



Adapting Internal Audit Functions to the COVID-19 Pandemic: Evidence from the United Arab Emirates

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ABSTRACT

This paper explores how the COVID-19 pandemic impacts the internal audit functions in the emerging market of the United Arab Emirates (UAE). This paper adopted an exploratory study using a qualitative approach. We used semi-structured, in-depth interviews to achieve the study objectives. The primary data collected was analyzed manually using thematic content analysis. The findings show that COVID-19 disrupted internal audit efficiency and productivity in the UAE due to limited physical access and remote work challenges. Audit quality varied, improving in firms with strong risk frameworks but declining where oversight weakened. Planning remained stable while fieldwork and communication processes shifted online. Information technology (IT) skills improved significantly, driven by digital audit requirements. Critical thinking and time management were tested, with mixed outcomes across firms. This paper helps to understand and focus on how the internal audit practices were affected by COVID-19. Also, it allows us to know how to deal with a similar situation in the future and to improve the internal audit profession.

Keywords: Internal Auditing, Performance, COVID-19, Emerging Market

JEL Classifications: M40, M41

1. INTRODUCTION

On January 30, 2020, the World Health Organization declared a public health emergency due to the COVID-19 pandemic outbreak. This incident affects a lot of businesses, including the internal audit profession. During COVID-19, the internal audit profession had to survive by using remote auditing, which became a new and significant challenge for internal auditors. Auditors rely more on physical, in-person evidence collection procedures, so lately, auditors are encouraged to invest more in digital programs to maintain their quality, including artificial intelligence. In this context, it is essential to understand and conduct studies of how internal audits were affected to ensure that a similar situation can

be dealt with. This paper explores the effects of COVID-19 on the daily practices of internal auditors. The financial reporting processes moved from in-person to online (Dohrer and Mayes, 2020). As a result of this pandemic situation, many challenges were presented to the internal auditors, which continue to have a profound effect on their work.

The COVID-19 pandemic disrupted internal audit functions by shifting work to remote environments, challenging traditional audit practices dependent on physical presence and direct access to records (Dohrer and Mayes, 2020; Albitar et al., 2020). Agency Theory explains how this disruption intensified principal-agent conflicts due to increased information asymmetry and reduced

auditor oversight capabilities (Jensen and Meckling, 1976; Chang et al., 2019). Empirical studies document heightened audit risks linked to internal control failures, fraud, and estimation uncertainty during the pandemic. This finding is consistent with the fraud triangle theory, highlighting pressure and opportunity factors amplified in remote contexts (Dohrer and Mayes, 2020; Martinelli et al., 2020). Remote auditing increased dependence on client-provided data and virtual communication, reducing evidence quality and raising cybersecurity concerns (Albitar et al., 2020; Lawal et al., 2022). Digital audit preparedness proved inadequate, with calls for hybrid models combining human judgment and AI tools to improve audit effectiveness (Appelbaum et al., 2020). Auditors developed new competencies in data analytics, cybersecurity, and virtual communication, emphasizing adaptability and technological skills as critical for audit performance (Martinelli et al., 2020; Chang et al., 2019). The UAE's business environment features rapid economic diversification, strong government support for digitization, and mixed regulatory frameworks that combine global standards with local customs, influencing internal audit practices (Fischer, 2020). The UAE's exposure to international trade and investment adds complexity to governance and risk management, increasing the need for agile internal audit functions during crises (Castka et al., 2020). Existing research primarily focuses on Western contexts, which differ institutionally from the UAE's unique corporate governance and rapid digitization environment (Castka et al., 2020). This situation creates a gap in understanding how UAE internal auditors adapted during COVID-19, a gap this study addresses by examining audit performance, processes, and skills through qualitative methods in that setting. This paper explores how the COVID-19 pandemic impacts the internal audit profession in the United Arab Emirates (UAE). Our objective is to answer the following questions: (1) What is the impact of the COVID-19 pandemic on internal audit performance? (2) What is the impact of the COVID-19 pandemic on the internal audit process? (3) What is the impact of the COVID-19 pandemic on the internal audit skills?

This paper uses qualitative, in-depth, semi-structured interviews in an emerging market to add to the literature on the impact and challenges of the COVID-19 crisis on the internal audit functions. The main findings in this paper show that the COVID-19 pandemic affected internal audit functions in the UAE in several critical ways. Audit efficiency and productivity declined due to delays in communication and restricted physical access, though audit quality improved in firms with strong risk controls. While planning activities continued with minimal disruption, fieldwork, and communication processes moved online, requiring significant adjustments. Auditors reported major improvements in IT skills, driven by increased reliance on digital tools. Critical thinking and time management were challenged, revealing gaps in adaptability across different audit environments. The remainder of this paper is as follows: Section 2 presents the background, and Section 3 discusses data and methodology. The findings and discussion are presented in Section 4. Finally, Section 5 concludes with a summary and recommendations for future research.

2. BACKGROUND

The COVID-19 outbreak, declared a global public health emergency by the World Health Organization on January 30, 2020, disrupted the internal audit function and broader business operations (Dohrer and Mayes, 2020). The shift to remote work challenged internal auditors, whose practices traditionally relied on physical presence and direct access to records (Albitar et al., 2020; Martinelli et al., 2020). Many organizations were unprepared for this shift, raising concerns about audit quality, internal control effectiveness, cybersecurity risks, and the digital readiness of audit functions (Appelbaum et al., 2020; Deliu, 2020; Castka et al., 2020; AlSuwaidi et al., 2024).

Agency Theory provides a theoretical lens to examine these disruptions. The theory explains principal-agent conflicts that arise from information asymmetry and misaligned incentives between principals (e.g., shareholders or boards) and agents (e.g., internal auditors or managers) (Jensen and Meckling, 1976). Internal auditors reduce this asymmetry by enhancing oversight, compliance, and risk mitigation (Chang et al., 2019). During the pandemic, agency conflicts intensified due to reduced physical access and communication difficulties, which constrained auditors' ability to verify evidence and monitor controls independently (Albitar et al., 2020).

Empirical studies show that audit risks increased during the pandemic, especially those linked to internal control failures, fraud, and estimation uncertainty (Dohrer and Mayes, 2020; Appelbaum et al., 2020). These risks are consistent with the fraud triangle theory, which holds that fraud is more likely when pressure, opportunity, and rationalization are present conditions amplified by the pandemic (Martinelli et al., 2020; Deliu, 2020). Remote auditing requires greater reliance on client data and virtual communications, increasing the risk of misreporting and limiting evidence quality (Albitar et al., 2020; Faradiba et al., 2020; Lawal et al., 2022). Antón et al. (2025) highlight concerns about whether auditors may have used benchmark changes to avoid reducing materiality levels during the pandemic. While other studies showed evidence on the pandemic impact on efficient electronic oversight and auditing professional skepticism (Assadat, 2025; Al-Thuneibat et al., 2025).

The crisis also exposed deficiencies in digital audit preparedness. Appelbaum et al. (2020) observed that although Artificial Intelligence (AI) and automation offer potential benefits, their current application is inadequate to replace human judgment. Solaimani et al. (2020) propose a hybrid approach that combines human decision-making with AI tools to enhance audit efficiency while retaining critical thinking capacity.

Audit competencies also evolved during this period. Martinelli et al. (2020) found that auditors had to develop new capabilities in data analytics, cybersecurity, and virtual communication. Chang et al. (2019) emphasized that internal audit effectiveness is linked to auditor attributes such as technological competence, adaptability, and independence. Appelbaum et al. (2020) similarly

argued that auditors must redesign risk assessment and evidence collection strategies for virtual environments. AlMarzooqi et al. (2024) examined shifts in performance analytics in response to COVID-19 disruptions, highlighting similar skill transformations among financial professionals in the UAE.

Most of this literature is based on Western settings, where regulatory and institutional contexts differ from those in the United Arab Emirates (Castka et al., 2020; Fischer, 2020). The UAE has unique corporate governance dynamics shaped by rapid digitization and mixed global-regional practices. The internal audit profession in the UAE thus warrants focused examination. This study addresses that gap by exploring how internal auditors in the UAE adapted their practices during the pandemic through qualitative interviews focused on audit performance, processes, and skills.

3. METHODOLOGY

This paper explores how the COVID-19 pandemic has impacted the auditing functions. This study is exploratory research (Stebbins, 2001) using the qualitative approach, which involves asking open-ended questions to converse with participants, in contrast to other studies that use primary data surveys or secondary datasets. This paper utilizes the in-depth semi-structured interview approach with highly experienced internal auditors to focus on the new ways of doing internal auditing during the lockdown and social distancing time, where meeting or working offline or physically was an option that could not be afforded. This study looks into this area by exploring internal auditors' routes to perform their work without regular interaction, their challenges, and how this new way of working could impact the business post-pandemic stage. The interview questions are divided into three sections: Section 1 includes the impact of the COVID-19 pandemic on internal audit quality, efficiency, and productivity. Section 2 consists of the effects of the COVID-19 pandemic on the internal audit planning, fieldwork, reviewing and communicating results, and the internal audit report. Section 3 includes the impact of the COVID-19 pandemic on the internal audit critical thinking skills, time management skills, communication skills, IT skills, and interpersonal skills.

Data collection for this paper uses the primary source, which includes collecting data from internal auditors working in the private sector in the United Arab Emirates. Primary sources are used in this paper because, considering the newness of the COVID-19 pandemic, there are no secondary sources directly related to our chosen research questions. This study uses the purposive sampling technique involving 10 highly experienced internal auditors. All interviews were conducted considering the safety procedures. The interview questions are based on the study's three objectives, and the interviewers ask the interviewees 12 questions. The primary data collected were analyzed manually using thematic content analysis. Limitations for this study include the few internal auditors interviewed due to safety restrictions during the pandemic. All interviewees agreed to conduct the meeting and were informed of the purpose of the study, and we assured participants of the confidentiality and privacy of information.

This study used qualitative content analysis to examine and interpret the data collected through semi-structured interviews. Content analysis enables systematic verbal and written data interpretation to identify patterns and make valid inferences (Bengtsson, 2016). The study followed a structured process, including data reduction, categorization, and thematic development (ibid). Coding was conducted at the sentence level to extract meaning and generate key themes. The process began with repeated reading of interview transcripts to identify significant issues. Each sentence was used as the unit of analysis and coded based on its relevance to the study objectives. These codes were then organized into themes and sub-themes, as shown in Table 1, following the classification method proposed by Turner (2010). This structure guided the thematic interpretation of the interview data, focusing on COVID-19's impact on internal audit functions. The next step involved comparing responses to highlight patterns, differences, and commonalities across participants. Finally, the main themes were described in detail to reflect the empirical insights from the fieldwork. The study focused on a few highly experienced participants in the UAE, which allowed for contextual depth in understanding internal audit practices under pandemic conditions.

4. FINDINGS AND DISCUSSIONS

This section analyzes the interview data collected from internal auditors in the UAE. It explores three themes: internal audit performance, audit processes, and audit skills, concerning Agency Theory, empirical evidence, and the UAE's institutional environment.

4.1. COVID-19 and Internal Audit Performance

Participants reported mixed impacts on internal audit quality. Some noted increased risk and reduced control due to remote working. One auditor stated, *"Because COVID-19 has impacted all the industries, it has become more important to carry out more activities; there is a chance for mistakes because people are working remotely"* (Interview 9). Another said, *"We cannot see all the processes and the outcome of this situation... many companies shut down in a short period"* (Interview 7). Other auditors viewed the pandemic as a trigger for improved diligence. One explained, *"The quality of the audit procedure has increased as the market became riskier... the role of the auditor became more in need"* (Interview 6). Another noted, *"more quality to be taken*

Table 1: Interview thematic content analysis structure

Codes	Themes	Sub-codes	Sub-themes
APE	Internal Audit Performance	APE1	Quality
		APE2	Efficiency
		APE3	Productivity
APR	Internal Audit Process	APR1	Planning
		APR2	Fieldwork
		APR3	Reviewing and Communication
		APR4	Reporting
ASK	Internal Audit Skills	ASK1	Critical thinking
		ASK2	Time management
		ASK3	Communication
		ASK4	Information technology
		ASK5	Interpersonal

because COVID-19 reduced revenue... we have big pressure to meet targets" (Interview 3). There findings are consistent with Purwanti et al. (2025) review showing that the pandemic impact on audit quality is not always bad, because remote audit obstacles can be overcome through alternative strategies and procedures to collect sufficient appropriate evidence.

Efficiency suffered across most organizations. A participant said, "We had more delay in information... we have to double-check more" (Interview 4). Another added, "Efficiency has reduced... much communication was done through email" (Interview 9). Productivity was also constrained. One auditor reported, "Most companies are working short hours... reports are late" (Interview 4). Another said, "Clients did not have staff to cooperate... fieldwork slowed" (Interview 10). These results confirm that internal audit performance was shaped by uneven preparedness for digital auditing and the UAE's corporate diversity. Larger audit firms with stronger IT infrastructure showed resilience, while smaller firms faced more disruptions. This finding reflects empirical findings on audit risks and the need for greater oversight in crisis (Appelbaum et al., 2020; Albitar et al., 2020). It also aligns with Agency Theory, as auditors increase monitoring to mitigate risks (Jensen and Meckling, 1976).

4.2. COVID-19 and Internal Audit Process

Audit planning generally remained intact. One auditor explained, "Planning remains unchanged. but we consider this extraordinary situation to explain trends" (Interview 6). Another stated, "Planning became more important... now we take 30 days instead of 15" (Interview 9). These comments highlight the adaptive capacity of UAE auditors under pressure. Fieldwork shifted significantly. One said, "Fieldwork has been severely affected... we are not going to client offices" (Interview 10). Another confirmed, "fieldwork was very limited... companies were closed for months" (Interview 4). This finding supports the literature, noting that physical audit evidence became harder to obtain during lockdowns (Martinelli et al., 2020).

Reviewing and communication are adapted through digital means. One auditor said, "We do online meetings and submit reports... some reports are hard copies" (Interview 4). Another explained, "scope of work changed... we communicate by Zoom" (Interview 10). These shifts reflect Solaimani et al. (2020), who advocated hybrid audit models integrating human judgment with digital tools. Audit reporting was largely stable. One participant noted that "there is no negative impact on the reports except that some companies are late" (Interview 5). This finding is consistent with the UAE's regulatory emphasis on maintaining compliance and disclosure, even during crises. The relatively smooth continuation of planning and reporting reflects the UAE's proactive digital governance policies and the technological maturity of major audit firms operating in the region. These institutional strengths helped offset the logistical limitations of remote auditing.

4.3. COVID-19 and Internal Audit Skills

Auditors reported both growth and challenges in skill development. Critical thinking evolved as work processes changed. One auditor said, "We have to adapt new measures... find new ways of carrying out audits safely" (Interview 9). Another added,

"We should increase our critical thinking skills... learn new software because we cannot visit companies" (Interview 5). Time management became harder. A participant shared, "Timing was no longer 9 to 6... we had to work around the clock" (Interview 9). However, another said, "We saved transportation time but worked scattered hours" (Interview 6). These experiences reflect differing organizational expectations in remote settings.

Communication skills require rapid adaptation. One auditor said, "We had to shift from spoken to written communication... we send more emails" (Interview 3). Another noted, "Employees must improve communication skills because everything is online now" (Interview 8). This finding confirms earlier findings about digital communication barriers and the need for written proficiency in remote work (Appelbaum et al., 2020). IT skills improved significantly. One participant explained, "We learned new software... we increased our IT skills" (Interview 5). Another said, "We give clients access to their accounts... verify transactions digitally" (Interview 10). This finding supports AlSuwaidi et al. (2024) and Lawal et al. (2022), who found that pandemic pressures forced rapid IT upskilling in UAE audit environments. Also, these findings are consistent with Khalil et al., (2025) who find internal auditing in retail companies showing an IA functions evolution during the pandemic in the UAE.

Interpersonal skills were marginally affected. A participant stated, "It became a face-to-face online meeting... affected slightly" (Interview 4). Another said, "No negative impact... we had to maintain these skills regardless" (Interview 3). These findings reflect the UAE's strong emphasis on ICT infrastructure and professional development, which enabled auditors to transition quickly. Larger firms benefited from established IT protocols, while smaller ones faced steeper learning curves.

5. CONCLUSION

This paper explored how the COVID-19 pandemic has impacted the profession of internal auditing in the United Arab Emirates. The study found that the COVID-19 pandemic had a varied impact on internal audit functions in the UAE, shaped by the country's institutional and business environment. Audit efficiency and productivity declined due to delays in client responses, limited physical access, and the shift to remote work, especially in firms with less digital readiness. In contrast, audit quality improved in larger firms with strong risk management systems and access to advanced audit technologies. Planning processes remained functional but required extended timelines due to operational uncertainty. Fieldwork was constrained by lockdowns and company closures, reflecting the vulnerability of small and medium enterprises in the UAE's mixed economy. Communication and review processes transitioned to online platforms, which are more effective in technologically equipped organizations. Reporting activities continued with minor delays, supported by the UAE's regulatory focus on disclosure. IT skills improved across all participants, driven by the government's digital transformation agenda. Critical thinking and time management were challenged, particularly in firms with weaker internal controls. The findings highlight how organizational size, sector, and digital capacity

differences shaped auditors' ability to adapt within the UAE's hybrid public-private business landscape.

The findings have practical implications for internal auditors, regulators, and policymakers in the UAE. Internal auditors must enhance digital capabilities, risk assessment methods, and critical thinking to operate effectively in remote and hybrid environments. Firms should invest in secure IT infrastructure and structured digital audit methodologies to maintain performance during disruptions. Regulators must revise audit guidance to address remote work challenges, digital evidence, and data reliability. Policymakers should support capacity building through targeted data analytics, cybersecurity, and virtual collaboration training. The variation in audit performance across firm sizes suggests a need for differentiated regulatory support, especially for SMEs. The UAE's digital strategy should be extended to audit-related compliance systems to ensure crisis continuity. Greater integration of digital tools in audit supervision can strengthen sector resilience. Clear protocols for virtual audit fieldwork and documentation must be standardized. Coordination between regulatory bodies and audit firms will improve responsiveness to future disruptions. These steps are necessary to align internal audit practice with the UAE business environment's evolving risks and digital realities.

This study is limited by its small, private-sector-focused sample, reducing generalizability. Future studies should include larger, more diverse samples across sectors. Quantitative and comparative research can strengthen findings and regional relevance. Further work should examine long-term digital audit effects and regulatory responses.

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