การใช้ทฤษฎีพฤติกรรมตามแผนเพื่อทำนายพฤติกรรมการใช้เว็บไซต์การท่องเที่ยว

FORECAST THE USE OF TRAVEL WEBSITES USING THE THEORY OF PLANNED BEHAVIOR

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บทคัดย่อ

โลกในยุคปัจจุบันกล่าวได้ว่าเป็นยุคดิจิทัลที่มีการนำปัญญาประดิษฐ์ไปประยุกต์ใช้งานในหลากหลายสาขาอาชีพ ทำให้จุดประสงค์ของบทความนี้คือ ทดลองประยุกต์ใช้ทฤษฎีพฤติกรรมตามแผนเพื่อทำนายการใช้งานเว็บไซต์การท่องเที่ยว ประชากรของบทความนี้คือ ผู้ที่เคยใช้งานเว็บไซต์และแชทบอท กลุ่มตัวอย่างที่นำมาใช้ในการทดสอบครั้งนี้คือ อาสาสมัครจำนวน 120 คน ดำเนินการสำรวจโดยใช้แบบสอบถามที่พัฒนาขึ้นมาจากทฤษฎีพฤติกรรมตามแผนประกอบกับและการนำปัญญาประดิษฐ์มาใช้ในเว็บไซต์การท่องเที่ยว วิธีการสุ่มตัวใช้วิธีการสุ่มแบบเจาะจงตามเงื่อนไขของกลุ่มตัวอย่าง การแจกแบบสอบถามใช้การแจกแบบสอบถามแบบสะดวก หลังจากนั้นทำการวิเคราะห์ข้อมูลที่ได้จากการเก็บรวบรวมด้วยการสถิติเชิงพรรณนา การวิเคราะห์สหสัมพันธ์ และวิเคราะห์การถดถอยพหุคูณ ผลที่พบคือตัวแปรต่าง ๆ ที่อยู่ในกรอบแนวคิดมีสหสัมพันธ์กัน และได้สมการถดถอยจากการวิเคราะห์ คือ Y=0.07+0.46A+0.36S+0.16CB โดยมีค่า R^2 คือ 0.66 ที่แสดงให้เห็นถึงความเหมาะสมของการประยุกต์ใช้ทฤษฎีพฤติกรรมตามแผนว่าสามารถนำมาใช้ในการทำนายการใช้งานเว็บไซต์การท่องเที่ยวที่มีปัญญาประดิษฐ์ได้

คำสำคัญ: ทีพีบี เว็บไซต์การท่องเที่ยว ปัญญาประดิษฐ์ เอไอ

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Abstract

Given the digital era's use of artificial intelligence (AI) in any field, the goal of this article is to investigate the use of the Theory of Planned Behavior (TPB) for forecasting travel websites utilizing AI applications. A total of 120 respondents who used both websites and chatbots were polled. The survey questionnaire elements were adapted from TPB and AI-enabled travel websites. Purposive random sampling was used to randomly assign the sample. Multiple regression analysis, correlation analysis, and descriptive statistics were utilized to investigate the acquired data. The results show that there are correlations among the variables that are included in the model framework. This study used TPB, as demonstrated by the regression equation: Y=0.07+0.46A+0.36S+0.16CB, with a strong R^2 of 0.66. These findings demonstrate how well TPB understands and predicts user behavior in the context of AI-driven travel website usage.

Keywords: TPB, Travel Website, artificial intelligence, AI

Introduction

The travel business has seen tremendous transition in recent years, owing to the rise of internet booking platforms and travel websites. These platforms have become essential sources of information and booking services for travelers, providing a quick and easy way to organize vacations and secure reservations (Berne et al., 2012). However, in the face of numerous travel websites, website owners and developers must understand the elements that influence user behavior and website usage (Amaro & Duarte, 2015). This information is critical for improving the user experience and drawing a broader audience.

The identification of major elements impacting the use of travel websites is critical to understanding user preferences and improving website design and functionality (Law et al., 2009). With this knowledge, website owners and developers may create a more user-friendly and engaging experience, resulting in higher website traffic, conversion rates, and customer satisfaction (Amaro & Duarte, 2015).

The Theory of Planned activity (TPB) provides useful insights into travel website activity, allowing us to predict users' intents to visit, engage with, and book through these platforms. Understanding the factors that influence these intentions allows website owners and developers to create and apply methods to improve user experience, website traffic, and conversion rates.

Review of Literature

Theory of Planned Behavior

One popular social psychological model that aims to explain and predict human behavior is called the Theory of Planned Behavior (TPB) (Ajzen, 1991). It asserts that the primary determinant of whether someone will really act upon a certain activity is that person's intention to engage in it. Three main factors influence this purpose in turn: the behavior's attitude, subjective norms, and perceived behavioral control (PBC). The figure illustrating this theory is shown next.

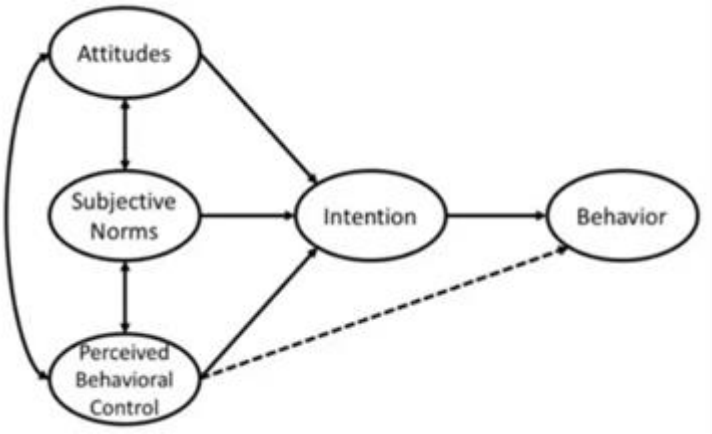

Figure 1 The Theory of Planned Behavior model adapted from Ajzen 2005

According to the figure above, the explanation is as follows:

Attitude toward the conduct: This idea refers to a person's overall evaluation of the behavior they are considering, regardless of its positive or bad aspects. Regarding travel websites, favorable attitudes can be influenced by things like the website's perceived usefulness, its navigability, and the caliber of the information it offers

Subjective norms: These include a person's sense of the social pressure to engage in a particular conduct or refrain from it. These norms may be impacted by recommendations from friends and family, internet evaluations, and the power of social media influencers in the context of travel websites (Hsu & Huang, 2012).

Perceived behavioral control refers to a person's belief in their own ability to carry out the desired conduct. PBC may be affected by a variety of elements when it comes to travel websites, including technological comfort, knowledge of online booking procedures, and availability of support resources (Amaro & Duarte, 2015).

Researchers and web developers can learn a great deal about the factors influencing users' intents to interact with travel websites by measuring these three TPB components. The creation of interventions and strategies targeted at improving user experience and increasing website utilization can then be based on this invaluable information.

If research shows, for instance, that perceived behavioral control is a strong predictor of using travel websites, web developers should focus their efforts on improving website usability, giving clear instructions, and guaranteeing easily accessible customer service. In a similar vein, marketing initiatives can place a higher priority on influencer partnerships, social media campaigns, and promoting user-generated reviews if subjective norms are found to be important.

Travel Website

The internet has orchestrated a paradigm shift in the way we plan and book our journeys, and travel websites have evolved into indispensable tools for navigating the expansive terrain of destinations, accommodations, and transportation options (Xiang & Gretzel, 2010). These digital platforms have not only transformed the travel industry but have also bestowed upon travelers an unprecedented level of ease and convenience in exploring the world. In this essay, we will delve into the significance of travel websites, dissecting their essential features, benefits, and the impact they've had on the travel sector.

Travel websites encompass a diverse array of features, meticulously crafted to cater to the multifaceted needs of contemporary travelers. These features can be broadly categorized into four main areas:

Information and Inspiration: Travel websites serve as exhaustive repositories of information, furnishing detailed descriptions of destinations, attractions, accommodations, and transportation options. They frequently showcase captivating images and videos, kindling the wanderlust within travelers and motivating them to explore new horizons (Law et al., 2010).

Planning and Booking: Travel websites have streamlined the intricacies of travel planning and booking. Users can effortlessly compare prices, check availability, and secure reservations for flights, hotels, rental cars, and tours. Moreover, they often feature exclusive deals and packages, ensuring travelers have access to cost-effective options (Buhalis & Law, 2008).

Personalization and Customization: Many travel websites employ sophisticated personalization algorithms that tailor recommendations and search results based on individual preferences, travel history, and budget constraints. This personalized approach not only elevates the user experience but also facilitates well-informed decision-making (Xiang & Gretzel, 2010).

Community and Reviews: Travel websites foster a sense of community by incorporating user reviews, ratings, and discussion forums. These features offer valuable insights into the experiences of fellow travelers, enabling users to make informed choices and steer clear of potential pitfalls (Law et al., 2010)

Methodology

Population: The research targets individuals who utilize internet websites for various activities, including gaming, entertainment, and more.

Sample: The research sample is derived from the population using a purposive random sampling method. The selection criterion for the sample is individuals belonging to the Gen-Z demographic, with a total of 120 respondents. For each variable in the study, a sample size of 30 respondents is employed (Creswell, 2013) (Kothari, 2004) (Portney & Watkins, 2015) (Tabachnick & Fidell, 2007).

Questionnaire: The questionnaire utilized in this research is based on the Theory of Planned Behavior and encompasses four key constructs: attitude, subjective norms, perceived behavioral control, and behavioral intention.

Statistics: The statistical analyses in this research were divided into two sections. The first section comprised descriptive statistics, including measures such as mean and standard deviation. The second section focused on hypothesis test statistics, encompassing reliability tests (Cronbach alpha), Pearson correlation, and Multiple Regression analysis.

Research Results

The results of this research are presented in three sections: descriptive statistics, reliability analysis with Cronbach alpha, and multiple regression analysis, respectively. The first part of these results is displayed in the following table:

Table 1 Reliability Analysis

Variable	No. of Item	Cronbach alpha
Attitude	5	.870
Subject norm	3	.834
Control behavior	2	.651
Behavioral Intention	4	.842

According to Table 1, Cronbach alpha values for all variables range from.651 to.870, which is greater than the .60 criterion and indicates strong internal consistency. These findings corroborate the variables' dependability and provide support for following analysis. Researchers can confidently use these factors for further investigation and interpretation in their study. The average and standard deviation of the variable under discussion are shown in the following table.

Table 2 Descriptive of each variable in MRA

Variable	Average	Standard Deviation
Attitude	4.315	.597
Subject norm	4.065	.708
Control behavior	4.063	.785
Behavioral Intention	4.165	.704

The four variables—Attitude, Subject Norm, Control Behavior, and Behavioral Intention—have their descriptive statistics shown in the table.

- With a standard deviation of 0.597, attitude has an average score of 4.315.
- Subject Norm's standard deviation is 0.708 and its average score is 4.065.
- The control behavior score is 4.063 on average, with a 0.785 standard deviation.
- The average score for behavioral intention is 4.165, with a 0.704 standard deviation.

The next part of the results reveals that all variables are suitable for Multiple Regression Analysis. The correlation analysis table is presented as follows:

Table 3 Correlation Analysis

Variable	2. Subject norm	3. Control behavior	4. Behavioral Intention
1. Attitude	.666**	.501**	.720**
2. Subject norm		.667**	.742**
3. Control behavior			.615**
4. Behavioral Intention			

*$p < .05$. **$p < .01$.

According to table 3, The correlation analysis finds strong positive relationships between all variables. Attitude has a significant positive association with Subject Norm (.666**) and Behavioral Intention (.720**). Similarly, Subject Norm has a substantial positive connection with Behavioral Intention (.742 **). Control Behavior has a moderate positive connection with Attitude (.501**), Subject Norm (.667**), and Behavioral Intention (.615**). These findings demonstrate that the variables are interconnected, implying that attitudes, subjective norms, and perceived behavioral control influence people's intentions to engage in the target behavior.

Table 4 Summary of Multiple Regression Analyses for Variables Predicting (n = 120)

Variable	B	SE. B	t
Constant	0.07	0.29	.24
Attitude	0.46	0.09	5.32**
Subject norm	0.36	0.08	4.30**
Control behavior	0.16	0.06	2.41*
R^2		.66	
R^2 *adjust*		.65	
F		74.78**	

*$p < .05$. **$p < .01$.

The multiple regression analysis (MRA) examines the relationship between the behavioral Intension and multiple factor variables. The results indicate that Attitude, Subject Norm, and Control Behavior significantly predict the behavioral Intension. Each factor has a statistically significant regression coefficient (B), indicating the strength and direction of its relationship with the behavioral intention.

Attitude has a positive coefficient of 0.46 (SE = 0.09, t = 5.32, p < .01), suggesting that as attitude increases by one unit, the behavioral intention increases by 0.46 units, holding other variables constant.

Subject Norm also has a positive coefficient of 0.36 (SE = 0.08, t = 4.30, p < .01), indicating that a one-unit increase in Subject Norm leads to a 0.36 unit increase in the behavioral intention, controlling for other variables.

Perceived Control Behavior has a smaller positive coefficient of 0.16 (SE = 0.06, t = 2.41, p < .05), implying a weaker but still significant relationship with the behavioral intention.

The model's overall fit is assessed by the R-squared (R^2) value, indicating the proportion of variance in the behavioral Intention explained by the predictors. Here, the R2 is 0.66, indicating that the behavioral intentions collectively account for 66% of the variance in the behavioral intention. The adjusted R^2 adjusts for the number of predictors in the model and is slightly lower at 0.65.

The F-statistic (F) tests the overall significance of the model, with a significant result (F = 74.78, p < .01) indicating that the factors as a group significantly predict the behavioral intention. The constant term represents the intercept when all factors are zero, with a value of 0.07 (SE = 0.29, t = 0.24), which is not statistically significant.

Discussion and Conclusions

The multiple regression analysis conducted on Behavioral Intention (Y) with Attitude (A), Subject Norm (S), and Control Behavior (CB) provides a comprehensive

understanding of the influential factors shaping individuals' intentions. The regression equation Y=0.07+0.46A+0.36S+0.16CB yields interesting results, suggesting that positive shifts in Attitude, Subject Norm, and Control Behavior are connected with an increase in Behavioral Intention. With a robust R2 value of 0.66, the model has significant explanatory power, implying that the included variables together explain 66% of the variance in Behavioral Intention. These findings have practical significance for decision-makers, allowing them to customize interventions that target certain determinants—such as attitudes and perceived control—to favorably influence behavioral intention. However, admitting potential limits is critical, and further refining and studies are needed to improve the model's precision and applicability.

The regression analysis aligns seamlessly with the Theory of Planned Behavior (TPB), illustrating the contributions of Attitude, Subject Norm, and Control Behavior in predicting Behavioral Intention. These insights offer valuable guidance for designing interventions and strategies grounded in TPB principles. Key approaches may include the modification of attitudes, addressing social norms, and enhancing perceived control. By implementing these strategies, stakeholders can effectively influence and gain a deeper understanding of Behavioral Intention, fostering more targeted and impactful interventions in diverse contexts.

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