# Behavioral Intentions to use Artificial Intelligence Among Managers in Small and Medium Enterprises

Alaa S. Jameel[1,a)], Sinan Abdullah Harjan[2,b)], Abd Rahman Ahmad[3,c)]

[1]*Department of Public Administration, Cihan University-Erbil, Erbil, Iraq*
[2] *College of Administration and Economics, University of Samarra, Samarra, Iraq*
[3]*Faculty of Technology Management and Business, University Tun Hussein Onn Malaysia, Batu Pahat, Johor, Malaysia*

[a)] *Corresponding author: alaa.salam@cihanuniversity.edu.iq*
[b)] *senan.a.h@uosamarra.edu.iq*
[c)]*arahman@uthm.edu.my*

**Abstract.** The purpose of this study is to examine the measure the Behavioral intentions (BI) to use artificial intelligence (AI) among managers in small and medium enterprises. the targets population of this study was the SMEs managers in Baghdad City after ensuring that the managers were using some form of AI. 184 valid questionnaires have been analyzed by Smart-PLS. The results indicated that performance expectancy (PE) , Social influence (SI), Facilitating Conditions (FC), and Top management support (TMS) have a positive and significant impact on behavioral intention to use AI among the managers in SMEs; on the other hand, the effort expectancy (EE) has an insignificant impact on behavioral intention to use AI among the managers.



## INTRODUCTION

Even though automation and support technologies transform people's job processes, humans will continue to play an essential role in organizations and management systems. In the information systems (IS) research field, the study of users' attitudes, acceptance, and usage of technology have gotten much attention [1]. Numerous theories and models have been developed and modified over time in trying to understand and foresee the dynamic and changing nature of technological innovation.

due to the rapid progress and application possibilities, AI has gained much attention in recent years. However, "artificial intelligence" refers to intelligence generated by humans. Using AI at the organizational level or individual level faces controversial opinions among scholars and researchers; for example, Duan et al., [2] indicated using AI could enhance the decision and performance of the organization. On the other hand, Some AI studies showed anxiety that AI might become uncontrollable and cause catastrophic effects on humans and society [3]. Artificial Intelligence's "dark side," referred to in the literature, has been linked to issues such as poor decision-making, prejudice, and other hidden biases [3], [4]. On an individual level, AI is causing dread among management, supervisors, and employees to the possibility of job losses when the organization adopts the AI [5].

Among the theories, the unified theory of acceptance and use of technology (UTAUT) is regarded as one of the most important and widely used model, which capable of describing individual intentions to use an technology as well as their use behavior [6]. The UTAUT theory consists of four primary variables, which are PE, EE, SI, and FC which influence behavioral intention directly or indirectly. The current study complements and extends the UTAUT by developing a model to be fit measuring the AI acceptance among SME managers, the current study model will be

*International Conference on Advances in Communication Technology and Computer Engineering*
AIP Conf. Proc. 2814, 020006-1–020006-8; https://doi.org/10.1063/5.0148676
Published by AIP Publishing. 978-0-7354-4582-6/$30.00

including the Top management support (TMS) due to AI can't adopt in organization without TMS and this study will be explaining the manager's behavioral intention to use AI in the workplace. There are several studies has been used the UTAUT theory to predict the BI to use AI [7], [8]. At the same time, there are limited studies that measured the BI to use AI among managers [9], [10], particularly in the Iraqi context.

The study's main aim is to identify and examine the possible factors impacting the manager's behavioral intention to use AI in SMEs

# LITERATURE REVIEW

## Artificial Intelligence

AI refers to the ability of machines to learn from previous challenge and mistakes [2]. AI allows equipment and programs to do duties that would otherwise need intelligence of human [9]. As well, AI designed to carry out basic chores and decision-making depending on the information they have acquired [11].

AI referred to Machines that demonstrate elements of human intelligence [12]. Automated, big-data, and machine learning-based AI models perform cognitive tasks to achieve predetermined goals and tasks [13].

Businesses, goods and services, and user experiences have all been altered by AI. AI can be used in the marketing and retail industries to help customers be more interested and satisfied [14]. AI is still a wide phrase that refers to the capacity to evaluate large amounts of data using deep machine learning techniques in order to help decision-making [11].

AI has the ability to do previously inconceivable activities that involve cognitive abilities, such as forming implicit judgments, feeling emotion, and driving processes [9]. AI offers a paradigm shift in how businesses gather and evaluate large amounts of useful data [15]. However a McKinsey report found that half of the responding organizations have implemented AI in at least one business function [16]. Managers find practical and prospective possibilities at every market level to employ AI. However, several circumstances influenced managers' acceptance of AI. exploring and comprehending managers' intent to employ AI in organizations has received little attention in organizations' research [9], [10]. As a result, new thinking about organizations and the willingness of managers to adopt AI in the workplace.



According Dabbous, Barakat and Sayegh [17] , Healthcare, retail, manufacturing, and other digital technology industries, such as AI, deem it essential. AI is transforming human resource management by introducing new capabilities and reshaping the way the field is currently conducted [10].However, AI helps HR managers make decisions and predict how employees will act at work. This reduces the amount of time HR managers spend doing the same things over and over again [10]. AI enables the organization to obtain and analyse the data [15], analyze the market environment [18] and enhance the Decision making among the managers [9].However, Using intelligent information technology, services like self-driving cars, drone deliveries, and real-time automated speech translation are being developed to improve our daily life [11]. Businesses are increasingly turning to AI for reliable outcomes, implying that companies planning to adopt AI must incentivize their staff to use it [19]. Nonetheless, it demands an examination of the manager's usage behavior. To figure out how managers use AI, their attitudes and intentions need to be in line with how they want to use the system, because their goals and attitudes are what make people do what they do. Managers who are responsible for evaluating consumer data must utilize AI [20]. Such technologies assist businesses incorrectly analyzing their consumers' preferences, habits, and dislikes [19].

## Hypotheses Development

To reach and achieve the aim of this study which is to examine the factors that lead to managers' BI to use the AI in SMEs. We will propose five hypotheses based on core elements of UTAUT model and Extended by including Top Management support (TMS) to be fit of the study context , This extended will help the organizations to understand the factors that lead to the acceptance and use of AI among the managers.

Adopting an information system (IS) by users is crucial to its success [21]. In recent years, a slew of theoretical models in IS, psychology, and sociology have been created to investigate and predict managers' and users' adoption of information systems.

Venkatesh et,al [6] proposed the model of UTAUT which has been frequently used to predict BI toward technology adoption, it does not consider the influence of individuals' negative impressions and worries on their behavioral intentions. As a result, in the context of AI among SMEs, its ability to forecast individuals' attitudes and intentions may be limited. Researchers have recently drawn attention to IT-related job stress, poor attitudes, and anxiety [9]. UTAUT is an integrated, causal model that has been empirically validated in multiple prior research for characterizing and forecasting technology adoption and application in diverse sectors [7], [9], [22], [23]. several previous studies examined the UTAUT model and AI in several sectors, such as in the transport sector [7], consumer acceptance [15], Education [24], Libraries [11], customer relationship management (CRM) [19].while still measuring the behavioral intention to use AI among the managers is limited [9], [10], particularly among managers in Iraqi SMEs. However, AI is still facing several impediments to its adoption and uses ignorance, technological fear, skepticism, and resistance to change.

## PERFORMANCE EXPECTANCY

PE in this study refers to the level at which managers believe adopting AI will help them to increase the performance of the company and achieve their goals. PE It is means as the level to which an users feels that using a new system would assist the users in achieving significant improvements in work performance [6].

Individuals obtain confidence with the PE that technology helps them boost productivity and accomplish the activity swiftly [17]. using AI in the organization could lead to enhancement the decision-making [9] and performance [25]; those are all related to performance expectations in general. Similarly, extending the UTAUT model to employing AI in SMEs by proposing that BI toward adopting AI may be similarly described and predicted by PE and EE is feasible. Limited studies examined the PE with BI to use AI among managers [9], particularly among the managers in SMEs.

Statistically, PE significantly impact on AI acceptance intention [17]. similarly, PE statistically important to improve the BI to use AI [11]. PE able significantly to enhance the BI to use the AI in organization [20], [26]. On the other hand, PE showed insignificant impact on intention to use AI among the business managers [9].



**H1: PE significantly predict the impact on AI adoption in SMEs.**

## Effort Expectancy

EE refers to the level of ease and simplicity managers associate with adopting AI in the workplace. EE refer to the ease level that linked to use particular system [6]. EE relates to the notion that the technology or system will be well-understood, making it easier to operate [17]. the EE in this study represent the managers perceptions of the ease of use of an AI in an organization and the perception of how simple or difficult it is to use AI in an organization.

Empirically PE has significant impact on BI to use the AI in organization [20],[27]. intention to adopt AI significantly impacted by EE [26]. while, EE had insignificant impact on AI acceptance intention [17],[9].

**H2: EE significantly predict the impact on AI adoption in SMEs.**

## Social Influence

SI is defined in this study as a level to which managers believe that crucial others feel AI should be used. Social influence is the idea that being part of a group that can influence people can make people more likely to use a particular system or technology [17]. SI able to improve the AI acceptance intention and SI statically impact on AI [17]. While Cao et al., [9] reported the peer, influence had insignificant impact on BI to use AI among UK business managers. SI has significant impact on BI to use AI [26],[27]. while, SI has insignificant impact on BI to adopt AI among librarians [11].

**H3: SI significantly predict the impact on AI adoption in SMEs.**

## Facilitating Conditions

FC defined in this study is a level to which managers believe the company infrastructure supports to use the AI.

FC refer to the degree to which a person feels that the necessary technological and related infrastructure is readily use to enable the use of the new system [6]. FC refers to the availability of resources and expertise regarded as essential for technology adoption [17]. These criteria include having access to people for assistance when using AI and having adequate individual expertise to utilize AI. Furthermore, believing that technological advancements would lead to safer and more dependable AI may be an enabling situation [7].

FC is statistically important and had significant impact on BI to adopt AI in context of higher education [24]. FC in context of organization is important and has positive and significant impact on BI to use AI [20]. Similarly, Kuberkar and Singhal [26] reported FC has significant impact to BI to adopt AI. while, FC had no statically impact on BI to use AI among business managers [9].

**H4: FC significantly predict the impact on AI adoption in SMEs.**

## Top Management Support (TMS)

Top management plays a critical role in technology adoption since they expressly and actively assist in introducing any new technology. When top management is unwilling to accept AI adoption, the entire organization begins to follow higher management's judgments, delaying the adoption process. In addition, management assistance is required to cover organizational policies, procedures, data storage difficulties, and technological and financial capabilities [28]. As a result, managerial support is an essential aspect of the adoption of AI.

AI is a cutting-edge technology employed to improve an organization's performance and decision-making [9] and help the organization to gather and analyze the data [15]. Additionally, AI will support the selection of talent inside the firm [10]; however, senior management will evaluate the intricacies of AI before implementing it. Top management must be persuaded to finance AI since they provide the resources for the new technology [28]. According to Alam et al., [29] the adoption of AI required support from top management.

Empirically TMS has significant impact on AI adoption among managers [10]. Cruz-Jesus, Oliveira, and Naranjo [30] proposed top management will significantly impact AI adoption in business firms. TMS and technology adoption in business firms are positively related [31].

**H5: TMS significantly predict the impact on AI adoption in SMEs.**

## Methodology

The data was collected from respondents utilizing a questionnaire. The target population of this study was the SMEs managers in Baghdad City after ensuring that the managers were using some form of AI. The study used the purposive sampling method to get the data from the managers by having them fill out the questionnaire on their own. The total SMEs managers surveyed was 250 in Baghdad by deploying the purposive method after ensuring these SMEs were using some kind of AI. Only 212 questionnaires were returned, and 184 questionnaires were valid after checking the missing values and outliers.

The questionnaire consisted of 6 constructs and 28 items, all the items adapted from previous studies. Table 1 illustrates the number of items for each construct and the sources of these items. preliminary analysis were by SPSS for demographic, missing and outliers values. the main analyses were analyzed by Smart-PLS3 for measurement and structural model.

## RESULTS

Smart-PLS3 has analyzed the results. According to Hair et al., [32], the first step should assess the loadings of items, and loadings above 0.708 are recommended. Based on Table 1, all items loadings between PE4 0.738 and 0.933 TMS3, thus there are no issues with items loadings. additionally, According to [32], the second step is to assess the internal consistency by composite reliability (CR) and Cronbach’s alpha (CA). the cutoff level for booth CR and CA 0.7, based on Table 1 CR between SI 0.895 and TMS 0.940 as well the CA between SI 0.854 and TMS 0.915; thus, the constructs reflect satisfactory internal consistency.

The third step is to assess the average variance extracted (AVE) to measure the convergent validity. The AVE should be < 0.50 and higher, Table 1 showed all the AVE constructs are higher than 0.5 and between TMS 0.796 and SI 0. 632.thus, there is no issue with the convergent validity.

**TABLE 1**. Validity and Reliability

| Constructs | Items | Outer Loadings | CA | CR | AVE | Reference |
|---|---|---|---|---|---|---|
| **BI** | BI1 | 0.762 | 0.907 | 0.931 | 0.731 | [24] [11] |
| | BI2 | 0.855 | | | | |
| | BI3 | 0.909 | | | | |
| | BI4 | 0.891 | | | | |
| | BI5 | 0.851 | | | | |
| **EE** | EE1 | 0.793 | 0.908 | 0.931 | 0.731 | [24] [11] |
| | EE2 | 0.900 | | | | |
| | EE3 | 0.821 | | | | |
| | EE4 | 0.855 | | | | |
| | EE5 | 0.900 | | | | |
| **FC** | FC1 | 0.791 | 0.870 | 0.911 | 0.720 | [24] [11] |
| | FC2 | 0.879 | | | | |
| | FC3 | 0.919 | | | | |
| | FC4 | 0.800 | | | | |
| **PE** | PE1 | 0.805 | 0.861 | 0.898 | 0.639 | [24][11] |
| | PE2 | 0.834 | | | | |
| | PE3 | 0.814 | | | | |
| | PE4 | 0.738 | | | | |
| | PE5 | 0.802 | | | | |
| **SI** | SI1 | 0.768 | 0.854 | 0.895 | 0.632 | [11], [27] |
| | SI2 | 0.845 | | | | |
| | SI3 | 0.856 | | | | |
| | SI4 | 0.750 | | | | |
| | SI5 | 0.749 | | | | |
| **TMS** | TMS1 | 0.896 | 0.915 | 0.940 | 0.796 | [10], [29] |
| | TMS2 | 0.843 | | | | |
| | TMS3 | 0.933 | | | | |
| | TMS4 | 0.895 | | | | |

The last step is to measure the discriminant validity by Heterotrait-Monotrait Ratio (HTMT). The values should be less than 0.85; if the values are higher mean the is an issue in discriminant validity based on Table 2; all the values are less than 0.85. thus, no issue with discriminant validity.

**TABLE 2.** HTMT

| | BI | EE | FC | PE | SI | TMS |
|---|---|---|---|---|---|---|
| **BI** | | | | | | |
| **EE** | 0.450 | | | | | |
| **FC** | 0.578 | 0.370 | | | | |
| **PE** | 0.578 | 0.603 | 0.567 | | | |
| **SI** | 0.462 | 0.539 | 0.444 | 0.430 | | |
| **TMS** | 0.191 | 0.088 | 0.192 | 0.090 | 0.120 | |

the next is to measure the proposed hypotheses by measuring the structural models. This step is run by bootstrapping with 5000 subsamples [32]. The hypotheses result showed in Table 3 and Fig.1 the PE, SI, FC and TMS has positive and significant impact on BI to use AI due to the P-value is less than 0.05 (0.00,0.24,0.001 and 0.16) respectively, thus, H1, H2, H3,H4 and H5 are supported. on the other hand, EE has insignificant impact on BI to use AI among the SMEs managers due to the P-value is (0.161higher than 0.05) thus, H2 not supported.

**TABLE 3**. Hypotheses Outcomes

| | Hypotheses path | Original Sample | Sample Mean | Standard Deviation | T Statistics | P Values |
|---|---|---|---|---|---|---|
| H1 | PE -> BI | 0.282 | 0.287 | 0.074 | 3.801 | 0.000 |
| H2 | EE -> BI | 0.118 | 0.116 | 0.084 | 1.401 | 0.161 |
| H3 | SI -> BI | 0.169 | 0.172 | 0.075 | 2.255 | 0.024 |
| H4 | FC -> BI | 0.245 | 0.245 | 0.076 | 3.241 | 0.001 |
| H5 | TMS -> BI | 0.150 | 0.148 | 0.062 | 2.414 | 0.016 |

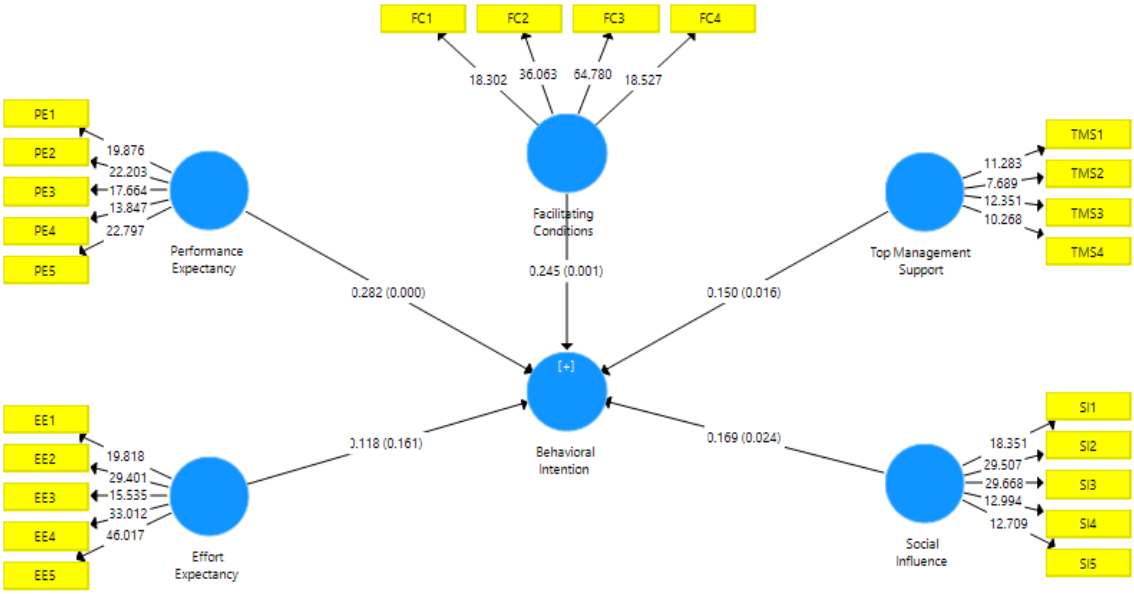


**FIGURE 1.** Structural Model

## DISCUSSION

AI is quickly making its way into users' daily life. AI is designed to make users' lives easier and assist them in various scenarios. In addition, managers should use AI to make their jobs easier and faster. The result showed the EE has insignificant impact on BI to use AI among managers, this result in line with previous result example [9], [17]. It might be owing to the nature of AI technology offerings, where mangers in SMEs are more likely to employ third-party programs and AI, without giving much thought to the techniques' complexities and potential results. FC impact on BI to use AI among managers this result consistent with previous result reported by [9], [24], [26]. managers are more willing to adopt AI if the current technical infrastructure is user-friendly and encourages them to use the AI in workplace. Managers are willing about adopting an AI in conjunction with proper technological infrastructure.

PE impact on BI to use AI among managers this result consistent with previous result reported by [11], [17]. Managers are eager to study and implement Artificial Intelligence if it may help them enhance their performance. the belief that applying the recommended information would yield positive outcomes for SMEs. Prior to using technology in their business and providing better service to their user groups the managers in SMEs are purportedly required to be regarded as being extremely beneficial. SI impact on BI to use AI among managers in SMEs, this result in line with previous findings [9], [26], [27]. A high level of technology adoption is demonstrated by mangers affected by technology users, whether they are offering or utilizing solutions. TOS impact on BI to use AI among managers in SMEs, this result in line with previous findings [10],[30],[31],[32]. based on logic any adoption of IS or AI need support from top management. Top management is supportive of AI deployment because they recognize that surviving in the market today in a highly competitive environment is complex, and AI enables them to increase their performance and gain a competitive advantage.

## CONCLUSION

The motive for Managers in SMEs to adopt AI is investigated in this study. We provided a contribution to the theoretical progression of AI in the area of SMEs. According to our findings, UTAUT is a useful theoretical model for investigating managers' BI toward adopting and using AI and associated technologies, such as the ones investigated in this research. This methodology lends itself to solid statistical studies, such as SEM, when correctly developed and implemented. It may be used in future approaches to creating and supporting technology adoption in SMEs.

## REFERENCES


1. S. Jameel, M. A. Karem, S. H. Aldulaimi, A. K. Muttar, and A. R. Ahmad, “The Acceptance of E-Learning Service in a Higher Education Context,” in International Conference on Emerging Technologies and Intelligent Systems, Springer, 2022, pp. 255–264.
2. Y. Duan, J. S. Edwards, and Y. K. Dwivedi, “Artificial intelligence for decision making in the era of Big Data – evolution, challenges and research agenda,” Int. J. Inf. Manage., vol. 48, pp. 63–71, Oct. 2019.
3. D. S. Weld and G. Bansal, “The challenge of crafting intelligible intelligence,” Commun. ACM, vol. 62, no. 6, pp.70–79, May 2019.
4. Y. R. Shrestha, S. M. Ben-Menahem, and G. von Krogh, “Organizational Decision-Making Structures in the Age of Artificial Intelligence,” Calif. Manage. Rev., vol. 61, no. 4, pp. 66–83, Aug. 2019.
5. S. Ransbotham, P. Gerbert, M. Reeves, D. Kiron, and M. Spira, “Artificial intelligence in business gets real,” MIT sloan Manag. Rev., vol. 60280, 2018.
6. Venkatesh, Morris, Davis, and Davis, “User Acceptance of Information Technology: Toward a Unified View,” MIS Q., vol. 27, no. 3, p. 425, 2003.
7. D. Loske and M. Klumpp, “Intelligent and efficient? An empirical analysis of human–AI collaboration for truck drivers in retail logistics,” Int. J. Logist. Manag., vol. 32, no. 4, pp. 1356–1383, Oct. 2021.
8. N. Upadhyay, S. Upadhyay, and Y. K. Dwivedi, “Theorizing artificial intelligence acceptance and digital entrepreneurship model,” Int. J. Entrep. Behav. Res., Sep. 2021.
9. G. Cao, Y. Duan, J. S. Edwards, and Y. K. Dwivedi, “Understanding managers’ attitudes and behavioral intentions towards using artificial intelligence for organizational decision-making,” Technovation, vol. 106, p. 102312, Aug. 2021.
10. R. Pillai and B. Sivathanu, “Adoption of artificial intelligence (AI) for talent acquisition in IT/ITeS organizations,” Benchmarking An Int. J., vol. 27, no. 9, pp. 2599–2629, Aug. 2020.
11. J. E. Andrews, H. Ward, and J. Yoon, “UTAUT as a Model for Understanding Intention to Adopt AI and Related Technologies among Librarians,” J. Acad. Librariansh., vol. 47, no. 6, p. 102437, Dec. 2021.
12. M.-H. Huang and R. T. Rust, “A Framework for Collaborative Artificial Intelligence in Marketing,” J. Retail., Mar. 2021.
13. C. Prentice, S. Dominique Lopes, and X. Wang, “Emotional intelligence or artificial intelligence– an employee perspective,” J. Hosp. Mark. Manag., vol. 29, no. 4, pp. 377–403, May 2020.

14. D. Grewal, A. Guha, C. B. Satornino, and E. B. Schweiger, “Artificial intelligence: The light and the darkness,” J. Bus. Res., vol. 136, pp. 229–236, Nov. 2021.
15. J.-P. Cabrera-Sánchez, I. Ramos-de-Luna, E. Carvajal-Trujillo, and Á. F. Villarejo-Ramos, “Online Recommendation Systems: Factors Influencing Use in E-Commerce,” Sustainability, vol. 12, no. 21, p. 8888, Oct. 2020.
16. McKinsey, “The state of AI in 2020,” 2020. .
17. A. Dabbous, K. Aoun Barakat, and M. Merhej Sayegh, “Enabling organizational use of artificial intelligence: an employee perspective,” J. Asia Bus. Stud., vol. 16, no. 2, pp. 245–266, Mar. 2022.
18. R. C. Joseph and N. A. Johnson, “Big Data and Transformational Government,” IT Prof., vol. 15, no. 6, pp. 43–48, Nov. 2013.
19. S. Chatterjee, R. Chaudhuri, D. Vrontis, A. Thrassou, and S. K. Ghosh, “Adoption of artificial intelligence-integrated CRM systems in agile organizations in India,” Technol. Forecast. Soc. Change, vol. 168, p. 120783, Jul. 2021.
20. S. Chatterjee, N. P. Rana, S. Khorana, P. Mikalef, and A. Sharma, “Assessing Organizational Users’ Intentions and Behavior to AI Integrated CRM Systems: a Meta-UTAUT Approach,” Inf. Syst. Front., Aug. 2021.
21. F. D. Davis, “Perceived usefulness, perceived ease of use, and user acceptance of information technology,” MISQ., pp. 319–340, 1989.
22. 22.A. S. Jameel and A. R. Ahmad, “The Role of Information and Communication Technology on Knowledge Sharing among the Academic Staff during COVID-19 Pandemic,” in Proceedings - 2020 2nd Annual International Conference on Information and Sciences, AiCIS 2020, 2020, pp. 141–147.
23. A. S. Jameel, S. N. Abdalla, M. A. Karem, and A. R. Ahmad, “Behavioural Intention to Use E-Learning from student’s perspective during COVID-19 Pandemic,” in Proceedings - 2020 2nd Annual International Conference on Information and Sciences, AiCIS 2020, 2020, pp. 165–171.
24. S. Chatterjee and K. K. Bhattacharjee, “Adoption of artificial intelligence in higher education: a quantitative analysis using structural equation modelling,” Educ. Inf. Technol., vol. 25, no. 5, pp. 3443–3463, Sep. 2020.
25. A. S. Jameel, M. A. Karem, and A. R. Ahmad, “Behavioral Intention to Use E-Learning Among Academic Staff During COVID-19 Pandemic Based on UTAUT Model,” in International Conference on Emerging Technologies and Intelligent Systems, Springer, 2022, pp. 187–196.
26. S. Kuberkar and T. K. Singhal, “Factors influencing adoption intention of ai powered chatbot for public transport services within a Smart City,” Int. J. Emerg. Technol. Learn., vol. 11, no. 3, pp. 948–958, 2020.
27. O. A. Gansser and C. S. Reich, “A new acceptance model for artificial intelligence with extensions to UTAUT2: An empirical study in three segments of application,” Technol. Soc., vol. 65, p. 101535, May 2021.
28. M. I. Baig, L. Shuib, and E. Yadegaridehkordi, “Big data adoption: State of the art and research challenges,” Inf. Process. Manag., vol. 56, no. 6, p. 102095, Nov. 2019.
29. M. G. R. Alam, A. K. M. Masum, L.-S. Beh, and C. S. Hong, “Critical Factors Influencing Decision to Adopt Human Resource Information System (HRIS) in Hospitals,” PLoS One, vol. 11, no. 8, p. e0160366, Aug. 2016.
30. F. Cruz-Jesus, T. Oliveira, and M. Naranjo, “Understanding the Adoption of Business Analytics and Intelligence,” 2018, pp. 1094–1103.
31. A. R. Ahmad, A. S. Jameel, and M. Raewf, “Impact of Social Networking and Technology on Knowledge Sharing among Undergraduate Students,” Int. Bus. Educ. J., vol. 14, no. 1, pp. 1–16, 2021.
32. J. F. Hair, J. J. Risher, M. Sarstedt, and C. M. Ringle, “When to use and how to report the results of PLS-SEM,” Eur. Bus. Rev., vol. 31, no. 1, pp. 2–24, Jan. 2019.