SOCIOLOGÍA & TECNOCIENCIA

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¿Qué papel juega la humanización de la IA en la mejora del rendimiento turístico?

What role does the humanisation of AI play in improving tourist performance

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Resumen: Desde una perspectiva humanista, la IA debe servir a las personas y a su bienestar, lo que requiere tanto de desarrollo personal como de práctica y estudio. En el sector hotelero, la IA presenta retos que deben respetar la dignidad humana. Este estudio evalúa la implementación de modelos humanistas de IA en hoteles para crear experiencias turísticas inclusivas y diversas. Basándose en la teoría MOA (Motivación-Oportunidad-Habilidad), analiza cómo la motivación, la oportunidad y la capacidad de los empleados afectan a la adopción de la IA y su impacto en los resultados del hotel, enfatizando la importancia de un enfoque centrado en el ser humano. El equipo de investigación seleccionó 4.500 hoteles en España y contactó con 970 utilizando IA. El cuestionario validó el modelo constrastándolo con 25 hoteles, ajustando los indicadores en función de su feedback. Participaron 420 directivos. Los resultados muestran una estrecha relación entre las soluciones del modelo humanista a los retos de la IA y la validación de la teoría MOA, utilizada por primera vez en este tipo de investigaciones.
Palabras clave: humanismo; turismo; IA; teoría MOA; satisfacción empresarial.

Abstract: From a humanistic perspective, AI should serve individuals and their well-being, requiring both personal development and practice and study. In the hotel industry, AI presents challenges that must respect human dignity. This study evaluates the implementation of humanistic AI models in hotels to create inclusive and diverse tourist experiences. Based on the MOA theory (Motivation-Opportunity-Ability), it analyses how employees' motivation, opportunity, and ability affect AI adoption and its impact on hotel outcomes, emphasising the importance of a human-centred approach. The research team selected 4,500 hotels in Spain and contacted 970 using AI. The questionnaire validated the model with 25 hotels, adjusting indicators based on their feedback. 420 managers participated. The results show a close relationship between the humanistic model's solutions to the AI challenges and the validation of the MOA theory, used for the first time in this type of research.
Keywords: humanism; tourism; AI; MOA theory; business satisfaction.

1. INTRODUCTION

According to Alvira (1989), we are born as individuals but not as fully developed human beings. This raises profound reflections on the nature of humanity and its development. This approach, proposed decades ago, remains relevant today, especially in a context where technology, such as Artificial Intelligence (AI) involves using machines to perform tasks that typically require human intelligence, such as decision-making and problem-solving. It is rapidly transforming our social, economic, and cultural interactions.

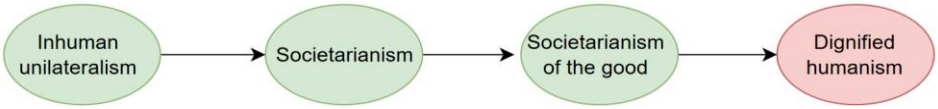
Alvira (1989) suggests that humanity is acquired by overcoming our "animal" inclination towards "inhuman unilateralism." In other words, we are born with human potential, but this potential must be nurtured and developed throughout our lives to truly become fully human beings. This development does not occur in isolation but within the context of the society in which we live.

The concept of "societarism" introduces the idea that the individual is completed and fully developed through interaction with society. Society provides the environment and resources necessary for the individual to thrive, and in turn, the individual contributes to the well-being and development of society as a whole. In

this sense, societarism implies reciprocity between the individual and society, where both benefit mutually.

Learning to build society involves guiding it towards the "societarism of good." This means that social interactions and structures must be based on ethical and moral principles that promote the common good and integral human development. Alvira argues that this cannot be achieved solely through economic, organisational, social, or technological models, but must be based on the recognition and promotion of human dignity, understood as "serving to" develop the person, or "dignified humanism" (Figure 1).

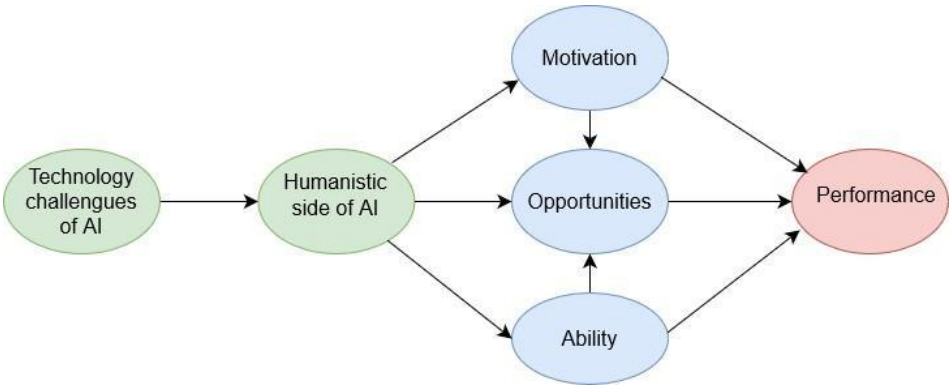
Figure 1: Model



From this humanistic approach, AI as a tool should be directed towards serving the person and promoting their well-being. However, to do good, one must train for it. Both personal development and AI require practice and study. "Prudent judgement presupposes memory of the past, a careful examination of circumstances, knowledge of principles and rules, and a vision of the future" (Alvira, 1989: 6). In the hotel industry, as in other sectors, AI-developed technology is generating a series of challenges that cannot be separated from the meaning of the person. The way information is collected, processed, and communicated must serve the person and their human dignity. It should not be compromised for economic reasons, power, or influence.

In this work, we evaluate the importance of implementing humanistic models of AI use in hotels by creating authentic, inclusive, and culturally and socially diverse tourist experiences. In the hotel industry, AI aids managers by optimizing operations, enhancing customer service, and personalizing guest experiences. It can streamline booking processes, manage inventory, predict maintenance needs, and analyze customer feedback. AI-powered chatbots handle guest inquiries, while data analytics provide insights for strategic decisions. This integration boosts efficiency, reduces costs, and elevates guest satisfaction, making hotel management more effective and responsive to market demands (Robina-Ramírez et al., 2023). Based on the MOA (Motivation-Opportunity-Ability) theory (Endres and Chowdhury, 2022), we analyse the motivation, opportunity, and ability of employees to implement AI in the tourism industry, and how a humanistic model of AI can affect the improvement of hotel outcomes.

Figure 2: Model



Motivation refers to the internal drive that leads individuals and organisations to adopt new technologies like AI. In the tourism industry, motivation stems from providing better customer service or staying competitive (Endres and Chowdhury, 2022). In most cases, the motivation to apply AI comes down to improving operational efficiency, economic benefit, and gaining greater influence in the tourism market (Endres and Chowdhury, 2022). This reduced AI approach could undermine the principles of "dignified humanism" proposed by Alvira.

Opportunity refers to the environment and conditions that facilitate the adoption of AI (Endres and Chowdhury, 2022). In the hospitality industry, the availability of financial resources, access to technology, and management support can influence the ability to effectively implement AI (Motta, V. and Sharma, A., 2020). In this work, we incorporate opportunities to improve efficiency and profitability, while still promoting human dignity and personal development of employees (Endres and Chowdhury, 2022).

The third element is ability. This refers to the technical capacity and knowledge required to effectively implement and use AI. This staff training, hiring of AI experts, and development of adequate technological infrastructures must have a direction. Developing skills requires understanding how AI can affect employees on a human and social level (Sancho-Garcia and Ivorra Alemañy, 2024).

The implementation of AI should contribute to improving people's quality of life and promoting their personal and professional development. By focusing on the well-being of employees and customers, AI can become a powerful tool for fostering human dignity and impacting company results.

2. LITERATURE REVIEW

2.1 Technological Challenges of AI in the Tourism Industry (TCH)

Tourism, as a global industry that encompasses a wide range of services and experiences, is inherently related to the challenges of Artificial Intelligence (AI)

(Alyasiri et al., 2024). These challenges range from technical and economic challenges to ethical and social concerns in the tourism sector (Samara, et al, 2020).

As AI is integrated into various applications and systems within the tourism industry, concerns arise about algorithmic fairness and inherent bias in the data used to train AI models (Akter et al., 2022). The design of tourism offerings should seek to promote human dignity through trust in AI systems based on careful attention to the collection and selection of tourism data (Rydzik et al., 2022.). It is also necessary to design and evaluate the algorithms to ensure equity and impartiality in tourism offerings (Banerjee et al., 2023), destination recommendations (Rydik et al., 2022) or allocation of tourism resources (Shi et al., 2021).

In the case of recommendation processes for tourist destinations or activities, algorithms may reflect cultural, socioeconomic or other biases, raising questions about equity and fairness in access to tourism opportunities (Pitoura et al., 2022).

Access to tourism opportunities can lead to privacy violations, identity theft, and data manipulation (Yallop et al., 2023). Ensuring data security and user privacy is essential to building trust in the AI systems used in travel planning and management (Shi et al., 2021), as well as mitigating the ethical risks associated with their misuse (Shneiderman, 2020).

These factors invite a shift from a one-sided vision based on corporate profit and inhumane use of AI towards the pursuit of the good based on the human dignity of each person.

Tourism also faces economic and labour challenges associated with the adoption and use of AI (Ivanov and Webster, 2019). While AI can increase efficiency and productivity in the tourism industry, it is crucial to implement policies and programs designed to support the transition towards an AI-driven tourism economy, ensuring protection and training for affected workers (Bešić et al., 2024.).

Fostering human dignity also implies working towards the inclusion of disadvantaged people (Mzembe and Filimonau, 2024; Robina-Ramirez and Sañudo-Fontaneda, 2018). Therefore, it is important to reduce the risk of AI use in tourism increasing existing inequalities, especially in marginalised regions and communities. Ensuring equitable access to AI and mitigating digital inequalities are goals of the pursuit of the good in society and the use of AI (Moon, 2023). It can contribute to promoting human dignity to ensure that everyone benefits from advances in this technology in the tourism sector (Ho, 2022; Zarantonello et al., 2024).

To address these challenges, updated regulatory frameworks are needed to address ongoing developments in the field of AI (de Almeida et al., 2021). These regulatory frameworks require a collaborative approach involving policymakers, regulators, the tourism industry and civil society (Dwivedi et al., 2021). This ensures transparency, accountability and trust in AI systems, especially in critical applications such as travel planning and destination management (Taeihagh, 2021).

2.2. The Humanistic Side of AI in the Hotel Industry (HAI)

Addressing the challenges and negative effects of integrating artificial intelligence (AI) requires developing a more humanistic approach based on treating employees not merely as a workforce or a tool to achieve goals (Bankins and Formosa, 2023).

As Alvira (1989) points out, humanism requires that there be a socially conscious leading elite aware of what it is and its necessity, and that this elite manages to sufficiently show the rest of society the benefits it brings. In the tourism industry, humanism applied to AI is not merely addressing its challenges. It is about helping the person to be a person away from their instrumentalization (Monzó-Nebot and Lomeña-Galiano, 2024). Using AI to dignify the person means moving from mere use of information to the "dialogue" that contributes to the development of the person, making them more of a person (Monzó-Nebot and Lomeña-Galiano, 2024). An AI that provides automated services that improve the productive capacity of hotels is appropriate but forgets that it is dealing with people. Basically, the main objective of AI should be to allow for the integral development of people. This goal is based on five aspects:

First, AI could offer continuous training based on personalised recommendations for courses, workshops or educational resources that allow employees to continue acquiring new knowledge and skills throughout their careers (Pedro et al., 2019).

Second, promote creativity through AI systems by providing inspiration, ideas, and feedback so that employees can explore new approaches and innovative solutions at work (Lim, 2018). These solutions help free workers from tedious tasks and allow them to focus on activities that require unique human skills, such as interacting with guests and solving complex problems (Eubanks, 2022). This can lead to a more satisfying and meaningful work environment for hotel staff, which in turn can improve the quality of service offered to guests.

Third, AI applications could facilitate teamwork, effective communication, and the exchange of ideas among employees from different areas, cultures, and backgrounds, enriching mutual learning (Thornhill-Miller et al., 2023). Through training personalization and empathy in interactions with guests can be improved, using large volumes of customer data to identify individual patterns and preferences (Said, 2023). This can include recommendations for local activities, restaurant options tailored to the tourist's preferences, and adjustments to the room settings to meet each guest's specific needs. Those recommendations can improve human interaction and promote a warmer and more welcoming hospitality culture (Ben Saad, 2024) by providing useful information and support to guests, anticipating guests' needs and preferences (Wang and Uysal, 2024). By effectively integrating AI into hotel operations, hotels can improve efficiency and quality of service without compromising the warmth and humanity of the customer experience (Kumar et al., 2022).

Fourth, AI tools could provide valuable information and in-depth analysis to allow employees to make more informed decisions aligned with their personal values and ethical principles (Ibáñez and Olmeda, 2022) to guide the development and implementation of AI (Paraman and Anamalah, 2023). These principles should promote respect for human rights, privacy, transparency, fairness, and accountability. Based on the above, hypothesis 1 is proposed:

H1: The technological and ethical challenges of AI (TCH) influence the application of a humanistic model (HS)

2.3. The Impact of the Humanistic Use of AI on Motivations (M)

Promoting the more humanistic side of artificial intelligence (AI) can have a significant impact on the motivations to act and turn the desire to humanise AI into sustained behaviour over time (Hitka et al., 2019).

The motivations to humanise AI involve creating tools and platforms that allow users to control and customise their experience with AI, as well as participate in decision-making about how the technology is used in their daily lives (Fenwick and Molnar, 2022). These insights can help employees better understand the ethical, social, and environmental implications of their decisions. They can provide recommendations helping employees to navigate complex situations and make decisions that are aligned with their personal beliefs fostering ethical and responsible decision-making. By incorporating these values from the outset, it ensures that AI is developed in an ethical and human-centric manner.

The second motivation to humanise AI requires the participation and collaboration of diverse fields, including ethics, philosophy, social sciences, psychology, and technology (Baum, 2021) (Ausín, 2021). By bringing together experts from different disciplines, the ethical, social, and technical challenges can be addressed in a comprehensive manner, promoting a holistic and enriched vision of how AI can benefit humanity.

Once the ethical principles, human values, and foundations of interdisciplinary collaboration are established a favourable ecosystem is created. It promotes the motivation for the desire to humanise AI to translate into concrete and sustained actions over time providing diverse and enriching perspectives, and education and awareness fostering a truly human-centric AI (Bryson, 2020). From developers and experts to the general public, it is necessary to foster critical thinking about the social implications of AI (Whittlestone et al., 2019) (Sancho-Garcia and Ivorra-Alemañy, 2022).

The motivations of those three elements also involve two structural elements. On one hand, the development of policies and regulations that incentivize the adoption of ethical standards and transparent practices in the design and implementation of AI systems (Felzmann et al., 2020). These include financial incentives and recognition for those who demonstrate outstanding commitment to the humanization of AI and the protection of human rights and dignity in its application.

On the other hand, the motivations to develop a human vision of AI also involve the creation of support communities and networks that promote collaboration and the exchange of ideas among different stakeholders (Díaz-Rodríguez et al., 2023). This can include the creation of working groups and discussion forums that bring together developers, researchers, policymakers, activists, and users to discuss and develop strategies and solutions that promote a more humanised and human-centric AI. Based on the above, hypothesis 2 is proposed:

H2: The application of a humanistic model (HS) influences the motivation to implement said model (M)

2.4. The Humanistic Use of AI to Leverage Opportunities Generated (O)

According to the model proposed by Endres and Chowdhury (2022), opportunity refers to the external conditions that make behaviour possible. In the case of the tourism industry, it is the external conditions that make it possible for the employee to achieve their desire to provide excellent service through the use of AI (Schanke, et al., 2021; Zong and Fukushige, 2023).

Green Hotels focused on environmental and social sustainability, offer a unique context for integrating AI in an ethical and human-centric way (Alkire et al., 2024). The opportunity arises to have resources in research and development (R&D) of AI applications for sustainability from new algorithms, models, and innovative solutions that can be applied in areas such as energy efficiency, water management, green technology, and eco-friendly materials (Vollenbroek, 2002).

The opportunity to develop robust infrastructures and robust data platforms facilitates an effective implementation of AI in sustainable practices (Amarasinghe, 2024). This involves investing in energy-efficient data centres, intelligent sensor networks, data collection and storage systems, and data analysis and processing platforms. These tools will enable the collection and processing of large amounts of relevant data to train and optimise AI models for sustainable applications.

Collaboration between academic institutions, research centres, and companies can be another opportunity to drive significant advances in this field. This collaboration will allow for the exchange of knowledge, technology transfer, and the development of joint solutions (Saini and Bhalla, 2022). AI can facilitate the creation of a culture of transparency that foster the exchange of ideas and collaboration among employees (Getchell et al., 2022). This is the case for AI systems that can facilitate scheduling meetings and coordinating tasks, as well as providing feedback and suggestion channels that allow employees to actively contribute to the identification and implementation of sustainable practices in the hotel. Based on the paragraphs above, hypotheses 3 and 4 are proposed:

H3: The application of a humanistic model (HS) influences the way of leveraging opportunities generated by the environment (O)

H4: The motivation to implement the humanistic model (M) influences the way of leveraging opportunities generated by the environment (O)

2.5. Humanism in the Use of AI and Employee Skills (SK)

Promoting human dignity through the use of artificial intelligence (AI) can have a transformative impact on the development and improvement of employee skills (Bankins and Formosa, 2023). To do this, it is necessary to address human-centred competencies, knowledge, and skills to effectively perform their functions in a sustainable environment (Yeşiltaş et al., 2022). In the hotel industry, these skills are essential to implement and maintain sustainable practices among guests and collaborate on projects that contribute to environmental protection (Huang et al., 2022).

Among the most outstanding skills would be digital literacy and handling of AI tools through reservation management systems, virtual assistants, and data analysis (Balkanov, 2023). Among the competencies, we can point to empathy and intercultural understanding, effective communication, or critical thinking and problem-solving (Lepeley, and Beutell, eds., 2021).

One way in which promoting the more humanistic side of AI can impact employee skills is through personalised training and professional development (Mukherjee, 2023). AI can use advanced algorithms to analyse the individual needs of each employee and recommend personalised training and development programs that fit their interests, skills, and career goals (Dwivedi et al., 2021). For example, employees working in areas related to energy and natural resource management can receive specific training on conservation and energy efficiency practices, while those working in customer service areas can receive training in communication, problem-solving, and customer service skills. By providing personalised training and development programs tailored to the individual needs of each employee, AI can improve their performance and contribution to the hotel, which in turn can increase customer satisfaction and business profitability.

It is important to understand how AI and other technologies can affect the cultures, traditions, and lifestyles of local communities and how they affect their fair and dignified working conditions (Stahl, 2021). Series of ethical principles such as transparency, fairness, privacy, and responsibility, play a key role in the hotel sector (Demir, 2024).

Furthermore, AI can offer continuous feedback and evaluation to help employees improve and refine their skills over time. By training employees in sustainable practices, AI can enhance their ability to contribute to the success and reputation of a hotel as a leader in sustainability and environmental responsibility (Adeel et al., 2024).

Another important aspect of skills development is fostering social and communication skills that allow employees to work in teams and effectively interact with guests about the hotel's sustainability initiatives (González-Rodríguez et al., 2019; Robina-Ramírez et al., 2019). Based on the paragraphs above, hypotheses 5 and 6 are proposed:

H5: The application of a humanistic model (HS) influences the way employees develop their skills (HA)

H6: The motivation to implement the humanistic model (M) influences the way employees develop their skills (HA)

2.6. The Effect of Humanistic AI on Employee Productivity (P)

Promoting the more humanistic side of artificial intelligence (AI) and its relationship with the hotel industry can generate significant productivity among employees by providing more personalised experiences, enhanced interactions, and a greater sense of well-being in the hotel (Kong et al., 2024).

According to Singh (2024), AI in its relationship with the tourism industry offers a repertoire of virtual assistants with emotional intelligence capabilities to improve employee productivity by facilitating more natural and empathetic interactions with guests. These assistants can detect and respond appropriately to customers' emotions, providing more personalised service (Ruiz-Equihua et al., 2023) and reducing the emotional burden on employees (Singh, 2024). This can create more enriching and rewarding work environments for employees, which in turn can translate into higher productivity, job satisfaction, and exceptional experiences for guests. By feeling welcomed and served by friendly and attentive staff, tourists experience a higher level of satisfaction and well-being during their stay at the hotel.

Productivity is affected by data analysis for personalised experiences based on guest preferences, behaviours, and patterns, allowing employees to offer more personalised experiences and anticipate customer needs (Solnet, et al., 2019; Harris et al., 2014). This can improve guest satisfaction while increasing employee efficiency by optimising their efforts. Proper use of AI can help employees better understand the needs and emotions of guests, allowing them to respond more empathetic and understanding to their concerns and desires (Pelau et al., 2021). Thus, AI systems can analyse guests' tone of voice and body language to detect signs of dissatisfaction or discomfort, allowing employees to proactively intervene to address any issues and ensure a positive experience (Pelau et al., 2021.).

Productivity is also measured by automating routine and repetitive tasks, such as reservation management, check-in, and check-out, freeing employees from these workloads and allowing them to focus on providing more personalised and attentive service to guests. This can improve productivity and reduce work stress.

By focusing on integrating AI in an ethical and human-centric way, hotels can create a work environment that goes beyond the merely transactional, creating memorable experiences and contributing to greater brand loyalty (Bagadiya and Kathiriya, 2024). Based on the paragraphs above, hypotheses 7, 8, and 9 are proposed:

H7: The motivation to implement the model (M) influences employee productivity (P)

H8: The way of leveraging opportunities generated by the environment (O) influences employee productivity (P)

H9: The way employees develop their skills (HA) influences employee productivity (P)

3. METHODOLOGY

3.1. Sample selection and indicators

Once the theoretical section had been drafted, the research team turned to the list of hotels in Spain published by INE in 2023. From a total of 14,796 Spanish hotels, a total of 4500 hotels were initially randomly selected (INE, 203). The objective was to find out how many of them were currently using AI in their hotel processes. This database was cross-checked and updated with the databases sent by each of the tourism offices of the 17 regions in Spain. In March 2024 emails were sent out in groups of 100. A total of 970 responded favourably.

All of them were then invited to take part in the research work by explaining the content and its theoretical and practical purpose. A total of 420 hotel managers responded favourably, interested in learning more about the benefits and advantages of applying a humanistic model of AI.

In mid-April, 25 hotels were randomly selected to test the presented model and collect their feedback. The relationship between the constructs and the contents of the theoretical sections was explained during 1h 30min. All their contributions were made in the theoretical part and were included in the work. The model was accepted by all. In the last week of April, a second pretest was presented with 22 indicators, two were rejected and four were modified.

Table 1. Constructs and indicators

Constructs	Definition	Authors
Technological Challenges of AI in the Tourism Industry (TCH)		
TCH1	Concerns arise about algorithmic fairness and inherent bias in the data used to train AI models	Akter et al., 2022; Pitoura et al., 2022
TCH2	Access to tourism opportunities can lead to privacy violations, identity theft, and data manipulation	Shi et al., 2021; Yallop et al., 2023
TCH3	Tourism also faces economic and labour challenges associated with the adoption and use of AI	Ivanov and Webster, 2019
The Humanistic Side of AI in the Hotel Industry (HAI)		
HAI1	Identify individual guest´s preferences promoting personalised recommendations with guest	Pedro et al., 2019;

HAI2	Promote creativity through AI systems	Eubanks, 2022; Lim, 2018
HAI3	Enhance teamwork, effective communication to promote a warmer and more welcoming hospitality culture	Ben Saad, 2024; Said, 2023; Thornhill-Miller et al., 2023; Wang and Uysal, 2024
HAI4	To make more informed decisions aligned with their personal values and ethical principles	Ibáñez and Olmeda, 2022; Paraman and Anamalah, 2023
The Impact of the Humanistic Use of AI on Motivations (M)		
M1	Creating tools and platforms that allow users to control and customise their experience in decision-making	Fenwick and Molnar, 2022
M2	Humanise AI through education and awareness about AI ethics at all levels	Baum, 2021
M3	Development of policies and regulations to adopt ethical standards and transparent practices	Bryson, 2020; Whittlestone et al., 2019
M4	Creation of support communities and networks	Díaz-Rodríguez et al., 2023
The Humanistic Use of AI to Leverage Opportunities Generated (O)		
O1	The opportunity of focusing on environmental and social sustainability, offer a unique context for integrating AI in an ethical and human-centric way	Alkire et al., 2024; Vollenbroek, 2002
O2	The opportunity to develop robust infrastructures and robust data platforms facilitates an effective implementation of AI in sustainable practices	Amarasinghe, 2024
O3	The opportunity of collaboration between academic institutions, research centres, and companies	Getchell et al., 2022; Saini and Bhalla, 2022
Humanism in the Use of AI and Employee Skills (SK)		
SK1	Promoting skills like digital literacy and handling of AI tools through reservation management systems, virtual assistants, and data analysis	Balkanov, 2023
SK2	AI develop competencies such as empathy and intercultural understanding through effective	Lepeley, and Beutell, eds., 2021

	communication, or critical thinking and problem-solving	
SK3	AI can impact employee skills is through personalised training and professional development	Dwivedi et al., 2021; Mukherjee, 2023
SK4	Development social and communication skills that allow employees to interact with guests about the hotel's sustainability initiatives	González-Rodríguez et al., 2019
The Effect of Humanistic AI on Employee Productivity (P)		
P1	Humanistic side of AI generate significant productivity among employees	Kong et al., 2024
P2	AI in its relationship offers a repertoire of Virtual assistants with emotional intelligence capabilities improve employee productivity	Singh, 2024
P3	Productivity is affected by data analysis for personalised experiences based on guest preferences, behaviours, and patterns	Pelau et al., 2021; Solnet, et al., 2019

Once accepted all indicators were sent to the 420 managers, 16 did not respond and 2 were incomplete. Finally, 402 were valid.

3.2. Model constructs and hypotheses

H1: Technical and ethical challenges of AI (HCT) influence the application of a humanistic model (HS).

H2: The application of a humanistic model (HS) influences the motivation to implement such a model (M)

H3: The application of a humanistic model (HS) influences the way of taking advantage of opportunities generated by the environment (O)

H4: The motivation to implement the humanistic model (M) influences the way of taking advantage of the opportunities generated by the environment (O)

H5: The implementation of a humanistic model (HS) influences the way employees develop their skills (HA)

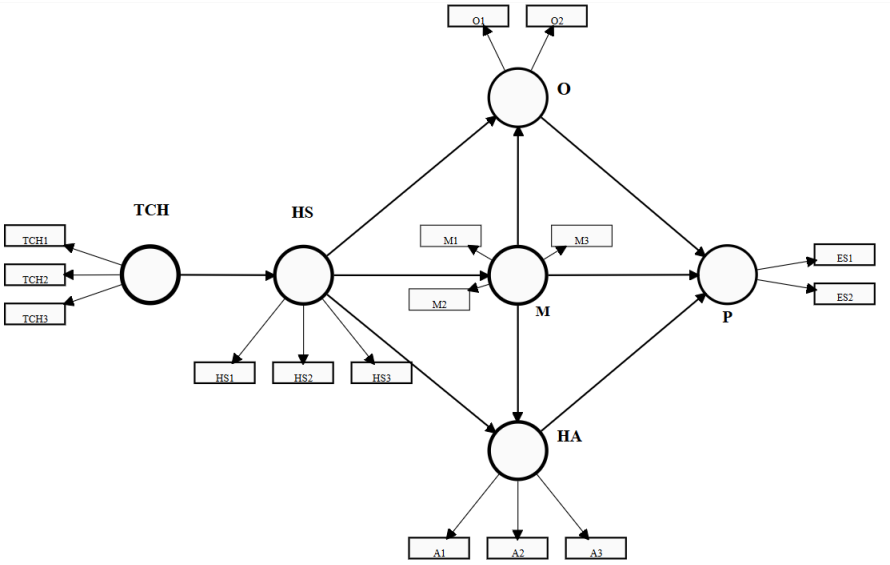
H6: Motivation to implement the humanistic model (M) influences the way employees develop their skills (A)

H7: Motivation to implement the humanistic model (M) influences how employees' productivity (P)

H8: The way opportunities generated by the environment (O) are exploited influences employee productivity (P)

H9: The way employees develop their skills (H) on employees' productivity (P)

Figure 3. External model



4. RESULTS

4.1. Outer Loading

Outer Loadings in SmartPLS indicate the strength of the relationship between indicators and constructs. Values above 0.7 are considered acceptable, indicating a significant influence on the construct.

Table 2. Strength of the indicators and constructs.

	A	ES	HS	M	O	TCH
SK1	0,848					
SK2	0,906					
SK3	0,905					
P1		0,916				
P2		0,931				
HAI1			0,889			
HAI2			0,831			

HAI3	0,910			
M1		0,912		
M2		0,888		
M3		0,884		
O1			0,924	
O2			0,917	
TCH1				0,902
TCH2				0,884
TCH3				0,846

4.2. Construct reliability and validity

In SmartPLS Structural Equations, reliability and validity of constructs are assessed using Cronbach's alpha, Composite reliability (rho_a), Composite reliability (rho_c) and Average variance extracted (AVE). Cronbach's alpha measures internal consistency, while the two forms of Composite reliability and AVE assess reliability and shared variance, respectively. Accepted values vary, but generally values above 0.7 are sought for Cronbach's alpha and Composite reliability, and above 0.5 for AVE.

Table 3. Reliability and validity of constructs

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
SK	0,864	0,873	0,917	0,786
P	0,827	0,832	0,920	0,852
HAI	0,849	0,853	0,909	0,769
M	0,876	0,886	0,923	0,801
O	0,820	0,821	0,917	0,847
TCH	0,850	0,852	0,909	0,770

4.3. Discriminant validity

The Discriminant validity HTMT measures the distinction between constructs. It is calculated by comparing the correlations between constructs with confidence intervals. It is considered acceptable if values are below 0.9, indicating adequate discrimination between constructs.

Table 4. HTMT

	SK	EP	HAI	M	O	TCH
SK						
P	0,627					
HS	0,485	0,652				
M	0,488	0,772	0,538			
O	0,261	0,575	0,561	0,635		
TCH	0,556	0,573	0,605	0,459	0,490	

4.4. Path coefficients

Path coefficients in SmartPLS represent direct relationships between variables. T statistics values assess the statistical significance of these coefficients, while P values indicate the probability of obtaining similar results by chance. A coefficient is considered significant if the absolute value of T statistics is greater than 1.96 and the P value is less than 0.05, suggesting a significant relationship between the variables.

Table 5.Coefficients T and P

	Original sample (O)	2.5%	97.5%	T Statistics	P values
H1: TCH -> HAI	0,515	0,446	0,583	14,564	0,000
H2: HAI -> M	0,471	0,380	0,560	10,132	0,000
H3: HAI -> O	0,280	0,175	0,379	5,372	0,000
H4: M -> O	0,405	0,300	0,509	7,590	0,000
H5: HAI -> SK	0,272	0,189	0,358	6,271	0,000
H6: M -> HA	0,304	0,201	0,398	6,148	0,000
H7: M -> P	0,443	0,314	0,561	7,037	0,000
H8: O -> P	0,168	0,058	0,280	2,948	0,003
H9: SK -> P	0,306	0,219	0,408	6,467	0,000

4.5. F-square

The f-square in SmartPLS measures the effect size or predictive significance of a construct on a specific endogenous variable. The reference values are: 0.02 (small effect), 0.15 (medium effect) and 0.35 (large effect). F-square values above 0.35 indicate that the construct has a substantial impact on the dependent latent variable, while values below 0.02 suggest an insignificant impact.

Table 6.F-Square

	A	ES	HS	M	O	TCH
A		0,164		0,106		
ES						
HS	0,208			0,033	0,285	
M		0,258				
O		0,043		0,208		
TCH			0,362			

5. DISCUSSION

The model presented to humanise the use of artificial intelligence (AI) in the hotel industry is significant (R^2=0.538). The relationships between the proposed variables are positive and significant, validating the use of MOA (Motivation, Opportunity and Ability) Theory. Motivations for humanising AI include defining a clear set of ethical principles and human values to guide its development and implementation (H2: HS → M, β=0.471; t=10.132; p=0.000). These principles should promote respect for human rights, privacy, transparency, fairness and accountability. Embedding these values from the outset ensures that AI is developed in an ethical and human-centred manner.

For hotel managers, external opportunities in hotels, if well harnessed, can create an environment that enables employees to use AI to deliver excellent service (Zong & Fukushige, 2023). Promoting a humanistic approach to AI can transform these opportunities, creating conditions conducive to exceptional service by improving employee well-being and service capability. Another interesting factor highlighted by managers is the investment in R&D of AI applications for sustainability (H3: HS → O, β=0.175; t=5.372; p=0.000). Which is crucial for developing new algorithms and innovative solutions in areas such as energy efficiency and green technology.

Employee skills refer to the competencies needed to perform effectively in a sustainable environment (Yeşiltaş et al., 2022). Promoting human dignity through AI can transform the development of these skills. It is essential to develop competencies such as empathy, effective communication and critical thinking, as well as knowledge of ethical principles such as transparency, fairness, privacy and accountability in the use of AI. Understanding how AI affects work cultures and working conditions is fundamental (H5: HS → HA, β=0.272; t=6.271; p=0.000).

Among these relationships, the relationship between the challenges presented and the proposal of a humanistic solution to them stands out for its high parametric values (H1: TCH→ HS, β=0.515; t=14.564; p-value=0.000). The integration of artificial intelligence (AI) in the tourism industry faces the harmful effects of algorithmic bias, which may reflect cultural and socio-economic biases in

recommendations of tourism destinations and activities, raising issues of equity and fairness in access to tourism opportunities. Furthermore, the use of AI in tourism can lead to privacy breaches and data manipulation, highlighting the need to ensure the security and privacy of users in order to build trust in these systems. A humanistic approach to AI in the hospitality industry is essential to address these challenges and promote human dignity.

The proposed model not only treats workers not as tools to achieve goals, but as human beings worthy of integral development. According to Alvira (1989), humanism requires leaders who are aware of their social responsibility, capable of showing the benefits of humanism to the rest of society. This means using technology to contribute to the personal and professional development of employees and to enhance the customer experience. Aligned with these two objectives, AI can offer continuous training through personalised course recommendations and educational resources, allowing employees to acquire new skills throughout their career. In addition, it can enhance training and empathy in guest interactions by analysing data to identify individual patterns and preferences.

Coupled with better training and empowerment, a third solution that AI proposes to overcome today's challenges is to promote creativity and innovation, freeing employees from repetitive tasks and allowing them to focus on activities that require unique human skills. All of this helps to facilitate teamwork and communication between employees from different areas, promoting a warmer and more welcoming hospitality culture.

6. CONCLUSIONS

First, from a humanist perspective, artificial intelligence (AI) should be a tool in the service of people's well-being and dignity. For AI to do good, both the technology and the individuals need constant training and practice. In the hospitality industry, this means using AI to collect, process and communicate information in a way that respects human dignity, avoiding its use for purely economic, power or influence purposes. A humanistic approach to AI in hotels should focus on creating authentic, inclusive and culturally diverse tourism experiences. Motivation-Opportunity-Ability (MOA) theory suggests that the effective implementation of AI in this sector depends on the motivation, opportunity and ability of employees. In this way, human well-being oriented AI can significantly improve outcomes and service quality in the hospitality industry.

Second. The integration of AI in tourism presents several technical, economic and ethical challenges. One of the main problems is algorithmic bias, which may reflect cultural and socio-economic biases in recommendations of tourism destinations and activities, raising questions of equity and fairness in access to tourism opportunities. Furthermore, the use of AI in tourism can lead to privacy breaches and data manipulation, highlighting the need to ensure the security and privacy of users to build trust in these systems. A humanistic approach requires

careful design and evaluation of algorithms to ensure fairness and impartiality in tourism offers and recommendations. Updated and collaborative regulatory frameworks involving legislators, regulators, industry and civil society are also crucial to ensure transparency and accountability in the use of AI.

Third, AI can and should be used to promote the holistic development of people in the hospitality industry. This includes offering continuous training to employees through personalised course recommendations and educational resources, improving training and empathy in guest interactions. AI can help identify individual customer patterns and preferences, enabling personalisation of service. In addition, it can foster creativity and innovation in employees, freeing them from tedious tasks and allowing them to focus on activities that require unique human skills. AI can also improve communication and teamwork, promoting a warmer and more welcoming hospitality culture. Finally, AI can provide analytics and recommendations that help employees make more informed decisions aligned with ethical principles, empowering them to act responsibly and ethically.

A study among hotel directors and managers can have several limitations and biases. First, the humanistic perspective suggests that AI should serve human well-being, but some managers may prioritize economic benefits over ethical implications. Second, the integration of AI faces technical, economic, and ethical challenges; managers may have different levels of knowledge and attitudes toward these challenges, affecting the study results. Finally, MOA theory indicates that the effective implementation of AI depends on employees' motivation, opportunity, and ability, but managers' biased perceptions of these variables can distort the understanding of AI's real impact.

These limitations could have been reduced with more preparation sessions to clarify the study's objectives and by increasing the sample size of directors and managers. Better preparation ensures a more comprehensive understanding of ethical considerations, technical challenges, and employees' capabilities, leading to more balanced and accurate results.

Future lines of research will focus on testing how the humanistic model affects not only managers, but also employees and customers, specifying their differences and similarities. Information that may be of interest for tourism authorities in a region and especially for companies in the tourism industry.

As a future research direction, a longitudinal analysis could be added to examine how AI influences the hospitality industry over several years. This approach would provide insights into the long-term impacts of AI on operational efficiency, employee adaptation, and guest satisfaction. By tracking changes and trends over time, researchers can identify patterns and make more informed recommendations for integrating AI in a way that balances economic benefits with ethical considerations.

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