ad intrusiveness (0.5078) and privacy concerns (0.5270), along with a moderately high platform cost of 0.4308.Twitter shows lower scores across the board, with user engagement at 0.3973 and content quality at 0.3869. It has a lower trustworthiness rating of 0.3859, but low

ad intrusiveness (0.3627) and minimal privacy concerns (0.3162), combined with the lowest platform cost at 0.1846.YouTube demonstrates strong engagement (0.4482), content quality (0.4591), and trustworthiness (0.4749). Nonetheless, it faces high ad intrusiveness (0.5804) and privacy concerns (0.6325), and has a high platform cost of 0.5539.TripAdvisor stands out with the highest scores in engagement (0.4839), content quality (0.4901), and trustworthiness (0.5046). It has the lowest ad intrusiveness (0.2902) and privacy concerns (0.2108), but the highest platform cost at 0.6155. These normalized values offer a clear comparison of each platform's strengths and weaknesses, aiding marketers and travelers in making informed decisions.

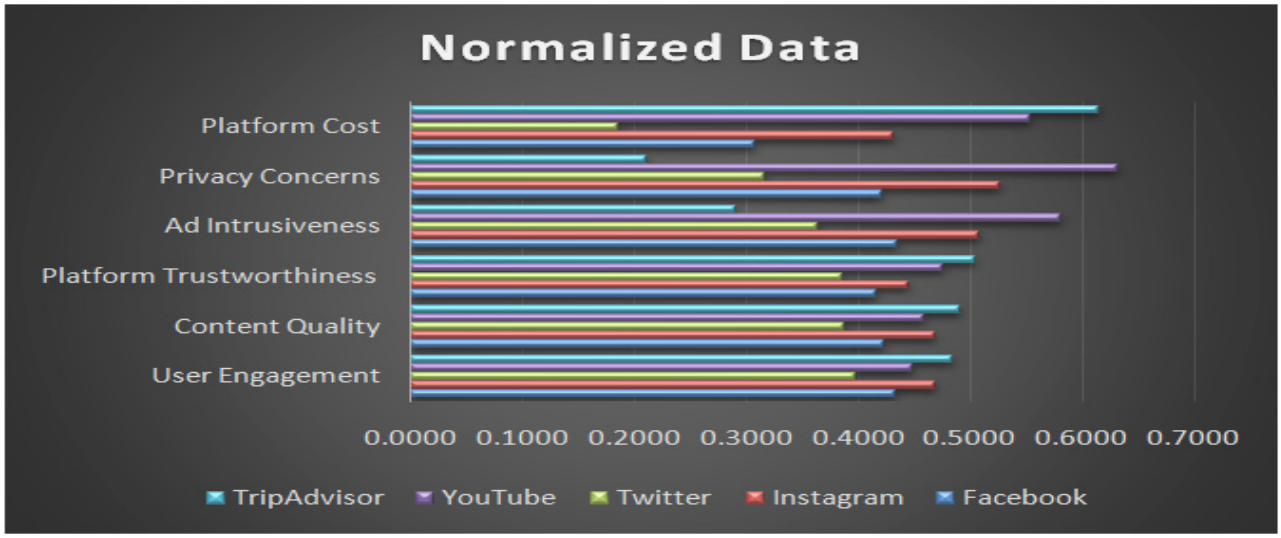

Figure 1 : Presents normalized data for various social media platforms across several criteria

Table 3: shows that equal weights of 0.17 are assigned to each criterion in evaluating the influence of social media platforms on travel decisions

Platform	User Engagement	Content Quality	Platform Trustworthiness	Ad Intrusiveness	Privacy Concerns	Platform Cost
Facebook	0.17	0.17	0.17	0.17	0.17	0.17
Instagram	0.17	0.17	0.17	0.17	0.17	0.17
Twitter	0.17	0.17	0.17	0.17	0.17	0.17
YouTube	0.17	0.17	0.17	0.17	0.17	0.17
TripAdvisor	0.17	0.17	0.17	0.17	0.17	0.17

Table 3 shows that equal weights of 0.17 are assigned to each criterion in evaluating the influence of social media platforms on travel decisions. This uniform weighting implies that all criteria—user engagement, content quality, platform trustworthiness, ad intrusiveness, privacy concerns, and platform cost—are deemed equally significant in assessing the effectiveness of each platform. This method provides a balanced and impartial evaluation, offering a comprehensive perspective on how each platform impacts travel decision-making. It enables stakeholders to make equitable comparisons and well-informed decisions when choosing platforms for travel marketing and engagement.

Table 4. Weighted normalized decision matrix

Platform	User Engagement	Content Quality	Platform Trustworthiness	Ad Intrusiveness	Privacy Concerns	Platform Cost
Facebook	0.0719	0.0702	0.0690	0.0723	0.0700	0.0511
Instagram	0.0778	0.0779	0.0739	0.0843	0.0875	0.0715
Twitter	0.0660	0.0642	0.0641	0.0602	0.0525	0.0306
YouTube	0.0744	0.0762	0.0788	0.0963	0.1050	0.0919
TripAdvisor	0.0803	0.0814	0.0838	0.0482	0.0350	0.1022

The weighted normalized decision matrix assesses the impact of social media platforms on travel decisions by integrating normalized scores with equal weights. Facebook demonstrates moderate performance across all criteria, with notable scores in user engagement (0.0719) and content quality

(0.0702). Instagram excels in several areas, including user engagement (0.0778) and ad intrusiveness (0.0843). Twitter has lower overall scores, indicating a lesser impact, such as a user engagement score of 0.0660. YouTube performs well in user engagement (0.0744) but has the highest score for ad intrusiveness (0.0963). TripAdvisor stands out for its trustworthiness (0.0838) and platform cost (0.1022), highlighting its role as a reliable travel resource. This matrix offers valuable insights into each platform's strengths.

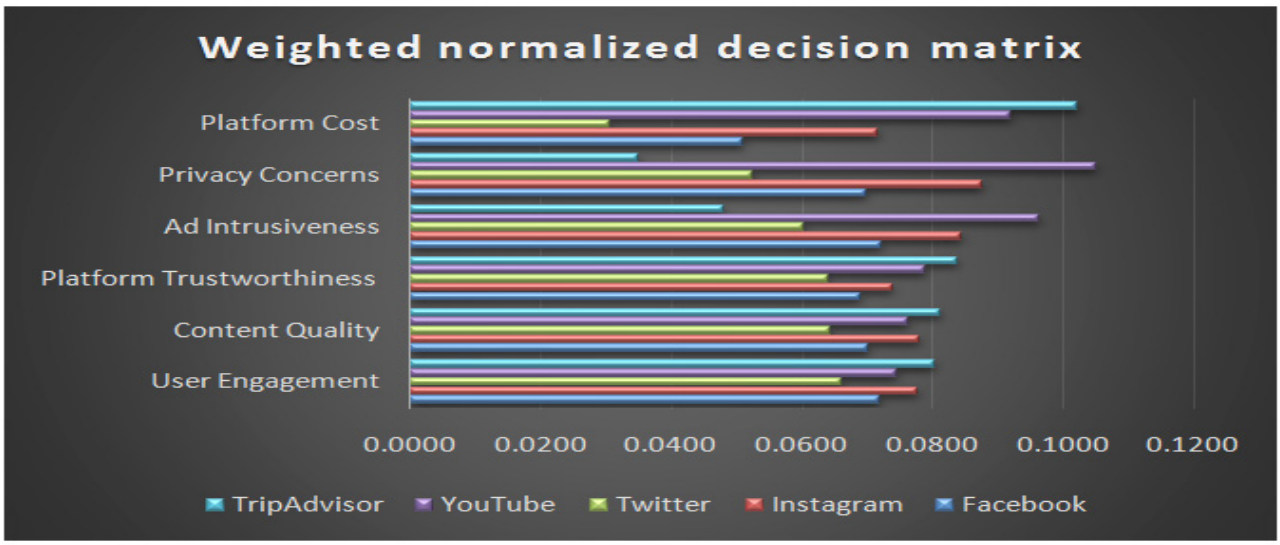

Figure 2 : Weighted normalized decision matrix

Figure 2 displays the weighted normalized decision matrix for different social media platforms based on various criteria. For Facebook, the weighted scores are 0.0719 for user engagement, 0.0702 for content quality, 0.0690 for platform trustworthiness, 0.0723 for ad intrusiveness, 0.0700 for privacy concerns, and 0.0511 for platform cost. Instagram has higher weighted scores in most categories, with 0.0778 for user engagement, 0.0779 for content quality, 0.0739 for trustworthiness, 0.0843 for ad intrusiveness, 0.0875 for privacy concerns, and 0.0715 for cost. Twitter shows lower weighted scores in general, except for ad intrusiveness. YouTube's weighted scores are notably high in ad intrusiveness and privacy concerns, while TripAdvisor exhibits the highest scores in user engagement and platform cost.

Table 5: The positive matrix outlines the ideal values for each criterion, serving as a benchmark for evaluating social media

Platform	User Engagement	Content Quality	Platform Trustworthiness	Ad Intrusiveness	Privacy Concerns	Platform Cost
Facebook	0.0803	0.0814	0.0838	0.0482	0.0350	0.0306
Instagram	0.0803	0.0814	0.0838	0.0482	0.0350	0.0306
Twitter	0.0803	0.0814	0.0838	0.0482	0.0350	0.0306
YouTube	0.0803	0.0814	0.0838	0.0482	0.0350	0.0306
TripAdvisor	0.0803	0.0814	0.0838	0.0482	0.0350	0.0306

The positive matrix outlines the ideal values for each criterion, serving as a benchmark for evaluating social media platforms' roles in travel decision-making. All platforms—Facebook, Instagram, Twitter, YouTube, and TripAdvisor—are measured against the same optimal standards. For user engagement, the ideal score is 0.0803, representing the highest level of user interaction. Content quality and platform trustworthiness are both set at 0.0814 and 0.0838, respectively, indicating top-tier content and reliability. The ideal value for ad intrusiveness is 0.0482, reflecting minimal disruption from ads, while privacy concerns are best at 0.0350, showing minimal user privacy issues. Lastly, the benchmark for platform cost is 0.0306, representing the lowest advertising costs. These ideal values provide a target for platforms, highlighting the standards required to maximize their impact on users' travel choices.

Table 6: The negative matrix establishes the worst-case values for each criterion across all social media platforms

Platform	User Engagement	Content Quality	Platform Trustworthiness	Ad Intrusiveness	Privacy Concerns	Platform Cost
Facebook	0.0660	0.0642	0.0641	0.0963	0.1050	0.1022

Instagram	0.0660	0.0642	0.0641	0.0963	0.1050	0.1022
Twitter	0.0660	0.0642	0.0641	0.0963	0.1050	0.1022
YouTube	0.0660	0.0642	0.0641	0.0963	0.1050	0.1022
TripAdvisor	0.0660	0.0642	0.0641	0.0963	0.1050	0.1022

The negative matrix establishes the worst-case values for each criterion across all social media platforms. In this matrix, Facebook, Instagram, Twitter, YouTube, and TripAdvisor are all assigned the same values, representing the least favorable performance metrics. For user engagement, the negative score is 0.0660, indicating lower effectiveness in engaging users. Content quality and platform trustworthiness are both rated at 0.0642 and 0.0641, respectively, representing the minimum acceptable standards for these attributes.The ad intrusiveness and privacy concerns are notably high, with scores of 0.0963 and 0.1050, respectively, reflecting significant disruptions and serious privacy issues. The platform cost is also set at 0.1022, representing the highest cost for advertisers. This matrix provides a benchmark for evaluating the negative aspects of each platform, offering a basis for comparison against ideal conditions.

Table 7. SI Plus, Si Negative and Ci

Platform	SI Plus	Si Negative	Ci
Facebook	0.0513	0.0672	0.5667
Instagram	0.0765	0.0426	0.3579
Twitter	0.0366	0.0958	0.7235
YouTube	0.1052	0.0232	0.1807
TripAdvisor	0.0715	0.0900	0.5573

Table 7 provides the SI Plus, SI Negative, and closeness coefficient (Ci) values for various social media platforms. Facebook has an SI Plus of 0.0513, an SI Negative of 0.0672, and a closeness coefficient (Ci) of 0.5667. Instagram's SI Plus is 0.0765, SI Negative is 0.0426, with a Ci of 0.3579. Twitter shows an SI Plus of 0.0366, an SI Negative of 0.0958, and the highest Ci value of 0.7235. YouTube has an SI Plus of 0.1052, an SI Negative of 0.0232, and the lowest Ci of 0.1807. TripAdvisor's SI Plus is 0.0715, SI Negative is 0.0900, resulting in a Ci of 0.5573.

The SI Plus, SI Negative, and CI values offer a thorough assessment of each social media platform's performance based on set benchmarks. Facebook has an SI Plus of 0.0513 and an SI Negative of 0.0672, resulting in a Composite Index (CI) of 0.5667. This suggests a balanced performance, with moderate user engagement and relatively higher negative factors. Instagram shows an SI Plus of 0.0765 and an SI Negative of 0.0426, leading to a CI of 0.3579. This indicates strong user engagement and content quality, with fewer negative aspects, making it a relatively favorable option.Twitter has the lowest SI Plus at 0.0366 and the highest SI Negative at 0.0958, giving it a CI of 0.7235. This implies that while Twitter has notable shortcomings, it also suffers from significant negative attributes affecting its overall effectiveness.YouTube has a high SI Plus of 0.1052 and the lowest SI Negative of 0.0232, resulting in the lowest CI of 0.1807. This shows excellent performance in engagement and content quality but also highlights considerable negative impacts.TripAdvisor has an SI Plus of 0.0715 and an SI Negative of 0.0900, with a CI of 0.5573. This reflects solid performance, balancing positive and negative attributes, making it a strong player in influencing travel decisions.

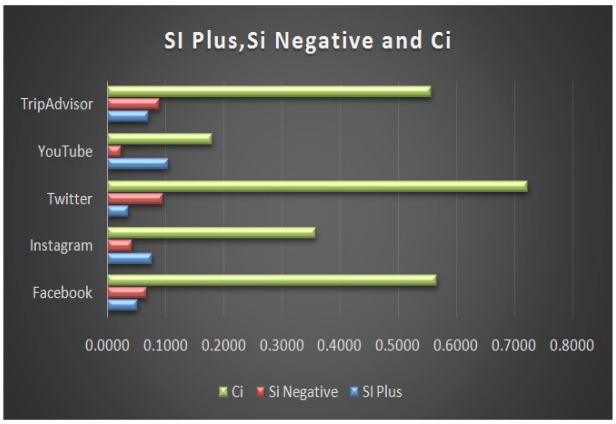

Figure 3: SI Plus, SI Negative, and Ci

Table 8: The ranking table outlines the overall performance of social media platforms based on their Composite Index (CI) values

Platform	Rank
Facebook	2
Instagram	4
Twitter	1
YouTube	5
TripAdvisor	3

The ranking table outlines the overall performance of social media platforms based on their Composite Index (CI) values. Twitter holds the top position with a rank of 1, indicating it has the best overall balance of positive and negative attributes among the platforms. Although its user engagement scores are lower, its negative aspects are less impactful compared to other platforms. Facebook is ranked 2, showing solid performance across various criteria, though it has a slightly higher negative impact than Twitter. TripAdvisor is ranked 3, with strong user engagement and content quality but notable negative aspects. Instagram comes in 4th place, excelling in engagement and content quality but facing higher negative impacts, especially in ad intrusiveness and privacy concerns. YouTube ranks 5th, demonstrating exceptional performance in engagement and content quality but suffering from significant negative issues, particularly in ad intrusiveness and privacy concerns. These

rankings provide a clear assessment of each platform's effectiveness in influencing travel decisions, aiding stakeholders in making well-informed choices based on their specific needs and priorities.

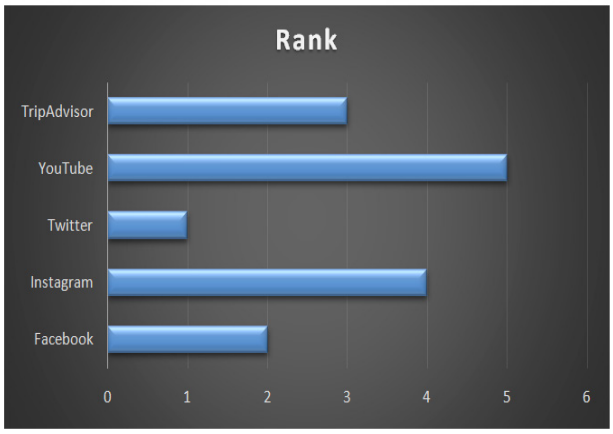

Figure 4: Ranking

Figure 4 presents the ranking of social media platforms based on the closeness coefficient (Ci). Twitter is ranked first, indicating it has the highest overall performance according to the Ci values. Facebook follows in second place, showing strong performance as well. TripAdvisor is ranked third, while Instagram and YouTube are ranked fourth and fifth, respectively. This ranking reflects the relative effectiveness of these platforms based on their closeness to the ideal solution.

Conclusion

In conclusion, the evaluation of social media platforms based on their Composite Index (CI) values provides valuable insights into their effectiveness in influencing travel decisions. Twitter leads with the highest rank, offering a favorable balance of positive and negative attributes despite lower user engagement scores. Facebook follows closely, demonstrating solid overall performance but with a slightly higher negative impact. TripAdvisor stands out with strong user engagement and content quality, though it has some notable negative aspects. Instagram excels in engagement and content quality but faces higher negative impacts, particularly regarding ad intrusiveness and privacy concerns. YouTube, while showing exceptional performance in engagement and content quality, suffers from significant negative aspects in terms of ad intrusiveness and privacy concerns.

These rankings highlight the strengths and weaknesses of each platform, enabling stakeholders to make informed decisions based on their priorities and specific needs in the travel decision-making process. By considering these factors, marketers and travelers can better understand how each platform can be leveraged to maximize positive influence and address potential drawbacks.

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