

# ANTECEDENTS OF AI-DRIVEN ACCOUNTING SYSTEM USAGE AND ITS IMPACT ON SMES PERFORMANCE: IN THE CONTEXT OF INDUSTRY 4.0 OF INDIA

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## ABSTRACT:

Studies have shown that companies are working on creating digital technology to make better decisions and stay ahead of their rivals. However, these studies haven't explored deeply how companies use digital technology to enhance their operations and impact value, particularly for small and medium-sized enterprises (SMEs). In this context, accounting information has played a crucial role in the decision-making process of businesses, and the broad use of digital technology has allowed for more efficient and effective handling of accounting data related to these activities. An online accounting system called the AI-Driven Accounting System generates the data required for research while enabling the reporting, recording, and processing of enormous amounts of money. The current study focuses on the influence of the TOE, or technological, organizational, and environmental characteristics framework, on AI-Driven Accounting System usage (AASU), which, in turn, affects AI-Driven Accounting System performance (AASP), in light of the significance of AI-Driven Accounting Systems

for improving the financial performance of SMEs. In order to examine the variables influencing SMEs' adoption of AI-Driven accounting systems, this study created an integrated model. The data collection tool for this study was a questionnaire created from a review of the literature. After analyzing data from 183 working professionals of SMEs in Gujarat and Haryana, India, structural equation modeling (SEM) was performed using IBM SPSS AMOS, Ver-20. The results demonstrate that compatibility of using technology, organizational preparedness, management at senior level, and government support—all these variables had an influence on using AI-Driven Accounting System (AASU) except in the Relative Advantage of Technology context. AASU also had a positive and substantial impact on AI-Driven accounting system performance (AASP). AASU has been demonstrated to be an effective technology for the management of large volumes of data, so it is expected that its usage will increase in the near future. This trend is leading to an increase in the usage of AASU. Excluding the Relative Advantage of

Technological context, the results show that AI-Driven Accounting System usage (AASU) was influenced by top-level management, organizational readiness, government support, and compatibility with technology. Additionally, AASU significantly and favorably affected the performance of AI-Driven accounting systems (AASP). Since AASU has proven to be a useful technology for managing massive amounts of data, more people are anticipated to use it in the near future. The AASU is rising as a result of this trend. The findings of the study contribute to our understanding of the causes and effects of using modern information technology and information systems by offering guidance on how businesses can optimize their use of digital accounting systems to achieve maximum efficiency. According to the report, the Indian government ought to create and carry out a public awareness campaign emphasizing the value of AI-driven accounting systems for small and medium-sized businesses (SMEs).

**Keywords:** *Government Support, AI-Driven Accounting System Usage (AASU), Technological Context, SMEs, Organizational Preparedness*

## INTRODUCTION:

Recently, the goal of AI research has been to create robots that can perform activities requiring human intelligence. Artificial intelligence (AI) is essentially the use of computers and algorithms for data-driven learning, reasoning, and decision-making (Dey et al., 2023; Kumar et al., 2022). Artificial intelligence (AI) technologies are brain-like mimics that can analyze data, perform tasks

autonomously, and provide various forms of assistance. In essence, artificial intelligence (AI) is the science and technology devoted to building robots with human-like intelligence and behavior. Artificial intelligence can help businesses use resources more effectively and efficiently (Pillai et al., 2022; Dubey et al., 2020). Companies can predict outcomes and make decisions more precisely when they use data to support them. In short, it's a sophisticated digital transformation approach that extracts knowledge from large data collections. Though AI has been linked to biases, problems with data privacy, and compliance, it also offers the ability to improve the accuracy and openness of financial reporting. Complex data analysis can be automated with AI tools, which can also spot irregularities and patterns that human accountants might miss. This lowers the possibility of mistakes or fraud while also improving the accuracy of financial statements. AI can also give businesses real-time financial performance insights, which help them make better decisions. AI systems can continuously enhance their capacity to forecast financial trends by incorporating machine learning algorithms, which will increase the accuracy of financial projections. Furthermore, AI-driven tools can enhance the transparency of financial processes, ensuring that stakeholders have access to up-to-date and detailed information. To maintain efficiency and competitiveness over time, any business strategy must include the use of AI solutions to streamline the gathering and sharing of accounting data. These days, artificial intelligence plays a full and integrated role in the way accounting procedures are carried out. Technology is beneficial to companies of all

kinds, but small and medium-sized enterprises (SMEs) can benefit most from it as it can help them simplify their accounting processes. Decision-making and business performance can be significantly impacted by the timely and accurate delivery of accounting reports and the accessibility of financial data, both of which are made possible by an appropriate IT infrastructure. Previous discussions have focused on accounting and financial reports as information sources for firms (Polisetty et al., 2024; Gawankar et al., 2020). To assist managers in making better decisions, an AI-Driven Accounting System (AIAS) is an example of an information system or IS tool. It helps gather, process, and store financial and accounting data. In essence, a web-driven accounting system would make it simple and quick for us to accomplish our objectives (Jalil et al., 2024; Rafique & Mujawinkindi, 2023). Some SMEs in India are using AI-based accounting and tax-compliance software like Xero, Fathom, TaxJar, Avalara, and Zoho Analytics. These software help them make important financial decisions. This study focuses on the impact of the TOE framework on the utilization of the AI-Driven Accounting System (AIASU), which in turn impacts the performance of the AI-Driven Accounting System (AIASP), in light of the significance of AIAS for enhancing the annual business results of SMEs. The TOE framework includes technological, organizational, and environmental aspects that can affect the working environment of organizations. The TOE framework helps analyze the adoption of AI-driven accounting systems (AIASU) in Indian SMEs under Industry 4.0. The **Technology** component focuses on AI's capabilities, such as

automation and predictive analytics, that meet SMEs' needs for efficient financial reporting. The **Organization** component examines internal factors like firm size, leadership commitment, and resources for training staff. The **Environment** component considers external factors such as government regulations and industry trends, which create a favorable environment for AI adoption in Indian SMEs striving to stay competitive and compliant. In order to strengthen their operations through control and monitoring across several areas such as costing, expenses, and cash flow, businesses rely on accounting information to address both short-term and long-term difficulties. Long-term strategic planning for organizations in a dynamic and competitive market context also heavily relies on accounting information. In order to maintain productivity and competitiveness, each business venture must incorporate information technology (IT) and IT-driven solutions to enable the collecting and transmission of accounting information. In modern accounting practices, information technology plays a major role in process performance. Through the improvement of accounting functions, IT plays a critical role in providing businesses—small and medium-sized firms (SMEs) in particular—with significant value addition. Organizations may guarantee fast and accurate accounting reports and simple access to financial data by utilizing IT properly (Almaiah et al., 2022; Alraja et al., 2022). These factors have a big impact on the performance and decision-making of organizations. Although case studies have looked at how organizations see AASU, there is still disagreement over the best method for companies to weigh the

advantages and potential drawbacks of AASU. It is necessary to recognize the promise of AI-powered accounting systems and to provide evidence of their practical benefits for small and medium-sized enterprises in particular (Alrawashdeh et al., 2022; Alghusain et al., 2020). Many studies have examined the role of AI in accounting and its impact on organizational performance. Almaiah et al. (2022) pointed out that AI-powered accounting tools increase the precision of financial forecasting and decision-making. There is a knowledge gap regarding AI adoption in Indian SMEs, though, as these studies primarily concentrate on developed nations. Furthermore, not much research has been done on how Industry 4.0, which emphasizes automation and data sharing, affects the use of AI in Indian SMEs (Dubey et al., 2020). Past studies on AI-driven accounting systems (AIAS) and their adoption in SMEs, particularly in developing economies, highlight both the potential benefits and significant challenges (Dey et al., 2023; Kumar et al., 2022). Research indicates that AI can enhance financial reporting efficiency, decision-making, and operational effectiveness in SMEs (Pumplun et al., 2019 and Nortje & Grobbelaar, 2020). However, studies also point out barriers such as high implementation costs, lack of skilled personnel, infrastructure limitations, and regulatory challenges (Alraja et al., 2022). **The cost of implementation** is a significant barrier, as many SMEs operate on tight budgets and the initial investment required for AI systems, along with ongoing maintenance costs, can be prohibitive. Additionally, the **lack of skilled personnel** is a critical challenge, as AI requires specialized knowledge in data science, machine

learning, and system integration, which is often scarce in the SME sector. Moreover, **cultural resistance** to adopting new technologies within SMEs, due to traditional practices and fear of job displacement, further complicates AI adoption. The other challenges include infrastructure issues such as limited access to high-speed internet, outdated hardware, and lack of digital tools, which can hinder the implementation of advanced technologies like AI. Additionally, regulatory complexities, including evolving tax laws, data privacy regulations, and compliance requirements, further complicate the adoption process for SMEs in India. Understanding these contextual barriers is crucial, as they significantly influence the readiness and ability of Indian SMEs to effectively integrate AI-driven systems into their accounting practices. The paucity of empirical research on the direct impact of AI systems on the financial performance of Indian SMEs, especially in industries with weak technological infrastructure, represents a significant gap in the literature. By examining AI adoption in Indian SMEs through the prism of Industry 4.0 and its effects on financial performance, this study seeks to close this gap. By doing so, it will contribute to a more context-specific understanding of AI's potential in the Indian SME sector. Therefore, more research is required to highlight the benefits and drawbacks of using an AI-Powered Accounting System, as well as to evaluate the effects of the system in connection to its value and to determine how effective it is for these kinds of firms. In this regard, not much work has been done to evaluate the variables affecting AASU and investigate how it affects the functioning of AI-Driven Accounting Systems in small

and medium-sized businesses in developing countries like India. Therefore, the research questions for the research work are: 1. What are the different factors determining AI-Driven Accounting System usages? 2. Is there any link between AASU and AASP?

## REVIEW OF LITERATURE

### Top Management Support (TMS):

Adoption of web technologies and other information technologies depends heavily on the support of the organization's leadership, which establishes the values and standards that are considered significant. Top Management Support (TMS) is critical for the successful adoption of AI-driven accounting systems (AIAS) in SMEs. TMS is essential because it ensures that AI adoption aligns with the overall business strategy, secures necessary resources, and overcomes resistance. Numerous studies have demonstrated the significance of a leader's beliefs and active participation. In the study, Alsyouf et al. (2022) came to the conclusion that Top Management Support refers to the care, assurance, and active involvement directed by the administration in the planning, development, and application of technology in the company and its utilization by the workforce. According to Nortje & Grobbelaar (2020), adopting a technology-driven accounting system requires the strong support of upper management. *H1: The use of AI-Driven Accounting System is influenced by top management support.*

### Organizational Readiness (OR):

Organizational elements encompass the aspects of a company that impact the uptake and utilization of technology and innovation. These components include the organization as a whole, its resource management plans, and the workspace that is intended to achieve the objectives set forth by the business. In the context of SMEs, OR encompasses several elements, including technical infrastructure, employee skills, cultural readiness for change, and leadership support. The readiness of an SME to adopt AI is particularly crucial because, unlike larger organizations, SMEs face constraints in terms of financial resources, skilled personnel, and infrastructure. Without sufficient OR, SMEs may struggle to integrate AI systems effectively, resulting in inefficiencies or resistance from employees who may not be prepared for the technological shift. According to Pumplun et al. (2019) and Nortje & Grobbelaar (2020), a company's organizational preparedness and culture have a significant impact on whether or not AI is accepted within the company. Business houses should hire and take advantage of developing AI-proficient services, according to Lin et al. (2019). They also need to provide the new and existing workers a place to work where they can support technological innovation and get past hierarchical structures. According to Jackson & Allen (2023), organizations need to train their bookkeeping staff to improve their confidence and talents while teaching them the importance of technical skills. *H2: Using AI-Driven Accounting System is influenced by organizational readiness (OR).*

### **Relative Advantage:**

Technological elements are those aspects of technology that are applied in innovative ways. According to **Rogers**, innovation has a number of properties that can affect how it is applied. One such property is relative advantage, which quantifies how much an innovation is perceived to provide more advantages than its competitors. According to Lufti et al. (2020), technological aspects necessitate the use of technical qualities in originality. Technological preparedness is a key factor in the acceptance of new technologies, claim Damerji and Salimi (2021). As per the findings of Pumplun et al. (2019) and Nortje and Grobbelaar (2020), the acceptance of technology in accounting models is significantly influenced by relative advantage. According to Luo et al. (2018), the accounting sector will grow as a result of the use of AI knowledge in the bookkeeping field.

*H3: The use of AI-Driven Accounting System is influenced by relative technological advantages.*

### **Compatibility:**

Compatibility gauges how well an innovation fits in with the ways and attitudes of the present. Compatibility has been defined by Picoto et al. (2014) as the extent to which a change is thought to be consistent with the norms and values of the time. Thus, the way that the current process is comparable to the recently developed technological accounting system is known as technological compatibility (Alraja, Imran, Khashab, & Shah, 2022). According to Almaiah et al. (2022), the introduction of new technology has increased the need for

inventive and creative abilities. The adoption of technology by accounting models is contingent upon compatibility, as suggested by Pumplun et al. (2019) and Nortje and Grobbelaar (2020). *H4: Using AI-Driven Accounting System is influenced by compatibility.*

### **Government Support:**

The ecological component that functions outside of management's authority over small and medium-sized businesses (SMEs) is external support from the government. This support is demonstrated by the government's encouragement and promotion of technology adoption and application within the company. In this regard, the government's regulations and guidelines may prevent or limit the use of innovation and technology in particular industries. On the other hand, similar regulations and guidelines may encourage the application of innovations in other fields.

Companies in the accounting and economics sectors must figure out how to be innovative in the workplace despite legal restrictions. According to Luo et al. (2018), the government needs to actively establish favorable ecological conditions for the development of artificial intelligence (AI) in the bookkeeping industry, as well as develop pertinent strategies and initiatives in a variety of industries. Strong laws and guidelines are necessary for artificial intelligence in bookkeeping in order to inspire and guide the way.

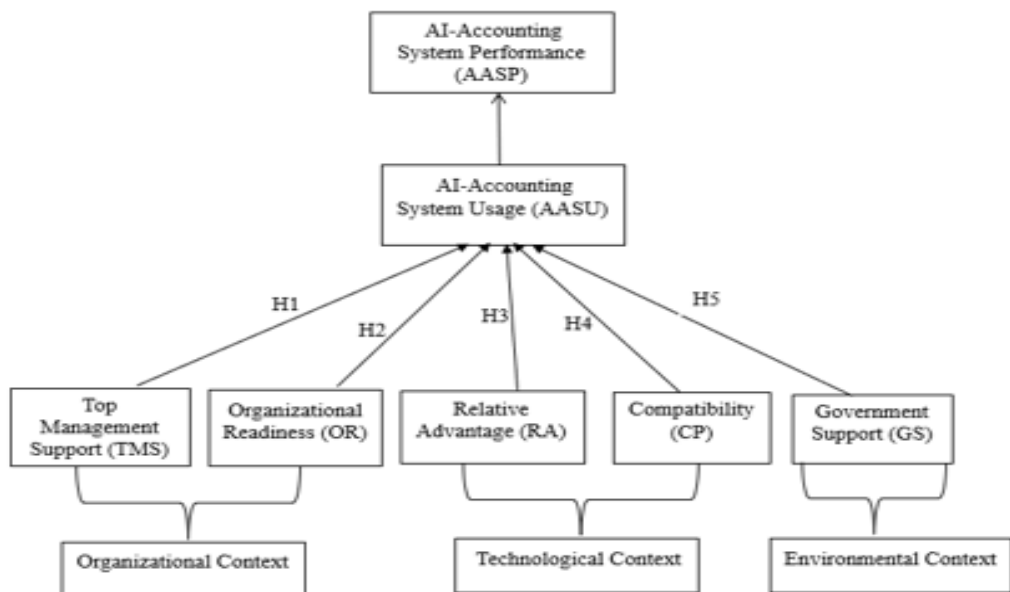
*H5: The use of AI-Driven Accounting Systems is influenced by government support (GS).*

### AI-Driven Accounting System usage (AASU) and AI-Driven Accounting System performance (AASP):

The extent to which AI-Driven accounting systems are employed in conjunction with other actions to improve competencies for enhancing financial performance is referred to as AI-driven accounting system usage. According to Apriyanti & Yuvitasari's research from 2021, businesses that successfully apply technology-driven accounting models are more likely to see positive effects on their performance than those whose utilization is at its lowest. Idris & Mohammed (2017) contend that a technology's level of use determines how much of an impact it has. Implementing an AI-driven

accounting system is the first step in evaluating its performance impact on the business. According to Lutfi et al.'s (2022) comparison between technology-driven accounting systems and RBV theory, any firm that uses artificial intelligence (AI) substantially will undoubtedly see improvements in its financial performance. It is difficult for competitors to imitate, and it will be valued for a very long time. *H6: The performance of the AI-Driven Accounting System usages is significantly influenced by its performance.*

**Hypothesized Model:** The above literature review has provided reason to create the following hypothesized model to be tested.



**Figure 1: Hypothesized Model**

*Source: Author's Own*

## RESEARCH METHODOLOGY:

The goal of this study is to determine how the Technological-Organizational-Environmental (TOE) framework's various aspects affect Indian SMEs' deployment of AI-driven accounting systems (Maroufkhani et al., 2020). The study included 198 MSMEs that were officially registered in the manufacturing sectors of Gujarat and Haryana. These companies were chosen at random based on their financial results. The study's definition of small and medium-sized businesses was based on their number of full-time employees and company success. Here, "small firms" refers to businesses with fewer than 50 full-time employees, while "medium firms" refers to businesses with more than 50 full-time employees but fewer than 250 employees overall.

The study's respondents are aware of how the company uses information technology (IT) and

information systems (IS) to inform its strategic decision-making. The main tool for collecting data was the questionnaire survey. The data were organized into four main categories: demographics, impact, extent, and participant profile. Table 1 below, which summarizes the participant profiles, shows this. The survey questions, which were based on measures from past studies on innovation/technology and IT systems, were composed in plain English. Five points were assigned to each statement on the questionnaire. The authors distributed 203 copies of their work via offline and online means to individuals who owned small and medium-sized businesses. One hundred ninety-eight employees from these 203 firms gave responses, but out of the 198 responses, 15 were incomplete. As a result, only 183 replies were kept for additional examination.

**Table 1: Participants Demographic Profile**

Category	Characteristic	N (frequency)	% (Percentage)
Age	20-30 Yrs	36	19.67
	31-40 Yrs	59	32.24
	41-50 Yrs	47	25.68
	>50 Yrs	41	22.40
Education	Certificate/12th/Diploma	39	21.31
	Bachelor Degree	91	49.72
	Master's Degree	53	28.96
Position	Senior Level Manager	109	59.56
	Assistant Manager	74	40.43
Gender	M (Male)	107	58.46
	F (Female)	76	41.53
Experience (in years)	Below 2 years	39	21.31
	2-5	51	27.86
	5-8	48	26.22
	>8 years	45	24.59

Using AI-Driven Accounting System (in years)	Less than 2.5	71	38.79
	2.5-5	55	30.05
	5-8	41	22.40
	> 8	16	8.74

**Source: Author's Own**

From February to April in 2023, a span of three months, the investigators conducted a survey involving 221 small and medium-sized enterprises (SMEs). It's typical for surveys targeting SMEs to seek input from just one or two individuals within each SME, usually from management or ownership. The purpose of the study, the expected duration, and the link to the survey were all detailed in the initial email invitations. The authors sent out the online questionnaire to 221 companies, followed by a series of follow-up steps. Out of the 221 companies, only 203 agreed to participate in the survey. Among the 203 firms, 198 workers responded. A total of 183 workers provided responses adequate for examination. The majority of these individuals held senior management positions within the company. The research included employees from various educational levels, age groups, years of experience, and genders, as detailed in Table 1.

**Development of Measurement Instrument**

To assess the elements of the TOE framework, AASU and AASP, various items on a 5-point rating scale were inquired about. Standard inquiries from various authors were taken into account in the measurement tool. The scales of AASU and AASP were drawn from the studies of Idris & Mohamad (2016) and Lutfi et al. (2020). Further, the scales of Organizational

factors (Top management support and organizational readiness), Technological factors (Relative Advantage and Compatibility), and Environmental factor (Government Support) were also drawn from the studies of Lutfi et al. (2020) and Idris & Mohamad (2016). The standard questionnaire has been attached as Annexure 1.

**Statistical Data Analysis:**

In this research, we employed structural equation modeling with the AMOS software for hypothesis testing. AMOS is a comprehensive statistical method capable of assessing several variables simultaneously within a single model. It is also appropriate for intricate models featuring multiple hidden variables, as well as for those with moderating variables and limited sample sizes (Rai, Gupta, & Tyagi, 2021). Therefore, AMOS was chosen in this study to examine the assumptions that were developed. The moderating variable was added to the suggested model in this study, which made the model more complex. This model's suggested sample size was 183, which is less than the threshold size needed by other methods. The recommended path modeling method in this exploratory investigation using TOE models was AMOS. This method of path modeling can be used for current theories or for research that focuses on predictions.

### Measurement Model Analysis:

The measurement model was assessed in AMOS-SEM in order to determine the dependability of the observed indicator constructs. To get the results, the following methods were used: factor loading, cross-loading, Cronbach's alpha, composite reliability, and AVE. Some researchers have advocated and suggested that a cut-off point for each item loading be set at 0.50 or higher. This means that any indicator with an outer loading of 0.50 or less needs to be removed from the model (Rai & Gupta, 2021). The elements that constitute the measurement framework are outlined in Table 3. This table shows that every component is both valid and reliable. Each element surpasses the suggested thresholds for Cronbach's Alpha and Composite Reliability, in addition to the mean variance extracted (Chin, 1998). Furthermore, the items satisfied the standards for convergent and discriminant validity, as all the factor loadings for their related constructs were above 0.50. Additionally, the AVEs were higher than the correlation coefficients between the constructs, demonstrating the items' discriminating validity. The measurement model satisfied all requirements for reliability, convergence, and

discrimination at both the item and construct levels after accounting for all of these factors. The investigation next turned to the structural model, which involved testing hypotheses.

### Analysis of Direct Relationship of Model-

To test the direct relationship model, AMOS-SEM was employed. The standardized path coefficient values, the critical ratio values, and the p-values for the hypotheses that were constructed defined the path coefficient's relevance and level for hypothesis testing. We built a CFA confirmatory model using AMOS version 20 and ran a regression analysis to see whether there is a correlation between endogenous and exogenous factors in order to evaluate construct reliability and validate the findings. A total of 198 written replies covering topics like cleaning, screening, and outlier removal were submitted for SPSS. Fifteen replies were discarded. Table 2 displays the validity and reliability of each individual factor. Based on standard metrics, Cronbach's Alpha, AVE, Maximum Shared Variance (MSV), composite reliability, and factor loading were confirmed to be valid and reliable.

**Table 2: Reliability and validity measures (summary)**

Construct	Items	Factor Loading	CA	CR	AVE	MSV
AASU	AASU1	.824	0.815	0.870	0.575	0.520
	AASU2	.805				
	AASU3	.769				

RA (Relative Advantage)	RA1	.581	0.830	0.846	0.583	0.371
	RA2	.805				
	RA3	.789				
	RA4	.850				
	RA5	.801				
Comp (Compatibility)	Comp1	.824	0.801	0.870	0.575	0.520
	Comp2	.805				
	Comp3	.769				
TMS (Top Management Support)	Tms1	.677	0.861	0.849	0.587	0.172
	Tms2	.694				
	Tms3	.864				
	Tms4	.813				
	Tms5	0.699				
ORS (Organizational Readiness)	ORS1	.608	0.881	0.884	0.661	0.332
	ORS2	.828				
	ORS3	.893				
	ORS4	.889				
GST (Government Support)	GST1	.721	0.808	0.822	0.536	0.520
	GST2	.717				
	GST3	.767				

AASP	AASP1	.746	0.899	0.877	0.589	0.382
	AASP2	.748				
	AASP3	.831				
	AASP4	.803				
	AASP5	.702				

*Source: Author's Own Calculation*

**Note:**

In the above case, the values of AVE (average variance extracted) should be greater than .50, CA (Cronbach's Alpha) and CR (composite reliability) should be greater than .70, and MSV (maximum shared variance) should be smaller than AVE (Chin, 1998; Hair et al., 2012).

**Discriminant validity:**

Discriminant validity is the degree to which a variable may be identified or isolated from other variables. Table 3 shows that the discriminant validity for each variable in this model is adequate.

**Table 3. Measurement Model (Diagonal Elements)**

	AASP	AASU	RA	COM	TMS	ORS	GST
AASP	0.732						
AASU	0.618	0.767					
RA	0.576	0.515	0.813				
COM	0.721	0.560	0.526	0.758			
TMS	0.378	0.406	0.378	0.365	0.766		
ORS	0.609	0.568	0.417	0.594	0.415	0.763	
GST	0.611	0.571	0.421	0.589	0.409	0.451	0.771

*Source: Author's Own Calculation*

**Results of Model Fit Index and Structural Equation Model (SEM):**

An analysis of the path was done to test the hypothesis. Table 4 presents the findings of this investigation. The crucial ratio test (t-value) and the regression weight test (S.E.) are shown in this table. A relationship is considered

significant when the t-value is greater than 1.96 and the p-value is less than .05. Path estimations are tested using standardized estimates, critical ratios (t-value), and p-values.

The findings confirmed hypotheses H1, H2, H3, H4, H5, and H6. This suggests that factors like compatibility, top management support, readiness within the organization,

competitive benefits, and support from the government are significantly linked to the adoption of the AI-Driven accounting system by small and medium-sized enterprises (SMEs), as the p-values for all hypotheses matched the anticipated standards. The adoption of AI-Driven Accounting Systems (AASU) and AI-Driven Accounting System performance (AASP) were also found to be substantially correlated ( $p < 0.05$ ) in the results. Thus, while hypothesis H1 was not supported by the study's findings, hypotheses H2, H3, H4, H5, and H6 were (Table 5 & figure 2). The findings of a few earlier studies also corroborated the findings of this one (Lutfi et al., 2022). Additionally, this study assessed the structural model using a number of metrics, such as  $X^2/df$ , GFI, AGFI, IFI, TLI, CFI, and RMSEA. The results are shown in Table 5, where all measures indicate values that are good or above the necessary norms, demonstrating a robust match of the structural model. The  $X^2/df$  metric was able to meet the minimum criterion of less than 4.0 and

get a respectable score of 3.145. All of the GFI, IFI, CFI values were higher than the advised cutoff of  $> 0.05$ ) in the results. Thus, while hypothesis H1 was not supported by the study's findings, hypotheses H2, H3, H4, H5, and H6 were (Table 5 & Figure 2). The findings of a few earlier studies also corroborated the findings of this one (Lutfi et al., 2022). Additionally, this study assessed the structural model using a number of metrics, such as  $X^2/df$ , GFI, AGFI, IFI, TLI, CFI, and RMSEA. The results are shown in Table 5, where all measures indicate values that are good or above the necessary norms, demonstrating a robust match of the structural model. The  $X^2/df$  metric was able to meet the minimum criterion of less than 4.0 and get a respectable score of 3.145. All of the GFI, IFI, and CFI values were higher than the advised cutoff of  $> 0.90$ , and RMSEA as well as RMR were appropriate as per the recommended values ( $< .080$ ).

$< .080$ ).

**Table 4: Results of Structural Model**

Variables			Estimate	S.E.	C.R.	P	Decision
AASU	<---	TMS	.192	.054	3.550	***	H1: Accepted
AASU	<---	ORS	.212	.055	3.872	***	H2: Accepted
AASU	<---	RA	.204	.063	3.261	.001	H3: Accepted
AASU	<---	CP	.201	.061	3.260	.001	H4: Accepted
AASU	<---	GS	.459	.070	6.600	***	H5: Accepted
AASP	<---	AASU	.441	.069	6.590	***	H6: Accepted

**Source: Authors Own Calculation**

Note: \*\*\* means p value < 0.005

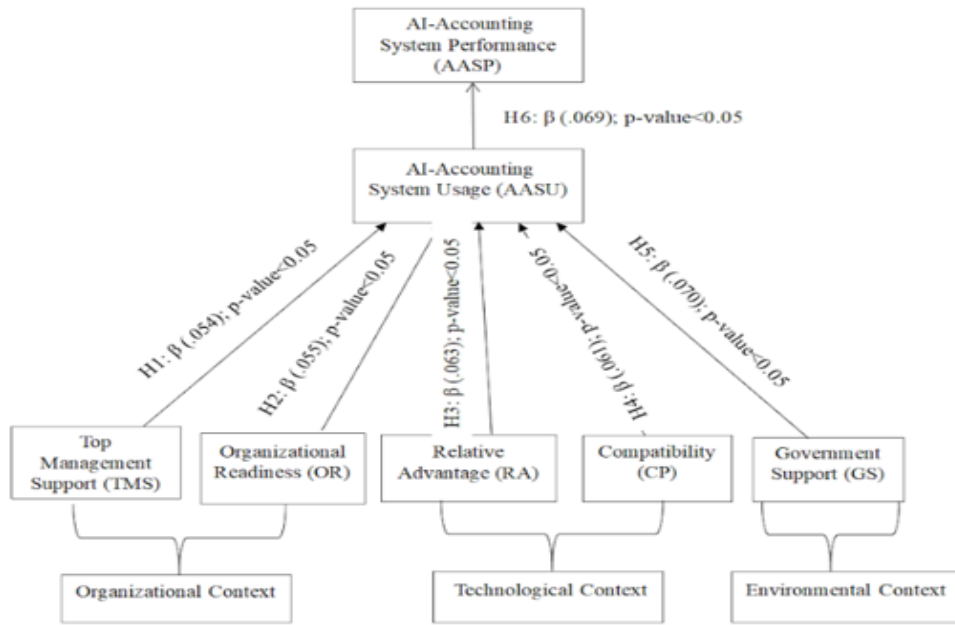
**Table 5: Model Fit Index**

Index	Recommended Criteria	Default Model
CMIN/DF	>4	3.145
IFI	$\geq 0.90$	0.92
GFI	$\geq 0.90$	0.91

CFI	$\geq 0.90$	0.92
RMSEA	$< .080$	.063
RMR	$< .080$	.041

Source: Authors Own Calculation

Figure 2: Hypothesized Model Results



Source: Authors' Own

**CONCLUSION:**

This study's primary objective was to determine the significance of adopting AI-driven accounting systems and how such adoption impacts the systems' functionality. Previous studies have reported low adoption and poor performance of AI-driven accounting systems; however, the low value and adoption rate of the system did not account for the poor performance. This empirical study examines how implementing AI-driven accounting systems can enhance the benefits and value of the system. The use of AI-driven accounting

systems in the context of small and medium-sized enterprises (SMEs) in India is an issue that is becoming increasingly relevant, especially in light of the government's goal to move towards a digital and contemporary corporate environment. Adoption and effective use of AI-driven accounting systems are critical for all enterprises across all industries. Many digital systems have failed because of low adoption, thus SMEs need to consider the possible elements that could impact the adoption process to ensure effective adoption. The great majority of the theories that have been put forth affect how AI-driven accounting systems

are implemented and, more significantly, how businesses decide whether or not to use these systems. The findings of some earlier studies also corroborated the findings of this work (Lutfi et al., 2022; Rikhardsson et al., 2022). Without a doubt, adopting an AI-driven accounting system has improved the performance of the companies using it. According to the poll, AASU significantly impacted the performance of the AI-driven accounting system, and all five AI adoption criteria had a significant impact on the utilization of the system.

### Limitations & Future Scope of Study:

There are certain restrictions with this study. It may not apply to other cities because it was limited to SMEs' employees in the states of Gujarat and Haryana. Additionally, it solely examined the performance and applications of AI-driven accounting systems, which may not be relevant to other issues. Furthermore, the sample size was inadequate. In summary, this study assessed the relationship between AASU and AASP as well as the impact of TOE variables on the use of AI-driven accounting systems. To ascertain the direct influence of the TOE variable on IS/IT and clarify any possible direct impacts, more research may be carried out. Finally, as the employed regression model was a linear additive model, the findings may differ from those displayed here. The limitations of this study may provide an avenue for future qualitative research on the adoption of AI-driven accounting systems, including the effect of demographic variables on adoption. Moreover, the study's findings come from primary and secondary sources, each of which has drawbacks

of its own. In the future, researchers might try to overcome these restrictions and potentially use a larger sample size.

### Practical implications:

Respondents to the survey who are eager to employ AI-driven accounting systems and who push their employees to do so are encouraging signs for the Indian economy. It is anticipated that the use of AI-driven accounting systems will rise in the near future due to their proven efficacy in managing vast amounts of data. Organizations also need to constantly preserve and safeguard data. The use of AI-driven accounting systems is growing as a result of this trend. The administration of SMEs, the Indian government, and policymakers can all benefit from the findings of this paper in terms of enhancing SMEs' financial performance.

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## Annexure 1:

**Table 2: Measurement Instrument**

Construct	Items	Statement	Authors
AASU	AASU1	Our organization uses AI-Driven Accounting System	Idris & Mohamad, 2016  Lutfi et. al., 2020
	AASU2	My company is planning to implement AI-Driven Accounting System on a regular basis	
	AASU3	My company provides an environment which encourages others to accept AI-Driven Accounting System	
Relative advantage	RA1	Our company can effectively manage supply risks with the help of AI-Driven Accounting System	
	RA2	AI-Driven Accounting System provides valuable data to my company for decision-making	
	RA3	AI-Driven Accounting System makes my company to adapt changes more quickly than our competitors.	
	RA4	AI-Driven Accounting System is helpful for my company in lowering costs	
	RA5	AI-Driven Accounting System is helpful for my company's people to work efficiently and speedily	

Compatibility	CP1	The use of AI-Driven Accounting System is in line with our company's ethics
	CP2	The use of AI-Driven Accounting System is in line with our core business principles
	CP3	The use of AI-Driven Accounting System is also in line with our preferred processes.
Top Management Support	TMS1	Our senior leadership facilitates AI-Driven Accounting System in the company
	TMS2	AI-Driven Accounting System efforts are directed by Our senior leadership
	TMS3	AI-Driven Accounting System efforts has been made on top priority in the organization by our senior leadership
	TMS4	AI-Driven Accounting Systems are always updated by senior level leaders
	TMS5	Our elite group has overcome the challenges brought about by people's innate reluctance to use technology.
Organizational Readiness	OR1	Capital/financial means have become obstacles for my company to systematically implement AI-Driven accounting system
	OR2	Lack of IT-enabled infrastructures <u>have</u> become obstacles for my company to systematically implement AI-Driven accounting system
	OR3	The lack of analytics capabilities among staff members <u>have</u> become obstacles for my company to systematically implement AI-Driven accounting system
	OR4	Sometimes lack of well qualified personnel's become obstacle for my company to systematically implement AI-Driven accounting system
Government Support	GS1	Government regulations provide motivation and encourage our company to develop advanced IT-enable infrastructure
	GS2	My company also motivated to adoption of AI-Infrastructure due to subsidies available by government
	GS3	Government provides following supports for IT adoption: Technical Assistance, Financing facilities, Training assistance etc.
AASP	AASP1	Software for data generation for decision makers is called data analysis software

AASP2	AI-driven accounting systems improve planning and control and lessen decision-making ambiguity.
AASP3	Our business expands due to the rise in sales and earnings, which are a result of our AI-powered accounting system. This system also makes it easier to share data with both our own employees and clients outside the company.
AASP4	Automated accounting software improves the experience for users, cuts down on errors, and boosts the ease of accessing information.
AASP5	An AI-powered accounting platform reduces expenses, time, and the need for human labor for your company.

*Source: Author's Own-standard and modified questionnaire*