

# Professional skepticism for green reputation clients: A mixed method study of technology enabled audits

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**Abstract.** The research investigated auditor’s Professional Skepticism (PS) mindset while auditing the “integrated financial statement” of green reputation clients in a technology enabled audit environment. The study tries to understand the difference in thought and action of auditors based on perception of their client as sustainability responsible or not. Subsequently, the study offers meaningful insights about the nuances that upholds this distinction. This research comprises two studies using the mixed method procedure as per Creswell and Clark (2017). The first study is a 2 x 2 between subject experiment. The second study uses the Theories in Use (TiU) methodology by analyzing qualitative interviews of practicing auditors in an emerging market setting. The findings of study 1 (comprising the experiment) highlight that auditors are more professionally skeptical while auditing clients with a green reputation. Study 2 (utilizing qualitative interviews) points out that technology assists the PS mindset by enhancing the audit effectiveness and audit efficiency of green client’s audit. The study offers an in-depth understanding of the level of auditor’s PS mindset toward clients with a green reputation, and therefore demystifies the inherent forces at play during such a phenomenon. Although the setting of the study is an emerging market, the study offers transferable findings to improve the overall understanding of auditor’s mindset. The study has implications for multiple actors engaged in the audit process, viz., auditors, audit firms, regulator of the audit profession, audit committees, academia, and policy makers.

**Keywords:** Integrated financial statement, green reputation, professional skepticism, non-financial reporting, audit.

## 1. INTRODUCTION

The establishment of International Sustainability Standards Board (ISSB) mandated disclosure of the probable material risks and threats that firms might encounter owing to their choices and actions in the contemporary as well as forthcoming years as per COP26, the UN Climate change conference held in partnership with Italy. The International Financial Reporting Standards (IFRS) Foundation and Global Reporting Initiative (GRI)'s memorandum of understanding was inked dated 24 March 2022 (Adrain, 2022). Therefore, the compliant firms need to provide truthful information in the financial records along with information not captured in the financial statements. Those firms should honor the jurisdictional requirements of the country in which they operate. Such sustainability information is mandated by the regulatory guidelines generally given in the annual report of the management discussion and analysis section (or as a separate disclosure as mandated by the law of the country). Subsequently, the global investors rely on audited 'integrated financial reports' to take an informed call about the value to be invested in the target firm, thereby indicating the relevance of non-financial disclosures (Orens & Lybaert, 2010). Further, the faith on audited integrated reports (especially, the 'green' dimension) of the firm must be aligned with the assessment of firm's value. Integrated reporting provides information for the global capital markets through the use of relevant metrics, risk identification, and mitigation tools and strategies to engage in sustainable practices (including the mechanisms for firm level sustainable governance). This demands logical curation of information with sound assumptions about the interrelationships of the variables. The interrelationships must be backed by a well-structured information system with reliable internal control mechanisms prepared in a time-honored manner. For instance, the disclosure on climate change would require creation of multiple scenarios and consideration of multiple possible outcomes. The ability to report correctly creates a favorable firm reputation.

Corporate Reputation (CR) is considered as "a stakeholder's overall evaluation of a company over time" (Gotsi & Wilson, 2001, p.29) and establishes legitimacy for long term solvency (Roberts & Dowling, 2002). CR is based on experience and future expectations (Lombardi et al., 2015), and it increases the economic and financial power of companies and makes them more socially responsible (Suseno & Nofianti, 2018). 'Corporate green reputation' connotes the overall image of the company and creates environmental value for all its stakeholders (Gardberg &

Fombrun, 2002). Stakeholders such as consumers are more skeptical about firms with low green reputation and perceive them to be low on green initiatives (Lii & Lee, 2012).

To face stakeholder's demand for the reliability of non-financial disclosure through an integrated financial report and well established corporate green reputation, the auditing activities and professionalism of the auditors are the key factors. The primary goal of auditors is to size up the client's financials and assure that 'no material misstatement' goes unnoticed. Auditors carry out a systematic assessment of the financials presented to them through a rigorous and critical process. They look for evidence to confirm or reject their findings without being unduly influenced by the client's reputation. The 'audit training' prepares prospective auditors to remain unbiased, independent and objective in their audit assignments, notwithstanding the public image of the client. Seasoned auditors would remain neutral regardless of the size and nature of business, whether manufacturing industries or services sector, domestic or foreign, environmentally friendly, or otherwise. Auditors look for weak links in the control processes, which may be prone to misuse and also check if environmental reporting and practices fall in line with the accounting regulations and accounting standards.

It is also true that auditors feel compelled to closely scrutinize the 'green clients' under manifold pressures. First, employees of the Big 4 audit firms feel dehumanized because the Big 4 considers employees as resources rather than individuals (Safari et al., 2022). Second, 'green clients' are micro-observed by all stakeholders, especially investors and regulators for any incidences of over claiming their initiatives or even any false claims. 'Green clients' need to meet their environmental commitments in letter and spirit of the law. They are also expected to lead by example in their environmental performance. Furthermore, the literature regularly requires investigating the impact of social forces on auditor's objectivity (Bamber & Iyer, 2007). This argument is nested in the observation that over a period of time, auditors tend to identify with their client and builds familiar relation with them that might compromise auditor's objectivity as well as reduce their Professional Skepticism (PS), and this might hinder audit quality (Carey & Simnett, 2006). Further, the auditor's non-financial incentives can compromise their independent reasoning in case of 'personal relationships' (Chung & Kallapur, 2003), which is also a concern, especially for the green reputed clients. Also,

COVID 19 had an adverse effect on about 70% of all businesses (PWC, 2021), and therefore such businesses may have a motive to manage their earnings that can only be unearthed through proficient audit (Albitar et al., 2021) based on sound judgement of the assurance providers (Humphreys & Trotman 2021). COVID 19 made many people desperate and vulnerable owing to loss of their livelihoods, which in turn impacted the accounting, audit and accountability mechanisms and outcomes in varied contexts (Christ & Burrirt, 2021). It was a humanitarian disaster with a clear impact on accounting and accountants (Carungu et al., 2021).

DeAngelo (1981) in his seminal work studied the risk of auditors using favorable audit reports to retain and accommodate large clients. Such large clients have favorable CR that they would want to safeguard. However, Reynolds and Francis (2000) asserted that economic dependence of the auditor on large and reputed clients does not make auditors more pro-client while giving audit opinions. With the coming of efficient technology, the task of auditor has become more effective, but the debate is not resolved even two decades later. Though technology adoption in audit is well studied (Krieger et al., 2021) and it has been established that audit firms employ IT specialists (Bauer et al., 2019), scant research has been carried out on auditor's mindset while engaging in technology enabled audits of large and green reputed clients. Recent studies, especially those in accounting literature, have focused on the measurement of reputation (Varma et al., 2021a). CR is considered as an intangible asset (Lombardi et al., 2015). High reputation is of significance to both auditors and their clients. High reputed audit firms increase the credibility of clients' financial statements as well (Nelson et al., 2008) and significantly impact client's decisions regarding price fixation in events such as mergers (Bugeja, 2011).

The advancement of technology has immense influence on accounting and auditing practices. Hence, reputed clients have started investing in technologies such as blockchain technology (Bonsón & Bednárová, 2019; Lardo et al., 2022), data analytics, artificial intelligence (AI), Robotic Process Automation (RPA) and big data (Varma et al., 2021a; Moffitt et al., 2018). Auditor's insecurity about their technology skills in a multi-disciplinary team (Smith-Lacroix et al., 2012) and the resultant power struggles (Xu & Andrew, 2021) highlight the significant role of technology in audit engagements. The reluctance of auditors to digital migration despite the reliance of accounting on eliciting trust (Jeackle & Carter, 2011) also draws attention to the interdisciplinary skillset required to conduct quality audits.

Hence, revenues from the mainstream of auditing work are becoming stagnant (Rapoport, 2018), and this is compelling audit firms (big four and the mid-size audit firms) to invest in information technology (IT) for more productivity and higher quality audits (Lowe et al., 2018). Information systems and embedded technologies (such as those in enterprise resource planning) have increasingly gained importance in audit evidence and the resultant focus is on ‘auditing through the computer’ (Alles, 2015). COVID 19 has also lessened the reluctance in the audit profession towards technology usage (Sharma et al., 2022). However, the mere use of information technology to test auditable financial statements does not linearly lead to confirmed audit success, either in terms of accuracy or in terms of comprehensibility; hence, auditor still need to use PS.

It has been highlighted above that literature on financial reporting and disclosure has widely investigated the relevance of PS for audit quality and its relationship with technology audit work and corporate reputation. However, the overarching question is related to the impact of green reputed clients on the mind of the auditor and whether it affects the PS exercised in the audit engagement. In fact, PS of the auditors for client with ‘green’ reputation in a technology enhanced eco-system is relatively understudied. This study is a probe into the level of PS exercised by auditors for green reputed clients, and simultaneously it also demystifies the underlying mechanisms through which this phenomenon unfolds. Considering that “auditing is a client-facing business, the characteristics of the auditor-client relationship are relevant factors” (Krieger et al., 2021, p.4), this study provides a peek into the mindset auditors involved in auditing green reputed clients.

Based on the mixed method procedure (Creswell & Clark, 2017), this research tries to clearly understand in the context of an emerging market country like India, whether auditors think and act differently based on perception of their client as sustainability responsible or not. The emerging markets make a contextually relevant setting to investigate the auditor’s PS for clients. In the case of India, though the economy is estimated to grow at 7% as per Standard & Poor (The Hindu, 2022), many highly reputed clients are being cautioned by the auditors. For instance, the audited results for the financial year 2020-21 for the Indian education technology start-up, Byju’s (valued at USD 22 Billion), were delayed by more than one year. Its auditor Deloitte, Haskins and Sells gave it a much-delayed unqualified report in an environment of excessive speculation about the viability of the business

(Business Standard, 2022). Overall, this study aims to unravel the mindset of emerging market auditors while dealing with highly reputed clients.

A new requirement mandating integrated reports, Business Responsibility and Sustainability Reporting (BRSR) - 2021 impacts the auditor's preparedness to audit the same using technology and a skeptical perspective. For this study, the definition of 'green reputation' has been taken from the Securities and Exchange Board of India (SEBI) circular on BRSR-2021, that aimed at providing standardized disclosures on Environmental, Social and Governance (ESG) parameters. 'Green reputation' of a company is considered as the presence of the client company among the top 1000 listed companies (by market capitalization) in the Indian stock exchange. This is because of two reasons. First, a company earns its green reputation on its historical actions, green initiatives and therefore enjoys a green appeal (Leonidou & Skarmas, 2017) based on past measurable actions captured by the integrated report. Second, skeptical stakeholders (such as customers) can be convinced by providing reliable information (Leonidou & Skarmas, 2017), which is disseminated by the financial statements.

The remainder of this paper is organized as follows: Sections 2 and 3 outline some additional literature review and the research questions related to computer assisted audit tools and techniques, professional skepticism, auditor mindset and green reputation. Section 4 describes the hypothesis development, followed by the research methodology, results of the experiment, and the qualitative interviews in Section 5. Section 6 discusses the results and section 7 concludes the article highlights the limitations and suggests avenues for future research.

## **2. COGNITIVE LOAD THEORY AND TECHNOLOGY ASSISTED AUDIT OF GREEN CLIENTS**

Computer assisted audit tools and techniques (CAATs) usage by the external auditor is closely linked to the clients Accounting Information System (AIS) complexity (Axelsen et al., 2017). Therefore, it is likely that the well reputed green clients will encourage and even demand that the auditor uses CAATs extensively (Lowe et al., 2018). The usage of CAATs for large firms having green reputation is due to the significant competitive pressure from other audit firms (Siew et al., 2020) along with excessive time-budget constraints (Axelsen et al., 2017) in conducting such large and complex audits. To enhance effectiveness, accounting and audit professionals need to be empowered (Varma & Malhotra 2020) through

technology. Interestingly, Lowe et al., (2018) found that the CAATTs usage by non-Big 4 audit firms is a mirror image of the Big 4 firms, thereby hinting at narrowing of ‘technological usage divide’ in the audit industry. Since CAATTs usage is higher in the developed nations than the developing nations (Siew et al., 2020), their linkage with PS exercised for auditing the green reputed firm in the emerging market context is negligible in the extant literature.

Cognitive overload connotes the excessive mental effort needed to process information and the subsequent feeling of being overwhelmed, as the interaction among the variables under study are not clearly understood (Paas et al., 2010). Auditors are exposed to cognitive overload on a regular basis. The cognitive load theory (Sweller, 1988) propagates that ambiguous information is difficult to process in a problem-solving situation and leads to cognitive load and stress. This is especially true for sustainability reporting, where both quantitative and qualitative data are used for estimations based on which futuristic assumptions are made. This results in the usage of heuristics and skewed information processing (Chandler & Sweller, 1991). Generally, in audit engagements, technology reduces the cognitive overload, but in case of big data analysis, it sometimes leads to information overload and irrelevant statistics are being processed (Brown-Liburd et al., 2015) by auditors.

Using an experimental design, Holt and Loraas (2021) studied the sub-optimality of auditor judgement and decision making. They concluded that auditors who were presented with data in a variety of formats came up with more conservative risk assessment (which is very similar to our context of green client’s audit). This could be due to time-budget pressure (Bonner, 2008), as audit engagement involves audit procedures, evidence collection and finally making relevant adjustments to the pre-audited numbers. These time-consuming activities lead to an increase in audit cost. Therefore, the use of technology needs to reduce cognitive overload and assist the auditor’s engagements with large and green reputed clients. The above discussion leads to the following research questions:

*RQ 1a: Does the technology usage of auditors impact their PS?*

*RQ 1b: Does the level of PS exercised by the auditor vary with the green reputation of the client in a technology enabled audit engagement?*

### 3. THE MINDSET THEORY, PROFESSIONAL SKEPTICISM, AND CLIENT REPUTATION

While practitioners believe PS to be a ‘mindset’ that impacts the auditor’s professional judgement (Glover & Prawitt, 2014), regulators opine that the lack of skepticism is a reason for audit deficiency (IFIAR 2015). Whatever be the philosophical stand a stakeholder takes, all audit stakeholders consider PS to be pervasive (Nolder & Kadous, 2018); hence, audit failures have been linked with the lack of PS (Hoos et al., 2019). Thus, the vital question is related to defining PS. PS is “indicated by auditor judgments and decisions that reflect a heightened assessment of the risk that an assertion is incorrect, conditional on the information available to the auditor” (Nelson, 2009, p. 1). Thus, in the context of auditing, PS ensures that auditors are mindful of potential misstatement and frauds (IAASB 2006), confirm the reliability of evidence provided (PCAOB, 2003) in the company’s reports, and thereby ensures the conduct of high-quality audits.

As per Hurtt (2010), PS is a multi-dimensional individual characteristic, which can be both, a trait, or a state of mind. The mindset literature (Griffith et al., 2016) highlights that the decision quality is enhanced with a better fit between the decision makers mindset and the decision at hand. A mindset connotes a mental state or cognition that influences a specific task (Achtziger & Gollwitzer, 2006). Mindsets could vary from ‘big picture thinking’ to a ‘piecemeal mindset’ (Higgins & Chaires, 1980). Auditing standards promote a deliberative mindset (which entails identification of best course of action) that promotes PS through characteristics such as ‘alertness toward new information’ and ‘objective assessment of the merits of the evidence’ (Gollwitzer, 1990). The deliberative mindset personifies PS through processes such as ‘a questioning mind’, ‘alertness to evidence’ and ‘seeking evidence out of diagnostic information’ (Nolder & Kadous, 2018).

PS is often considered a personality trait (Cohen et al., 2017) and prior works such as those by Nolder and Kadous (2018) have bifurcated PS into two components: skeptical mindset and skeptical attitude. Skeptical attitude reflects the auditor’s opinion (cognitive and affective) about client’s assertions and evidence. Skeptical mindset indicates the way of thinking or processing information; for instance, the way the auditor critically assesses the audit evidence given that auditor’s sometimes fear losing important audit assignments (DeAngelo, 1981). This study utilizes the mindset theory to study the skeptical mindset of the auditors.



Reputation protection motivates not only the client but the auditor's behavior as well (Reynolds & Francis, 2000). Professional accountants being aware of their impact on CR (Varma et al., 2021b) try to enhance their expertise and status by acquiring new proficiencies and skills, either through regular mode or through online digital medium (Varma et al., 2022). Similar to these accountants, auditors too seek comfort in PS through the use of digital technology. This supports the deliberative mindset that entails critical thinking, which is the cornerstone of PS in auditing (Griffith et al., 2015). This becomes crucial in the context of an emerging economy like India, where the financial system is relatively underdeveloped (Allen et al., 2012) and the corporate incentives for gaming the system are tempting.

Auditors aim to maximize their immediate and long-term revenues (Lim & Tan, 2010) and simultaneously desire to protect their reputation (Gul et al., 2009) as experts to attract future clients (DeAngelo, 1981). This generally happens when auditors acquire insightful client specific knowledge due to a longer tenure that leads to high quality audits and high auditor reputation. Mautz and Sharaf (1961) cautioned against the long tenure of auditors as it results in reduced vigilance (PS). However, Krishnan (2003) opined that longer auditor tenure leads to deeper knowledge of the client's operations eventually leading to better audits. The above discussion entails the following research question:

*RQ 2: What are the key forces at play that cause the variation in the auditor's PS for green reputed clients?*

#### **4. HYPOTHESIS DEVELOPMENT**

As per Stough (1969), the word skeptic derives its collective meaning from "careful observation, examination and consideration". Hurtt et. al. (2013 p. 47) advocated that a skeptical judgement "occurs when an auditor recognizes that a potential issue may exist and that more work or effort is needed". PS is influenced by context and situation (Hurtt et al., 2013), and the same auditor may have varying levels of PS in different situations and scenarios (Robinson et al., 2018). Situations where PS of the same auditor may vary include powerful clients and influence of client characteristics on trust (Shaub, 1996). PS also impacts audit effectiveness, as it is shaped into auditor's behavior in two distinct phases (Martinov-Bennie et al., 2022). First is the pre-professional phase, in which a novice auditor tends to build their character virtue of PS through development of analytical mind and confidence. Second is the professional praxis stage, where the novice auditors are under

guidance of experts and try to develop their actions in accordance with PS. With the repeated praxis they become seasoned auditors and also learn to balance the required skepticism in the audit setting through proper training (Martinov-Bennie et al., 2022).

Studies on auditing have examined the behavioral pattern of skeptical auditors (Anderson & Maletta 1999). Samagaio and Felicio (2022) utilized the big five personality theory on auditor's personality and the mechanisms through which it impacts audit quality. They discovered that agreeableness, conscientiousness, and openness have a significant positive impact on auditor's skepticism, whereas conscientiousness and neuroticism impact audit quality adversely. The Nelson (2009) framework on PS comprises two elements: skeptical judgement (i.e., recognizing the risk of given assertion being incorrect) and skeptical action (i.e., judgement of an auditor translates into actions). Nelson (2009) depicted the way in which the collective auditor's trait, knowledge, incentive, training, and experience contribute toward their skeptical judgements and actions.

The higher PS expectation for green reputed clients could be the complex nature of regular operations of such clients, and the cognitive overload on auditors is to assess the sustainability disclosures and other qualitative data fairly. Mascha and Miller (2010) associated task complexity with a greater assessment of internal control risk that also included sustainability risks. Auditing rests upon the tenet of conservatism, and therefore, auditors choose to be conservative while taking a call on the numerous complex tasks (Mascha & Miller, 2010), which are a hallmark of large and green reputed firms. The high cost of audit failure (Chaney & Philipich, 2002) leads to auditors feeling fearful in the audit process (Gue'nin-Paracini et al., 2014). Thus, to ensure that they have not missed out on sustainability perspective and to provide themselves with an element of comfort (Holt & Loraas, 2021), auditors choose to be more conservative by exercising PS (for instance for green clients). PS could also be auditors' way of compromise (Holt & Loraas, 2021) due to risk aversion (Deck & Jahedi, 2015).

Computer assisted audit tools and techniques (CAATTs) include electronic audit papers, database tools, business, and audit software (Braun & Davis, 2003). The usage of CAATTs lowers the audit cost and improves audit quality and auditor efficiency (Pincus et al., 1999). CAATTs usage by audit firms has been investigated by prior works such as those by Siew et al., (2020), who confirmed the low usage

of CAATTs in the developing economies (Widuri et al., 2016). The above discussion leads to the following hypothesis:

*H1: The use of technology in audit process has a direct effect on PS of auditors.*

*H2: Client's green reputation moderates the effect of technology enabled audit procedures on PS exercised.*

## **5. RESEARCH METHODOLOGY AND RESULTS**

Given the nature of the research questions, a 'sequential explanatory' mixed method design (Creswell & Clark, 2017) with a 'Quantitative-Qualitative' approach was utilized in this study. The study 1 was conducted by using a 2 (Audit work experience in a high technology environment vs. audit experience in a traditional/low technology environment) x 2 (High green reputation client vs. Low green reputation client), fully crossed, between subject's experimental design to address RQ1a and RQ1b. The experiment was followed by detailed qualitative interviews as a part of the Theories in Use (TiU) methodology in study 2 to gather deeper insights on the results obtained and also to address RQ2. In the following subsections, more details on two methods are provided and the results are presented.

### **5.1. Study 1: the experiment**

#### *5.1.1. The sample, stimuli development and vignette administration*

To test the hypothesized relationship as per the conceptual model (Figure 1), 103 students from a professional qualification course in accounting were selected to take part in the study. These students had advanced proficiency in financial accounting, auditing, taxation, and business sustainability performance sub-domains. As asserted by Peytcheva (2014), auditors and students had similar PS scores; and hence, students were chosen as the subject of the experiment. Two pretests were conducted to generate appropriate stimuli for the experiment and to check the effectiveness of the manipulation. The first pretest involved a focus group of six practicing auditors. The aim of this focus group discussion was to identify elements of client's green reputation from an auditing professional's perspective. This discussion lasted for 1 hour and 10 minutes. The findings of the focus group confirmed an overlap between client's 'green image' and client's 'green reputation', as established by scholars such as Gardberg and Fombrun (2002). Thus, the three dimensions in the client image scale as per Bamber and Iyer (2007) were primarily used to create client's green reputation. The vignettes were prepared

for both high and low green reputation clients. The vignette mirrored the traits of ‘green reputation client’, i.e., the presence of the company among top 1000 listed companies (by market capitalization) in the Indian stock exchange. The length of the vignette was two pages each and apart from the high or low green reputation, all the other scenario was kept the same.

Subsequently, the manipulation check was done on a separate set of 30 students by asking them about the client’s reputation on a five-point Likert scale. An ‘independent sample t test’ was performed. The mean rating given by participants of high green reputation vignette exposure was significantly higher for high green reputation vignette ( $t = 2.02, p < 0.05$ ). Similarly, participants exposed to low green reputation vignette scored higher on low green reputation. The t test results showed that the manipulation was effectively primed to the two reputation scenarios and that the experiment could be conducted using the vignettes.

#### *5.1.2. The experiment design and measures*

In the study, prior experimental works (Varma & Khan, 2023) were referred to and two contextually rich vignettes were prepared representing the traits of high reputation and low reputation. A cohort of 103 final stage student’s volunteers (like sample of 120 auditors by Holt and Loraas (2021)), enrolled for professional accounting degree were the subject of the experiment. This group comprised participants with work experience as audit interns in technologies enriched audit firms ( $n=51$ ) and traditional accounting/ audit firms ( $n=52$ ). The gender split was 81.55% males and 18.44 % females. The average age of participants was approximately 22.5 years. The participants were randomly assigned to high green reputation scenario and low green reputation scenario with an exposure to stimuli for 30 minutes each and a single “post it” slip to scribble down observations from the vignette was provided to simulate the auditors ‘time-budget constraint’. Following the exposure, the response to the PS was measured using a questionnaire. The demographic profile was also captured at this stage. The study controlled for the ‘gender’ and the ‘client identification behavior’ of the auditor.

The scales were taken from prior literature and the constructs were measured on a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Finally, the dependent variable PS was measured on the 30-item scale by Hurtt (2010). The control variable, client identification, was measured on a 4-item scale by Bamber and Iyer (2007).

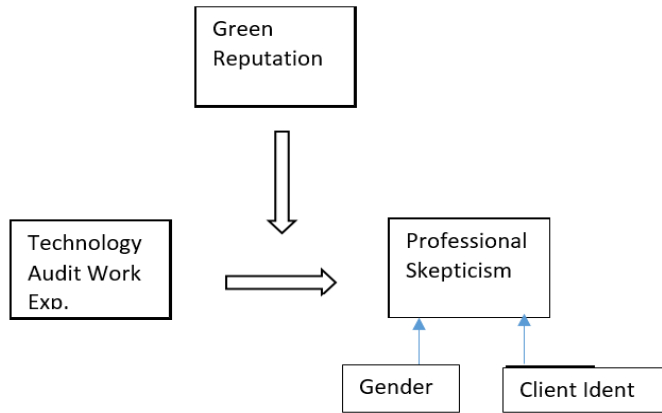


Figure 1. The conceptual map

5.1.3. Results of the experiment

The Process Macro (Model 1; 10,000 bootstrapping) from Hayes (2022) was used to study the moderating effect of the client’s green reputation. As per Table 1, the interaction effect of ‘technology enabled work environmental experience of the auditor’ and the ‘green reputation of the client’ was found to be positive and significant (p= 0.01; there is no “0” between lower-level confidence interval (LLCI) and upper-level confidence interval (ULCI)).

Variable	Coefficient	S.E.	t-value	p-value	LLCI	ULCI
Constant	3.97	0.13	31.35	0.00	3.72	4.22
WExpTech	0.05	0.06	0.84	0.40	-0.07	0.18
Cl Rep	0.05	0.06	0.92	0.36	-0.06	0.16
<b>Int_1 (WExpTech x ClRep)</b>	<b>0.31</b>	<b>0.11</b>	<b>2.85</b>	<b>0.01</b>	<b>0.1</b>	<b>0.53</b>
Gender (Control Variable)	0.05	0.08	0.57	0.57	-0.12	0.21
CLidPast (Control Variable)	-0.05	0.04	-1.48	0.14	-0.13	0.02

Table 1. Interaction effect

R	R-sq	MSE	F	df1	df2	P
0.34	0.11	0.10	2.46	5.00	97.00	0.04

Table 2. Model summary

As per Table 2, the regression model was statistically significant ( $F = 2.46$ ;  $p = 0.04$ ) explaining adequate variance ( $R\text{-square} = 0.11$ ) in the data.

CLRep	Effect	Se	t-value	p-value	LLCI	ULCI
-0.59	-0.13	0.09	-1.44	0.15	-0.31	0.05
0.00	0.05	0.06	0.84	0.4	-0.07	0.18
<b>0.59</b>	<b>0.24</b>	<b>0.09</b>	<b>2.62</b>	<b>0.01*</b>	<b>0.06</b>	<b>0.42</b>

\*significant at 0.05 level for highly reputation clients

Table 3. Conditional effects of the focal predictor 'Auditor experience in a technology enabled environment' at values of the moderator 'Client's green reputation'.

In Table 3, the moderator values in conditional table is the mean and +/- standard deviation (SD) from the mean. The broader output as per Process Model 1 highlighted that client's reputation moderating effect was observed to be significant up to -0.99 ( $p < 0.05$ ) and then beyond 0.38 ( $p < 0.05$ ). The positive sign with the interaction term connoted that as the moderator client's green reputation increases, the effect size of technology enabled audit experience on PS also increases.

The test of highest order unconditional interaction achieved statistical significance ( $R\text{-square change} = 0.07$ ;  $F = 8.12$ ;  $p = 0.01$ ). As per Table 4, Levene's test was not significant, thereby supporting the null hypothesis that populations have equal error variances.

Dependent Variable: ProfSkep			
F	df1	df2	Sig.
1.515	12	90	.133
Tests the null hypothesis that the error variance of the dependent variable is equal across groups.			
a. Design: Intercept + Gender + CLidPast + WExpTech + CLRep + WExpTech * CLRep			

Table 4. Levene's test of equality of error variances<sup>a</sup>

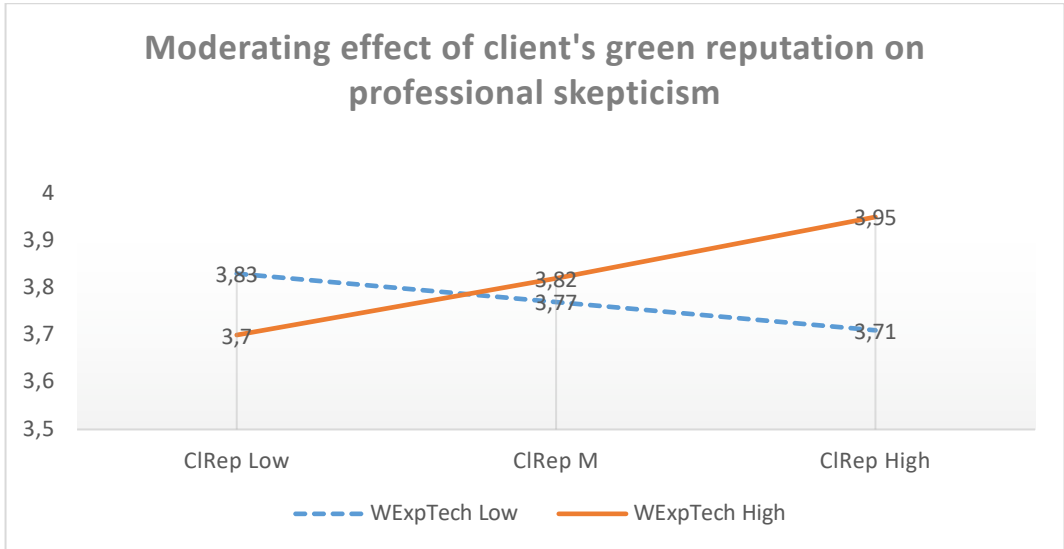


Figure 2. Interaction effects

As per Figure 2, auditors exercise a higher level of PS for highly reputed green clients (3.95) in a high technology enabled environment vis-a-vis in a low technology enabled audit environment (3.71). Thus, high green reputation of the client moderates ( $p=0.01$ ) the level of PS exercised in a high vis-a-vis a low technology enabled audit environment. For low green reputation clients, the moderating effect is not significant, and the observed level of PS exercised is higher for low technology enabled audits (3.83) than high technology enabled audits (3.7).

## 5.2. Study 2: the qualitative interviews of auditors

As a part of the post experiment sense-making exercise (Tashakkori et al., 1998), and to address RQ2, the qualitative in-depth interviews of practicing auditors were conducted because they acted as “knowledgeable agents” for drawing plausible and defensible conclusions (Gioia et al., 2013). To gain the auditor’s perspective, the study utilizes a “theories-in-use” (TiU) approach (Zeithaml et al., 2019). This was also important because the subjects in the experiment stage were students and not practicing auditors, and thus, the findings required a confirmatory follow up process. The post-hoc interview method of data collection aimed to provide comprehensive and deeper insights about the practicing auditor’s mindset and functioning while auditing green clients. These interviews also helped to explain (and confirm) the findings from the experiment. Therefore, this study used a grounded theory to capture insights from auditors ‘firsthand audit experience’ for

creating a theoretical model with its genesis in the data and which is built “bottom up” (Corbin & Strauss, 2014). In total, there were 16 respondents for the interview (Table 5: profile of respondents). The qualitative data source comprised anonymous, semi-structured interviews conducted in the National Capital Region of Delhi (Kvale, 1999). Since there are no pre-determined tests or guidelines as to what constitutes saturation point (Morse, 1994), the authors stopped collecting more data after the 16 interviews as no new or significantly distinguished insights were being generated from the respondents about the PS for green clients (Malsch & Salterio, 2016; Glaser & Strauss, 2009). Although several auditor levels were represented in the interview, albeit special priority was given to interviewing those auditors with prior exposure to technologies such as enterprise resource planning (ERP), big data artificial intelligence (AI), machine learning (ML) and cloud because the large and green reputed clients generally use the same in their operations.

### *5.2.1. The interview setting*

In the first meeting, the authors met two senior auditors. During such meetings, the researchers wrote down the discussion points in details (Eisenhardt, 1989; Silverman, 2006) even including the expressions used, respondent’s turn taking during conversations and emotional reaction to any discussion point. The notes were then compared between researchers and transcribed, and the interaction notes were used to develop the interview guide (Appendix 1). One senior auditor remarked that “The audit work has significantly changed in the last decade, now we need to do audit using technology, so it seems like a constant learning and update of not just compliance and regulatory changes but also for catching up on technology”.

The auditor’s interviews took place in the firms during the next three visits occurring over a period of approximately four months, thus providing a longitudinal dimension to the qualitative data collected. Although the interview guide was prepared in advance, it was gradually used with less rigor during the final two visits to capture some new perspectives that arose during the conversation. This was because high priority was purposely given to the respondent’s own interpretation and perceptions of the audit phenomenon.



### 5.2.2. *The interview process*

Information about the context of the interview was telephonically shared in advance of the interview to enhance credibility and gain the confidence of interviewees. All Interviews lasted between 30 to 40 minutes in duration and were recorded and subsequently transcribed to ensure accuracy of interview material captured. During the interview a neutral tone of voice was used, and the process was kept inductive and flexible. Long questions and theoretical concepts were avoided. Interviewees were given time to articulate their responses. In case necessary, answers were spoken back to interviewees in summary form to confirm for correct understanding. A conscious effort was made not to allow the personal perspective of the interviewer to influence the responses of the interviewee.

### 5.2.3. *The interview data analysis*

To enhance data sensitivity, interview data was coded by the researcher using a coding scheme developed while reading the transcripts. After having reached a preliminary understanding of the material to design the nodes and sub-nodes, the researchers also used the NVIVO (a computer-based program for qualitative data analysis from QSR International) to conduct the subsequent more systematic coding and analysis of the material. After two rounds of coding, a review of the nodes and the sub nodes was undertaken. Subsequently, the homogenous nodes in the information content were merged while a few others were renamed more appropriately. Certain related/ linked codes were grouped into an overarching theme as well. (This procedure is most effective when the focus is on informant's interpretation of the phenomenon).

Table 5 contains the detailed profile of the respondents who agreed to be interviewed with their informed consent and were assured of complete anonymity. Table 6 presents the resulting data table (with the verbatim quotes from the respondents, reproduced without any judgement, prejudice or refinement by the interviewer). Finally, table 7 presents the data structure, where the 1<sup>st</sup> order concepts are the representative words arising from the knowledge agent's responses, 2<sup>nd</sup> order theories are the key theory centric themes created by the researchers and overall aggregate dimensions as per Corley and Gioia (2004). The data structure is created by identifying 'principles that are portable' (Corley & Gioia, 2004), and there exists a dynamic relationship among the 2<sup>nd</sup> order concepts of the data structure.

<b>Pseudonym of the respondent</b>	<b>Gender</b>	<b>Primary role/ Profile</b>	<b>Organization category</b>	<b>Full time work experience (in years)</b>
A1	Male	Audit Partner	Big 4	16
A2	Male	Audit & Assurance	Mid-tier audit firm	18
A3	Male	Senior manager (Audit)	Mid-tier audit firm (Next 4)	12
A4	Male	Auditor (Forensic audit)	Big 4	8
A5	Male	Associate Auditor	Big 4	7
A6	Female	Audit Director	Mid-tier audit firm	19
A7	Male	Data & Systems Assurance	Mid-tier audit firm	20
A8	Male	Junior Auditor	Big 4	7
A9	Male	Subject Matter Expert/ Audit/ Regulatory	Big 4	11
A10	Female	Audit Analytics and Cyber Risk	Mid-tier audit firm	13
A11	Female	Subject Matter Expert/ Audit/ Regulatory	Mid-tier audit firm	15
A12	Female	Auditor	Big 4	14
A13	Male	Junior Auditor	Mid-tier audit firm	5
A14	Male	Junior Auditor	Mid-tier audit firm	5
A15	Female	Junior Auditor	Mid-tier audit firm	4
A16	Female	Auditor	Big 4	12

Table 5. Profile of the respondents

## 5.2.4. Data supporting interpretation of the professional skepticism of auditors

Theme	Representative Quotes	Number of comments that were substantially similar
Audit process and enabling procedures (Design and structure)	<p>A7, Male “I generally try to connect with a single person if I need more ESG data; this way I don’t disturb the other people or the work, it’s also easier to communicate to and fro, and it does not create any unnecessary buzz”.</p> <p>A2, Male “Short cuts would be against my ethics and it will be like allowing someone with power to get away with mistakes, which is not being professional. So, I’ll be doing all checking and estimating fairly, long process and high timeline stress for clients, is just fine... these clients may also have new and unique risks such as those from integrated reporting requirements or from supply chain...”.</p> <p>A15, Female “The aim is to identify fraud and major misstatements in the integrated reporting by firms, we also know that it’s not like every lapse is severe and justifies a qualified/ modified audit opinion... we inspect it diligently ourselves and any material uncertainty about the firm’s ability to continue as a going concern is duly noted”.</p> <p>A11, Female “Its sometimes a confirmed point estimate and sometime a range of values, that’s where the real experience of an auditor comes in.... There are some critical audit matters (CAM) which are both subjective and challenging”.</p>	4
Technology in influencing the audit design and execution	<p>A9, Male “It’s like being more practical, if human is analyzing there is a high chance that there might be errors or misunderstanding due to some outliers which could be costly”.</p> <p>A15, Female, “Technology really helps us show the actual facts of the audit that we are doing .... We filter, sort, analyze, visualize, etc., to judge the evidence; so, I believe in utilizing software,</p>	4

	<p>technologies and data analytic tools... about 80% of the task is made easier with it so its good value for me.... Post that I always trust my own analysis and experience”.</p> <p>A12, Female, “The amount of data, now with the requirement of Ind AS framework is quite overwhelming, there is a lot of workload, the technology red flags items when you use pie charts correlations, pattern matching, simulation runs etc, but effectively it’s your call, it’s not an individual thing you need to have the support of your entire team and you need to audit innovatively”.</p> <p>A1, Male “As an auditor, you should build on your skill set including the data analytics and automation part. That and focus on designing smarter procedure. Also, the data analytics gives you some amount of leeway that you can create in your work.....routine work is now increasingly becoming a smaller proportion of our daily work as new procedures are created thoughtfully by using technology”.</p>	
Scrutiny of the financial records, green disclosures (internal control testing, fine combing the transaction data)	<p>A3, Male “It could be as direct as hiding lower earnings and enhanced debt levels than disclosed by them..., so I don’t mind more audit procedures even when the client is impeccable; I understand internal controls over financial reporting (ICOFR); Personally, I would do what I have to do to be double confident and submit a detailed assessment which actually will also help the client if there is any situation... most of us avoid rigidity. We would not mind understanding the complete data flow... we look for evidence”.</p> <p>A2, Male “The aim of assurance also entails that If we don’t unearth anything, its ok; no one in my team gives anyone a rude comment or anything, we are doing our job.... Compliance is data driven and in any case the client has to be assessed with maximum certainty for their claim of being a going concern”.</p>	3

	<p>A6, Female, "I would never ignore anything (even if I was an auditor for a smaller company), the auditing work that will be done, it has to be fair and without giving any bias.</p> <p>Then, all the more reason when a client is audited who has pro-sustainability reputation, I would be doing a proper detailed audit/research into whatever has been reported by the client, the tech team is there to support".</p>	
<p>Green reputation of the client as a determinant of audit design for critical treatments such as for ESG, 'revenue recognition' and 'employee benefits'</p>	<p>A16, Female "We saw Satyam Computers Ltd., right? So, it was a big Indian Information Technology (IT) company and the fraud happened. So, I think we need to keep that in mind. It is good to reinforce that the company is really working nice and there are no faults or loopholes in the accounts, in the data, and also if possible see their incentives".</p> <p>A9, Male, "We can't just rely on the output of the company or their claims, not us. I depend on my own experience out of all my audits and I drive the information I want... and what has to be in a particular situation for instance to ensure that correct provisions have been made".</p>	2
<p>Role of other actors, especially, the Audit Committee</p>	<p>A4, Male, "We know they are well equipped, well linked to get any clarification, access to officials and everything else... so it's a time bound task for us and it needs to be orchestrated quite well".</p> <p>A14, Male "Auditing impacts the capital markets the most, one big company failure and everyone talks suspiciously....To audit successfully is to be reliable and focused for the client and this way we stay relevant all other stakeholders".</p>	3
<p>Cognitive Load with financial and non-financial data</p>	<p>A5, Male "Auditors need more than just audit skills and a capacity for long hours, there is too much information so it is confusing at times, we do sampling and risk analysis, everything is interrelated yet distinct... the peak season is always a testing time".</p> <p>A1, Male "... it's the confirming of the estimates taken by the clients and their impact on measurements, those things are quite abstract</p>	4

	<p>mostly, but it's also where our experience comes in... still it is quite a handful... can't afford to be lenient even when you are an old hand at this".</p>	
Disruption of regular work of green clients	<p>A16, Female "For remote working we had to modify some procedures, although we avoided requests for sensitive data evidence by emails to mitigate data breaches, anomaly detection was done manually, reviews were carried out, video calls replaced in-person meetings".</p> <p>A10, Female "We ensure as minimum disruption as we can, redundant tasks and redundant data are strictly to be avoided ... technology simplifies the processes... we have a fancy term called <i>data addiction</i> which we all try to avoid... and perhaps the clients biggest I.T risk is unauthorized access to sensitive data".</p> <p>A7, Male "Big or small, unique or repetitive, we look into all tasks ourselves; technology compliments it but it is not our substitute; just that procedural mistakes of humans is much less... however one has to understand that using correct judgement based on audit procedure is extremely important in auditing so it's really upto an auditor what to delve deep into and what to accept on face value...".</p>	4
Learnings and knowledge assimilation on the job	<p>A8, Male "The learning and reinforcement of skills is immense in the audit profession, the impact of technology such as data analytics, data visualization tools, is huge... to ascertain what needs to be further investigated and then focusing on judging that aspect, holds the key...so it's always good to get a mentor/ buddy".</p> <p>A15, Female "My initial learnings were cash flow estimations, inventory verification and stock count... as a junior auditor I was and still am given mentoring and guidance and I am also required to be logistically available; at client site, in their sitting room/ breakout room in their offices".</p>	3

<p>Impact on audit firms' reputation</p>	<p>A11, Female “what we do is noticed, this is firm is what it is for a reason.... There is a strong, pervasive, significant impact on our firm, on the client, on our careers ... sometimes immediately and sometimes in the future, but effectively auditing is impactful and definitely our credibility is at stake”.</p> <p>A2, Male “The clients Board sees the audit report, while some clients bring complete transparency and have high quality data, others follow a piecemeal approach... but data security is what all expect, irrespective of size”.</p>	<p>4</p>
<p>Role of Team work</p>	<p>A13, Male “Audit is all team work, you are a part of the project, its time bound and stressful specially when we deal with areas of grey... we don't trust clients beyond a reasonable limit even when we intuitively know that they are authentic... to ensure that there is no misrepresentation, a sound audit generally has multi-level reviews”.</p> <p>A14, Male “Modern auditing is technologically inclined... younger auditors are digitally inclined, but we don't have any formal reverse mentoring yet, with the use of technology-based tools, new relationships, patterns and new risks can be seen but obviously we take decisions and not the tools... the invested time sometimes is even longer”.</p> <p>A15, Female “My team lead told me, If I have to ask a tough question... go ahead and ask, human skills matter, client may or may not be forthcoming or may not like your probe, just ask and clarify rather than guess”.</p>	<p>3</p>

Table 6. Data table (Corley & Gioia, 2004)

1 <sup>st</sup> order Concepts	2 <sup>nd</sup> Order Themes	Aggregate Dimensions
<ul style="list-style-type: none"> <li>● Task support (from information technology)</li> <li>● Repetitive tasks, subject matter expertise, robust procedures</li> </ul>	<p>‘Enabler technologies’ supporting PS</p>	

<ul style="list-style-type: none"> <li>• Technology enabled audit for green clients</li> <li>• Audit design</li> <li>• Learnings and procedure improvements</li> </ul>		Audit effectiveness, for green clients through enhanced PS
<ul style="list-style-type: none"> <li>• Mindset: skeptical</li> <li>• Mindset: empowered</li> </ul>	Auditor traits supporting PS; Psychological safety	
<ul style="list-style-type: none"> <li>• Role of other actors</li> <li>• Team interaction in audit engagement</li> <li>• Communication and collaboration in audit process</li> </ul>	Organizational actors (including Audit Committee) supporting higher PS by auditors	
<ul style="list-style-type: none"> <li>• Prior engagement(s), auditor expertise and status</li> <li>• Auditor's technological skill set</li> <li>• Client level traits that encourage PS</li> <li>• Work disruption at client site</li> </ul>	Tasks, competencies, and contingencies, congenial for PS	Enablers of PS
<ul style="list-style-type: none"> <li>• Competitive landscape for Auditor, enabling technology adoption</li> <li>• Competitive landscape for client</li> <li>• Focus on results; better advice giving</li> <li>• Client's peers, competitors, channel partners and vendors level of IT integration</li> </ul>	Technology usage (as a strategic choice) in the context of green clients	Audit efficiency for green clients through enhanced PS

Table 7. Data structure (Corley and Gioia, 2004)

## 6. DISCUSSION AND RESEARCH IMPLICATIONS

To meaningfully connect PS to its determinants, there was need of filling the void of a clear understanding of PS in a digitalized environment for the large and green clients. Auditor needs support, reassurance and encouragement to exercise PS. In the context of emerging markets such as India, the policy level development aims



to embrace digital technologies as an audit enabling resource. Legally, as per the Ministry of Corporate Affairs Government of India (2013) mandated Indian Companies Act 2013 requires firms to change their auditor every 10 years to improve the audit quality, thereby maintaining PS. Recently, COVID 19 resulted in significant alteration of many established norms. COVID 19 led to higher audit fee and higher audit delays (Harjoto & Laksmana, 2023). While traditional auditing involved fieldwork, on-site data collection and analysis (Gong et al., 2022), COVID 19 led to virtual audits (for inventory observations) and remote working in audit firms; this compelled auditors to adopt new skillsets and become capable of co-evolving with the complexities of the pandemic (Barac et al., 2021). The governmental and regulatory response to COVID 19's impact on audit is well discussed. For instance, Foucault's concept of "apparatuses of security" was utilized by Ahrens and Ferry (2021) to explore the use of accounting and statistical calculative practices that the UK government implemented to respond to COVID-19, thereby balancing multiple pressing demands and priorities. Along the same lines, Ahn and Wickramasinghe (2021) studied the surveillance assemblage created to control and make the citizens accountable through their convergence of desires. The post COVID 19 audit landscape is quite different than the earlier scenario, thereby necessitating a fresh visit to auditors PS.

The findings of study 1 revealed that auditors tend to exercise a higher level of PS for green reputation clients (owing to the presence of positive interaction effect). PS is required for audit of financial statements (Popova, 2013) and audit quality (Brown-Liburd et al., 2013); and the lack of PS is associated with audit failure (Grenier, 2017). Auditor's lack of PS impacts all stakeholders. However, PS is also costly and stressful for the auditors and audit teams, as audits are conducted in teams (Udeh, 2015) that comprises different skill sets, experiences, and mindsets. The question about auditors exercising higher PS for green clients remains. One of reasons behind this phenomenon could be that auditors are mindful of the likelihood of litigation by large and green clients (Reynolds & Francis, 2000); and therefore, the audit firms to protect their own reputation show more conservativeness while auditing larger firms (in our case green reputed clients). Second, high green reputation clients are generally the large firms that are under high media/stakeholder scrutiny. Hence, the self-reputation stake of the auditors is higher in such audits. Third, the Environment Social and Governance (ESG) data is ambiguous and unstructured, which would result in the higher use of technology

both by the green client and the auditor. Therefore, a higher degree of PS is required while evaluating such multi-source and unstructured data. Fourth, green clients are subjected to multiple reporting mandates, such as Global reporting initiatives (GRI), International Sustainability Standards Board (ISSB), and the local guidelines, to satisfy the informational needs of multiple stakeholders; and hence, auditors use technology to cut down the noise to be precise and accurate. Finally, the audit assignments involve engaging with a particular client daily for months and in a recurrent yearly trend (Bamber & Iyer, 2007); and therefore, auditors may see the client as a potential future employment provider as well. This realization may influence some auditors to give their best possible audit effort on high green reputation clients (who are likely to become potential employers).

The mixed method design (Creswell & Clark, 2017) was applied to understand the results of the experiment in a comprehensive, clear, and contextual manner. The result of the experiment although not completely unexpected for high reputation firms has still left room for a deeper investigation, especially for drawing auditing practice through informed managerial considerations. Though the experiment was conducted first, the subsequent qualitative interviews of auditors (towards TiU) were given an equal priority in terms of rigor and significance to cross validate the findings from the experiment and to provide a holistic understanding of the technology enabled audit phenomenon for green clients.

The findings of the Study 2 involved use of qualitative interviews (towards TiU for Grounded Theory) since little is known about auditor's PS in the context of emerging markets. Therefore, the interviews were useful to develop an in-depth understanding of the practicing auditor's mindset and lived experience while auditing green reputed clients (Table 6). The essence of the qualitative data confirms that auditors tend to be more professionally skeptical of green clients, especially upon embracing technology by such clients (Table 7). A significant pattern emerged from multiple interviews with practicing auditors. Auditors were observed to be more skeptical for green reputation clients, as the involvement in technology improved both audit effectiveness and audit efficiency in such cases. Auditors were mindful of the new and emerging risks for green reputation clients; and therefore, more PS was exercised. Technology also strengthened the procedures, reduced cognitive load, and thereby enabled higher PS (Table 7). 'Green reputation' clients were found to have the support of other actors as well,

such as supportive Audit committees, which ensured auditor independence and further encouraged the use of technology in audit procedures. By training, the auditors are encouraged to be critical of any lapses and errors, but extra procedures are sometimes interpreted as a conflict with the choices of the client. Internal budget pressures, time constraints (Hurt et al., 2013) and team dynamics collectively explain the reduced level of PS that is exercised by technology conversant auditors while auditing comparatively lower reputed clients (vis a vis client with high green reputation). However, it was also discovered that reduced PS does not connote insufficient PS.

The interviews also revealed that auditors expect the large and green firms to have an enabling environment (such as, the presence of effective and supportive audit committee), thereby signaling the mandate to exercise PS in the context of such clients. All audits need to be performed with PS (ISA200, 2007) and auditors are guided by the audit and assurance standard setters because the audit output has a direct bearing on public interest. Auditors need to confirm whether the green client has adequately considered the relevant risks and potential threats in accounting terms while making any decision. For large and green reputed clients, the non-financial risks pose a threat with severe financial ramifications. The resulting grounded theory developed (using TiU from qualitative interviews) supports the fact that auditors of green clients require to engage in more tasks, more time and effort, thereby utilizing higher PS (Hurt et al., 2013).

Besides contributing to an understanding of auditor's PS, this paper also contributes to the audit methodology research by utilizing the TIU' approach (Argyris & Schon, 1974). The approach addresses a person's (auditor) mental model that influences his or her behavior in a particular context. TIU approach uses a "if-then" relationship between inputs and outcomes (Zaltman et al., 1982); and individuals (auditors) deliberate behavior is shaped by such mental models. Subsequently, the grounded theory emerges from the observations and data inputs gathered through field study regarding the phenomenon of interest (audit process) (Corbin & Strauss, 2008). TiU is one of the ways of creating grounded theory (the other being ethnography and case study method). TIU reaches out to individuals (auditors) having proximity to the phenomenon and captures the theories held by these individuals (Challagalla et al., 2014).

## 7. CONCLUSIONS, LIMITATIONS, AND FUTURE STUDIES

This mixed method study being framed within the underpinning of the mindset theory and the cognitive load theory provided a better understanding of the auditor's PS mindset while auditing green reputation clients. It was observed that auditors tend to exhibit higher level of PS for high green reputation clients than low green reputation clients in a technology enhanced audit environment. The prime reason of the above phenomenon, as demystified by the qualitative interviews based on the TiU approach (towards creation of a grounding theory), is the enhanced level of audit effectiveness and audit efficiency (due to the use of technology both by the auditor and the green client). The results of this study are relevant for the emerging economies such as India, where COVID 19 impacted the timeline of audit procedures, the substance and scope of audits including the control mechanisms (Luo & Malsch 2022).

The limitations of this study are those inherent to an experimental design in a controlled setting while establishing causality. Compared to a field experiment, this procedure traditionally suffers from milder external validity. Another limitation of this research was the moderate study window, as longer duration studies can capture more nuanced responses from the respondents. Finally, the use of the top one thousand listed companies as a proxy for green reputation clients leaves out comparatively smaller firms that have earned a green reputation. However, the above shortcomings do not limit the scope or the significance of key findings of the two studies undertaken by the researchers.

Future studies can be conducted in other emerging markets, and it will help in a richer socio-cultural context of the auditor's mindset since social norms drive skeptical behavior and country wide differences have information that can enrich the collective understanding of audits. Further, a multi wave study can be undertaken to understand the effectiveness of higher/ lower level of PS exercised for green clients over a period. The audit eco-system has witnessed a rise in stakeholder expectations and auditor capabilities, and the present study connects these dots.

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**APPENDIX 1**Abridged Interview Guide:

Thank you for meeting us and agreeing to share your audit experiences and opinions in the context of client, both high and low on green initiatives, disclosures, and reporting. We are audio recording this conversation with your consent. Please be as candid as possible. We assure you of the anonymity of your responses.

- What is your current role and assignment?
- What does digital technology usage in audit mean to you and what has changed in your audit task/ procedures thereafter especially for green reputed clients?
- Has client's reputation for "people, planet and profit", ever impacted an audit engagement in your office, if not for you then maybe for your peers? Do you engage in any extra tasks/ procedures/ tools for green clients?
- How does PS play out with digital eco-system of the green reputed clients in terms of audit procedures, tasks, audit committee support, etc.?
- How similar or dissimilar are clients with green reputation in terms of forthcoming, cooperative, and co-creating the audit success with you?
- Does your own firm or your own team give space for you to be skeptical? Please narrate your experience.
- Is skepticism a key skill that must be effective in the auditing profession? Why?
- Please share any anecdotal evidence of any (or all) of the above.
- Please feel free to share any other views/ opinion/ understanding that you wish to share on the above theme or peripheral conversations. All inputs are welcome.

*Thank you very much for your valuable time.*



**Scale used in this study:****1. Professional Skepticism; 30 items scale as per Hurtt (2010)**

Items	1	2	3	4	5
I do not accept other people's explanations, without further thought.					
I feel good about myself.					
I wait to decide on the issues until I get more information.					
The prospect of learning excites me.					
I am interested in what causes people to behave the way they do.					
I am confident of my abilities.					
I often reject statements unless I have proof that they are true.					
Discovering new information is fun.					
I take my time while making decisions.					
I tend not to immediately accept what other people tell me.					
Other people's behavior does interest me.					
I am self-assured.					
My friends tell me that I usually question things that I see or hear.					

I like to understand the reason for other people's behavior.					
I think that learning is exciting.					
I usually do not accept things I see, read, or hear at face value.					
I do feel sure of myself.					
I usually notice inconsistencies in explanations.					
Most often I do not agree with what the other in my group think.					
I dislike having to make decisions quickly.					
I have confidence in myself.					
I do not like to decide until I have looked at all of the readily available information.					
I like searching for knowledge.					
I frequently question things that I see or hear.					
It is not easy for other people to convince me.					
I often ponder as to why people behave in a certain way.					
I like to ensure that I have considered most available information before making a decision.					
I enjoy trying to determine if what I read or hear is true.					

I relish learning.					
The actions people take and the reasons for those actions are fascinating.					

\*1 = strongly disagree, 5 = strongly agree

**2. Client Identification;** 4-item scale as per Bamber and Iyer (2007)

Items	1	2	3	4	5
When someone praises one of our key clients, it feels like a personal compliment to me also.					
When I talk about this key client, I usually say “We” rather than “They”.					
This key client’s success is my success.					
When someone criticized this key client, it feels like a personal insult to me also.					

\*1 = strongly disagree, 5 = strongly agree

**3. Client Reputation vignette description was designed on the Client Image scale;** 3-item scale as per Bamber and Iyer (2007).

Items	1	2	3	4	5
This client has a good reputation in business community.					
The public thinks highly of this client.					
This client is considered as one of the best companies to work for.					

\*1 = strongly disagree, 5 = strongly agree