

Determinants of ChatGPT Adoption in Higher Education: Proposed Research Model Based on the Extended UTAUT Framework

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Article

Keywords: ChatGPT, higher education, UTAUT, technology adoption, behavioral intention, trust, hedonic motivation, PLS-SEM

Posted Date: October 15th, 2026

DOI: <https://doi.org/10.21203/rs.3.rs-10974553/v1>

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Additional Declarations: No competing interests reported.

Abstract

This study investigates the determinants influencing university students' adoption of ChatGPT as an educational tool through the lens of the Unified Theory of Acceptance and Use of Technology (UTAUT). The proposed research model examines the influence of performance expectancy, effort expectancy, social influence, hedonic motivation, and trust on students' attitudes toward ChatGPT, as well as the effect of attitude on behavioral intention to use ChatGPT. Data were collected from 385 students enrolled in business administration and human resource management programs at public and private universities in Jordan. Partial Least Squares Structural Equation Modeling (PLS-SEM) using Smart PLS was employed to analyze the collected data. The findings reveal that performance expectancy, effort expectancy, social influence, hedonic motivation, and trust significantly influence students' attitudes toward ChatGPT adoption. Furthermore, students' attitudes significantly affect their behavioral intention to use ChatGPT in educational contexts. The study contributes to the growing literature on AI adoption in higher education by extending the UTAUT framework and providing practical implications for educators, policymakers, and universities seeking to integrate AI technologies into teaching and learning environments.

1.0 Introduction

Artificial intelligence (AI), particularly generative AI and conversational systems such as ChatGPT, is reshaping how university students access information, develop ideas, and complete learning activities. In business administration and human resource management education, these tools can support research, writing, problem solving, and decision-making, while also raising questions about reliability, appropriate use, and academic integrity. Prior research shows that students' willingness to adopt ChatGPT depends not only on its perceived usefulness and ease of use, but also on social, motivational, and trust-related considerations (Al-Abdullatif & Alsubaie, 2024; Al-Kfairy, 2024; Budhathoki et al., 2024). These considerations make technology-acceptance research especially relevant as universities seek to integrate generative AI into teaching and learning in a responsible manner.

The Unified Theory of Acceptance and Use of Technology (UTAUT) provides a useful theoretical basis for examining these adoption decisions. Building on this perspective, the present study examines performance expectancy, effort expectancy, social influence, hedonic motivation, and trust as determinants of students' attitudes toward ChatGPT, and subsequently assesses the relationship between attitude and behavioral intention. Extending UTAUT with hedonic motivation and trust is particularly relevant to generative AI because students may evaluate ChatGPT not only in terms of instrumental value and ease of interaction, but also in terms of enjoyment and confidence in the system's reliability (Balaskas et al., 2025; Jo, 2024). Although research on ChatGPT adoption in higher education has expanded rapidly, further evidence is needed from discipline-specific and regional contexts, including business-related programs in Jordan. Accordingly, this study addresses two related questions: (RQ1) How do performance expectancy, effort expectancy, social influence, hedonic motivation, and trust influence students' attitudes toward adopting ChatGPT? (RQ2) To what extent does students' attitude toward ChatGPT influence their behavioral intention to use it? By addressing these questions, the study contributes context-specific evidence on generative AI adoption and provides implications for universities seeking to support informed, responsible, and pedagogically meaningful use of ChatGPT.

2. Literature review

2.1. Unified Theory of Acceptance and Use of Technology (UTAUT) and hypothesis Development

Performance expectancy refers to the extent to which an individual believes that using a technology will improve task or learning performance. Within technology-acceptance research, it is consistently identified as an important predictor of adoption intentions, including in higher education contexts (Al-Qadri & Al-Khresheh, 2025). In the context of ChatGPT, students may perceive value when the tool helps them complete academic tasks more efficiently, improve the quality of their work, or support learning activities. Evidence from research on generative AI likewise indicates that perceived usefulness is central to students' acceptance decisions (Aslanyan-rad, 2024; Bailey, 2025).

The present study selected performance expectancy, effort expectancy, social influence, trust, and hedonic motivation because these constructs represent the core determinants of technology acceptance identified in UTAUT and UTAUT2. Recent studies on generative AI consistently demonstrate that these variables explain a substantial proportion of variance in students' attitudes and behavioral intentions toward AI-supported educational technologies (Balaskas et al., 2025).

Taken together, prior research suggests that students are more likely to develop favorable attitudes toward ChatGPT when they expect the tool to improve their academic performance. Therefore, this study proposes the following hypothesis:

H1. Performance expectancy exerts a positive influence on the acceptance of the ChatGPT.

2.2. Effort expectancy and ChatGPT acceptance

Effort expectancy refers to the perceived ease associated with learning and using a technology. In higher education, students are more likely to accept digital tools when interaction is clear, understandable, and requires limited effort (Budhathoki et al., 2024). This construct is closely related to perceived ease of use and is especially relevant to conversational AI, where a natural-language interface can reduce technical barriers. Prior research on ChatGPT and related technologies indicates that ease of interaction can strengthen favorable attitudes and intentions to use such systems (Cambra-Fierro et al., 2025). Accordingly, this study proposes the following hypothesis:

H2. Effort expectancy exerts a positive influence on the acceptance of the ChatGPT.

2.3. Social influence and ChatGPT acceptance

Social influence refers to the extent to which individuals perceive that important people in their social environment believe they should use a particular technology. In higher education, classmates, instructors, and broader academic norms can shape students' perceptions of emerging digital tools (Duah et al., 2024). Research on ChatGPT adoption has similarly highlighted the role of social and institutional encouragement in influencing acceptance and use (Hidayat-ur-Rehman & Ibrahim, 2024; Jaffar et al., 2025). Therefore, students who perceive stronger support for ChatGPT use from people important to them are expected to develop more favorable attitudes toward its adoption.

H3. Social influence exerts a positive effect on the acceptance of the ChatGPT.

2.5. Hedonic motivation and ChatGPT acceptance

Hedonic motivation refers to the enjoyment and intrinsic pleasure obtained while interacting with technology. Within UTAUT2, hedonic motivation has emerged as one of the strongest predictors of technology acceptance, particularly for AI-powered applications that provide interactive and personalized experiences. In the context of ChatGPT, students often perceive conversational AI as an engaging learning partner rather than merely an information retrieval system. Such enjoyment enhances curiosity, increases learning engagement, and strengthens positive attitudes toward AI-supported education (Jo, 2024).

Hedonic motivation is the pleasure people obtain from engaging with innovation. This particular motivation manifests itself in utilization of innovation for interactive purposes such as video game playing, social networking websites, and chatbots in higher education. Comparison between the willingness of Generation X and millennials to adopt mobile services reveals that the generational fit of an individual can make utilization of mobile innovation dependent on his/her generation (Lee & Esposito, 2025). It is pertinent to mention here that hedonic motivation is highly influential on behavioral intentions, such as intrinsic motivation will be most likely instrumental in depicting the perceived utility of chatbot applications given these factors (Li et al., 2024). This study presents the following hypothesis:

H4. Hedonic motivation positively influences the acceptance of the ChatGPT.

2.6. Trust and ChatGPT acceptance

Trust is particularly important when users interact with AI systems whose outputs may be uncertain or difficult to verify. Students may evaluate ChatGPT not only according to its usefulness but also according to whether they consider its responses reliable, accurate, and responsibly generated (Masa'd et al., 2024). In educational settings, trust can reduce perceived uncertainty and support more favorable attitudes toward AI-based learning technologies (Parveen et al., 2025). Recent research on generative AI adoption also identifies trust as an important predictor of acceptance (Balaskas et al., 2025).

Trust encompasses perceptions of competence, integrity, reliability, and responsible behavior. These perceptions become especially salient when users depend on AI-generated information for learning activities. When students have greater confidence in the reliability and responsible operation of an AI system, they may be more willing to incorporate it into their academic work (Parveen et al., 2024; Paudel & Acharya, 2024). On this basis, the following hypothesis is proposed:

H5. Trust positively influences the acceptance of the ChatGPT.

2.7. Students' intention, behavioral intention, and ChatGPT acceptance

Behavioral intention reflects an individual's willingness or plan to use a technology. Technology-acceptance research generally treats favorable attitudes and intentions as important precursors to actual use. In the context of ChatGPT, students who evaluate the technology positively are expected to express stronger intentions to use it for academic purposes (Polyportis, 2024; Raman et al., 2024). Positive evaluations may

develop when students perceive ChatGPT as useful, easy to use, enjoyable, socially supported, and trustworthy. Accordingly, this study proposes the following hypothesis:

H6. Students' intention significantly influences their behavioral intention toward adopting ChatGPT.

Despite the rapid growth of research on ChatGPT and generative AI in education, evidence remains uneven across disciplines and national contexts. Existing studies have examined students' and educators' attitudes toward AI technologies, but comparatively less attention has been devoted to the combined roles of performance expectancy, effort expectancy, social influence, hedonic motivation, and trust among students in business administration and human resource management programs (Sallam et al., 2024; Salloum et al., 2024). Examining these factors together can clarify how established UTAUT mechanisms and AI-specific considerations jointly shape students' attitudes and behavioral intentions. This study addresses that gap in the Jordanian higher education context.

3. Research methodology

Ethics statement:

All procedures were conducted in accordance with relevant ethical guidelines and regulations. The study used a non-invasive, anonymous questionnaire. Participation was voluntary, informed consent was obtained before data collection, and no personally identifiable information was collected.

The study titled “Determinants of ChatGPT Adoption in Higher Education: An Extended UTAUT Model among Business and Human Resource Management Students” was reviewed and approved by the Ethical Review Committee at Jadara University under reference number A.D/16-10/113 (12 January 2026).

The ethical approval was issued by the Faculty of Business and approved by the Deanship of Scientific Research at Jadara University in accordance with the university's applicable regulations and guidelines.

3.1. Material and methods

The research model presented in Figure 1 is grounded in UTAUT and examines performance expectancy, effort expectancy, social influence, hedonic motivation, and trust as antecedents of students' attitudes toward ChatGPT. The model further examines the effect of students' attitudes on their behavioral intention to use ChatGPT. This framework is intended to explain the technological, social, motivational, and trust-related factors associated with ChatGPT adoption in higher education.

3.2. Sample characteristics

Table 1 summarizes the demographic characteristics of the 385 participants drawn from public and private universities in Amman, Jordan. The sample included students across different age groups, genders, university types, educational levels, and business-related specializations. These characteristics provide the descriptive context for interpreting the subsequent measurement and structural model analyses.

An explanatory video was presented to participants before completing the questionnaire to ensure a common understanding of ChatGPT functionalities. Although this procedure enhanced respondents' familiarity with the

technology, it may have introduced information bias by positively influencing participants' perceptions. To minimize this potential effect, the video provided only information without emphasizing advantages or encouraging adoption.

3.3 Questionnaire Development

The questionnaire was developed using measurement items adapted from prior studies and aligned with the constructs in the proposed model: performance expectancy, effort expectancy, social influence, hedonic motivation, trust, attitude toward ChatGPT, and behavioral intention. To strengthen content validity and clarity, the instrument was reviewed by three specialists familiar with technology adoption and higher education. Their feedback was used to refine the wording and organization of the questionnaire before data collection.

Table (1): Explanation of the respondents

(Demographic construct)	(Frequency)	(Percentage)	(Demographic construct)	(Frequency)	(Percentage)
Stage			Concentration		
Lower than 21	168	45.50%	public Administration	90	25.00%
21–27	136	36.50%	Advertising	70	20.00%
27–32	53	15.86%	Finance	70	19.00%
Above 32	27	7.00%	HRM	33	9.05%
Total	385	100%	Business Analytics	50	15.00%
Gender			Supply chain and Logistics	25	6.00%
Male	216	55%	Innovation	30	7.15%
Female	167	45%	Others	17	4.00%
Total	385	100%	Total	385	100%
Type of University			Education level		
(Private)	280	75.00 %	Bachelor	226	60%
(Public)	105	25.00%	Master	144	40%
(Total)	385	100%	Ph.D.	15	4.30%
			Total	385	100%

Source: Primary data

The demographic profile shows representation from both public and private universities and from multiple business-related specializations. Because the study used convenience sampling, these distributions describe the achieved sample and should not be interpreted as estimates of the wider Jordanian student population.

The questionnaire consisted of two main sections. The first collected demographic information, including age, gender, educational level, university type, and specialization. The second contained the construct measurement items adapted from prior research, as presented in Table 2.

4. Research Approach

4.1. Common Method Variance (CMV)

Because the study relied on self-reported survey data, procedural and statistical steps were used to address potential common method variance (CMV). Before data collection, the questionnaire was pilot-tested with 40 students to assess clarity, and participants were informed that responses were anonymous, confidential, and had no right or wrong answers. After data collection, collinearity was assessed using variance inflation factor (VIF) values. The reported VIF values ranged from 2.712 to 4.305, below the threshold of 5.0, indicating that problematic collinearity was not evident in the model.

4.2. Gathering Data and Sampling

This study employed a non-probability convenience sampling technique to target university students who were familiar with digital learning technologies and AI applications such as ChatGPT. The selected sampling approach was appropriate because the study focused specifically on students with prior exposure to AI-based educational tools. Although convenience sampling may limit the generalizability of the findings, it is widely used in exploratory studies examining emerging technologies. To reduce response bias, participants were informed that their responses would remain anonymous and confidential. In addition, the explanatory video shown before distributing the questionnaire aimed to ensure that all respondents had a common understanding of ChatGPT functionalities before answering the survey questions.

4.3. Structural model results

Partial Least Squares Structural Equation Modeling (PLS-SEM) was used to evaluate the proposed model because the study focuses on explaining and predicting the relationships among the latent constructs. The analysis proceeded through assessment of the measurement model followed by evaluation of the structural model and hypothesis testing. Figure 2 presents the structural model analysis outputs.

Table No (2): Research instrument.

No.	Type of Variable	Items	References
1	Performance Expectancy	- ChatGPT tool improves my learning performance. - Consuming ChatGPT tool increases my productivity in university tasks. - ChatGPT tool helps me accomplish tasks more quickly. - ChatGPT tool enhances the quality of my university outcomes.	(Tummalapenta et al., 2024)
2	Effort Expectancy	- Learning to use ChatGPT tool is easy for me. - My interaction with ChatGPT tool is clear and understandable. - I find ChatGPT tool easy to use in my studies. - It does not take much effort to become skillful at consuming ChatGPT tool.	(Vargas Bernuy et al., 2025)
3	Social Influence	- People who are important to me think that I should use ChatGPT tool. - My classmates encouraged me to use ChatGPT tool. - My instructors support the use of ChatGPT tool in learning. - People around me influence my intention to use ChatGPT tool.	(Wang et al., 2025)
4	Hedonic Motivation	- I find consuming ChatGPT tool enjoyable. - I have fun when I use ChatGPT tool for learning. - Consuming ChatGPT tool makes my learning experience more interesting. - I feel pleasure and satisfaction when consuming ChatGPT tool.	(Woithe & Filipec, 2023)
5	Trust	- I believe ChatGPT tool provides accurate information. - I trust ChatGPT tool to handle my data responsibly. - ChatGPT tool is reliable and dependable for learning purposes. - I believe ChatGPT tool acts in my best interest as a user.	(Yakubu et al., 2025)

Source: Developed by the authors based on literature

4.4 Measurement Model

Discriminant validity was assessed using the Fornell-Larcker criterion and the heterotrait-monotrait (HTMT) ratio. Under the Fornell-Larcker criterion, the square root of each construct's AVE should exceed its correlations with other constructs. HTMT provides a complementary assessment of construct distinctiveness. The results reported in Table 4 were examined against the stated thresholds to assess whether the constructs were empirically distinguishable.

4.5 Discriminant Validity

The Fornell-Larcker criterion was used as one indicator of discriminant validity by comparing the square root of each construct's AVE with its inter-construct correlations (Alomari et al., 2020). The results are reported in Table 4 together with the HTMT values, providing complementary evidence for evaluating discriminant validity.

Table No (3): Discriminant validity.

Construct	Objects	Factor loading	CR	rho_A	CR	(AVE) R ²
Performance Expectancy	PE1	0.856	0.886	0.901	0.950	0.744
	PE2	0.906				
	PE3	0.858				
	PE4	0.840				
Effort Expectancy	EEB1	0.845	0.884	0.896	0.92	0.741
	EEB2	0.806				
	EEB3	0.916				
	EEB4	0.873				
Social Influence	SI P1	0.715	0.906	0.950	0.931	0.73
	SI P2	0.905				
	SI P3	0.950				
	SI P4	0.876				
	SI P5	0.841				
	HM I1	0.876				
	HMI2	0.906				
	HM I3	0.758				
	HMI4	0.914				
	T S1	0.883				
Trust	T S2	0.893	0.927	0.929	0.948	0.821
	T S3	0.907				

	T	0.941				
	S4					
Scholars' Intention towards ChatGPT	STO1	0.849	0.935	0.938	0.951	0.795 0.845
	STO2	0.936				
	STO3	0.912				
	STO4	0.909				
	STO5	0.847				
Behavioral Intention to use ChatGPT	BIN1	0.877	0.899	0.920	0.925	0.711 0.712
	BIN2	0.910				
	BIN3	0.885				
	BIN4	0.800				
	BIN5	0.730				
(Average scores)						0.757 0.787
(AVE*R ²)						0.595
(GoF)						0.770

Source: Smart PLS output

The measurement model was assessed using indicator loadings, composite reliability (CR), rho_A, and average variance extracted (AVE). The reported indicator loadings exceeded 0.70, while reliability coefficients were above 0.70 and AVE values exceeded 0.50. These results support the internal consistency and convergent validity of the constructs. The R² values reported for attitude toward ChatGPT and behavioral intention indicate the proportion of variance explained in the endogenous constructs and are considered further in the structural model assessment.

Table No (4): Blindfolding process: F2, Q2 and VIF values

(Fornell–Larcker criterion)	Intention towards ChatGPT	Behavioral Intention to use ChatGPT	Performance Expectancy	Effort Expectancy	Social Influence	Hedonic Motivation	Trust
Intention towards ChatGPT	0.892						
Behavioral Intention to use ChatGPT	0.856	0.839					
Performance Expectancy	0.752	0.677	0.861				
Effort Expectancy	0.871	0.751	0.723	0.855			
Social Influence	0.710	0.627	0.528	0.661	0.906		
Hedonic Motivation	0.881	0.735	0.770	0.853	0.789	0.867	
Trust	0.790	0.620	0.725	0.750	0.560	0.755	0.865
(HTMT0.85 standard)							
Intention towards ChatGPT							
Behavioral Intention to use ChatGPT	0.900						
Performance Expectancy	0.820	0.750					
Effort Expectancy	0.830	0.819	0.815				
Social Influence	0.760	0.670	0.570	0.710			
Hedonic Motivation	0.835	0.769	0.850	0.855	0.865		
Trust	0.805	0.665	0.805	0.830	0.625	0.845	

Discriminant validity was evaluated using both the Fornell-Larcker criterion and HTMT. Under the Fornell-Larcker criterion, the diagonal value for each construct should be greater than its correlations with other

constructs. HTMT was used as a complementary criterion for assessing the distinctiveness of the latent variables. The values reported in Table 4 provide the basis for this assessment.

Table No: (5) F^2 , Q^2 and VIF standards

Constructs	Collinearity Statistics (VIF)	F^2	Q^2
Intention towards ChatGPT	2.466	0.610	–
Behavioral Intention to use ChatGPT	1.000	–	0.449
Performance Expectancy	2.936	0.015	–
Effort Expectancy	3.172	0.201	–
Social Influence	2.719	0.019	–
Hedonic Motivation	4.155	0.083	–
Trust	2.809	0.070	–

The hypotheses were tested using PLS-SEM with bootstrapping based on 3,000 resamples. Path coefficients, t-values, p-values, and confidence intervals were examined to determine the statistical significance of the proposed relationships. The structural model results are reported in Table 6.

Table No (6): Outcomes for path connection.

H	(Path Connection)	(β (STDEV)	(T Value)	(P Values)	(2.50) %	(97.50) %
H1	Hedonic Motivation → Scholars Intention to use (ChatGPT)	0.310 (0.025)	12.15	0.000	0.550	0.750
H2	Performance Expectancy → Scholars Intention to use (ChatGPT)	0.277 (0.039)	7.155	0.000	0.850	0.700
H3	Effort Expectancy - Scholars Intention to use ChatGPT	0.360 (0.088)	4.355	0.000	0.630	0.710
H4	Trust → Scholars Intention to use (ChatGPT)	0.430 (0.133)	3.225	0.000	0.650	0.510
H5	Social Influence → Scholars Intention to use (ChatGPT)	0.255 (0.039)	6.77	0.000	0.450	0.715
H6	Intention towards ChatGPT → Scholars Behavioral Intention to use (ChatGPT)	0.850 (0.055)	15.00	0.000	0.800	0.950

The structural model results indicate statistically significant relationships for the proposed paths linking hedonic motivation, performance expectancy, effort expectancy, trust, and social influence with students' attitudes toward ChatGPT, as well as the relationship between attitude and behavioral intention. These findings provide the empirical basis for the discussion that follows.

5. Discussion

This study examined university students' adoption of ChatGPT by extending UTAUT with trust and hedonic motivation. The structural results show that the five proposed antecedents—performance expectancy, effort expectancy, social influence, hedonic motivation, and trust—are significantly associated with students' attitudes toward ChatGPT, while attitude is significantly associated with behavioral intention. Rather than treating ChatGPT adoption as a purely utilitarian decision, the findings suggest that students' evaluations combine instrumental, social, affective, and trust-related considerations. This interpretation is consistent with recent research showing that acceptance of generative AI in higher education is shaped by multiple dimensions of perceived value, usability, trust, and social context (Al-Abdullatif & Alsubaie, 2024; Budhathoki et al., 2024; Balaskas et al., 2025).

Hedonic motivation was positively associated with attitude toward ChatGPT, indicating that enjoyment and engagement form part of students' evaluations of conversational AI. This finding is consistent with Jo (2024), who highlights the role of perceived benefits and user experience in educational ChatGPT use, and with Lee and Esposito (2025), who emphasize the importance of students' perceptions when evaluating AI-supported learning interactions. The result extends the discussion beyond functional usefulness by showing that an engaging interaction experience may contribute to favorable attitudes toward generative AI. Performance expectancy was also positively associated with attitude, supporting the UTAUT proposition that users are more receptive to technologies they expect to improve task performance. This pattern is consistent with evidence that perceived usefulness and performance benefits remain central to ChatGPT acceptance in educational settings (Al-Qadri & Al-Khresheh, 2025; Al-Dokhny et al., 2024).

Effort expectancy was significantly associated with attitude, suggesting that students respond more favorably when ChatGPT is perceived as easy to learn and interact with. This result aligns with UTAUT-based research showing that ease of use remains relevant to generative AI acceptance (Budhathoki et al., 2024). Social influence was also significant, underscoring the role of classmates, instructors, and academic norms in shaping students' evaluations of emerging technologies; comparable effects have been reported in research on educators' and students' adoption of ChatGPT (Hidayat-ur-Rehman & Ibrahim, 2024; Jaffar et al., 2025). Trust likewise showed a significant relationship with attitude. This finding is particularly important because generative AI can produce uncertain or inaccurate outputs, making perceived reliability and responsible use central to adoption decisions. It is consistent with studies identifying trust as an important mechanism in students' acceptance of AI-supported technologies (Balaskas et al., 2025; Parveen et al., 2025). Finally, attitude was significantly associated with behavioral intention, supporting the view that favorable overall evaluations translate into stronger intentions to use ChatGPT. The study's original contribution therefore lies in testing these technological, social, affective, and trust-related determinants together in a Jordanian business-education context and showing how they jointly relate to attitude and subsequent behavioral intention. These findings do not imply that access alone is sufficient; universities should combine access with AI literacy, clear guidance, and responsible-use practices.

6. Implications

The findings have both theoretical and practical implications. Theoretically, the study extends the application of UTAUT to generative AI by incorporating hedonic motivation and trust alongside performance expectancy, effort expectancy, and social influence. This combination captures not only the functional and social dimensions of technology acceptance but also the experiential and trust-related considerations that are particularly relevant to conversational AI. Practically, universities can use these findings to design AI-literacy initiatives that address usefulness, ease of use, responsible verification of AI outputs, privacy, and academic integrity. Faculty guidance is also important: students should be encouraged to use ChatGPT as a learning support tool while critically evaluating generated content rather than treating AI output as an unquestioned substitute for independent reasoning. Institutional policies and training can further clarify appropriate use and help establish responsible norms around generative AI in teaching and learning.

7. Conclusion

This study investigated the determinants of university students' adoption of ChatGPT using an extended UTAUT framework. The results indicate that performance expectancy, effort expectancy, social influence, hedonic motivation, and trust are significantly associated with students' attitudes toward ChatGPT, and that attitude is significantly associated with behavioral intention. Together, these findings show that ChatGPT adoption in higher education reflects a combination of perceived performance benefits, ease of interaction, social context, enjoyment, and trust. The study contributes evidence from business-related programs in Jordan and highlights the value of examining established technology-acceptance factors together with constructs that are especially relevant to generative AI. At the same time, the findings should be interpreted in light of the convenience sampling strategy, cross-sectional design, geographic context, and the use of an explanatory video before questionnaire completion. Future research can test the model across other disciplines and cultural settings, use longitudinal or probability-based designs, and examine additional factors such as AI literacy, perceived risk, self-efficacy, and ethical awareness.

Data availability: The data supporting this study's findings are available on request from the corresponding author, (Tariq Khairo Aldaabseh). The data are not publicly available due to their containing information that could affect the privacy of research participants.

7.1. Theoretical Implications

The theoretical contribution of this study lies in extending UTAUT by incorporating trust and hedonic motivation into a model of generative AI adoption among university students. The results indicate that students' attitudes are associated with a combination of functional, social, experiential, and trust-related beliefs, and that attitude is subsequently associated with behavioral intention. This integrated perspective provides a more context-sensitive explanation of ChatGPT adoption in higher education than a model focused only on instrumental technology characteristics.

7.2. Practical Implications

University administrators can strengthen responsible ChatGPT adoption by integrating AI literacy into business curricula, offering training on verification and ethical use, establishing clear institutional guidance, and supporting instructors in designing learning activities that use generative AI without undermining

academic integrity. These actions should emphasize both the potential benefits and the limitations of AI-generated content.

7.3. Research Limitations

Several limitations should be considered when interpreting the findings. First, convenience sampling limits the extent to which the results can be generalized to the wider student population. Second, the cross-sectional design captures perceptions at one point in time and does not establish changes in adoption behavior over time. Third, the study was conducted in Jordanian universities, so the findings may not transfer directly to other institutional or cultural contexts. Fourth, the explanatory video shown before questionnaire completion may have influenced participants' perceptions despite being designed to provide neutral information.

7.4. Future Research

Future research could validate the proposed model in other cultural and disciplinary settings, employ longitudinal or probability-based sampling designs, compare students across academic majors, examine instructors' adoption of generative AI, and incorporate additional constructs such as AI literacy, perceived risk, self-efficacy, and ethical awareness.

Declarations

Ethics approval and consent to participate: The study titled "Determinants of ChatGPT Adoption in Higher Education: An Extended UTAUT Model among Business and Human Resource Management Students" was reviewed and approved by the Ethical Review Committee at Jadara University under reference number A.D/16-10/113 (12 January 2026). Participation was voluntary, informed consent was obtained, and the survey did not collect personally identifiable information.

The ethical approval was issued by the Faculty of Business and approved by the Deanship of Scientific Research at Jadara University in accordance with the university's applicable regulations and guidelines.

Consent to publish: Not applicable.

Clinical trial number: Not applicable.

Competing interests: No conflicting interests have been disclosed by the author.

Author Contributions: Conceptualization, Tariq Khairo Aldaabseh; methodology, Tamara Adel Al-Maaitah; software, Tamara Adel Al-Maaitah; formal analysis, Nader Mohammed Aljawarneh; writing—original draft preparation, Tariq Khairo Issa Al Daabseh; writing—review and editing, Ahmad Rasheed Ali Alfares. All authors have read and agreed to the published version of the manuscript.

Acknowledgement: The authors are grateful to the Deanship of Scientific Research at Jadara University for providing financial support for this publication

Funding Source: There was no funding source.

Data Availability: The data that supports the findings of this study are available from the corresponding author, Tariq Khairo Aldaabseh, upon reasonable request. The data is not publicly available due to privacy considerations concerning the research participants.

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Figures

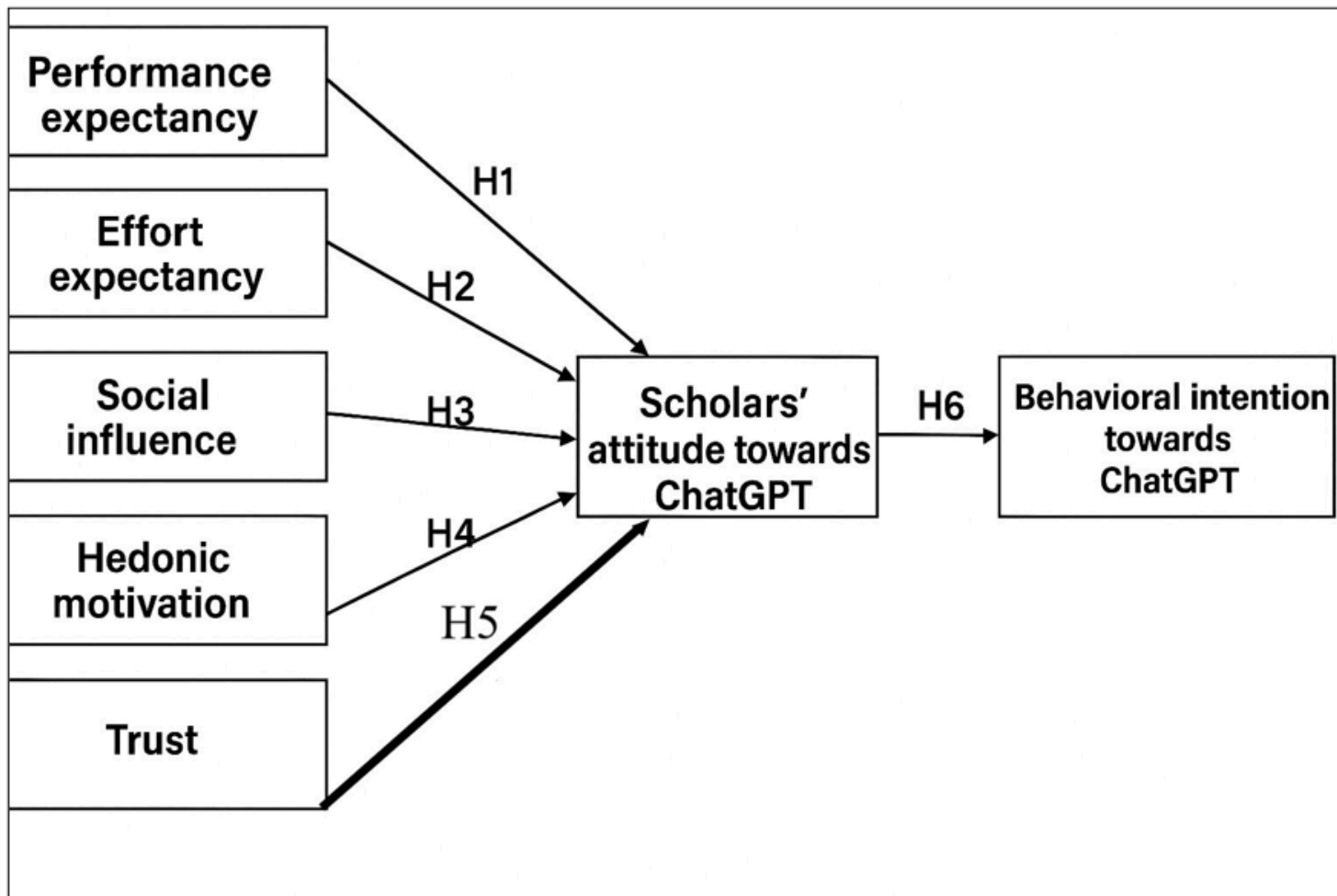


Figure 1

Research Model Developed by Authors

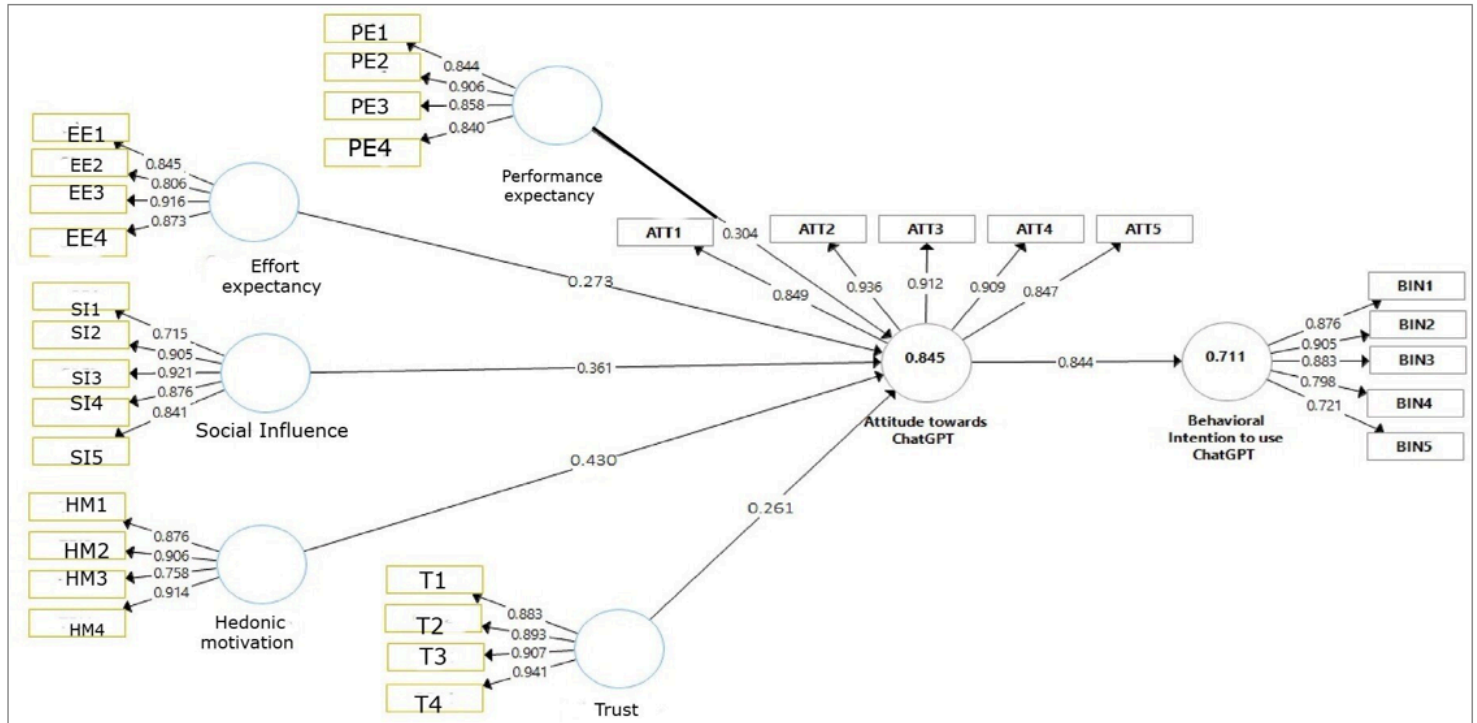


Figure 2
structural model analysis outputs