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## Perspectives of Tourism Employees on the Implementation of Smart Technologies

**Abstract.** In the context of the ongoing digital transformation that characterizes the contemporary business landscape, the adoption of advanced technologies has become a strategic imperative for organizations. Although such technological investments involve substantial risks, they also present significant opportunities for organizational growth and enhanced competitiveness. Failure to keep pace with technological innovations may severely undermine a firm's long-term viability in an increasingly competitive environment. In line with this perspective, the present study investigates how tourism employees perceive smart technologies by employing the Technology Acceptance Model (TAM) together with the positive dimensions of Technology Readiness. Drawing on data collected from a convenience sample of 388 respondents, the findings reveal that the intention to adopt smart technologies is positively influenced by perceived usefulness, optimism, and innovativeness. These results highlight the critical role of both cognitive and attitudinal factors in shaping employees' willingness to engage with smart technologies, thereby offering practical and theoretical implications for promoting technology adoption in the tourism sector.

**Keywords:** smart technologies, tourism employees, technology acceptance, technology readiness

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## 1. Introduction

Technology has become a core element of modern tourism, fundamentally reshaping strategic practices across the industry (Gonzalez et al., 2020; Dávid & El Archi, 2024; Gonzales-Santiago et al., 2024). The increasing adoption of smart technologies by tourism enterprises is largely driven by continuous digital advancements, sector-specific transformations, and evolving consumer demands (Cheng & Cho, 2011). While these technologies offer considerable advantages, their transfer and integration into organizational systems present substantial challenges (Napierała et al., 2020). As Marler et al. (2009) argue, realizing the expected returns on such investments often requires full-scale adoption. Simply acquiring new technologies is insufficient; meaningful outcomes depend on effective implementation (Jeffers, 2010), which, in turn, requires the commitment and support of individual employees — even when initiatives are led from the top (Brandon-Jones & Kauppi, 2018). Darsono (2005) further notes that the true value of technological innovation emerges only when end-users actively engage with it in alignment with operational and strategic goals.

However, adopting smart technologies is resource-intensive, and requires time, financial capital, and employee adaptation. User resistance can increase operational costs and hinder expected performance gains (Al-Qaysi et al., 2020). Despite these barriers, smart technologies continue to serve as valuable tools for managing operational complexity and enhancing service delivery within the tourism sector (Oikonomou et al., 2022). This is especially relevant in technologically emerging regions, where understanding how tourism employees adapt to innovation is crucial (Cimbaljević et al., 2024). Nevertheless, as Güven and Şahin (2023) and Qui et al. (2024) emphasize, rapid technological advancement are not automatically accepted by employees or associated with corresponding competence development.

To understand technology adoption from an individual perspective, Davis (1986) proposed the Technology Acceptance Model (TAM), which explains how psychological factors influence decisions to embrace innovation. Building on the Theory of Reasoned Action and the Theory of Planned Behavior, TAM highlights two core perceptions: perceived usefulness and perceived ease of use (Chau, 1996; Marangunić & Granić, 2015; Hasni et al., 2019; Vorm & Combs, 2022). These constructs have become foundational in interpreting individual adoption behavior (Lu et al., 2003; Aburbeian et al., 2022). As Natasia et al. (2022) note, behavioral intention is strongly related to individuals' beliefs about how beneficial and user-friendly a technology appears. Specifically, perceived usefulness refers to the belief that using a technology will enhance job performance, whereas perceived ease

of use denotes the belief that it will be free of physical or cognitive strain (Keni, 2020; Na et al., 2021).

In parallel, the concept of readiness for change — as introduced by Dalton and Gottlieb (2003) — refers to the cognitive and emotional states of organizational members, encompassing their beliefs, attitudes, and intentions regarding transformation. It involves a psychological evaluation of whether individuals are likely to support or resist change (Armenakis et al., 1993). Complementing this, the concept of technology readiness (TR) reflects users' general attitudes and predispositions toward technology adoption (Parasuraman & Colby, 2015). According to the technology readiness index (TRI), traits such as optimism and innovativeness facilitate adoption, while discomfort and insecurity act as inhibitors (Walczuch et al., 2007; Godoe & Johansen, 2012; Shin & Lee, 2014; Chang & Chen, 2021; Chiu & Cho, 2021). In contrast, discomfort and insecurity capture users' unease and skepticism toward technology, often linked to feelings of lost control or concerns about reliability (Bakırtaş & Akkaş, 2017).

Park and Zhang (2022), who highlight a significant link between generalized technology beliefs and actual acceptance, further support the connection between technological readiness and adoption. While TAM focuses on attitudes toward specific systems, TRI captures broader predispositions (Lin et al., 2007; Ferreira et al., 2014). To reconcile these perspectives, the technology readiness and Acceptance Model (TRAM) was developed (Kampa, 2023). This integrated framework allows researchers to explore how psychological traits interact with perceived usefulness and ease of use, offering a more comprehensive understanding of adoption behavior (Chung et al., 2015). For instance, high TR scores are associated with stronger intention to adopt due to positive cognitive evaluations (Buyle et al., 2018), while also facilitating more seamless integration into daily work routines (Chen & Lin, 2018).

Behavioral intention, as conceptualized in the Theory of Planned Behavior (TPB), stems from individuals' expectations regarding the consequences of their actions (Chen & Li, 2010). Teo (2012) emphasizes that individuals are more likely to exert effort toward behaviors they already intend to perform — intention thus serves as a reliable predictor of actual use. Within TAM, intention is largely shaped by perceived usefulness and ease of use (Ajzen, 2020), though structural dimensions of TR also contribute to overall adoption levels (Na et al., 2021).

Although rapid technological progress offers significant potential for service innovation — enhancing speed, connectivity, and user experience — service industries remain particularly vulnerable to disruption due to the concurrent nature of production and consumption (Parasuraman & Colby, 2015; Clausning & Holmes, 2010). This makes timely adaptation imperative for tourism organizations

(Sun et al., 2019). In this context, employees' preparedness becomes a determining factor, reflecting their awareness that technological systems must be embedded within suitable organizational structures (Wiastuti et al., 2024). As Cimbaljević et al. (2024) argue, tourism professionals must continually update their skills and technological competencies to stay aligned with sectoral transformation

Accordingly, this study investigates behavioral intentions of tourism employees regarding the adoption of smart technology by integrating TAM and the positive dimensions of TRI (i.e. optimism and innovativeness). Specifically, the study addresses the following research questions:

**RQ1:** How do optimism and innovativeness (as positive dimensions of technology readiness) influence perceived usefulness, perceived ease of use, and tourism employees' intention to use smart technologies?

**RQ2:** Does perceived usefulness mediate the relationship between positive technology readiness and the intention to use smart technologies?

**RQ3:** Does perceived ease of use mediate the relationship between positive technology readiness and the intention to use smart technologies?

This study explores how key psychological and perceptual factors — namely technological optimism, innovativeness, perceived usefulness, and perceived ease of use — influence employees' intention to adopt smart technologies. The theoretical model focuses exclusively on the positive dimensions of technology readiness (TR), namely optimism and innovativeness, due to their demonstrated relevance in capturing affirmative attitudes toward technological change. Prior research supports this conceptual focus. Ismail et al. (2011) emphasize that these positive TR traits play a crucial role in determining users' readiness to embrace emerging technologies. Optimism, in particular, has been found to significantly predict both intention to use and actual adoption (Zhao et al., 2025), as it reflects a belief in technology's capacity to improve quality of life, often shaped by prior positive experiences and familiarity (Krier & Gillette, 1985). This favorable orientation is aligned with broader societal trends that frame technology as a progressive force with minimal downside risks (Clark et al., 2016; Danaher, 2022). Similarly, innovativeness reflects a proactive disposition to explore and manage the uncertainties associated with new technologies (Yi et al., 2006; Thakur et al., 2016). Importantly, the decision to exclude the negative dimensions of TR — discomfort and insecurity — was theoretically informed and supported by empirical evidence. Ekşioğlu and Ural (2022) found that these inhibiting factors did not significantly affect perceived usefulness or perceived ease of use. Blut and Wang (2020) further argue that motivational dimensions of TR are generally more influential than in-

hibiting ones in shaping technology-related perceptions and behavioral intentions. Furthermore, in an era of rapid technological development, users tend to adapt quickly, which may diminish the influence of negative predispositions. As such, the exclusion of discomfort and insecurity is consistent with recent literature and does not compromise the conceptual validity or explanatory power of the model.

To complement these psychological predispositions, the Technology Acceptance Model (TAM) is employed due to its theoretical clarity and parsimony. Its two central constructs — perceived usefulness and ease of use — offer a streamlined yet effective means of explaining user behavior, particularly in studies where sample sizes are moderate or where expanding the model may risk analytical complexity (Holden & Karsh, 2010). By integrating positive TR with TAM, which involves combining dispositional traits with cognitive appraisals, one can gain a more holistic understanding of technology acceptance. This approach helps to overcome the limitations of relying on either model in isolation and provides a more comprehensive framework for assessing technology adoption (Lin et al., 2023).

Employee engagement is critically important for successful digital transformation, particularly in environments characterized by high uncertainty. As emphasized by Doll et al. (1998), one of the central challenges in technology adoption research is understanding why employees accept some systems while resisting others. Even when technological innovations are consistent with strategic objectives, individual responses can vary widely. Previous studies have shown that positive traits associated with technology readiness — such as optimism and innovativeness — generally support favorable attitudes toward technology adoption. However, these traits may not always fully eliminate negative emotional reactions, such as frustration, confusion, or stress, during the adaptation process (Ramayah & Lo, 2007). In such cases, resistance behaviors may emerge (Wang et al., 2017). Therefore, gaining a deeper understanding of how positive technology readiness influences technology acceptance is essential for ensuring successful integration.

While smart technologies are becoming essential to tourism operations, research has predominantly centered on managerial and consumer perspectives (Baltaci et al.; 2024; Khan & Khan, 2025). As a result, there is a knowledge gap regarding how employees perceive and respond to technological change. This study addresses this gap through the TRAM framework, focusing on tourism workers in Antalya, a globally significant destination in Turkey, and a national leader in digital tourism transformation. As a region with extensive infrastructure and strategic importance, Antalya offers an ideal setting for exploring how innovation is experienced at the employee level (Napierała et al., 2020). The study's contextual focus strengthens both the practical and policy relevance of its findings.

## 2. Theoretical Framework and Hypothesis Development

### 2.1. Perceived Usefulness and Perceived Ease of Use

Building on the foundational constructs of the Technology Acceptance Model, prior research highlights a consistent relationship between perceived ease of use and perceived usefulness. While both factors contribute to users' evaluations, studies suggest that ease of use often serves as a cognitive precursor to perceived usefulness — shaping the extent to which users believe the technology will improve their performance (Henderson & Divett, 2003; Bakı et al., 2018). When a system is considered simple and intuitive, users are more likely to recognize its practical value. This relationship is further supported by evidence suggesting that user-friendly technologies enhance task efficiency and promote greater acceptance (Saade & Bahli, 2005; Ramayah & Lo, 2007; Letchumanan & Muniandy, 2013; Chen & Aklikokou, 2020; Gupta et al., 2021; Chiu & Cho, 2021; Peng & Yan, 2022; Raza et al., 2017). Based on these findings, the following hypothesis is proposed:

**H1:** Perceived ease of use has a positive impact on perceived usefulness

### 2.2. Technology Readiness Index (TRI)

Optimism reflects confidence in technology's ability to enhance efficiency, flexibility, and control, thereby shaping perceptions of usefulness. Innovativeness, as a trait, reflects a willingness to engage with new technologies, which may lower perceived complexity and increase ease of use (Lin & Chang, 2011). According to Peng and Yan (2022), higher levels of technology readiness — particularly its positive dimensions — are associated with more favorable evaluations of both the usefulness and ease of use of technological systems. However, empirical findings on the specific effects of optimism and innovativeness remain somewhat mixed. For example, Buyle et al. (2018) found that while optimism did not significantly influence either perceived usefulness or ease of use, innovativeness showed a positive relation with both constructs. In contrast, Kim and Chiu (2019) reported that both optimism and innovativeness were positively related to perceptions of usefulness and ease of use. Similarly, Larasati et al. (2017) observed that optimism was positively linked only to perceived usefulness, whereas innovativeness influenced both TAM dimensions. Supporting this pattern, Mahgfiroh et al. (2024) identified a significant relationship between positive technology readiness and perceived usefulness alone. Drawing upon this literature, the following hypotheses are proposed:

- H2: Optimism has a positive impact on perceived usefulness.
- H3: Innovativeness has a positive impact on perceived usefulness.
- H4: Optimism has a positive impact on perceived ease of use.
- H5: Innovativeness has a positive impact on perceived ease of use

### 2.3. Intention to Use

The likelihood of a person adopting smart technologies is often reflected in their behavioral intention to engage with such tools (Suki & Suki, 2011). Within the Technology Acceptance Model (TAM), perceived usefulness and perceived ease of use are widely recognized as core antecedents of behavioral intention, exerting either direct or indirect effects on adoption decisions (Abdullah et al., 2016; Chen & Aklirikou, 2020; Hong et al., 2021; Gupta et al., 2021; Chiu & Cho, 2021; Aleassa et al., 2022). Nonetheless, not all findings are consistent. For instance, Larasati et al. (2017); Alshammari & Babu (2025) found no significant relationship between perceived ease of use and behavioral intention. Furthermore, prior research suggests that perceived usefulness tends to be a more influential factor in shaping intention compared to perceived ease of use (Saade & Bahli, 2005; Kucukusta et al., 2015; Kim & Chiu, 2019).

- H6: Perceived usefulness has a positive impact on intention to use.
- H7: Perceived ease of use has a positive impact on intention to use.

According to Flavian et al. (2022), individuals with an optimistic outlook generally exhibit a balanced and trusting perspective toward technological developments. Innovativeness is often seen as a precursor to adoption, as innovative individuals are more inclined to embrace new technologies — even when the outcomes remain uncertain. Godoe and Johansen (2012) also emphasize the importance of technology readiness in influencing actual usage intention. However, findings on the individual impact of optimism and innovativeness remain mixed. Seong and Hong (2022), for instance, found no significant relationship between optimism and the intention to use technology, while innovativeness was shown to have a positive effect. In contrast, Negm (2023); O'Hern and Louis (2023) highlighted the role of optimism in encouraging technology engagement. Similarly, Ahmed et al. (2024) linked innovativeness with a higher intention to adopt technology. Drawing on these insights, the following hypotheses are proposed.

- H8: Optimism has a positive impact on intention to use.
- H9: Innovativeness has a positive impact on intention to use.



2.4. Mediation role of perceived usefulness and perceived ease of use

Chen and Aklikokou (2020) identify perceived usefulness as a fundamental factor influencing end-user satisfaction. Complementarily, Widiar et al. (2023) point out that perceived ease of use significantly contributes to shaping behavioral intentions, especially when users possess the necessary competencies to operate technological systems. Previous research suggests that such perceptions act as mediators between external influences — such as individual user characteristics — and behavioral intentions related to technology adoption (Lin & Chang, 2011).

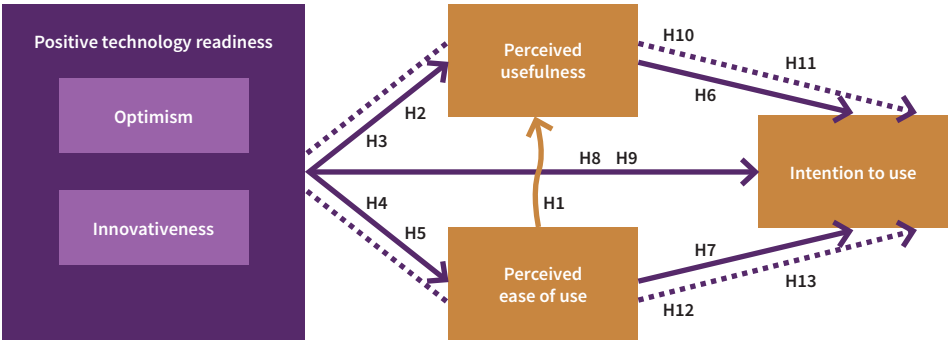


Fig. 1. Theoretical model  
\*Arrows in the model represent hypothesized directional relationships, while mediation effects are indicated with dashed lines.  
Source: Authors' elaboration

Within the framework of the Technology Acceptance Model (TAM), technology readiness is believed to strengthen perceptions of both usefulness and ease of use, thereby enhancing the likelihood of adoption (Blut & Wang, 2020). This mediating effect has been further supported by empirical findings from Lin et al. (2007), Damerji and Salimi (2021), and Cimbalević et al. (2024), who observed indirect pathways linking readiness to adoption through these perceptual constructs. In a similar vein, Almaiah et al. (2022) argue that individual predispositions and system-specific features may influence usage intentions either directly or via mediating mechanisms. Based on this theoretical and empirical groundwork, the following mediation hypotheses are proposed:

- H10: Perceived usefulness mediates the relationship between optimism and intention to use
- H11: Perceived usefulness mediates the relationship between innovativeness and intention to use



**H12:** Perceived ease of use mediates the relationship between optimism and intention to use

**H13:** Perceived ease of use mediates the relationship between innovativeness and intention to use

### 3. Research Method

#### 3.1. Data Collection Method

The study sample included 388 employees from the tourism sector in the Antalya region. Antalya was selected because of its strategic importance within the tourism industry and its ongoing efforts towards digital transformation, making it an ideal context for examining technology adoption among tourism employees (Napierała et al., 2020). To ensure anonymity, no personal identifying information was requested from participants. Respondents were given a link to a Google Forms questionnaire with no imposed time constraints for survey completion. The data collection period spanned from July 27 to December 28, 2024. Responses were measured on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) across five distinct dimensions.

#### 3.2. The Questionnaire

The measurement instruments utilized in this study were adapted from those used in previous studies. The constructs of perceived usefulness and perceived ease of use were operationalized using scales developed by Davis (1989), with each construct comprising 14 items. The measures for optimism and innovativeness were drawn from the work of Parasuraman and Colby (2015), consisting of 10 items assessing optimism and 7 items evaluating innovativeness. Additionally, the intention to use was assessed using four items adapted from the study by Schierz et al. (2010).

#### 3.3. Respondent Characteristics

The sample consisted of 388 employees from accommodation establishments and travel agencies.

Table1. Sample demographic statistics (n=388)

Variables		n	%	Variables		n	%
Gender	Male	222	57.2	Education	High School	6	1.5
	Female	166	42.8		Associate's Degree	49	12.6
Age	19–30 age group	170	43.8		Bachelor's Degree	270	69.6
	31–50 age group	191	49.2		Postgraduate Degree	63	16.2
	51–64 age group	27	7.0	Income	Low	43	11.1
Field of Activity	Accommodation	193	49.7		Moderate	278	71.6
	Travel	195	50.3		High	67	17.3

Source: Authors' elaboration

### 3.4. Common Method Variance

Method variance refers to a systematic error that stems from the measurement method itself rather than the constructs being examined (Baumgartner et al., 2021). A specific type of this bias, known as common method variance (CMV), can occur when both predictor and outcome variables are collected from the same source, potentially leading to artificially inflated correlations (Cooper et al., 2020). Prior research has suggested that such inflation may result in misleading conclusions, as part of the correlation may reflect methodological artifacts rather than genuine associations (Kline et al., 2000). One commonly used approach for detecting CMV is Harman's single-factor test, which involves conducting an exploratory factor analysis to assess whether a single latent factor dominates the variance among items (Teo, 2011). CMV is considered problematic if all measurement items load onto a single factor or if the first factor explains more than 50% of the total variance (Bozionelos & Simmering, 2021). In the current study, the first unrotated factor accounted for 28.09% of the total variance, indicating that CMV is unlikely to be a serious concern.

## 4. Assessment of the Measurement Model

Assessing the normality assumption is crucial for selecting the appropriate statistical test, whether parametric or non-parametric (Orcan, 2020). Additionally, the mean value should only be reported when the data meet the criteria for normal distribution; otherwise, the mean may not accurately reflect the dataset (Mishra et al., 2019). A violation of normality is indicated when skewness and kurtosis coefficients exceed  $\pm 2$  (Demir, 2022). Table 2 presents skewness and kurtosis coefficients, their standard errors, means ( $\bar{X}$ ), and standard deviations (SD) for items corresponding to each factor (subscale).

Table 2. Descriptive statistics of the items corresponding to each subscale

Factors	Skewness	SE <sup>1</sup>	Kurtosis	SE <sup>2</sup>	$\bar{X}$	SD
Perceived Usefulness	-1.294	0.124	1.856	0.247	4.578	0.4814
Perceived Ease of Use	1.011	0.124	0.290	0.247	2.187	0.9859
Optimism	-0.893	0.124	0.627	0.247	4.452	0.5353
Innovativeness	-0.690	0.124	0.103	0.247	3.849	0.7610
Intention to Use	-1.399	0.124	1.829	0.247	4.526	0.6290

<sup>1</sup>standard error of skewness ( $\sqrt{6/n}$ ), <sup>2</sup>standard error of kurtosis ( $\sqrt{24/n}$ ), where n denotes sample size

Source: Authors' elaboration

When evaluating the suitability of a dataset for exploratory factor analysis, both sample size and the strength of inter-variable correlations must be taken into account (Hadi et al., 2016). In this context, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy should exceed 0.7, and Bartlett's test of sphericity, which assesses the appropriateness of factor analysis by examining the correlation matrix, should yield a significance level below 0.05 (Rossoni et al., 2016). Based on these criteria, the dataset was considered appropriate for conducting factor analysis.

Table 3. KMO and Bartlett's test results

KMO Measure of Sampling Adequacy	0.925	
Bartlett's Test of Sphericity	Mean chi-square	10874.606
	Df	1176
	Sig.	0.000

Source: Authors' elaboration

The process of factor analysis and reliability testing was conducted in line with well-established criteria in the literature. To ensure discriminant validity, items displaying cross-loadings greater than 0.10 on multiple factors were eliminated, as recommended by Guvendir and Ozkan (2022). Furthermore, following the guideline by Howard (2016), items were retained only if the difference between their primary and secondary loadings was at least 0.20. In accordance with Sigudla and Maritz (2023), items with factor loadings below 0.40 were also excluded from further analysis. Factor loadings represent the strength of association between each item and its underlying construct, and loadings above 0.30 are generally considered to indicate a moderate relationship (Tavakol and Wetzel, 2020).

Based on the results of factor analysis, 16 items were eliminated, including 4 items relating to perceived usefulness, 7 relating to perceived ease of use, 4 relating to optimism, and 1 relating to innovativeness. Consequently, the final measurement model consisted of 33 items.

To evaluate the reliability and internal consistency of the constructs, both Cronbach's alpha and composite reliability (CR) were calculated. According to Hair et al. (2019), Cronbach's alpha values above 0.60 are acceptable, while Kissi et al. (2022) suggest a higher threshold of 0.70 for satisfactory internal consistency. Construct reliability was established for CR values of 0.60 or higher and average variance extracted (AVE) values of at least 0.50, as recommended by Ahmad et al. (2016). Although the AVE values for perceived usefulness, innovativeness, and optimism were slightly below 0.50, their CR values exceeded 0.60. According to Huang et al. (2013), in such cases, convergent validity can still be considered acceptable.

Table 4. Diagnostics of the measurement model

Items	Factor Loading	Cronbach's Alpha ( $\alpha$ )	CR	AVE
Perceived Usefulness		0.903	0.907	0.496
Using smart technologies increases my job performance.	0.801			
Using smart technologies enhances my effectiveness on the job.	0.792			
Using smart technologies increases my productivity.	0.776			
Overall, I find the smart technologies useful in my job.	0.775			
Using smart technologies saves me time.	0.758			
Smart technologies address my job-related needs.	0.755			
Smart technologies enable me to accomplish tasks more quickly.	0.741			
Using smart technologies improves the quality of the work I do.	0.696			
Using smart technologies gives me greater control over my work.	0.696			
Using smart technologies reduces the time I spend on unproductive activities.	0.628			
Perceived Ease of Use		0.909	0.912	0.604
I make errors frequently when using smart technologies.	0.893			
Interacting with the smart technologies is often frustrating.	0.888			
I often become confused when I use the smart technologies.	0.866			
I find it cumbersome, to use the smart technologies.	0.837			
I need to consult the user manual often when using smart technologies.	0.774			
Interacting with the smart technologies requires a lot of my mental effort.	0.748			
Smart technologies are rigid and inflexible to interact with.	0.638			
Innovativeness		0.820	0.848	0.483
I can usually figure out new high-tech products and services without help from others	0.780			
In general, I am the first among my colleagues to acquire smart technology when it appears	0.746			
I enjoy the challenge of figuring out high-tech gadgets (systems and applications)	0.746			
Other people come to me for advice on smart technologies	0.745			

Items	Factor Loading	Cronbach's Alpha ( $\alpha$ )	CR	AVE
I find I have fewer problems than other people when using smart technologies at work	0.735			
I keep up with the latest technological developments in the business I am engaged in	0.639			
Optimism		0.846	0.826	0.444
Technology makes me more efficient in my occupation.	0.784			
I like computer programs that allow me to tailor things to fit my own needs	0.766			
Products and services that use smart technologies are much more convenient to use.	0.757			
Learning about technology can be as rewarding as the technology itself	0.687			
I prefer to use the most advanced technology available.	0.659			
Technology gives me more freedom of mobility	0.611			
Intention to Use		0.895	0.889	0.672
I am willing to use smart technologies in the near future.	0.909			
I am likely to use smart technologies in the near future.	0.890			
I intend to use smart technologies when the opportunity arises.	0.889			
Given the opportunity, I will use smart technologies.	0.798			

Source: Authors' elaboration

The assessment of model fit in structural equation modeling involves analyzing various fit indices (Marsh and Balla, 1994), which are used to conduct confirmatory factor analysis (CFA). The fit indices along with their corresponding standard thresholds are presented in Table 5.

Table 5. Goodness-of-fit indices and references obtained from CFA

Index	$\chi^2/df$	RMSEA <sup>1</sup>	NFI <sup>2</sup>	CFI <sup>3</sup>	GFI <sup>4</sup>	AGFI <sup>5</sup>
Value	2.016	0.051	0.874	0.932	0.861	0.838
Reference range	$2 \leq x \leq 5$	$0.05 \leq x \leq 0.08$	$0.83 \leq x \leq 0.95$	$0.90 \leq x \leq 0.97$	$0.80 \leq x \leq 0.95$	$0.80 \leq x \leq 1$

\* Reference ranges come from Schermelleh-Engel et al., 2003; Gupta and Singh, 2014; Wang et al., 2020; Firat et al., 2021

<sup>1</sup>Root Mean Square Error of Approximation, <sup>2</sup>Normed Fit Index, <sup>3</sup>Comparative Fit Index, <sup>4</sup>Goodness of Fit, <sup>5</sup>Adjusted Goodness of Fit

Source: Authors' elaboration

To confirm discriminant validity, the correlations between constructs should not exceed 0.85. (Ahmad et al., 2016). Discriminant validity was assessed using the Fornell–Larcker criterion by comparing the square root of the Average Variance Extracted (AVE) for each construct with the correlations between constructs. According to this criterion, the square root of the AVE for each construct (on the diagonal) should be greater than its correlations with other constructs (off-diagonal

values) (Hamid et al., 2017). As shown in Table 6, most constructs meet this requirement, indicating adequate discriminant validity. While the square root of AVE for Optimism (0.666) is somewhat lower than its correlation with Usefulness (0.828), this difference is relatively small and may not pose a significant concern for the discriminant validity of the model.

Table 6. Discriminant validity assessment

Factors	AVE	1	2	3	4	5
Innovativeness (1)	0.483	<b>0.695</b>				
Usefulness (2)	0.496	0.364	<b>0.704</b>			
Ease of Use (3)	0.604	-0.144	-0.324	<b>0.777</b>		
Optimism (4)	0.444	0.506	0.828	-0.406	<b>0.666</b>	
Intention to Use (5)	0.672	0.406	0.531	-0.269	0.625	<b>0.820</b>

Source: Authors' elaboration

#### 4.1. Key Findings

Regression analysis is a commonly used statistical technique to assess the relationship between independent variables and a dependent variable (Lio & Liu, 2020). Regression statistics for the hypotheses tested in the study are presented in Table 7. Taking into account values of  $R^2$ , which expresses the proportion of variance in the dependent variable that is explained by the independent variables, it can be concluded that the strongest association exists between optimism and perceived usefulness ( $R^2 = 0.479$ ,  $p < 0.05$ ), while the weakest was observed between innovativeness and perceived ease of use ( $R^2 = 0.015$ ,  $p < 0.015$ ). Additionally, perceived ease of use was found to be negatively correlated with all other variables, which means that the findings provide only partial support for the proposed hypotheses (see Fig. 1).

Table 7. Regression analysis results

Hypotheses	Independent variable	Dependent variable	$\beta^1$	p	$R^2$	Adjusted $R^2$	F-Value	Hypothesis status
H1	Ease of use	Usefulness	-0.291	0.000	0.085	0.082	35.670	not supported
H2	Optimism	Usefulness	0.692	0.000	0.479	0.477	354.222	supported
H3	Innovativeness	Usefulness	0.316	0.000	0.100	0.097	42.756	supported
H4	Optimism	Ease of use	-0.332	0.000	0.110	0.108	47.774	not supported
H5	Innovativeness	Ease of use	-0.121	0.017	0.015	0.012	5.747	not supported
H6	Usefulness	Intention to use	0.492	0.000	0.242	0.240	123.001	supported

Hypotheses	Independent variable	Dependent variable	$\beta^1$	p	R <sup>2</sup>	Adjusted R <sup>2</sup>	F-Value	Hypothesis status
H7	Ease of use	Intention to use	-0.232	0.000	0.054	0.051	21.876	not supported
H8	Optimism	Intention to use	0.555	0.000	0.308	0.307	172.103	supported
H9	Innovativeness	Intention to use	0.383	0.000	0.147	0.145	66.397	supported

<sup>1</sup>standardised coefficients are regression estimates showing how many standard deviations the dependent variable is expected to change when the independent variable changes by one standard deviation

Source: Authors' elaboration

Mediation analysis is conducted to understand and explain how an independent variable (X) influences a dependent variable (Y) through a mediating variable (M). The mediator acts as the mechanism through which X affects Y, establishing a causal pathway between them (Igartua and Hayes, 2021). According to Hayes' criteria, the fact that the confidence interval does not include zero indicates a significant mediation effect (Molina-López et al., 2020). Based on this criterion, hypotheses H10, H11, and H13 are supported, while hypothesis H12 is not. Specifically, optimism exerts a direct effect on the intention to use, which is not mediated by perceived ease of use.

Table 8. Mediation effect of perceived usefulness and perceived ease of use

Hypothesis	Mediator	X and Y	$\beta$	SE	BootLLCI <sup>1</sup>	BootULCI <sup>2</sup>	Hypothesis status
H10	Usefulness	Optimism (X) Intention to use (Y)	0.1675	0.0656	0.0436	0.3050	supported
H11	Usefulness	Innovativeness (X) Intention to use (Y)	0.1074	0.0235	0.0644	0.1557	supported
H12	Ease of use	Optimism (X) Intention to use (Y)	-0.0207	0.0173	-0.0120	0.0566	not supported
H13	Ease of use	Innovativeness (X) Intention to use (Y)	0.0188	0.0096	0.0028	0.0403	supported

<sup>1</sup>bootstrap lower limit confidence interval, <sup>2</sup>bootstrap upper limit confidence interval

Source: Authors' elaboration

## 5. Discussion

This study, guided by the technology readiness and Technology Acceptance Model frameworks, explored these dynamics among tourism employees. In addressing RQ1, which investigated how optimism and innovativeness affect perceived usefulness, ease of use, and behavioral intention, the findings present a mixed picture. Optimism and innovativeness were found to be positively associated with both perceived usefulness (H2, H3) and intention to use (H8, H9), aligning with prior



research (Walczuch et al., 2007; Rahman et al., 2017). These traits appear to enhance employees' openness to engage with technology and recognize its value in their work lives, consistent with earlier findings on the benefits of high technology readiness (Amoroso & Lim, 2015; Alkawsu et al., 2021).

Contrary to theoretical expectations based on the Technology Acceptance Model (Davis, 1989), the study revealed negative associations between perceived ease of use and several key variables, including optimism, innovativeness, perceived usefulness, and intention to use (H1, H4, H5, H7 — all not supported). These inverse relationships suggest that individuals with higher levels of optimism and innovativeness may have encountered greater difficulty or dissatisfaction when interacting with smart technologies, particularly during early adoption stages.

A possible explanation for this unexpected pattern lies in the operationalization of the ease of use construct. The measurement included negatively worded items that emphasized frustration, confusion, and mental effort (Chen et al., 2022), which may have shaped participants' responses toward perceptions of difficulty rather than ease. According to Grevet et al. (2023), ease of use is closely linked to the concept of effort expectancy, reflecting the perceived effort required to interact with a system. In this context, the findings of Gunavan et al. (2019), who reported a negative relationship between ease of use and both attitude and behavioral intention, provide supporting evidence for the above result.

Moreover, the negative phrasing of the items (e.g., "I make errors frequently"; "Interacting is often frustrating") may have heightened respondents' sensitivity to system challenges, especially among those with limited prior exposure or inconsistent experiences with similar technologies. As a result, perceived ease of use may have functioned more as an indicator of perceived difficulty, thereby reversing the expected direction of its relationships.

These findings highlight a broader issue: smart technologies, despite their functional benefits, are not always perceived as intuitive or user-friendly in the early stages of use. Prior studies have shown that ease of use perceptions tend to improve as users gain familiarity and confidence through repeated interaction (Saade & Kira, 2007). Similarly, Krier and Gillette (1985) note that technological optimism is often rooted in direct experience rather than abstract expectations. From this perspective, continued engagement and hands-on use may be essential for reducing initial barriers and fostering more favorable perceptions over time (Clark et al., 2016; Jokisch et al., 2020).

Finally, the positive link between perceived usefulness and intention to use (H6 — supported) underscores that utility remains a strong driver of adoption, even when ease of use is lacking. This aligns with Godoe & Johansen (2012); Alshammari & Babu (2025), who emphasize that users are often willing to tolerate

complexity if the technology offers clear benefits. As seen in this study, younger, educated tourism employees (93% of those aged 19–50 and 85.8% of those holding higher education degrees) may be particularly inclined to engage with smart technologies when they recognize functional value, even if usability falls short

The results provide empirical support for hypotheses H10 and H11, confirming that perceived usefulness mediates the relationship between optimism, innovativeness, and intention to use. Additionally, hypothesis H13 was supported, indicating that perceived ease of use serves as a mediator between innovativeness and intention to use. However, hypothesis H12 was not supported, since perceived ease of use was not found to have a statistically significant mediator between optimism and intention to use. Prior research (Lin et al., 2007; Jin, 2020; Khashan et al., 2025) has emphasized that constructs from the Technology Acceptance Model often act as mediators between individual characteristics — such as technology readiness — and technology adoption behaviors. Consequently, a strong association between optimism and intention to use is expected, since optimism can help reduce perceived barriers to adoption. Employees with positive attitudes tend to recognize the practical benefits of technology in their work, facilitating acceptance despite potential usability challenges. Lin and Chang (2011) note that optimistic individuals generally focus more on the advantages of technology rather than its limitations, while Cimbalević et al. (2024) argue that optimistic users maintain favorable perceptions of technology regardless of its complexity or ease of use. Addressing RQ2 and RQ3, the mediation analyses found perceived usefulness to be a statistically significant mediator between both optimism and innovativeness — key dimensions of technology readiness — and intention to use smart technologies. This suggests that employees who are optimistic and innovative are more likely to adopt smart systems when they perceive these technologies as functionally beneficial for their professional tasks. Conversely, perceived ease of use was found to mediate only the relationship between innovativeness and intention to use, with no significant mediating effect observed for optimism.

## 6. Conclusion and Recommendations

The rapid adoption of technology in the tourism sector has been largely driven by evolving consumer expectations and the operational challenges recently encountered by tourism enterprises. The successful development of a smart tourism ecosystem depends not only on the presence of skilled personnel but also on the implementation of cohesive and well-structured organizational frameworks.

However, managerial support for technological initiatives does not automatically ensure quick or effective adoption by employees. At this point, individual user characteristics and the inherent attributes of the technology itself become critical, as the effective integration of intelligent systems is contingent upon employees' readiness and willingness to engage with innovation.

Although the adoption of advanced technological systems entails considerable financial investment, in a highly competitive tourism market smart technologies can offer a decisive strategic advantage. These innovations enable more personalized service experiences and support sustainable operational practices. Particularly during periods of high demand, such technologies assist employees by streamlining routine tasks, reducing workload-related stress, and ultimately contributing to increased job satisfaction and overall well-being. Given the complexity and susceptibility to error inherent in tourism operations, the integration of technology presents an opportunity to enhance both efficiency and service quality. Therefore, tourism organizations must invest in robust technological infrastructure while cultivating an internal culture that encourages and supports employees in effectively utilizing such innovations.

How smart technologies are received and implemented within tourism organizations also depends on cultural context. Perceptions of technology are deeply embedded within cultural norms and influenced by a society's broader level of technological advancement. The extent to which a community is accustomed to engaging with digital tools significantly affects employees' levels of readiness and acceptance. Consequently, technology adoption extends beyond individual preferences and is shaped by collective societal values and stages of socio-technological development. Furthermore, the growing integration of smart technologies across various organizational departments highlights the need for future research to include a more diverse array of participants in order to capture the full scope of influencing factors.

This study has several limitations that should be acknowledged when interpreting the findings. First, it was conducted within a specific geographic and sectoral context — namely, tourism employees working in travel agencies and accommodation services in the Antalya region. This focus may limit the generalizability of the results, as employee perceptions and experiences with smart technologies could vary across different industries, organizational structures, and cultural settings. The scope of future research in this field should be extended by including diverse sectors, regions, and organizational types within and beyond the tourism industry to enhance external validity.

Second, the questionnaire did not contain questions about organizational details, such as hotel size, chain affiliation, or travel agency classification (e.g., tour operators vs. intermediaries). These contextual factors are likely to influence the de-

gree and nature of smart technology adoption. Their omission restricts the depth of analysis regarding how organizational characteristics shape employees' acceptance of technology. Subsequent studies could benefit from incorporating such variables to offer more nuanced insights.

Third, only the positive dimensions of technology readiness — optimism and innovativeness — were included in the model, while the negative dimensions — discomfort and insecurity — were excluded. Although this decision was theoretically informed and supported by prior empirical research, it may have limited the model's ability to capture the full range of users' psychological responses to technology. Including negative readiness traits in future studies could provide a more balanced understanding of both acceptance and resistance, particularly in environments where skepticism toward technology is more prevalent.

Although the original Technology Acceptance Model (TAM) provided a suitable and parsimonious framework for this study, future research could benefit from employing extended models such as TAM2 or TAM3. These enhanced frameworks incorporate additional external factors, such as social influence, cognitive instrumental processes, and facilitating conditions, which may provide further insight into the complex dynamics influencing technology adoption in tourism contexts. These extended models may also help to uncover the moderating effects of organizational and socio-cultural variables, particularly as the sector continues to undergo digital transformation.

## 7. Theoretical and Practical Implications

This study makes substantial theoretical contributions by extending recent empirical research in smart tourism, particularly by supporting the TRAM framework with new evidence from tourism employees. Consistent with Cimbaljević et al. (2024), our findings demonstrate that technological readiness — especially optimism and innovativeness — not only bolster perceived usefulness but also have an effect on perceived ease of use. Additionally, our results are consistent with the meta-analytic findings on personal innovativeness (Ciftci et al., 2021) that individual disposition plays a significant role in predicting behavioral intention. By showing the mediating effects of perceived usefulness (and in some cases perceived ease of use), the study contributes a more nuanced understanding of how readiness traits map onto acceptance outcomes in real workplace settings.

On the practical side, the implications are multifold. First, organizations — especially tourism firms in regions undergoing rapid smart tourism transforma-

tion — should implement differentiated onboarding and training programs that not only teach technical skills but also explicitly manage expectations around usability. For example, as seen in the study of the Vietnamese Gen Z (Loan et al., 2022), attributes like optimism and resilience can uplift intention to use only if negative emotions (e.g., anxiety) are also addressed. Second, as Pizam et al. (2022) indicate, technology managers should consider moderating factors such as innovativeness to tailor support and communication strategies — innovative employees might require different usability aids than their less innovative counterparts. Third, according to Ahmad and Rasheed (2024), SMEs and regional destination stakeholders need policy and support structures that reduce barriers such as technological anxiety, complexity, and resource constraints, through incentives, infrastructure, and digital literacy programs. In addition, studies on smart technologies can serve as valuable guidance in identifying both the barriers and motivating factors that influence employee adoption (Truant et al., 2024). Finally, local stakeholders from the Antalya region can use these findings as a benchmark to understand which readiness traits are prevalent in their employee pool and design interventions accordingly.

### CRediT Authorship Contribution Statement

**SG:** Writing — review & editing, Writing — original draft, Visualization, Software, Methodology, Formal analysis, Conceptualization. **BS:** Writing — review & editing, Validation, Supervision, Conceptualization. **OE:** Writing — review & editing, Methodology, Investigation, Formal analysis, Conceptualization. **IM:** Writing — review & editing, Methodology, Investigation, Formal analysis, Conceptualization.

### Declaration of Competing Interest

None.

### References

- Abdullah, F., Ward, R., & Ahmed, E. (2016). Investigating the influence of the most commonly used external variables of TAM on students' perceived ease of use (PEOU) and perceived usefulness (PU) of e-portfolios. *Computers in Human Behavior*, 63, 75–90. <https://doi.org/10.1016/j.chb.2016.05.014>
- Aburbeian, A.M., Owda, A.Y., & Owda, M. (2022). A technology acceptance model survey of the metaverse prospects. *AI*, 3(2), 285–302. <https://doi.org/10.3390/ai3020018>
- Ahmad, N., & Rasheed, H.M.W. (2024). Tourism and hospitality SMEs and digital marketing: what factors influence their attitude and intention to use from the perspective of BRT, TAM and IRT. *Journal of Hospitality and Tourism Insights*, 8(4), 1546–1563. <https://doi.org/10.1108/JHTI-05-2024-0508>

- Ahmad, S., Zulkurnain, N.N., & Khairushalimi, F.I. (2016). Assessing the validity and reliability of a measurement model in structural equation modeling (SEM). *British Journal of Mathematics & Computer Science*, 15(3), 1–8. <https://doi.org/10.9734/BJMCS/2016/25183>
- Ahmed, K.A., Damodharan, V., & Kumaraperumal, S. (2024). Factors affecting mobile coupon acceptance through smartphone app. *International Journal of Business Information Systems*, 46(1), 140–163. <https://doi.org/10.1504/IJBIS.2024.138557>
- Ajzen, I. (2020). The theory of planned behavior: frequently asked questions. *Human Behavior and Emerging Technologies*, 2(4), 314–324. <https://doi.org/10.1002/hbe2.195>
- Aleassa, H.M., Ababneh, H.T., Khider, K.H., & Al-Omari, A. (2022). Predicting behavioural intentions using an extended technology acceptance model. *International Journal of Knowledge Management Studies*, 13(4), 423–444. <https://doi.org/10.1504/IJKMS.2022.126153>
- Alkawsi, G., Ali, N., & Baashar, Y. (2021). The moderating role of personal innovativeness and users experience in accepting the smart meter technology. *Applied Science*, 11(8), 1–29. <https://doi.org/10.3390/app11083297>
- Almaiah, M.A., Alfaisal, R., Salloum, S.A., Al-Otaibi, S., Shishakly, R., Lutfi, A., ..., Al-Marooof, R.S. (2022). Integrating teachers' TPAC levels and students' learning motivation, technology innovativeness, and optimism in an IoT acceptance model. *Electronics*, 11(19), 1–17. <https://doi.org/10.3390/electronics11193197>
- Al-Qaysi, N., Mohamad-Nordin, N., & Al-Emran, M. (2020). Employing the technology acceptance model in social media: A systematic review. *Education and Information Technologies*, 25(1), 4961–5002. <https://doi.org/10.1007/s10639-020-10197-1>
- Alshammari, S.H., & Babu, E. (2025). The mediating role of satisfaction in the relationship between perceived usefulness, perceived ease of use and students' behavioural intention to use ChatGPT. *Scientific Report*, 15, 7169, 1–13. <https://doi.org/10.1038/s41598-025-91634-4>
- Amoroso, D.L., & Lim, R.A. (2015). Exploring the personal innovativeness construct: the roles of ease of use, satisfaction and attitudes. *Asia Pacific Journal of Information Systems*, 25(4), 662–685. <http://dx.doi.org/10.14329/apjis.2015.25.4.662>
- Armenakis, A., Harris, S.G., & Mossholder, K.W. (1993). Creating readiness for organizational change. *Human Relations*, 46(6), 681–703. <https://doi.org/10.1177/001872679304600601>
- Bakı, R., Birgören, B., & Aktepe, A. (2018). A meta analysis of factor affecting perceived usefulness and perceived ease of use in the adoption of e-learning systems. *Turkish Online Journal of Distance Education*, 19(4), 4–42. <https://doi.org/10.17718/tojde.471649>
- Bakırtaş, H., & Akkaş, C. (2017). Technology readiness for new technologies: an empirical study. *Uluslararası Sosyal Araştırmalar Dergisi*, 10(52), 941–949. <http://dx.doi.org/10.17719/jisr.2017.1948>
- Baltacı, F., Başer, M.Y., & Çelik, M. (2024). Attitude towards service robots in tourism and hospitality services settings — The effect of multidimensional anthropomorphism and technology readiness. *International Journal of Tourism Research*, 26, 1–15. <https://doi.org/10.1002/jtr.2685>
- Baumgartner, H., Weijters, B., & Pieters, R. (2021). The biasing effect of common method variance: some clarifications. *Journal of the Academy of Marketing Science*, 49(2), 221–235. <https://doi.org/10.1007/s11747-020-00766-8>
- Blut, M., & Wang, C. (2020). Technology readiness: A meta-analysis of conceptualizations of the construct and its impact on technology usage. *Journal of the Academy of Marketing Science*, 48(2), 649–669. <https://doi.org/10.1007/s11747-019-00680-8>
- Bozionelos, N., & Simmering, M.J. (2021). Methodological threat or myth? evaluating the current state of evidence on common method variance in human resource management research. *Human Resource Journal Management*, 32(4), 194–215. <https://doi.org/10.1111/1748-8583.12398>
- Brandon-Jones, A., & Kauppi, K. (2018). Examining the antecedents of the technology acceptance model within e-procurement. *International Journal of Operations & Production Management*, 38(1), 22–42. <https://doi.org/10.1108/IJOPM-06-2015-0346>



- Buyle, R., Compernelle, M.V., Vlassenroot, E., Vanlishout, Z., & Mechant, P. (2018). Technology readiness and acceptance model as a predictor for the use intention of data standards in smart cities. *Media and Communication*, 6(4), 127–139. <https://doi.org/10.17645/mac.v6i4.1679>
- Chang, Y.-W., & Chen, J. (2021). What motivates customers to shop in smart shops? The impacts of smart technology and technology readiness. *Journal of Retailing and Consumer Services*, 58(C), 1–11. <https://doi.org/10.1016/j.jretconser.2020.102325>
- Chau, P.Y. (1996). An empirical assessment of a modified technology acceptance model. *Journal of Management Information Systems*, 13(2), 185–204. <https://doi.org/10.1080/07421222.1996.11518128>
- Chen, C.-C., Chang, C.-H., & Hsiao, K.-L. (2022). Exploring the factors of using mobile ticketing applications: Perspectives from innovation resistance theory. *Journal of Retailing and Consumer Service*, 67(C), 1–10. <https://doi.org/10.1016/j.jretconser.2022.102974>
- Chen, L., & Aklikokou, A.K. (2020). Determinants of e-government adoption: Testing the mediating effects of perceived usefulness and perceived ease of use. *International Journal of Public Administration*, 43(10), 850–865. <https://doi.org/10.1080/01900692.2019.1660989>
- Chen, M.-F., & Lin, N.-P. (2018). Incorporation of health consciousness into the technology readiness and acceptance model to predict app download and usage intentions. *Internet Research*, 28(2), 351–373. <https://doi.org/10.1108/IntR-03-2017-0099>
- Chen, S.-C., & Li, S.-H. (2010). Consumer adoption of e-service: Integrating technology readiness with the theory of planned behavior. *African Journal of Business Management*, 4(16), 3556–3563.
- Cheng, S., & Cho, V. (2011). An integrated model of employees' behavioral intention toward innovative information and communication technologies in travel agencies. *Journal of Hospitality and Tourism Research*, 35(4), 488–510. <https://doi.org/10.1177/1096348010384598>
- Chiu, W., & Cho, H. (2021). The role of technology readiness in individuals' intention to use health and fitness applications: A comparison between users and non-users. *Asia Pacific Journal of Marketing and Logistics*, 33(3), 807–825. <https://doi.org/10.1108/APJML-09-2019-0534>
- Chung, N., Han, H., & Joun, Y. (2015). Tourists' intention to visit a destination: The role of augmented reality (AR) application for a heritage site. *Computers in Human Behavior*, 50, 588–599. <https://doi.org/10.1016/j.chb.2015.02.068>
- Ciftci, O., Berezina, K., & Kang, M. (2021). Effect of personal innovativeness on technology adoption in hospitality and tourism: Meta-analysis. In W. Wörndl, C. Koo, & J.L. Stienmetz (Eds.), *Information and Communication Technologies in Tourism* (pp. 162–174). Springer. [https://doi.org/10.1007/978-3-030-65785-7\\_14](https://doi.org/10.1007/978-3-030-65785-7_14)
- Cimbaljević, M., Bajrami, D. D., Kovačić, S., Pavluković, V., Stankov, U., & Vujičić, M. (2024). Employees' technology adoption in the context of smart tourism development: The role of technological acceptance and technological readiness. *European Journal of Innovation Management*, 27(8), 2457–2482. <https://doi.org/10.1108/EJIM-09-2022-0516>
- Clark, B.B., Robert, C., & Hampton, S.A. (2016). The technology effect: How perceptions of technology drive excessive optimism. *Journal of Business Psychology*, 31(1), 87–102. <https://psycnet.apa.org/doi/10.1007/s10869-015-9399-4>
- Clausing, D., & Holmes, M. (2010). Technology readiness. *Research-Technology Management*, 53(4), 52–59. <https://doi.org/10.1080/08956308.2010.11657640>
- Cooper, B., Eva, N., Fazlelahi, F.Z., Newman, A., Lee, A., & Obschonka, M. (2020). Addressing common method variance and endogeneity in vocational behavior research: A review of the literature and suggestions for future research. *Journal of Vocational Behavior*, 121, 1–14. <https://doi.org/10.1016/j.jvb.2020.103472>
- Dalton, C.C., & Gottlieb, L.N. (2003). The concept of readiness to change. *Journal of Advanced Nursing*, 42(2), 108–117. <https://doi.org/10.1046/j.1365-2648.2003.02593.x>



- Damerji, H., & Salimi, A. (2021). Mediating effect of use perceptions on technology readiness and adoption of artificial intelligence in accounting. *Accounting Education*, 30(2), 107–130. <https://doi.org/10.1080/09639284.2021.1872035>
- Danaher, J. (2022). Techno optimism: An analysis, an evaluation and a modest defence. *Philosophy & Technology*, 35(2), 54–83. <https://doi.org/10.1007/s13347-022-00550-2>
- Darsono, L.I. (2005). Examining information technology acceptance by individual professionals. *Gad-jah Mada International Journal of Business*, 7(2), 155–178. <https://doi.org/10.22146/gamaijb.5576>
- Dávid, L.D., & El Archi, Y. (2024). Beyond boundaries: Navigating smart economy through the lens of tourism. *Oeconomia Copernicana*, 15(1), 13–25. <http://dx.doi.org/10.24136/oc.2978>
- Davis, F.D. (1986). *A technology acceptance model for empirically testing new end-user information systems: Theory and results*. Massachusetts Institute of Technology.
- Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *Management Information Systems Research Center*, 13(3), 319–340. <https://doi.org/10.2307/249008>
- Demir, S. (2022). Comparison of normality tests in terms of sample sizes under different skewness and kurtosis coefficients. *International Journal of Assessment Tools in Education*, 9(2), 397–409. <https://doi.org/10.21449/ijate.1101295>
- Doll, W.J., Hendrickson, A., & Deng, X. (1998). Using Davis's perceived usefulness and ease-of-use instruments for decision making: A confirmatory and multigroup invariance analysis. *Decision Science*, 29(4), 839–869. <https://doi.org/10.1111/j.1540-5915.1998.tb00879.x>
- Ekşioğlu, Ş., & Ural, T. (2022). The effects of technology readiness on intention of using the mobile payment applications. In S. Grima, E. Özen, & H. Boz (Eds.), *Contemporary studies in economic and financial Analysis* (pp. 231–250). Emerald Publishing Limited.
- Ferreira, J.B., Rocha, A., & Silva, J.F. (2014). Impacts of technology readiness on emotions and cognition in Brazil. *Journal of Business Research*, 67(5), 865–873. <https://doi.org/10.1016/j.jbusres.2013.07.005>
- Firat, M., Kanbay, Y., Gokmen, B.D., Utkan, M., & Okanli, A. (2021). Investigating the factors affecting depression by using structural equation modeling. *Galician Medical Journal*, 28(1), 1–8. <https://doi.org/10.21802/gmj.2021.1.1>
- Flavian, C., Perez-Rueda, A., Belanche, D., & Casalo, L.V. (2022). Intention to use analytical artificial intelligence (AI) in services — The effect of technology readiness and awareness. *Journal of Service Management*, 33(2), 293–320. <http://dx.doi.org/10.1108/JOSM-10-2020-0378>
- Godoe, P., & Johansen, T.S. (2012). Understanding adoption of new technologies: Technology readiness and technology acceptance as an integrated concept. *Journal of European Psychology Students*, 3(1), 38–52. <http://dx.doi.org/10.5334/jeps.aq>
- Gonzalez, R., Gasco, J., & Llopis, J. (2020). Information and communication technologies and human resources in hospitality and tourism. *International Journal of Contemporary Hospitality Management*, 32(11), 3545–3579. <http://dx.doi.org/10.1108/IJCHM-04-2020-0272>
- Gonzales-Santiago, M.S., Loureiro, S.M.C., Langaro, D., & Ali, F. (2024). Adoption of smart technologies in the cruise tourism services: A systematic review and future research agenda. *Journal of Hospitality and Tourism Technology*, 15(2), 285–308. <http://dx.doi.org/10.1108/JHTT-06-2022-0159>
- Grevet, E., Forge, K., Tadiello, S., Izac, M., Amadieu, F., Brunel, L., Pillette, L., Py, J., Gasq, D., & Jeunet-Kelway, C. (2023). Modeling the acceptability of BCIs for motor rehabilitation after stroke: A large scale study on the general public. *Frontiers in Neuroergonomics*, 3, 1–23. <https://doi.org/10.3389/fnrgo.2022.1082901>
- Gunavan, F., Ali, M. M., & Nugroho, A. (2019). Analysis of the effects of perceived ease of use and perceived usefulness on consumer attitude and their impacts on purchase decision on PT Toko-pedia In Jabodetabek. *European Journal of Business and Management Research*, 4(5), 1–6. <http://dx.doi.org/10.24018/ejbmr.2019.4.5.100>

- Gupta, K., & Singh, N. (2014). Fit estimation in structural equation modeling — A synthesis of related statistics. *HSB Research Review*, 8(2), 2027.
- Gupta, P., Prashar, S., Vijay, T.S., & Parsad, C. (2021). Examining the influence of antecedents of continuous intention to use an informational app: The role of perceived usefulness and perceived ease of use. *International Journal of Business Information System*, 36(2), 270–287.
- Guvendir, A.M., & Ozkan, O.Y. (2022). Item removal strategies conducted in exploratory factor analysis: A comparative study. *International Journal of Assessment Tools in Education*, 9(1), 165–180. <https://doi.org/10.21449/ijate.827950>
- Güven, S., & Şahin, B. (2023). Analyzing technology readiness level of tourism academicians based on certain demographic variables. *Journal of Global Tourism And Technology Research*, 4(2), 56–75. <https://doi.org/10.54493/jgttr.1351477>
- Hadi, N.U., Abdullah, N., & Sentosa, I. (2016). An easy approach to exploratory factor analysis: Marketing perspective. *Journal of Educational and Social Research*, 6(1), 215–223. <http://dx.doi.org/10.5901/jesr.2016.v6n1p215>
- Hair, J.F., Risher, J.J., Sarstedt, M., & Ringle, C.M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2–24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Hamid, M.R.A., Sami, W., & Sidek, M.H.M. (2017). Discriminant validity assessment: Use of Fornell & Larcker criterion versus HTMT criterion. *Journal of Physics: Conference Series*, 890, 1–5. <https://iopscience.iop.org/article/10.1088/1742-6596/890/1/012163>
- Hasni, M.J., Farah, M.F., & Adee, I. (2019). The technology acceptance model revisited: Empirical evidence from the tourism industry in Pakistan. *Journal of Tourism Future*, ahead-of-print, 1–21. <https://doi.org/10.1108/JTF-09-2021-0220>
- Henderson, R., & Divett, M.J. (2003). Perceived usefulness, ease of use and electronic supermarket use. *International Journal of Human Computer Studies*, 59(3), 383–395. [https://doi.org/10.1016/S1071-5819\(03\)00079-X](https://doi.org/10.1016/S1071-5819(03)00079-X)
- Holden, R.J., & Karsh, B. (2010). The Technology Acceptance Model: Its past and its future in health care. *Journal of Biomedical Informatics*, 43(1), 159–172. <https://doi.org/10.1016/j.jbi.2009.07.002>
- Hong, X., Zhang, M., & Liu, Q. (2021). Preschool teachers' technology acceptance during the COVID-19: An adapted technology acceptance model. *Frontiers in Psychology*, 12, 1–11. <https://doi.org/10.3389/fpsyg.2021.691492>
- Howard, M.C. (2016). A Review of exploratory factor analysis decisions and overview of current practices: What we are doing and how can we improve? *International Journal of Human-Computer Interaction*, 32(1), 51–62. <https://doi.org/10.1080/10447318.2015.1087664>
- Huang, C.-C., Wang, Y.-M., Wu, T.-W., & Wang, P.-A. (2013). An empirical analysis of the antecedents and performance consequences of using the moodle platform. *International Journal of Information and Education Technology*, 3(2), 217–221. <http://dx.doi.org/10.7763/IJiet.2013.V3.267>
- Igartua, J.-J., & Hayes, A.F. (2021). Mediation, moderation, and conditional process analysis: Concepts, computations, and some common confusions. *The Spanish Journal of Psychology*, 24(49), 1–23. <https://doi.org/10.1017/SJP.2021.46>
- Ismail, I., Azizan, S.N., & Azman, N. (2011). Accessing innovativeness of distance learners toward their readiness in embracing technology. *African Journal of Business Management*, 5(33), 12768–12776. <https://doi.org/10.5897/AJBM11.824>
- Jeffers, P.I. (2010). Embracing sustainability: Information technology and the strategic leveraging of operations in third-party logistics. *International Journal of Operations & Production Management*, 30(3), 260–287. <http://dx.doi.org/10.1108/01443571011024629>
- Jin, C.-H. (2020). Predicting the use of brand application based on a TRAM. *International Journal of Human-Computer Interaction*, 36(2), 156–171. <http://dx.doi.org/10.1080/10447318.2019.1609227>
- Jokisch, M.R., Schmidt, L.I., Doh, M., Marquard, M., & Wahl, H.-W. (2020). The role of internet self-efficacy, innovativeness and technology avoidance in breadth of internet use: Comparing older

- technology experts and non-experts. *Computers in Human Behavior*, 111(2), 1–9. <http://dx.doi.org/10.1016/j.chb.2020.106408>
- Kampa, R.K. (2023). Combining technology readiness and acceptance model for investigating the acceptance of m-learning in higher education in India. *Asian Association of Open Universities Journal*, 18(2), 105–120. <http://dx.doi.org/10.1108/AAOUJ-10-2022-0149>
- Keni, K. (2020). How perceived usefulness and perceived ease of use affecting intent to repurchase? *Jurnal Manajemen*, 24(3), 481–496. <http://dx.doi.org/10.24912/jm.v24i3.680>
- Khan, S., & Khan, S. U. (2025). Tourist motivation to adopt smart hospitality: the impact of smartness and technology readiness. *Journal of Hospitality and Tourism Insights*, 8(4), 1268–1287. <http://dx.doi.org/10.1108/JHTI-04-2024-0335>
- Khashan, M.A., Alasker, T.H., Ghonim, M.A., & Elsotouhy, M.M. (2025). Understanding physicians' adoption intentions to use electronic health record (EHR) systems in developing countries: An extended TRAM approach. *Marketing Intelligence & Planning*, 43(1), 1–27. <http://dx.doi.org/10.1108/MIP-05-2023-0225>
- Kim, T., & Chiu, W. (2019). Consumer acceptance of sports wearable technology: The role of technology readiness. *International Journal of Sports Marketing and Sponsorship*, 20(1), 109–126. <http://dx.doi.org/10.1108/IJSMS-06-2017-0050>
- Kissi, E., Agyekum, K., Baiden, B.K., Agyei, T.R., Eshun, B.T., & Badu, E. (2022). Factors influencing tender pricing strategies of construction SMEs in Ghana. *International Journal of Construction Management*, 22(3), 387–399. <https://doi.org/10.1080/15623599.2019.1625995>
- Kline, T.J., Sulsky, L.M., & Rever-Moriyama, S.D. (2000). Common method variance and specification errors: A practical approach to detection. *The Journal of Psychology*, 134(4), 401–421. <http://dx.doi.org/10.1080/00223980009598225>
- Krier, J.E., & Gillette, C. P. (1985). The un-easy case for technological optimism. *Michigan Law Review*, 84, 405–429.
- Kucukusta, D., Law, R., Besbes, A., & Legoharel, P. (2015). Re-examining perceived usefulness and ease of use in online booking: The case of Hong Kong online users. *International Journal of Contemporary Hospitality Management*, 27(2), 186–198. <https://doi.org/10.1108/IJCHM-09-2013-0413>
- Larasati, N., Widyawan, & Santosa, P.I. (2017). Technology readiness and technology acceptance model in new technology implementation process in low technology SMEs. *International Journal of Innovation, Management and Technology*, 8(2), 113–117. <http://dx.doi.org/10.18178/ijimt.2017.8.2.713>
- Letchumanan, M., & Muniandy, B. (2013). Migrating to e-book: A study on perceived usefulness and ease of use. *Library Hi Tech News*, 30(7), 10–15. <http://dx.doi.org/10.1108/LHTN-05-2013-0028>
- Lin, C.-H., Shih, H.-Y., & Sher, P.J. (2007). Integrating technology readiness into technology acceptance: The TRAM model. *Psychology & Marketing*, 24(7), 641–657. <http://dx.doi.org/10.1002/mar.20177>
- Lin, J.-S. C., & Chang, H.-C. (2011). The role of technology readiness in self-service technology acceptance. *Managing Service Quality*, 21(4), 424–444. <http://dx.doi.org/10.1108/09604521111146289>
- Lin X.P., Li B.B., Zhang M., & Yang Z. (2023) Exploring the intersections of TAM and TRI models in middle school VR technology acceptance. *Frontiers in Education*, 8, 1–8. <https://doi.org/10.3389/educ.2023.1308509>
- Lio, W., & Liu, B. (2020). Uncertain maximum likelihood estimation with application to uncertain regression analysis. *Soft Computing*, 24(13), 9351–9360. <https://doi.org/10.1007/s00500-020-04951-3>
- Loan, N.T., Lan, L.T., Tra, D.T., & Hoang, N.V. (2022). The intention to use mobile applications in tourism among gen Z in Vietnam: The effect of technological readiness and technology acceptance factors. *Journal of Organizational Behavior Research*, 7(2), 290–309. <https://doi.org/10.51847/AcDw70I581>

- Lu, J., Yu, C.-S., Liu, C., & Yao, J.E. (2003). Technology acceptance model for wireless internet. *Electronic Networking Applications and Policy*, 13(3), 206–222. <http://dx.doi.org/10.1108/10662240310478222>
- Marangunić, N., & Granić, A. (2015). Technology acceptance model: A literature review from 1986 to 2013. *Universal Access in the Information Society*, 14(1), 81–95. <https://doi.org/10.1007/s10209-014-0348-1>
- Mahgfiroh, R.K, Indriastuti, H., & Martiyant, D. (2025). The influence of technology readiness and perceived ease of use on the decision to use QRIS as a digital payment through perceived utility. *American Journal of Humanities and Social Sciences Research*, 13(3), 93–101. <http://dx.doi.org/10.1108/10662240310478222>
- Marler, J.H., Fisher, S. L., & Ke, W. (2009). Employee self-service technology acceptance: A comparison of pre-implementation and post-implementation relationship. *Personnel Psychology*, 62(2), 327–358. <https://doi.org/10.1111/j.1744-6570.2009.01140.x>
- Marsh, H.W., & Balla, J. (1994). Goodness of fit in confirmatory factor analysis: The effects of sample size and model parsimony. *Quality & Quantity*, 28(2), 185–217. <https://doi.org/10.1007/BF01102761>
- Mishra, P., Pandey, C. M., Singh, U., Gupta, A., Sahu, C., & Keshr, A. (2019). Descriptive statistics and normality tests for statistical data. *Annals of Cardiac Anaesthesia*, 22(1), 67–72. [https://doi.org/10.4103/aca.aca\\_157\\_18](https://doi.org/10.4103/aca.aca_157_18)
- Molina-López, J., Zarzuela, I.B., Sáez-Padilla, J., Tornero-Quiñones, I., & Planells, E. (2020). Mediation effect of age category on the relationship between body composition and the physical fitness profile in youth handball players. *International Journal of Environmental Research and Public Health*, 17(7), 1–16. <https://doi.org/10.3390/ijerph17072350>
- Na, T.-K., Lee, S.-H., & Yang, J.-Y. (2021). Moderating effect of gender on the relationship between technology readiness index and consumers' continuous use intention of self-service restaurant kiosks. *Information*, 12(7), 1–13. <https://doi.org/10.3390/info12070280>
- Napierała, T., Bahar, M., Leśniewska-Napierała, K., & Topsakal, Y. (2020). Technology towards hotel competitiveness: Case of Antalya, Turkey. *European Journal of Tourism, Hospitality and Recreation*, 10(3), 262–273. <http://dx.doi.org/10.2478/ejthr-2020-0023>
- Natasia, S.R., Wiranti, Y.T., & Parastika, A. (2022). Acceptance analysis of NUADU as e-learning platform using the technology acceptance model (TAM) approach. *Sixth Information Systems International Conference (ISICO 2021)*, 512–520. Jawa Timur: Procedia. <http://dx.doi.org/10.1016/j.procs.2021.12.168>
- Negm, E. (2023). Intention to use internet of things (IoT) in higher education online learning — The effect of technology readiness. *Higher Education, Skills and Work-Based Learning*, 13(1), 53–65. <http://dx.doi.org/10.1108/HESWBL-05-2022-0121>
- O'Hern, S., & Louis, R.S. (2023). Technology readiness and intentions to use conditionally automated vehicles. *Transportation Research Part F: Psychology and Behaviour*, 94(4), 1–8. <http://dx.doi.org/10.1016/j.trf.2023.02.001>
- Oikonomou, M., Kopanaki, E., & Georgopoulos, N. (2022). Readiness analysis for IT adoption in the hotel industry. *Journal of Tourism and Leisure Studies*, 7(1), 23–42. <http://dx.doi.org/10.18848/2470-9336/CGP/v07i01/23-42>
- Orcan, F. (2020). Parametric or non-parametric: Skewness to test normality for mean comparison. *International Journal of Assessment Tools in Education*, 7(2), 255–265. <https://doi.org/10.21449/ijate.656077>
- Parasuraman, A., & Colby, C.L. (2015). An updated and streamlined technology readiness index: TRI 2.0. *Journal of Service Research*, 18(1), 59–74. <https://doi.org/10.1177/1094670514539730>
- Park, H.J., & Zhang, Y. (2022). Technology readiness and technology paradox of unmanned convenience store users. *Journal of Retailing and Consumer Services*, 65(C), 1–9. <http://dx.doi.org/10.1016/j.jretconser.2021.102523>

- Peng, M.Y.-P., & Yan, X. (2022). Exploring the influence of determinants on behavior intention to use of multiple media kiosks through technology readiness and acceptance model. *Frontiers in Psychology*, 13, 1–11. <https://doi.org/10.3389/fpsyg.2022.852394>
- Pizam, A., Ozturk, A. B., Balderas-Cejudo, A., Buhalis, D., Fuchs, G., Hara, T., Meira, J., Revilla, M.R.G., Sethi, D., Shen, Y., State, O., Hacikara, A., & Chaulagain, S. (2022). Factors affecting hotel managers' intentions to adopt robotic technologies: A global study. *International Journal of Hospitality Management*, 102, 1–15. <https://psycnet.apa.org/doi/10.1016/j.ijhm.2022.103139>
- Rahman, S.A., Taghizadeh, S.K., Ramayah, T., & Alam, M.M. (2017). Technology acceptance among micro-entrepreneurs in marginalized social strata: The case of social innovation in Bangladesh. *Technological Forecasting & Social Change*, 118(C), 236–245. <http://dx.doi.org/10.1016/j.techfore.2017.01.027>
- Ramayah, T., & Lo, M.-C. (2007). Impact of shared beliefs on “perceived usefulness” and “ease of use” in the implementation of an enterprise resource planning system. *Management Research News*, 30(6), 420–431. <http://dx.doi.org/10.1108/01409170710751917>
- Raza, S.A., Umer, A., & Shah, N. (2017). New determinants of ease of use and perceived usefulness for mobile banking adoption. *International Journal of Customer Relationship Management*, 11(1), 44–65. <http://dx.doi.org/10.1504/IJECRM.2017.10007744>
- Rossoni, L., Engelbert, R., & Bellegard, N.L. (2016). Normal science and its tools: Reviewing the effects of exploratory factor analysis in management. *Revista de Administração*, 51(2), 198–211. <https://doi.org/10.5700/rausp1234>
- Saade, R.G., & Kira, D. (2007). Mediating the impact of technology usage on perceived ease of use by anxiety. *Computers & Education*, 49(4), 1189–1204. <http://dx.doi.org/10.1016/j.compedu.2006.01.009>
- Saade, R., & Bahli, B. (2005). The impact of cognitive absorption on perceived usefulness and perceived ease of use in on-line learning: An extension of the technology acceptance model. *Information & Management*, 42(2), 317–327. <http://dx.doi.org/10.1016/j.im.2003.12.013>
- Schierz, P.G., Schilke, O., & Wirtz, B.W. (2010). Understanding consumer acceptance of mobile payment services: An empirical analysis. *Electronic Commerce Research and Applications*, 9(3), 209–216. <https://doi.org/10.1016/j.elerap.2009.07.005>
- Seong, B.-H., & Hong, C.-Y. (2022). Corroborating the effect of positive technology readiness on the intention to use the virtual reality sports game “screen golf”: Focusing on the technology readiness and acceptance model. *Information Processing and Management*, 59(4), 1–11. <https://doi.org/10.24985/ijass.2024.36.1.56>
- Shin, S. & Lee, W.-J. (2014). The effects of technology readiness and technology acceptance on NFC mobile payment services in Korea. *The Journal of Applied Business Research*, 30(6), 1615–1626. <http://dx.doi.org/10.19030/jabr.v30i6.8873>
- Sigudla, J., & Maritz, J.E. (2023). Exploratory factor analysis of constructs used for investigating research uptake for public healthcare practice and policy in a resource-limited setting, South Africa. *BMC Health Services Research*, 23, 1–8. <https://doi.org/10.1186/s12913-023-10165-8>
- Suki, N.M., & Suki, N.M. (2011). Exploring the relationship between perceived usefulness, perceived ease of use, perceived enjoyment, attitude and subscribers' intention towards using 3D mobile services. *Journal of Information Technology Management*, 22(1), 1–7.
- Sun, S., Lee, P., & Law, R. (2019). Impact of cultural values on technology acceptance and technology readiness. *International Journal of Hospitality Management*, 77, 89–96. <http://dx.doi.org/10.1016/j.ijhm.2018.06.017>
- Tavakol, M., & Wetzell, A. (2020). Factor analysis: a means for theory and instrument development in support of construct validity. *International Journal of Medical Education*, 11, 245–247. <https://doi.org/10.5116/ijme.5f96.0f4a>
- Teo, T. (2011). Considering common method variance in educational technology research. *British Journal of Educational Technology*, 42(5), 94–96. [https://doi.org/10.1007/978-94-6091-487-4\\_1](https://doi.org/10.1007/978-94-6091-487-4_1)



- Teo, T. (2012). Examining the intention to use technology among pre-service teachers: An integration of the technology acceptance model and theory of planned behavior. *Interactive Learning Environments*, 20(1), 3–18. <https://doi.org/10.1080/10494821003714632>
- Thakur, R., Angriawan, A., & Summey, J.H. (2016). Technological opinion leadership: the role of personal innovativeness, gadget love, and technological innovativeness. *Journal of Business Research*, 69(8), 2764–2773. <https://doi.org/10.1016/j.jbusres.2015.11.012>
- Truant, E., Giordino, D., Borlatto, E., & Bhatia, M. (2024). Drivers and barriers of smart technologies for circular economy: Leveraging smart circular economy implementation to nurture companies' performance. *Technological Forecasting and Social Change*, 198, 122954. <https://doi.org/10.1016/j.techfore.2023.122954>
- Vorm, E. S., & Combs, D. J. (2022). Integrating transparency, trust, and acceptance: the intelligent systems technology acceptance model. *International Journal of Human-Computer Interaction*, 38(18–20), 1828–1845. <http://dx.doi.org/10.1080/10447318.2022.2070107>
- Walczuch, R., Lemmink, J., & Streukens, S. (2007). The effect of service employees' technology readiness on technology acceptance. *Information & Management*, 44(2), 206–215. <http://dx.doi.org/10.1016/j.im.2006.12.005>
- Wang, K., Xu, Y., Wang, C., Tan, M., & Chen, P. (2020). A corrected goodness-of-fit index (CGFI) for model evaluation in structural equation modeling. *Structural Equation Modeling: A Multidisciplinary Journal*, 27(5), 735–749. <http://dx.doi.org/10.1080/10705511.2019.1695213>
- Wang, Y., So, K.K., & Sparks, B.A. (2017). Technology readiness and customer satisfaction with travel technologies: a cross-country investigation. *Journal of Travel Research*, 56(5), 563–577. <https://doi.org/10.1177/0047287516657891>
- Wiaštuti, R.D., Omar, R.M., Ignacia, S.N., Sarim, S., & Nurbaeti, N. (2024). The continuance intention of coffee shop mobile food ordering applications. *Academica Turistica*, 17(3), 231–245. <http://dx.doi.org/10.26493/2335-4194.17.231-245>
- Widiar, G., Yuniarinto, A., & Yulianti, I. (2023). Perceived ease of use's effect on behavioral intention mediated by perceived usefulness and trust. *Interdisciplinary Social Studies*, 2(4), 1829–1844. <http://dx.doi.org/10.55324/iss.v2i4.397>
- Yi, M.Y., Fiedler, K.D., & Park, J.S. (2006). Understanding the role of individual innovativeness in the acceptance of IT-based innovations: Comparative analyses of models and measures. *Decision Sciences*, 37(3), 393–426. <http://dx.doi.org/10.1111/j.1540-5414.2006.00132.x>
- Zhao, J., Li, X., & Gao, Z. (2025). From innovativeness to insecurity: Unveiling the facets of translation technology use behavior among EFL learners using TRI 2.0. *Humanities & Social Science Communications*, 12, 1–15. <https://doi.org/10.1057/s41599-025-04777-0>

## Opinie pracowników branży turystycznej dotyczące wdrażania inteligentnych technologii

**Streszczenie.** Wobec trwającej transformacji cyfrowej, która kształtuje współczesny krajobraz biznesowy, wdrażanie zaawansowanych technologii stało się strategiczną koniecznością dla wielu organizacji. Pomimo znacznego ryzyka, inwestycje technologiczne tego typu stwarzają istotne możliwości rozwoju i poprawy konkurencyjności. Zaniedbania w tym zakresie mogą poważnie osłabić długoterminową rentowność firmy w coraz bardziej konkurencyjnym otoczeniu. W związku z tym, w opisanym w artykule badaniu autorzy wykorzystują Model Akceptacji Technologii (TAM) w połączeniu z pozytywnymi wymiarami gotowości technologicznej do analizy opinii pracowników branży turystycznej na temat inteligentnych technologii. Dane uzyskane za pomocą ankiety internetowej z udziałem 388 respondentów wskazują, że na zamiar korzystania z inteligentnych technologii pozytywnie wpływają ich subiektywna użyteczność, pozytywne nastawienie do technologii oraz innowacyjność pracownika. Wyniki te podkreślają kluczową rolę czynników poznawczych i determinujących

postawy w kształtowaniu gotowości pracowników do korzystania z inteligentnych narzędzi. Tym samym badanie dostarcza teoretycznych i praktycznych wniosków, które można wykorzystać do szerszego wdrażania technologii w sektorze turystycznym.

**Słowa kluczowe:** inteligentne technologie, pracownicy branży turystycznej, akceptacja technologii, gotowość technologiczna



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