DETERMINING FACTORS AND IT ADOPTION BY AUDITING LIMITED LIABILITY PARTNERSHIPS: MEDIATING EFFECT OF IT CONFIDENCE

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ABSTRACT

This research study examines the effect of information technology (IT) determining factors (IT awareness and IT proficiency) and IT adoption by auditing Limited Liability Partnerships (LLPs). This study also examines the mediating effect of IT confidence on the link between the determining factors and IT adoption by auditing LLPs. Data were gathered from 143 partners who are practicing chartered accountants registered as LLPs located in Kerala, India. The conceptual model is tested using structural equation modeling based on partial least squares. The findings confirm the direct effect of IT awareness, IT confidence on IT adoption as well as the mediating effects of IT confidence on the relationship between IT proficiency and IT adoption by auditing LLPs. The research study is performed only in the Indian LLPs perspective and future studies can be performed in other nations as well to generalize the findings. The findings of this research study can be used to guide practicing chartered accountants registered as LLPs, governing bodies of practicing auditors, and software developers while expanding the IT adoption by auditing LLPs. The determining factors of IT adoption have great potential for auditors of practicing firms for transforming from manual audits by adopting IT-enabled auditing tools to facilitate their audit services. The present research study gives valuable insight into the critical mediating role of IT proficiency and other IT variables as activating factors that impact auditing practice efficiency of auditing LLPs.

Keywords: Auditing, IT, LLP, Practicing, Determining factors

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1. INTRODUCTION

Limited Liability Partnership (LLP), a hybrid form of an organization having features of the Companies Act and Partnership Act which benefits professional auditors to start LLP firms in India. The Ministry of Corporate Affairs (MCA) has permitted Chartered Accountants (CA) forming LLPs to undertake audits and attestation services (MCA general circular, dated 4th April 2011). As a result, many sole proprietorship firms converted to LLPs, allowing CA firms to expand and increase their capacity. Information technology (IT) innovations in auditing services contribute to increase efficiency of auditing LLPs. The use of Computer Assisted Auditing Techniques (CAATs) may provide numerous benefits over traditional auditing (Al-Hiyari, Al Said, and Hattab, 2019). The Big Four accounting firms – Deloitte, EY, PwC, and KPMG – have invested heavily in artificial intelligence in recent years (Tsao, 2021). Most auditing firms in each state reported issues with their audit documentation quality (Otete, 2020).

The constantly evolving technological landscape creates a variety of audit challenges that grow over time (Byrnes et al., 2018). The majority of sole proprietorship audit firms perform auditing services manually (Thottoli, 2021). Manual auditing is still used by some of the converted LLPs. For each audit engagement, LLP audit firms typically have two or more signing partners who should be assigned (Chi and Pan, 2021). Most audits of publicly traded companies are conducted by Big 4 audit firms (Al Ani and Chong, 2021). As a result, LLP accepts more clients for audits and attestation services. Hence, it is critical that they need to automate their audit services.

Practitioners were hampered by a lack of knowledge of software applications used in preparing financial statements (Umar and Muhammad Kurawa, 2021). Auditors lack a sufficient level of awareness of the latest auditing tools (Jaber and Wadi, 2018). In general, auditors are unable to perform a continuous auditing process because they lack IT proficiency (Sulistyowati et al., 2021). Lack of confidence in the software may have an impact on the robotic process. Since accounting and auditing are being transformed by automation (Rozario and Vasarhelyi, 2018), these challenges may cause small

auditors and auditing LLPs to stick with traditional auditing methods rather than adopting IT-enabled auditing practices.

Thus, IT adoption in the auditing by LLPs is challenging since there is a lack of prior IT awareness in newly qualified audit staff. Another barrier to adopting IT-enabled auditing technologies is a lack of awareness about the latest automated audit tools. Clients of LLPs might include a variety of companies that use an IT-enabled accounting system. Audit tasks are assigned depending on the IT proficiency and expertise of the auditing assistant. The LLP audit staff may be incompetent to audit through the system because they lack competency in MS Excel and lack experience working with the latest technologies of computer-assisted auditing techniques (CAATs). Audit technology awareness, auditor's IT proficiency, and competency are essential because the auditor is the key player who has access to the clients' database (Supriadi, et al., 2019).

The list of challenges presented prompts researchers to investigate the IT determining factors and IT adoption by auditing LLPs as well as the importance of researching issues in the country. Hence, this research study intends to examine the effect of IT determining factors (IT awareness and IT proficiency) and IT adoption by auditing LLPs. Further, this study also aims at examining the mediating effect of IT confidence on the link between the determining factors and IT adoption by auditing LLPs.

2. REVIEW OF LITERATURE

2.1 IT AWARENESS, IT CONFIDENCE AND IT ADOPTION BY AUDITING LLPs

As part of IT awareness, Big 4 practicing audit firms were describing artificial intelligence and its usefulness to persist with the innovation in auditing, for instance, audit planning, tests of clients' transactions, analytical process, and accumulation of audit working papers for various clients (Munoko, Brown-Liburd, and Vasarhelyi, 2020). Bradford et al. (2020) investigated technology integration in auditing because it is still important to have confidence and awareness among auditors about the relationships between audit benefits and audit software use. Artificial intelligence (AI), big data analytics, and blockchain technology are all examples of current technological advancements that were examined by Tiberius and Hirth (2019) with numerous technological changes in auditing practices. They

concentrated on transformation of auditing firms' procedures and the profile of the audit profession as a result of new technologies. Vincent, Skjellum, and Medury (2020) aimed at designing a blockchain architecture for firms that will enable valuable connectivity to a blockchain while also allowing auditors awareness, confidence, and use of blockchain technology that provides audit and assurance services. Size of the audit firm, employee IT proficiency, and higher management commitment remained as important factors for IT adoption by practicing audit firms (Siew, Rosli, and Yeow., 2020). Audit firms should be familiar with IT auditing software and its most recent technical features in order to perform audit tasks through the auditing process. As a result, audit firms are able to use audit software systems with simple instructions to learn (Tansil, et al., 2019). Hashim Mohamad Ariff, and Amrah (2016) found that several businesses had reported accounting irregularities and aggressive tax reporting. Handoko, Ariyanto, and Warganegara (2018) noted that if practicing auditors have confidence in their improved work performance, it will increase the auditor's intention to use computerized audit software. Thus, it is hypothesized that:

H1:   IT awareness positively associates with IT confidence

H2:   IT awareness positively associates with IT adoption by auditing LLPs

2.2 IT PROFICIENCY, IT CONFIDENCE AND IT ADOPTION BY AUDITING LLPs

Adoption of IT-enabled audit software is regarded as an important factor in increasing audit skills, confidence, efficiency, and effectiveness (Thottoli et al., 2021; Pedrosa et al., 2020) and identified audit software adoption factors. The auditor's adoption of audit technology in the course of financial audit work has been researched by Widuri et al. (2019), Handoko, Ayuanda, and Marpaung (2020) while Internal Shariah auditors' competence has been investigated by Ab Ghani, Mohd Ariffin, and Abdul Rahman (2019). IT skills have improved the confidence of partners in an audit firm and it has helped to improve audit quality and auditor effectiveness (Lowe, et al., 2018). Auditors' willingness to use and evaluate the perceived value of information technology in their auditing tasks have also been examined. Top management support and employee IT proficiency and confidence had inspired usage of audit software applications in audit

firms (Li et al., 2018). Ku Bahador et al. (2018) found that practicing accounting firms were not fully skilled in using IT in their audit tasks. Nguyen, Ha, and Nguyen (2020) noted that accounting knowledge, IT confidence, proficiency in IT audit, and independence are considered as the most crucial factors in the information technology audit. In determining the audit quality, indicators associated with practicing auditors regarding their knowledge, proficiency, and timely reporting of internal control matters were discovered to possess the maximum level of efficiency (Harris and Williams, 2020). Auditors who often use audit software were successful in understanding and applying numerous audit analytics and gaining IT skills because of their self-confidence and familiarity (Moradi and Nia, 2020). Jaber and Wadi (2018) found a lack of proficiency in IT skills, lack of IT confidence, and failure in data protection among auditors. Thus, it is hypothesized that:

H3:   IT proficiency positively associates with IT confidence

H4:   IT proficiency positively associates with IT adoption by auditing LLPs

2.3 THE MEDIATING EFFECT OF IT CONFIDENCE BETWEEN IT DETERMINANTS AND IT ADOPTION BY AUDITING LLPs

Nurul (2018) sought to establish whether a relationship existed between competence and auditor performance with IT usage serving as a moderating variable. The mediator role of user confidence in influencing IT adoption and the readiness of machine learning in accounting were studied by Al-Olimat and Al Shbail (2021). Al-Ansi et al. (2017) examined the impact of technical expertise, IT utilization, and IT training among partners of auditing LLPs. They also investigated the mediating role of IT value on the link between technology training and technology expertise with technology utilization. Lois et al. (2020) analyzed continuous auditing in the technological era through the eyes of audit firm partners. Auditors' confidence in the audit software, its control procedures are required to ensure that those are fairly equipped with the necessary proficiency and should have better confidence in all IT tweaks that might be necessary to conduct audit tasks in a complex structured organization. The primary goal can be achieved by utilizing customized audit software in a variety of ways to achieve a distinct purpose. Audit partners should gain confidence in the most recent developments in IT-enabled auditing (Shaikh et al., 2018). IT is recognized as a

mediator used in administration of a complex set of data to effectively manage and produce information. IT's evolving role is inextricably linked to information (Saputra and Malau, 2018). Self-efficacy mediated the impact of achievement goals on less complex audit tasks than those more complex (Mohd Sanusi et al., 2018). Au and Fung (2019) in their study confirmed that IT governance had a significant impact on knowledge centric information security, IT security maturity, and auditing. They also confirmed that knowledge-centric information security acts as a mediator between IT Governance, IT security maturity, and audit results. Thus, it is hypothesized that:

H5a: IT confidence mediates the relation between IT awareness and IT adoption by auditing LLPs

H5b: IT confidence mediates the relation between IT proficiency and IT adoption by auditing LLPs

2.4 THEORETICAL DEVELOPMENT

Extensive research has covered technological proficiency and confidence in IT adoption by practicing professionals. Accounting functions have a higher IT adoption rate as a result of the push for higher efficiency among accounting professionals. Accountants and auditors are expected to be tech-savvy (Pan and Seow, 2016). The mediating variable described by MacKinnon (2012); Baron and Kenny (1986), that a variable appears as a causal way from an independent variable to a dependent variable. It affects variation in the dependent variable, which in turn is affected by the independent variable. In the current study, the researchers used a mediator, IT confidence, on the link between IT determining factors and IT adoption by auditing LLPs. The theory of conservative accrual accounting was successfully implemented using IT, intensity, user expertise, and work motivation (Muda and Landau, 2019). IT adoption research is often regarded as one of the most established branches of technology research (Brown, Dennis, and Venkatesh, 2010). The availability of cognate theories explains in different contexts by Rogers (1983) and Davis (1989). Researchers believe that most leading adoption theories are deterministic and techno-economic (Lawrence, 2010; Al-Natour and Benbasat, 2009; Benbasat and Zmud, 2003), placed a great deal of emphasis on specific roles and technological characteristics that are relatively stable, with little effort made to address the rising intricacies of organizational operations.

In order to link the utilitarian and deterministic conceptual frameworks of most classical theories, further research is necessary to provide an understanding of the social and economic dynamic process of IT adoption among auditing LLPs. Small audit firms are said to be more strategic in their IT adoption decisions because they recognize the interaction of changing, but sophisticated and multiple, IT determining factors.

As a result, a hypothetical structure has been formed. The effect of IT determining factors (IT awareness and IT proficiency) and IT adoption by auditing LLPs and the mediating role of IT confidence on the link between the determining factors and IT adoption by auditing LLPs is shown in the following theoretical model, Figure 1:

FIGURE 1
Theoretical Model
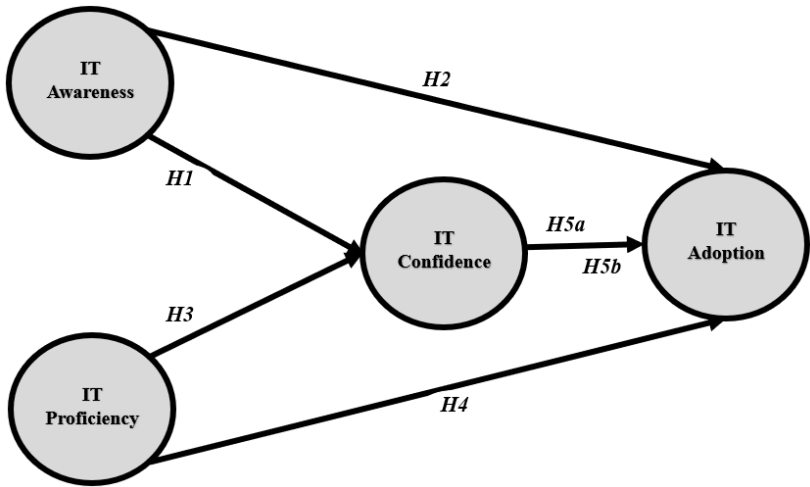
2.5 INSTITUTIONAL THEORY

According to institutional theory, an institution's environment has a greater impact on formation of organizational structures than business and market pressures (DiMaggio and Powell, 2000). As DiMaggio and Powell (1991) point out, institutional theory is a process by which institutional practices are adopted by other organizations experiencing similar institutional pressures. Furthermore, it has been established that the level of consistency depends on the source of such pressures. Organizations can be transformed to become more consistent in three

ways, according to the structure of consistency (Sherer et al., 2016). This transformation can occur as a result of legislation and regulations based on best practices; and also, by conforming to social norms and expectations. Compatibility is an advantage for complying, according to Scott (2001); compatibility also alleviates the risk of threats and improves resource availability.

Learning from others in professional networks is referred to as normative isomorphism. Coercive isomorphism is caused by demands from other groups that one is reliant on, either formally or informally. Organizational structure, culture, and behavioral emphasis can all be influenced by these institutional forces (DiMaggio and Powell, 2000). ''Institutional theory provides a conceptually powerful source for observing the non-linear (as opposed to linear) paths of IT adoption and assimilation around markets and organizations.'' (Currie, 2009). In times of uncertainty, complex social dynamics such as coercive, normative, and mimetic influence decision-making (Galaskiewicz and Wasserman, 1989). The institutional forces model has been used to describe how technologies such as ERP and enterprise applications get adopted (Ugrin, 2009; Liang et al., 2007), supply chains and e-commerce (Gibbs and Kraemer, 2004), and financial data exchange (Teo et al., 2003). It has also been used to describe adoption of accounting standards (Judge and Pinsker, 2010; Collin et al., 2009) and compliance with Health Insurance Portability and Accountability (Appari et al., 2009). As a result, institutional forces have now been measured in the most important IT adoption studies based on institutional theory. Thus, the present study employs institutional theory to reinforce the discussion and findings, because there is a visible resemblance between organizations in terms of technology adoption and rules, as well as the concept of consistency developed from such theories.

3. METHODOLOGY

3.1 DATA COLLECTION PROCEDURE

The sample in this study involved the practicing-chartered accountants in Kerala, registered as limited liability partnership firms, who are members of The Institute of Chartered Accountants of India (ICAI) during the year 2018-2019, consisting of n = 465 partnership firms. The data were gathered by the researcher through mailed questionnaire surveys and participants were personally called by the researcher. The study received 350 responses in total. Because of their

wide experience in accounting and auditing, those respondents were chosen as the most suited for the current study. Respondents who did not provide explicit consent or did not fulfill the requirement for inclusion were excluded (186) from the data prior to analysis. Upon further examination, 21 responses with missing information from the three major constructs were excluded. Thus, the final sample size consisted of 143 usable questionnaires that were considered for the study, representing a 40.8% total response rate. A total of four variables are used in this study. As a result, the sample size of 143 is adequate according to Nunnally's (1978) rule of thumb, which states that the subject to item ratio for exploratory factor analysis should be at least 10 per variable. Even though the response rate is low, it is important to note that the targeted population involved the busy practicing chartered accountants. The low response rate may also indicate a non-response bias.

3.2 MEASUREMENTS

The questionnaire is divided into four sections, each measuring IT awareness, IT proficiency, IT confidence, and IT adoption, and includes 19 scale items adapted from the validated model of Thottoli and Thomas (2020). There are 4 constructs covering IT awareness, IT proficiency, IT confidence, and IT adoption among practicing chartered accountants in LLPs. IT awareness, IT proficiency, and IT confidence are measured by four (4) items each. A seven (7) item measure was used to describe IT adoption. The questionnaire items were represented as statements employing a five-point Likert scale ranging from 1 to 5, with 1 indicating strong disagreement and 5 indicating strong agreement. Three independent latent variables influencing IT adoption were investigated in this study, namely, IT awareness, IT proficiency, and IT confidence. IT confidence, which is thought to be the driving force behind IT adoption, is also a mediator in this relationship construct.

3.3 DATA ANALYSIS

The main concepts of this research are IT adoption by practicing chartered accountants who work in LLPs, with focus on their IT awareness, IT proficiency, and IT confidence. A structured survey questionnaire (Hox and Boeije, 2005) for collecting data on IT adoption by practicing chartered accountants was the primary instrument for this study. The research also investigated the relationships between the variables under consideration (Thottoli and

Thomas, 2020). The analysis was carried out by two processes. Initially (process 1), the study instrument was developed, and then validated. The variance inflation factor (VIF) is a measure for calculating the degree of multicollinearity in a set of possible regression variables. To extract the factors and assess validity, convergent validity analysis was used. The instrument reliability was assessed using Composite Reliability.

In process 2, the relationship among three latent constructs was measured using Structural Equation Modeling using the Partial Least Square estimation technique (PLS-SEM). The PLS method can be used to evaluate structural path coefficients as well as measurement model parameters at the same time (Chin, 1998). The PLS analysis model allows for a small sample for validation and produces more consistent results than the SEM analysis model (Barclay, Higgins, and Thompson, 1995). In PLS, the sample size that affects a dependent variable or the highest sum of formative indicators is ten times that of the independent variables (Chin, 1998). In this study, the dependent variables can have up to three estimated independent variables. As a result, the 143 sample size is sufficient for PLS analysis. This study examines how the bootstrapping method has an indirect effect (Simar and Wilson, 2007).

Cronbach's (1951) coefficient alpha was applied to assess the survey instrument reliability. The reliability analysis was undertaken after the data were collected, and all of the Cronbach's alpha including Rho_A, composite reliability values were substantial and are agreed on point i.e., 0.6, as in Table 1 (Bryman, 2016). The conceptual model is examined by applying structural equation modeling based on partial least squares. The researchers examined the value of each construct's square root of average variance extracted (AVE) with the correlation among the other constructs in the same model (Ghozali and Latan, 2014). The VIF, variance inflation factor, was used to examine multicollinearity, which occurs when two or more variables are closely linearly connected. Item loading, composite reliability, and AVE have cut-off values of 0.5, 0.7, and 0.5, respectively (Hair et al., 2010). Additionally, the Rho A value is more than > 0.70 value which confirms the internal consistency of the measurement model. All the VIF values in this research are less than 10. Hence, no multicollinearity issues emerged in the research data.

TABLE 1
Summary of the Construct Reliability and Validity Results

Construct	Items	Item Loading	VIF	AVE	Composite Reliability	Cronbach's Alpha	Rho_A
IT Adoption	IT_ADO1	0.577	2.387	0.601	0.910	0.917	0.917
	IT_ADO2	0.576	3.456				
	IT_ADO3	0.690	3.254				
	IT_ADO4	0.830	2.192				
	IT_ADO5	0.916	3.504				
	IT_ADO6	0.987	2.678				
	IT_ADO7	0.751	2.799				
IT Awareness	IT_AWA1	0.776	3.392	0.599	0.851	0.874	0.874
	IT_AWA2	0.618	4.548				
	IT_AWA3	0.624	3.508				
	IT_AWA4	1.011	1.400				
IT Confidence	IT_CON1	0.782	4.540	0.730	0.915	0.918	0.918
	IT_CON2	0.847	3.766				
	IT_CON3	0.835	3.988				
	IT_CON4	0.945	1.996				
IT Proficiency	IT_PRO1	0.983	3.498	0.639	0.871	0.857	0.857
	IT_PRO2	0.862	3.765				
	IT_PRO3	0.519	1.303				
	IT_PRO4	0.759	2.807				

Source: Authors' own elaboration based on the results of PLS analysis.

4. RESULTS

4.1 DESCRIPTIVE STATISTICS

Table 2 provides the descriptive statistics for all of the constructs in this study, including mean and standard deviation (Field, 2009). On a five-point Likert scale, the mean values for IT adoption, IT awareness, and IT confidence are about in the middle, indicating that the study respondents are acceptable in terms of IT awareness, IT confidence, and IT adoption by auditing LLPs. A low mean score for IT proficiency implies that the respondents perceived themselves as not so skilled in IT adoption by auditing LLPs. It appears that the respondents are highly influenced by IT awareness against IT confidence and to IT adoption by auditing LLPs. A low mean value of IT proficiency implies that the respondents have a low level of intention towards IT adoption by auditing LLPs.

TABLE 2
Descriptive Statistics by Constructs

Variable	n	Minimum	Maximum	Mean	SD
IT Adoption	143	-4.819	1.427	0.177	1.000
IT Awareness	143	-3.605	1.822	0.129	1.000
IT Confidence	143	-3.305	1.717	0.161	1.000
IT Proficiency	143	-5.316	1.723	-0.048	1.000

Source: Authors' own elaboration based on the results of the analysis.

4.2 MEASUREMENT MODEL

Once the correlation among two constructs, off-diagonal items, is not larger than their relative composite reliability, then the discriminant validity was used to determine the level of variance in the indicators that could describe the variable within constructs (Henseler, Ringle, and Sarstedt, 2015). (Table 3)

TABLE 3
Discriminant Validity of Constructs (Fornell-Larcker Criterion)

Constructs	IT Adoption	IT Awareness	IT Confidence	IT Proficiency
IT Adoption	0.775			
IT Awareness	0.370	0.774		
IT Confidence	0.252	0.208	0.854	
IT Proficiency	0.145	0.290	0.707	0.799

Source: Authors' own elaboration based on the results of PLS analysis.

In this study, confirmatory factor analysis was also used to assess convergent and discriminant validity. All regression weights show statically meaningful (*p*-value 0.001) values, and their standardized predictions are larger than 0.5, indicating that discriminant validity is demonstrated (Henseler et al., 2015), and the Heterotrait-monotrait ratio (HTMT) is less than 0.85 (Kline, 2012) signifying sufficient discriminant validity. (Table 4)

TABLE 4

Discriminant Validity of Constructs (Heterotrait-monotrait Ratio)

Constructs	IT Adoption	IT Awareness	IT Confidence	IT Proficiency
IT Adoption				
IT Awareness	0.344			
IT Confidence	0.253	0.194		
IT Proficiency	0.162	0.303	0.710	

Source: Authors' own elaboration based on the results of PLS analysis.

The validity of the path coefficients, as well as the value of R^2, Variance explained, are all used to test for hypothesized relations, the f^2, effect size, and the Q^2, predictive relevance (Hair et al., 2021) and indicated that the path coefficients in the structural model represent the relationships between the latent variables, that assesses the stability of a link between a dependent and an independent variable, keeping the impact of all other independent variables constant (Allison, 1999). The R^2 indicates the extent of endogenous latent variable described in the structural model, with a higher number indicating that the construct is better explained together by all latent variables in the structural model through path relation (Hair Hult, Ringle, and Sarstedt, 2021). The bootstrapping method was used to assess the significant thresholds for loadings and path coefficients in the current research, which included 143 instances with a 500 re-sample count.

The resultant R^2 of IT adoption at 0.182 (adjusted R^2 of 0.165) suggests that 18% of the variance in IT adoption among practicing auditors of auditing LLPs can be explained by the predictors. Whereas R^2 of IT confidence at 0.500 (adjusted R^2 of 0.492) suggests that 50% of the variance in IT confidence among practicing auditors of auditing LLPs can be explained by the predictors. The variance explained are shown in the following Table 5.

TABLE 5
Variance Explained

Endogenous Construct		Variance Explained (R^2)	(R^2) Adjusted
Exogenous Variables -> Endogenous (auditing LLPs)	IT_ADO	0.182	0.165
	IT_CON	0.500	0.492

Source: Authors' own elaboration based on the results of PLS analysis.

Furthermore, we used a blindfolding process to examine the predictive relevance of Q^2. Blindfolding is considered a sample reuse approach that eliminates each dth data-point in the endogenous data and then uses the prevailing data points to approximate the parameters (Chin, 1998). If the recommended value of predictive relevance Q^2 is larger than 0, the model is predictively relevant.

Table 6 depicts predictive relevance Q^2 indicates that IT Adoption, IT Awareness, IT Confidence, and IT Proficiency have a medium impact on the model's predictive relevance.

TABLE 6
Predictive Relevance Q^2

CV redundancy	Excluded predictor	Q^2	Effect size
0.087	IT Adoption	0.547	Medium
	IT Awareness	0.508	Medium
0.304	IT Confidence	0.641	Medium
	IT Proficiency	0.532	Medium

Source: Authors own elaboration based on the results of PLS analysis.

5. DISCUSSION

5.1 HYPOTHESES TESTING

Table 7 shows the path coefficients and hypotheses test results.

TABLE 7
Path Coefficients and Hypotheses Test

Hypotheses	Relationship	Standard β	Standard error	t-value	p-value	Decision
H1: IT awareness positively associates with IT confidence by auditing LLPs.	IT awareness→ IT confidence	0.022	0.080	0.272	0.786	Not supported
H2: IT awareness positively associates with IT adoption by auditing LLPs.	IT awareness→ IT adoption	0.325	0.077	4.192***	0.000	Supported
H3: IT proficiency positively associates with IT confidence by auditing LLPs.	IT proficiency→ IT confidence	0.640	0.075	8.562***	0.000	Supported
H4: IT proficiency positively associates with IT adoption by auditing LLPs.	IT proficiency→ IT adoption	0.049	0.097	0.501	0.617	Not supported
H5a: IT confidence mediates the relation between IT awareness and IT adoption by auditing LLPs.	IT awareness→ IT confidence→ IT adoption	0.005	0.024	0.220	0.826	Not supported
H5b: IT confidence mediates the relation between IT proficiency and IT adoption by auditing LLPs.	IT proficiency→ IT confidence→ IT adoption	0.154	0.069	2.237*	0.026	Supported

Note: Significance levels: ***$p < 0.001$ ($t > 3.33$), **$p < 0.01$ (t > 2.33), *$p < 0.05$ ($t > 1.605$) (based on one-tailed test)
Source: Authors' own elaboration based on the results of PLS analysis.

5.2 THE IMPACT OF IT AWARENESS AND IT CONFIDENCE ON IT ADOPTION BY AUDITING LLPs

Based on Path coefficients and hypotheses test (*H1*), as shown in Table 7, IT awareness has no direct effect on IT confidence ($\beta = 0.022$, $p > 0.05$), thus, *H1* is not supported. This is attributed to various reasons such as junior partners of the auditing LLPs may not be having the confidence to test clients' data by using audit software, their lack of IT additional qualification, and so on. This contradicts prior results that IT awareness towards IT confidence is a significant predictor among partners of auditing LLPs (Thottoli et al., 2019; Maradona, 2020). Bozkus Kahyaoglu, and Caliyurt (2018) found that it is critical to ensure that all firms are aware of the information security assurance process, which is critical for achieving corporate goals.

Path coefficients and hypotheses test (H2) in Table 7 suggest that IT awareness has a direct effect on IT adoption ($\beta = 0.325$, $p < 0.05$), thus, H2 is supported. The higher the level of IT awareness between partners of the auditing LLPs, the stronger their intentions to adopt IT auditing software in the LLPs. This result corresponds to prior findings that IT awareness is a significant predictor towards IT adoption in auditing LLPs (Correia, Pedrosa, and Costa, 2021; Siew et al., 2020; Mohamed et al., 2019; Soni et al., 2018). Implementation of cutting-edge technology such as artificial intelligence has become obligatory for all professionals, including auditors, to adopt and standardize their application in accounting sectors. Previously time-consuming auditing and accounting services have been facilitated because of technological advances such as knowledge-based systems (Afroze and Aulad, 2020). Generalized auditing software adoption in auditing is influenced by training, awareness, and education (Mujalli and Almgrashi, 2020). The primary motivation for adopting audit software is to increase audit quality and efficiency (Christ et al., 2021). This hypothesis (H2) predicts positive relation for various reasons such as prior IT awareness in partners of auditing LLPs; they believe that IT software will improve audit task quality, the benefit of on-the-job IT training to junior auditors, awareness of the latest audit software and its benefit, and so on.

5.3 THE IMPACT OF IT PROFICIENCY AND IT CONFIDENCE ON IT ADOPTION BY AUDITING LLPs

Path coefficients and hypotheses test (H3) results displayed in Table 7 show that IT proficiency has direct effect on IT confidence ($\beta = 0.640$,

$p < 0.05$), thus, H3 is supported. The higher the level of IT proficiency between partners of the auditing LLPs, the higher their IT confidence to adopt IT auditing software in their auditing LLPs. This result corresponds to prior findings that IT proficiency towards IT confidence is a significant predictor of auditing LLPs (Lim 2021; Thottoli and Thomas, 2020; Mustapha and Lee, 2020). The greatest important enhancements to auditor education include proficiency in technology application and proficiency in analytical ability (Ab Wahid and Grigg, 2020). Latest technologies have impacted every facet of accounting as well as the audit profession. Auditing service clients are expecting newer needs, and merely using the latest audit software might not meet their expected needs, so practicing auditors need to update their proficiency in technology changes (Moradi and Nia, 2020). This hypothesis (H3) suggests positive relation because of various beliefs among partners of auditing LLPs, such as junior auditors have enough knowledge to test clients' data with customized audit software, junior staff have additional IT qualification, audit assistants have enough confidence to audit through the computer, and audit staff have sufficient confidence in IT auditing than in manual auditing.

Path coefficients and hypotheses test (H4) results in Table 7 suggest that IT proficiency has no direct effect on IT adoption ($\beta = 0.049$, $p > 0.05$), thus, H4 is not supported. This is attributed to various reasons such as junior partners of the auditing LLPs believe that audit assistants lack experience in IT auditing, they are not competent enough to do auditing through the system, and they are not competent in using MS Excel or any latest computer-assisted auditing tools. This contradicts prior results that IT proficiency towards IT adoption is a significant predictor among partners of auditing LLPs (Thottoli et al., 2019).

5.4 THE MEDIATING EFFECT OF IT CONFIDENCE ON THE LINK BETWEEN THE DETERMINING FACTORS AND IT ADOPTION BY AUDITING LLPs

Path coefficients and hypotheses test (*H5a*) results shown in Table 7 imply that IT confidence has no mediating effect on the link between IT awareness and IT adoption by auditing LLPs ($\beta = 0.005$, $p > 0.05$), Therefore, at the 0.05 level, the mediating impact is statistically insignificant, thus, *H5a* is not supported. On the other hand, *H5b*, IT confidence has mediating effect on the link between IT proficiency and IT adoption by auditing LLPs ($\beta = 0.154$, $p < 0.05$), revealed that

IT confidence was a significant mediator on the link between IT proficiency and IT adoption by auditing LLPs and thus *H5b* is supported.

The structural model is shown in the following Figure 2, with IT determining factors (IT awareness and IT proficiency) and IT adoption by auditing LLPs and the mediating effect of IT confidence on the link between the determining factors and IT adoption by auditing LLPs.

FIGURE 2
Structural Model
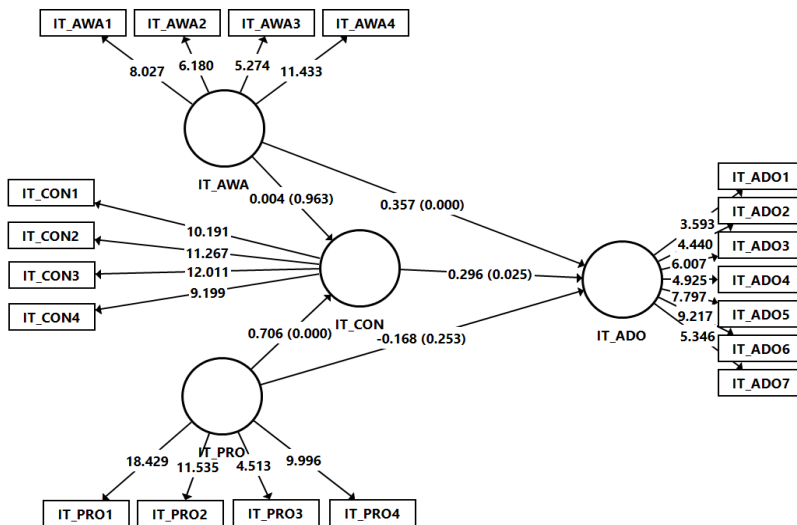
Source: Authors' own elaboration based on the results of PLS analysis.

6. IMPLICATIONS

The results of this research study have significant implications on the adoption of information technology tools by auditing LLPs. There may be significant implications for scholars and policymakers when it comes to adoption of IT tools in auditing LLPs. The findings suggest to academics that both IT awareness motivates partners of auditing LLPs to make significant contributions to implementation of IT audit tools, while IT proficiency leads to IT confidence among partners of auditing LLPs. Furthermore, IT confidence mediates the link between IT proficiency and IT adoption by auditing LLPs. The research adds to the theoretical viewpoint by providing variables such as IT awareness, IT confidence, IT proficiency on IT adoption by auditing

LLPs. For policymakers, the findings are critical for policy implementation, particularly in ensuring that The Institute of Chartered Accountants of India's (ICAI's) suggestions related to information technology are considered. When auditing LLPs use IT-enabled auditing software, they can provide the best auditing services, including ensuring accuracy of their client's financial statements. The result is also helpful for software providers to develop customized audit software for auditing LLPs.

7. CONCLUSION, LIMITATIONS AND FUTURE RESEARCH

7.1 CONCLUSION

This study investigates the information technology determinants that contribute to successful adoption of IT tools by auditing LLPs. It is driven by the partners of auditing LLPs to think strategically to use IT tools in their auditing services as well as strong professional support that their IT use will help them do their numerous audit tasks more effectively. There is currently no comprehensive analysis of similar studies in the literature. As a result, this research contributes to closing the knowledge gap by assessing the IT determinants that triggered successful adoption of IT tools and identifying IT mediating factors that might be used to sway future decisions to adopt IT tools by auditing LLPs. This study looks into IT tools usage among partners of auditing LLPs and the data were gathered from 143 practicing auditors who are partners of various auditing LLPs. This study has also given a brief analysis of the IT mediating factors in successful adoption of IT tools by auditing LLPs. Particularly, the one proposed mediator, IT confidence, that was investigated and found to be appropriate for research using a quantitative research method as the one used in this study. The mediator IT confidence was shown to be important in the relationship between IT proficiency and IT adoption by auditing LLPs.

7.2 LIMITATIONS AND FUTURE RESEARCH

This research study, however, has its limitations. The research has taken a quantitative approach, which prevents the study respondents from completely stating their views (Sudman and Bradburn, 1982). Qualitative or mixed-method research may be used in future research. The research was carried out in Kerala, India, and it is feasible that the findings can be only applied to emerging countries with similar conditions. Similar and more extensive research could be carried out

in other countries.

It would be helpful for future research if practicing auditors could be classified into separate groups based on auditing firm type. These groups could then be assessed by the importance of dimensions (such as information technology, artificial intelligence, blockchain technology) in influencing audit service efficiency. Governing bodies, such as the ICAI, would be able to target specialized awareness programs relevant to those groups by surveying the failure or success of the program. Future research can also look into other IT determinants and mediating or moderating effects that might affect auditing LLPs.

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