



# Exploring Self-Determination Theory and its consequences in Hospitality Industry; Does Generative Artificial Intelligence Matters?

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**Abstract.** This study seeks to create a developed predictive model that explores the impact of Self-Determination Theory (SDT) on motivation, in-role and extra-role performance within hospitality sector employees. To provide a novelty, this research integrates and examine the Generative Artificial Intelligence (GAI) as a moderating factor. An online self-administered survey was conducted and primary data were collected by randomly distributing questionnaire links through email and social media. A total of 200 hotel employees in Makassar City, Indonesia, were then chosen as respondents through purposive sampling. Employing Structural Equation Modeling-Partial Least Squares analysis, the findings revealed that all SDT dimensions (autonomy, competence, relatedness) had a positive and significant impact on employee work motivation. Furthermore, it was found that work motivation had a positive and significant influence on both in-role and extra-role performance. Lastly, the GAI moderator was observed to strengthen the direct relationships between these variables. The study also delves into the theoretical and practical significance of these findings and puts forward recommendations for future research.

**Keywords:** Self-Determination Theory ⊕ Motivation ⊕ In-Role Performance ⊕ Extra-Role Performance ⊕ Generative Artificial Intelligence ⊕ ChatGPT ⊕ Hospitality Sector ⊕ Human Resource Management

## 1 Introduction

The hospitality sector relies heavily on its workforce, operating without interruption 365 days a year and around the clock. This demands employees to put in hours that often exceed the standard 40-hour workweek expected in full-time service roles. This work environment poses significant challenges as it exposes workers to perilous and exploitative conditions, offers low wages, requires them to work irregular hours, and subjects them to a diminished social status. These obstacles make it difficult for employees to strike a healthy balance between their professional commitments, family

obligations, and other essential aspects of their lives (1). Work-related stress is a prevalent issue within the hotel industry, where the working conditions often hinder employees from attaining a satisfactory level of psychological well-being and work-life balance, as outlined in a study (2). The “Health on Demand” survey, which collected responses from 14,000 employees globally, including 1,000 from Indonesia, also highlights disparities in employee welfare. Specifically, the data reveals that there exists a disparity in health benefits between employees, with only 38% of lower-income workers receiving different health benefits compared to the 59% of their higher-earning counterparts.

Self-determination theory (SDT) is a psychological theory which proposes that everyone has basic needs that drive their motivation and behavior (3) In practice, SDT is often used in self-development, education, and work environments to help people achieve intrinsic motivation and develop their basic needs (4,5). According to (6), SDT conceptualizes the basic psychological needs for autonomy, competence, and relatedness as innate and important for psychological growth, internalization, and sustainable well-being. For decades, SDT has addressed the relationship between motivation and dual attention to performance and tourism actors in organizations, it focuses on what facilitates high-quality and sustained motivation and what elicits volitional engagement in employees and customers (7). According to (8) in his book entitled “Tourism Impacts, Planning and Management” defines tourism actors as individuals or organizations involved in tourism activities such as travel companies, hotels, restaurants, tour operators, airlines and tourist destinations.

The SDT model, once developed, underwent testing and was associated with novel variables. Artificial Intelligence has gained popularity as a valuable tool across diverse industries. AI is seen as a way for organizations to reduce expenses and enhance service quality, coordination, productivity, and operational efficiency (9,10). Instances of AI application within businesses can be observed across domains like executive decision-making, production processes, and product design (11). In research (12) AI technology has seamlessly integrated into the tourism and hospitality sectors, serving as a vital and strategic driver of economic growth. In summary, it is imperative to prioritize these technologies and employ suitable strategies to satisfy the demands and aspirations of both customers and staff by leveraging AI innovations. The business performance is expected to significantly improve due to the positive impact of AI. However, it is worth noting that AI can also have adverse effects. Various research studies in the context of AI implementation within the hotel industry have yielded mixed results, suggesting that limiting the extent of AI usage might be a more favorable approach (13).

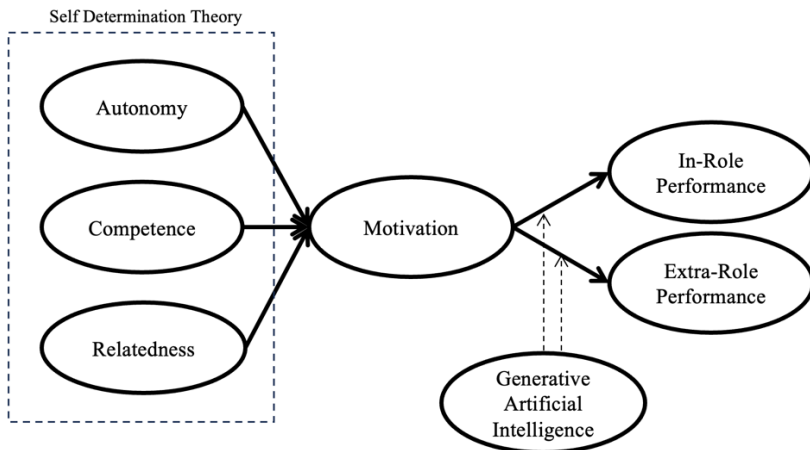
Consequently, researchers have pinpointed empirical deficiencies in the existing SDT model, prompting an expansion of the model to introduce new dimensions in research. This aligns with recommendations put forth by various SDT scholars who have suggested that enhancing the model's predictive capabilities can be achieved by incorporating more external variables and conducting mediation-moderation tests (14–16). Therefore, the research objectives are (1) to investigate the influence of the original construct of SDT (autonomy, competence, relatedness) on the motivation, in-role and extra-role performance of hotel sector employees; (2) to test the

moderating role of generative artificial intelligence variables on the influence of work motivation and performance.

### 1.1 Theoretical Review and Hypotheses Development

Self-determination theory (SDT) is a psychological framework suggesting that every individual possesses fundamental needs that fuel their drive and actions. In line with SDT, these fundamental needs comprise three core components, which are as follows: (1) Autonomy is the yearning for self-determination, to have authority over our lives and decisions, and to engage in activities of our personal preference; (2) The desire for competence arises from a longing to experience a sense of capability and effectiveness in the tasks and endeavors undertaken; (3) The longing for social connectedness (relatedness) is the aspiration to cultivate positive connections with individuals and experience a sense of belonging within our social surroundings. SDT posits that an individual's drive can stem from two primary origins: external motivation, stemming from external factors like rewards, penalties, or societal expectations, and internal motivation, emerging from an individual's inner desire to engage in meaningful or enjoyable activities. The SDT identifies two distinct motivation types: intrinsic motivation (autonomous motivation) and extrinsic motivation (controlled motivation).

Fig. 1. Research Model



The creators of Self Determination Theory (SDT) underscore the significance of autonomy as a fundamental human requirement that enhances intrinsic motivation. They argue that when people perceive themselves as having independence in their actions and lifestyles, they typically exhibit heightened motivation, greater intrinsic engagement, and increased satisfaction when participating in those tasks (17).

Findings from the research (18) indicated that motivation exhibited a positive correlation with both perceived autonomy support and the presence of a task-oriented climate. This finding is substantiated by research (1) Demonstrates that when it comes to enhancing psychological well-being and achieving a balance between work and personal life, having psychological autonomy yields positive results. However, psychological competence only contributes positively to psychological well-being.

Conversly, as per (19) the competence level can have an impact on performance since when employees possess a high level of competence, it enables them to attain better performance. The company is more likely to reach its objectives when all employees are assigned roles that align with their skills and capabilities. This is corroborated by the viewpoint presented (20) employees may find greater motivation to finish their tasks when the work aligns with their skills and abilities. The level of perceived competence has a greater impact on the motivation to pursue future goals among individuals with a strong desire for achievement (21). In this case, competency plays a pivotal role in shaping motivation and cultivating a productive working atmosphere.

Teamwork and interpersonal encouragement among individuals have the potential to boost employee motivation and productivity, particularly when it comes to tasks. Employees who sense the backing of their colleagues are generally more inclined to actively contribute with creativity (22). In research (23) discovered that the extent to which one's relatedness needs are met, as a potential marker of self-regulatory challenges, was not notably distinct from the general population. The results indicate that colleague support plays a role in promoting employee creativity (24). Considering the information provided earlier, this study puts forth a number of hypotheses, which are outlined as follows:

*H1: Autonomy had a significant influence on employee's motivation*

*H2: Competence had a significant influence on employee's motivation*

*H3: Relatedness had a significant influence on employee's motivation*

Motivation plays a significant role in influencing an individual's in-role performance within an organization. In-role performance refers to the specific tasks and responsibilities that are outlined in a person's job description or role. Workers perceive that internal drive and a sense of higher purpose significantly influence their performance. Previous research in multiple settings consistently affirms that motivation plays a pivotal role in determining employee performance (25–27). Moreover, motivation can have a significant effect on extra-role performance, also known as organizational citizenship behavior (OCB). Extra-role performance refers to the discretionary and voluntary behaviors of employees that go beyond their formal job responsibilities and are not explicitly rewarded through the formal incentive system. These behaviors can include helping colleagues, volunteering for additional tasks, providing feedback, and more. Multiple preceding investigations support the assertion that motivation plays a crucial role (28–30). In research (31) ndicates a strong correlation between motivation and OCB performance, highlighting the substantial influence of perceived supervisor autonomy support on employee

motivation and job satisfaction. Given the information provided earlier, this study formulates several hypotheses, as outlined below:

*H4: Motivation had a significant influence on in-role performance and extra-role performance*

Generative Artificial Intelligence (GAI) refers to a subset of artificial intelligence capable of generating diverse and unique content. Unlike the theoretical concept of Artificial General Intelligence (AGI), which can autonomously learn and execute a wide range of tasks and concepts but does not exist in practice, GAI is termed “generative” due to its ability to produce specific outputs, including text, audio, images, and videos through supervised or unsupervised training (32). Commonly used AI tools encompass platforms like ChatGPT, BingAI, Bard, DALL-E 2, and numerous others. The vast potential consequences of this technology for society and humanity are profound. As with every sector, the hospitality and tourism industry stands on the threshold of encountering groundbreaking innovations and unparalleled challenges as AI advances further (33–35). As an illustration, in the context of the hospitality and tourism industry, GAI has the capability to utilize a traveler’s historical travel data, their preferences when it comes to consumption, and their social media activity to offer tailored suggestions to travelers. It can also produce detailed descriptions of various travel destinations and hotels, and it can even craft virtual tours of hotels and tourist attractions (36). Generative artificial intelligence (GAI) also holds the capacity to assist workers in the hospitality sector by diminishing the necessity for humans to engage in monotonous and time-consuming activities. This can empower workers to dedicate their efforts to challenging assignments demanding creativity, critical reasoning, and customer engagement. Simultaneously, this can yield favorable outcomes in regions where recruiting and retaining personnel, particularly those lacking specific skills, poses challenges. GAI raises apprehensions regarding the substitution of human employees across diverse sectors. These raises concerns in various sectors of the economy, with the hotel industry being a notable example. It has implications for both unskilled workers and those in customer service roles. From the employees’ viewpoint, it could potentially devalue their roles, but it's anticipated that General Artificial Intelligence (GAI) will also generate fresh employment prospects and redefine the roles of frontline service workers in the hospitality industry (33). According to the details provided earlier, this research puts forth a number of hypotheses, as outlined below:

*H5: GAI strengthens the relationship between motivation and performance (in-role and extra-role)*

## **2 Methodology**

### **2.1 Research Design**

This study employs a quantitative research framework for the purpose of gathering dependable and precise data. To achieve this, an online survey approach is utilized, as it facilitates the uniformity of quantitative data collection, ensuring that the data maintains internal coherence and is readily comprehensible for subsequent analysis via structural equation modeling (SEM) .

### **2.2 Sample Procedures and Data Collection**

The object of this research focuses on employees in the hospitality sector. These criteria were chosen so that researchers can group the right respondents to become research material. Furthermore, the sample selection technique uses purposive sampling or also known as judgmental, selective, or subjective sampling. In more detail, a purposive homogenous sample was chosen because the sample members have shared characteristics or a series of relatively similar characteristics (37), namely (working/min. 1 year experience) in Makassar hotels, working in 3-5 star hotels. The sample size refers to the maximum likelihood estimation method, meaning the minimum sample size is 200 employees (38). To collect primary data, an online survey was implemented using the Google Forms (GoogleDrive) feature in accordance with expert recommendations in social science research (39,40). The link containing the online questionnaire (e-form) is distributed randomly via various social media (Facebook, Twitter and Instagram) and e-mail – while still guaranteeing the anonymity and confidentiality of the respondent's privacy data. Data collection was carried out for three months, starting from September 2023 to October 2023. After verification, primary data that was suitable for testing was determined, namely 200 samples (hotel sector employees who worked in Makassar City).

### **2.3 Measurement**

The internet-based survey consists of two sections. Part A aims to gather demographic data from participants, including details such as gender, age, educational background, work experience, and hotel ratings. In contrast, Part B encompasses abstract concepts derived from Self Determination Theory (SDT) (autonomy, competence, and relatedness), motivation, in-role and extra-role performance. This section has been adapted and adjusted with reference to prior research investigations (6,7,15,41–43). All measurement items were assessed using a five-point Likert scale, where 1 corresponds to “Strongly Disagree,” 2 to “Disagree,” 3 to “Neutral,” 4 to “Agree,” and 5 to “Strongly Agree”.

### 3 Results and Discussion

#### 3.1 Respondents

The composition of hotel sector workers in Makassar City, when considering gender, reveals that the majority of respondents are female, making up 61.5%, while males account for 38.5%. When examining their ages, nearly all of the participants fall within the productive age bracket, with 68.0% being in the 18-25 years range, followed by 22.0% in the 26-35 years group, and 10.0% in the 36-45 years category. In terms of their educational background, a significant portion of hotel sector employees have either completed high school or obtained a diploma, constituting 76.5% of the workforce. Additionally, 14.0% have attained a Bachelor's degree (S1), with the remaining 9.5% possessing Master's (S2) or Doctoral (S3) degrees. Moreover, a significant portion of the survey participants earn between 1-3 million (accounting for 45.5% of respondents) and possess a work history of 1-3 years (constituting 44.0%). On the other hand, there are those with incomes exceeding 3 million (comprising 37.5%) and work experience exceeding 3 years (making up 32.5%). The remainder falls into the category of individuals earning less than 1 million (17.0%) and having worked for less than 1 year (23.5%). To conclude, the majority of the study's participants were engaged as contract or outsourced employees, with the majority working in hotels rated between 1-3 stars (63.0%).

**Table 1.** Demography of respondents (N=200)

Categories	Demographic	F	Percentage
Gender	Male	77	38,5%
	Female	123	61,5%
Age	18-25	136	68,0%
	26-35	44	22,0%
	36-45	20	10,0%
Level of education	High school or Diploma	153	76,5%
	Undergraduate (Bachelor)	28	14,0%
	Postgraduate (Master & PhD)	19	9,5%
Level of income	Below 1 million	34	17,0%
	1 - 3 Million	91	45,5%
	More than 3 million	75	37,5%
Working experience	Less than 1 year	47	23,5%
	1 - 3 years	88	44,0%
	More than 3 years	65	32,5%
Employment status	Permanent/ regular	74	37,0%
	Contract/ Outsourcing	126	63,0%

Hotel star ratings classification	1 – 3 Stars	138	69,0%
	4 Stars	50	25,0%
	5 Stars	12	6,0%

**3.2 Outer Model Evaluation**

The initial stage in assessing PLS-SEM outcomes consists of examining the measurement model, also known as the outer model, this component of the SEM model delineates how latent variables are connected to their observable indicators (44). The initial phase of evaluating the reflective measurement model entails examining indicator loadings (loading factors) with the requirement that all measurement items should exhibit values exceeding a certain threshold 0.7. Therefore, the object is considered suitable for assessing the variable. The subsequent stage involves evaluating internal consistency reliability by examining the provided values Composite Reliability (CR) and Cronbach Alpha (CA), when the data processing outcomes reveal that all variables exhibit CR and CA values surpassing a certain threshold 0.7. Consequently, every variable has been declared to fulfill the reliability criteria. In the third stage, convergent validity is assessed using specific values Average Variance Extracted (AVE) for every element within every construct, according to the results, all the values indicate a level higher than 0.5, To ensure acceptance of the AVE criteria, the fourth step involves evaluating discriminant validity using the Fornell-Larcker criteria. The examination of test outcomes revealed that the AVE root for each construct exceeded the squared correlation with other constructs, thus confirming the presence of discriminant validity. The results of the outer model tests are presented in Tables 2 and 3.

**Table 2.** Measurement model assessment

Variables	Items	Loadings	C.A.	C.R.	AVE
AUT	AUT1 – I am motivated to pursue my personal aspirations and am willing to exert additional effort to attain them.	0.824	0.754	0.821	0.677
	AUT2 – I believe it's my duty to make a positive impact in my workplace or local community.	0.812			
	AUT3 – I have a sense of influence and agency in determining the results I accomplish in my work or activities.	0.865			
COM	COM1 – I possess the essential abilities to successfully carry out the tasks that have been assigned to me.	0.843	0.751	0.867	0.712
	COM2 – I am self-assured in my comprehension of the tasks provided.	0.857			



	COM3 – I am well-equipped to handle and surmount any hindrances that might surface during the execution of my designated responsibilities..	0.814			
REL	REL1 – I believe it's my duty to assist those in my vicinity when they encounter challenges or hardships.	0.795	0.761	0.844	0.679
	REL2 – I willingly extend assistance to individuals who require it.	0.863			
	REL3 – I have a strong emotional bond with individuals and genuinely wish for their success.	0.821			
MOT	MOT1 – I experience job fulfillment when my assigned tasks are finished.	0.712	0.722	0.865	0.651
	MOT2 – I can harness my capabilities and function autonomously.	0.843			
	MOT3 – I am content when i receive a fair rewards of my individual performance, along with the corresponding bonus.	0.865			
IRP	IRP1 – I believe I have enough capability to finish the assigned tasks.	0.821	0.762	0.870	0.788
	IRP2 – I carry out the duties outlined in the job description.	0.876			
	IRP3 – I consistently carry out my job tasks with a strong commitment to delivering high-quality results.	0.789			
ERP	ERP1 – My intention is to assist individuals from other departments when they encounter difficulties.	0.821	0.710	0.842	0.689
	ERP2 – I avoid both complaining and using profanity.	0.843			
	ERP3 – I diligently document details pertaining to the organization's events.	0.865			
GAI	GAI1 – I can employ ChatGPT to accomplish tasks.	0.749	0.743	0.879	0.700
	GAI2 – I'm open to acquiring knowledge pertaining to ChatGPT.	0.832			
	GAI3 – I'm receptive to learning about topics related to ChatGPT.	0.843			

Source: Output SmartPLS 3.0

AUT: Autonomy; COM: Competence; Rel: Relatedness ; MOT: Motivation; IRP: In-role performance; ERP: Extra-role performance; GAI: Generative Artificial Intelligence

**Table 3.** Discriminant validity with Fornell-Larcker

	Mean	Standard Deviation	AUT	COM	REL	MOT	IRP	ERP	GAI
AUT	3.74	0.62	<b>0.924</b>						
COM	3.72	0.60	0.508	<b>0.823</b>					
REL	3.78	0.66	0.522	0.505	<b>0.801</b>				
MOT	3.79	0.51	0.632	0.612	0.521	<b>0.878</b>			
IRP	3.81	0.67	0.743	0.669	0.634	0.654	<b>0.819</b>		
ERP	3.72	0.69	0.465	0.560	0.556	0.534	0.455	<b>0.803</b>	
GAI	3.86	0.63	0.578	0.513	0.578	0.521	0.678	0.541	<b>0.826</b>

Notes. Square roots of Average Variances Extracted (AVEs) are shown diagonally (in bold).

AUT: Autonomy; COM: Competence; Rel: Relatedness ; MOT: Motivation; IRP: In-role performance; ERP: Extra-role performance; GAI: Generative Artificial Intelligence

### 3.3 Inner Model Evaluation

Before assessing the structural model in PLS-SEM, the Variance Inflation Factors (VIF) values are checked to ensure there are no symptoms of collinearity in the model. Ideally, the VIF value should be smaller or close to 3, and if the VIF value is greater than 5, then critical collinearity between construct indicators is detected (45). Based on the test results, all VIF values for each construct are less than 3, indicating that there is no multicollinearity problem. Next, the R Square (R<sup>2</sup>) value for each endogenous latent variable was assessed, where the R<sup>2</sup> values of MOT, IRP and ERP were 0.665 (66.5%), 0.521 (52.1%) and 0.678 (67.8%), respectively, indicating that the model has sufficient predictive relevance (fit) (45).

The outcomes of hypothesis testing for every latent variable connection are displayed in figure 3. To evaluate all connections among variables, we employed a non-parametric bootstrapping method (SmartPLS 3.0) to determine beta coefficients and their associated significance, as indicated by (t and p values). Implemented by taking the subsample and scaling it up by a factor of 1,000 (38). The critical t-table value corresponding to a 95% confidence level ( $\alpha = 5\%$ ) and degrees of freedom (df)= n-2; 200-2= 198 is 1.99. Hypotheses 1-5 anticipate that the exogenous SDT variables directly affect the endogenous variables (MOT, IRP, dan ERP). The results of the test indicate that AUT ( $\beta = 0.345, t = 4.367, p < 0,000$ ), COM ( $\beta = 0.319, t = 3.467, p < 0,001$ ), REL ( $\beta = 0.297, t = 3.453, p < 0,001$ ) was discovered to yield a positive and significant impact on MOT. Additionally, it was also observed to exert a positive and significant on the impact of MOT on IRP ( $\beta = 0.426, t = 5.259, p < 0,000$ ) and ERP ( $\beta = 0.388, t = 4.084, p < 0,000$ ). As a result, H1-H5 were accepted. Furthermore, H6 which comprises (H6a and H6b) the study verified that GAI play a moderating role in

the direct connections between variables. According to the test outcomes, it was evident that the GAI level substantially enhanced all direct connections. Therefore, both sub-moderation hypotheses (H6a, H6b) were confirmed.

**Table 4.** Bootstrapping test results

Direct effects		Std. $\beta$	Std. Error	T- value	P- value	Decision	CI (95%)	
							LL	UL
H1	AUT → MOT	0,345	0,079	4,367	0,000	Signifikan	0,022	0,932
H2	COM → MOT	0,319	0,092	3,467	0,001	Signifikan	0,087	0,149
H3	REL → MOT	0,297	0,086	3,453	0,001	Signifikan	0,014	0,846
H4	MOT → IRP	0,426	0,081	5,259	0,000	Signifikan	0,062	0,906
H5	MOT → ERP	0,388	0,095	4,084	0,000	Signifikan	0,005	1,107
Moderating effects		Std. $\beta$	Std. Error	T- value	P- value	Decision	CI (95%)	
							LL	UL
H6a	MOT*GAI → IRP	0,246	0,095	2,589	0,010	Signifikan	0,133	1.254
H6b	MOT*GAI → ERP	0,278	0,095	2,926	0,004	Signifikan	0,257	1.268

Significance at: P-value  $p < 0.01$ ,  $p < 0.05$  and T-statistics  $> 1.98$

CI: Confidence Interval; LL: Lower level; UP: Upper level AUT: Autonomy; COM: Competence; Rel: Relatedness ; MOT: Motivation; IRP: In-role performance; ERP: Extra-role performance; GAI: Generative Artificial Intelligence

### 3.4 Discussion

The positive and significant impact on employee motivation within the hotel industry in Makassar City is reinforced by the three key elements of self-determination theory (SDT): (autonomy, competence, and relatedness) as revealed in this study, which further supports prior research finding (1,3,18,46). In the field of hospitality, it entails granting employees the freedom to showcase their creativity, exercise initiative, and experience a sense of accountability in their roles. Self-Determination Theory (SDT) also underscores the significance of employees perceiving their proficiency in their jobs. Within the hospitality industry, training and skills enhancement are crucial components. When employees sense that they are progressing and gaining more proficiency, their enthusiasm will grow. Positive interpersonal connections within the workplace also have a pivotal role in SDT. Hospitality staff who feel a strong bond with their colleagues and management might find themselves more driven. Acknowledgment of accomplishments and appropriate rewards also factors into employee motivation. SDT stresses the importance of fitting rewards or incentives as a means to bolster employee motivation.

Motivation also has a positive and significant effect on in-role and extra-role performance among hotel sector employees, and this finding is in line with previous research (25–28,30,47). Motivation serves as a source of encouragement for individuals to attain their designated objectives and targets. When employees exhibit robust motivation, they tend to enhance their effectiveness in fulfilling their role-specific goals. Highly motivated employees generally display heightened focus, increased effort, and improved job performance. Furthermore, heightened motivation often leads to greater job satisfaction and a stronger commitment to the organization. Motivation can also have a beneficial impact on the workplace environment by fostering a more cooperative and amicable atmosphere. This, in turn, influences Organizational Citizenship Behavior (OCB), which can bolster overall job satisfaction within the workforce. Additionally, employees who are well-motivated tend to exhibit a preference for making extra contributions to their organization, such as assisting colleagues, providing additional support to management, or participating in volunteer initiatives that benefit the organization.

Lastly, this research also examines the role of the generative artificial intelligence (GAI) construct (an extension of the model) in moderating the direct relationships between the variables tested. The results show that all interactions are positive, meaning GAI provides reinforcement of motivation to carry out in-role performance and extra-role performance (32–34). Utilizing General Artificial Intelligence (GAI) enables the automation of repetitive tasks devoid of substantial creativity, thereby lightening the routine workload for employees. This, in turn, allows them to redirect their efforts toward tasks demanding decision-making, innovation, and problem-solving skills. The outcome is heightened motivation among employees as their work acquires a deeper sense of purpose and importance. Furthermore, GAI can enhance customer service, exemplified by chatbots delivering swift and precise information to guests. Employees can take pride in knowing that their services are bolstered by cutting-edge technology, contributing to increased motivation. With GAI's assistance, employees may experience reduced stress and work-related burdens, ultimately mitigating exhaustion and burnout, positively impacting work motivation and overall effectiveness.

## 4 Conclusion

This study enhances the Self-Determination Theory (SDT) framework to evaluate the in-role and extra-role performance among workers in hotel industry in Makassar City. The findings from the research demonstrate the significant influence of three specific variables (autonomy, competence, relatedness) on motivation ( $R^2 = 66.5\%$ ), Motivation has a significant effect on in-role performance ( $R^2 = 52.1\%$ ) and extra-role performance ( $R^2 = 67.8\%$ ). Furthermore, it was established that the inclusion of generative artificial intelligence significantly enhances the direct correlation between these factors. To sum up, this study's findings broaden the potential application of the SDT model in different situations, notably within the hospitality and tourism industries. This research also introduces a novel moderating factor, generative

artificial intelligence, which has received limited attention in both SDT theory and human resource management literature. From a practical perspective, generative AI can open up new possibilities for human resource development (HRD). Contemporary work environments are poised for a transformation in how they facilitate opportunities and HRD accessibility, allowing employees to be proactive contributors to talent development. Human resource development becomes a collaborative endeavor between employers and their workforce. In the context of utilizing ChatGPT for performance management, organizations and HR professionals should harness their capabilities to oversee and regulate both official data and casual conversations within their corporate settings.

#### 4.1 Limitations and future research directions

While this research makes a valuable contribution, it is not without its limitations. To begin with, the study's scope is limited to a single location, specifically Makassar City. As a result, it is recommended that future research broadens its applicability by including participants from various major cities across Indonesia. Additionally, this investigation solely employs a quantitative approach from a positivist standpoint. Hence, it is advisable for subsequent research to employ qualitative or mixed methods to gain a more profound insight into the utilization of generative artificial intelligence within organizations. Moreover, the data collection for this study predominantly focuses on employees in the hospitality sector. Future studies should endeavor to explore this phenomenon in non-business organizations, such as government, education, and non-governmental organizations (NGOs). Finally, given the expansive potential for developing the SDT model, it is advisable to consider several crucial variables related to the interaction between individuals and technology, whether it's mobile or computer-based. These variables include mobile self-efficacy, job satisfaction, artificial intelligence, and overall well-being.

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