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Analyzing the Factors That Affect Auditor's Judgment and Decision Making in Lebanese Audit Firms

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Abstract: The exercise of audit judgment is essential because it is impractical to perform an audit on all types of evidence. These types of evidence are considered in forming an opinion on audited financial statements, making audit judgment a determinant of the auditor's outcome. The objective of this research is to analyze the factors that affect an auditor's judgment and decision making (JDM) during an audit. This study used an exploratory research design, with the factor analysis approach as its methodology. However, the data were collected using the questionnaire method. The questionnaire was sent to all member auditors of the Lebanese Association of Certified Public Accountants (LACPA). A total of 310 completed questionnaires were collected and analyzed. The data analysis findings indicate that the auditor's JDM throughout the audit process is affected by three factors: personal, task, and environmental factors. The auditor's personal factor becomes the dominant factor because it has the largest eigenvalue of 7.949. These findings demonstrate the complex and diverse nature of auditor judgment, highlighting the significance of considering audit JDM factors. Therefore, auditors may improve their abilities to make informed and effective judgments throughout the audit process by acknowledging the importance of personal, task, and environmental factors.

Keywords: judgment and decision making; auditors; factor analysis; personal factors; task factors; environmental factors; LACPA; Lebanon

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1. Introduction

Accounting and auditing have increasingly acknowledged the importance of judgment and decision-making (JDM) qualities in the industry because professionals such as auditors, managers, financial analysts, accountants, and standard setters take part in critical JDM (Mala and Chand 2015). However, the topic of audit JDM has garnered increasing interest due to its comprehensive coverage of all stages involved in the auditing process, its consideration of different interests, and its influence on the quality and nature of decision making (Sila et al. 2016). However, many businesses fail or become insolvent because of auditor failure, threatening financial statement credibility, and making audit judgment crucial to audit reports (Pratama et al. 2018).

Audit judgment is essential because it is impractical to perform the audit on all types of evidence (Pratama et al. 2018). Wedemeyer (2010) outlines four key decisions that must be made within the framework of a particular audit. First, the evaluation of the material mis-statement risks in financial statements, considering the possible consequences of bias, fraud, and business risk. Second, the process of identifying, conducting, and evaluating audit processes to deal with these risks. Third, the assessment of audit evidence to figure out whether the evidence obtained is of sufficient quality and value and to determine the necessity of obtaining additional evidence to address any potential limitations or uncertainties. Fourth, the process regarding an opinion on financial statements and the decision

to express that opinion is formed. Thus, auditors concentrate on making their best professional judgment during auditing (Mala and Chand 2015).

Professional judgments represent collective judgments at all steps of the auditing process, from planning to evidence gathering and evaluation to audit opinion formulation (Iskandar and Sanusi 2011). It is “the application of relevant training, knowledge and experience, within the context provided by auditing, accounting and ethical standards, in making informed decisions about the courses of action that are appropriate in the circumstances of the audit engagement” (IAASB 2021, p. 22). In addition, these judgments are affected by many factors that may lower the quality or higher the quality of audit JDM. One of the most important things an auditor needs to know when evaluating a financial report is the factors that impact the auditor’s JDM.

Many factors affect how auditors react and evaluate the audit evidence they receive in audit work (Pratama et al. 2018). Previous studies have shown that several factors might impact the way auditors use their professional judgment (Halim et al. 2018). According to Bonner (1999), JDM research has examined the determinants of both high-quality and low-quality judgments, categorizing them into personal, environmental, and task factors. Some researchers have examined the impact of these factors on JDM (Iskandar and Sanusi 2011; Sila et al. 2016; Ghani et al. 2019; Pawitra and Suhartini 2019), whereas others have examined their inter-relationship (Duh et al. 2006; Santos and Cunha 2021). However, the findings and analysis of the factors that impact JDM were not the same and cannot be generalized, which prompted the researcher to analyze the factors that affect JDM in Lebanese audit firms. This is because the auditor’s judgment is a subjective evaluation of an auditor and is heavily reliant on the individual’s perspective of a circumstance (Pratama et al. 2018).

Prior researchers (Iskandar and Sanusi 2011; Sastri et al. 2019; Dewi et al. 2020; Atmaja and Sukartha 2021; Tandean et al. 2022) have frequently employed regression analysis methods to analyze the factors that impact audit judgment. This study employs a factor analysis method to analyze the factors that affect auditors in making audit JDM, considering the limitations of previous research. Thus, the objective of this research is to analyze the factors that affect auditor’s JDM throughout the audit process by addressing three questions: (1) What are the auditor’s personal factors that affect JDM in Lebanese audit firms? (2) What are the task factors that affect JDM in Lebanese audit firms? (3) What are the environmental factors that affect JDM in Lebanese audit firms?

This study used an exploratory research design, using the factor analysis approach as its methodology. However, the data were collected via a questionnaire distributed to all members of the Lebanese Association of Certified Public Accountants (LACPA). A total of 310 questionnaires were completed, collected, and analyzed. Personal, environmental, and task factors are the three primary components that have been shown to have an impact on auditors’ JDM. Nevertheless, according to the perceptions of auditors in Lebanon, the most important factor that influences auditors in the process of making audit JDM is the auditor’s personal factor, which includes self-efficiency, skills, knowledge, familiarity, decision aid, professional skepticism, trust, professional development, experience, and professional commitment.

This study provides significant theoretical contributions. This study expands the existing research on the factors that affect audit JDM by analyzing the auditor’s personal, task, and environmental factors, specifically among auditors in Lebanon. From a practical perspective, this study is significant as it seeks to assist audit firms in understanding the effects of these factors on their profession and to develop and carry out guidelines for assessing the working conditions of clients’ audits. This study provides beneficial guidance for regulatory authorities such as the LACPA, enabling them to enhance the standards and effectiveness of the profession. Hence, understanding the cognitive processes involved in human JDM is crucial to develop problem-solving strategies or make better enhancements in audit efforts, thereby benefiting the entire financial market.

The research is divided into six sections: Section 1 encompasses the introduction and Section 2 discusses audit judgment theory. Section 3 provides a comprehensive review of the existing literature. Data and research methods are highlighted in Section 4. The results, interpretation, and discussions are presented in Section 5. Finally, Section 6 includes the research conclusion, limitations, recommendations, and further research.

2. Theoretical Background

The JDM discussions in accounting and auditing generally aim to explain the JDM process as well as the factors that may affect the audit process and the causes behind this effect. The concepts behind audit judgment theory are drawn from behavioral accounting theory, especially motivation theory, social cognitive theory (SCT), attribution theory, and goal-setting theory (Sastri et al. 2019).

2.1. Motivation Theory

Since the 1940s, several ideas have emerged due to studies on various aspects of motivation. One of these theories is called self-determination theory (SDT) (Momani and Jamous 2017). However, in contrast to most other theories, SDT introduces a crucial additional difference that comes under the category of behavior that may be categorized as intentional or motivated. It distinguishes between sorts of deliberate regulation that are self-determined and those that are regulated (Deci et al. 1991). Therefore, the regulatory process for a self-determined conduct is choice, whereas the regulatory process for a controlled behavior is compliance (or in certain situations disobedience) (Deci et al. 1991).

Theorists of motivation often differentiate between two main groups of incentive to carry out an activity: extrinsic motivation and intrinsic motivation (Davis et al. 1992). Extrinsic motivation refers “to the performance of an activity because it is perceived to be instrumental in achieving valued outcomes that are distinct from the activity itself, such as improved job performance, pay, or promotions” (Davis et al. 1992, p. 1112). In contrast, intrinsic motivation refers “to the performance of an activity for no apparent reinforcement other than the process of performing the activity” (Davis et al. 1992, p. 1112). The auditor’s motivation will increase the auditor’s self-efficacy by increasing the auditor’s willingness to engage in particular activities in order to accomplish objectives (Zelamewani and Suputra 2021). Thus, judging from motivation theory, auditors must have high levels of motivation to successfully meet both the inspection objectives and the organizational goals (Zelamewani and Suputra 2021).

2.2. Social Cognitive Theory

SCT is a model of individual behavior that is generally accepted and has been scientifically confirmed (Bandura 1977). Bandura argues that two different sets of expectations serve as the primary cognitive factors that guide behavior. The first set of expectations concerns the outcomes of the activity. The term outcome expectancy refers to a person’s estimation that a certain action will result in a particular set of outcomes (Bandura 1977). People are more inclined to engage in actions that they feel will result in valuable outcomes rather than behaviors that they do not regard as having beneficial effects (Compeau and Higgins 1995). The second group of expectations comprises what psychologist Bandura refers to as self-efficacy, which may be defined as beliefs about an individual’s capacity to carry out a certain activity (Bandura 1977).

Self-efficacy impacts decisions made about which behaviors to engage in, the amount of effort and commitment devoted to challenges faced during the execution of those actions, and, eventually, the level of control achieved in those behaviors (Compeau and Higgins 1995). Thus, the quality of an audit judgment can be described as the outcome of an auditor’s social and cognitive processes in analyzing the obtained data based on their experience and knowledge (Pawitra and Suhartini 2019).

2.3. Attribution Theory

Attribution theory is a theoretical framework that places emphasis on the cognitive processes through which people perceive events and how these interpretations influence their thinking patterns and subsequent behavior (Tandean et al. 2022). According to Heider (cited by Oktavianto and Suryandari 2018), individuals have the capacity to create two distinct attributions; internal attribution refers to the inference that an individual's behavior is influenced by internal factors, such as their attitude, character, or personality; external attribution refers to the inference that an individual's behavior is influenced by factors inherent to the circumstance in which they find themselves. Therefore, this theory explores the process of information collection and its subsequent integration to generate causal judgments (Suryarini et al. 2022).

2.4. Goal-Setting Theory

Locke and Latham presented a comprehensive theory of motivation known as the goal-setting theory, which highlights the significant correlation between goals and performance (Lunenburg 2011). This theory states that an auditor who understands the goals and expected outcomes of their work is less likely to deviate from expected behavior when faced with pressures from superiors or the entity under examination and when faced with complicated audit duties, leading the auditor to conduct audit activities in accordance with professional ethics and standards even when faced with problems (Sastri et al. 2019).

Lunenburg (2011) claims that research results support the idea that optimal performance is achieved when goals are attainable and difficult, when they are used for performance evaluation and connected to feedback on outcomes, and when they foster commitment and acceptance. Thus, goal-setting theory suggests that individuals who establish particular goals are more likely to enhance their performance because of the attribution that arises from striving to improve their abilities and competences in order to attain optimal job performance (Astuti et al. 2022).

3. Literature Review

This section presents a comprehensive review of the existing literature on auditor JDM, specifically analyzing the factors that impact JDM. The literature is categorized into three main domains: personal factors, task factors, and environmental factors.

3.1. Judgment and Decision Making

Auditing JDM is crucial to the auditing process (Mala and Chand 2015). Auditors are responsible for making audit judgments because the audit judgment's quality reflects how successfully the auditors carried out their responsibilities (Siregar et al. 2019). The phrase judgment refers to "forming an idea, opinion, or estimates about an object, an event, a state, or another type of phenomenon" (Bonner 1999, p. 385). Judgment often takes the form of predictions about the future or an evaluation of the existing condition of circumstances before the act of decision making (Bonner 1999). Decision refers to "making up one's mind about the issue at hand and taking a course of action" (Bonner 1999, p. 385). However, following the judgment, there will be activities that involve decision making between variables and predictions (Hamdam et al. 2021). Hence, JDM plays a crucial role in the process of auditing (Sila et al. 2016).

Audit judgment is inherent at every phase of the audit procedure, from accepting audit engagements, to planning, testing, and reporting, which acts as the fundamental framework for the development and expression of opinions about audited financial statements (Hasan and Andreas 2019). Wedemeyer (2010) claims that audit judgment is distinct or unique for each audit assignment because judgment is difficult for each audit and should be carried out with caution to prevent any unexpected results. However, audit judgment should be based on verifiable and complete facts and information, ensuring the accuracy and completeness of the conclusions. Likewise, a decision to be made by auditors

should align with the belief in selecting the most suitable decision (Sila et al. 2016). Hence, it may be argued that the outcomes of audits are dependent on the exercise of JDM.

Auditors are impacted by several technical and non-technical factors while assessing and performing audit JDM (Pratama and Innayah 2019). Based on research conducted by Iskandar and Sanusi (2011), Sastri et al. (2019), Pratama and Innayah (2019), Dewi et al. (2020), Atmaja and Sukartha (2021), and Tandean et al. (2022), numerous factors influence auditors' perceptions when responding to and evaluating the evidence and information they receive during their audit tasks. In accordance with Bonner (1999), this section is divided into three primary factors that influence auditor judgment: factors related to the person, task, and environment. These three considerations are fundamental to the JDM process that an accountant or auditor goes through (Mala and Chand 2015). Therefore, a comprehensive review of JDM with specific factors is conducted by analyzing existing research.

3.2. Auditor Personal Factors That Have an Impact on JDM

Personal factors pertain to the traits the decision maker carries to the job or the cognitive processes he/she employs while carrying out JDM (Bonner 2008). This literature review explores the influence of various personal factors, such as skills, self-efficacy, professional skepticism, knowledge, experience, trust, cognitive limitations, information processing, decision aids, prior beliefs, familiarity, professional development, professional commitment, and locus of control, on audit judgment.

A significant body of literature consistently demonstrates a positive correlation between auditors' skills and audit judgment (Nugraha and Suryandari 2018; Hasan and Andreas 2019; Sastri et al. 2019; Akib and Dharmawati 2022). High-level skills are associated with more accurate opinions, better understanding of audit issues, and the capability to provide professional opinions in challenging audit situations. Also, the literature consistently supports a positive correlation between auditors' self-efficacy and audit judgments (Iskandar and Sanusi 2011; Lee et al. 2016; Erlina and Muda 2018; Atmaja and Sukartha 2021; Tandean et al. 2022; Astuti et al. 2022). High self-efficacy levels contribute to internal motivation, leading to maximum effort and accurate judgments. However, Zelamewani and Suputra (2021) present a contrasting view, indicating a negative relationship between self-efficacy and audit judgment for auditors with little professional experience.

Additionally, professional skepticism has been explored for its impact on audit judgment and the results vary, with some studies showing a positive correlation (Rose 2007; Hussin et al. 2017; Dewi et al. 2020; Atmaja and Sukartha 2021) and others finding no significant relationship (Pratama et al. 2018; Nugraha and Suryandari 2018; Ghani et al. 2019). Moreover, previous research has shown a positive relationship between auditors' knowledge and their ability to exercise sound judgment throughout the audit process (Johari et al. 2012; Sila et al. 2016; Sastri et al. 2019; Pawitra and Suhartini 2019; Siregar et al. 2019; Soe et al. 2022). Comprehensive knowledge enhances the likelihood of making accurate audit judgments, especially when faced with complex issues. However, Halim et al. (2018) found that while auditors gain information via training and education, this knowledge has no significant relationship with audit judgment.

Similarly, the relationship between auditor experience and audit judgment is explored with varying results. Some studies have shown a positive correlation (Rose 2007; Iskandar and Sanusi 2011; Sila et al. 2016; Halim et al. 2018; Mala et al. 2018; Nugraha and Suryandari 2018; Siregar et al. 2019; Soe et al. 2022; Tandean et al. 2022), explaining the role of experience in enhancing their capacity to effectively solve and predict challenges encountered throughout the auditing process. Others found no significant relationship (Pawitra and Suhartini 2019; Pravitasari and Hirmantono 2020; Merdekawati 2022).

Furthermore, trust among auditors has a significant impact on audit judgment (Rose 2007; Kerler III and Brandon 2010; Kadous et al. 2013; Santos and Cunha 2021). Trust enhances the acceptability of advice, leading auditors to incorporate it into their JDM processes, thus improving the overall audit work quality. On the other hand, limited research

has explored the impact of cognitive limitations on audit judgment. Setiawan (2017) emphasized that auditors engage in both careful and quick judgments, with cognitive processes playing a significant role in professional judgment.

Moreover, information processing is explored in relation to its impact on audit judgment (Brown and Solomon 1991; Ganzach 1997; Leung and Trotman 2008; Rose et al. 2017). Results vary, with some studies showing a positive correlation (Brown and Solomon 1991; Ganzach 1997; Leung and Trotman 2008) and others indicating differences in the impact of intuitive and deliberative processing (Rose et al. 2017). Meanwhile, the use of decision aids in the audit process is found to impact audit judgment differently depending on the aid used (Bonner et al. 1996; Lowe et al. 2002; Ng and Tan 2003; Arnold et al. 2004; DeZoort et al. 2006). Decision aids, such as mechanical aggregation, the availability of authoritative guidance, and the effectiveness of the client's audit committee, can significantly enhance auditor judgment, but their impact may vary based on reliability.

In addition, previous research highlights the significant impact of prior beliefs on audit judgment (Butt and Campbell 1989; Bhattacharjee et al. 2007; Bhattacharjee et al. 2017). Butt and Campbell (1989) emphasize that the order of evidence, with negative evidence following positive evidence, affects audit judgment, indicating that negative evidence acquired after positive evidence has a lesser impact. While Bhattacharjee et al. (2007) and Bhattacharjee et al. (2017) indicate that judgments made by auditors are positively impacted by earlier client judgment information. Further, familiarity has been investigated in relation to audit judgment by Asare and McDaniel (1996) and Iskandar and Sanusi (2011). Asare and McDaniel (1996) found that familiarity affects audit review effectiveness, with familiar preparer reviewers exhibiting greater confidence and efficiency, particularly in complex tasks. In contrast, Iskandar and Sanusi (2011) reported no significant impact of task familiarity on audit judgment performance.

Likewise, professional development has been studied for its association with audit judgment (Lee et al. 2016; Erlina and Muda 2018). Lee et al. (2016) established a positive correlation between auditor performance and professional development initiatives, including corporate culture and training opportunities. Erlina and Muda (2018) further highlighted the positive impact of professional development on internal auditor work quality, emphasizing the role of formal education in enhancing auditors' abilities and adherence to auditing standards. Similarly, previous research has shown that auditors' judgment would be influenced by higher professional commitment (Lord and DeZoort 2001; Nasution and Östermark 2012). Those with high professional commitment demonstrate a firm belief in their profession's objectives and invest effort in its development. Furthermore, the prior literature has collectively emphasized the positive impact of the locus of control on auditors' ability to resist unethical pressures, make sound judgments, and effectively go through the audit process (Nasution and Östermark 2012; Sastri et al. 2019; Dewi et al. 2020).

In conclusion, this literature review presents an in-depth analysis of auditors' personal factors and their impact on JDM in the field of auditing. Although there is consensus on the positive impact of skills, trust, professional development, professional commitment, and locus of control on audit judgment, the results are mixed for other factors such as self-efficacy, professional skepticism, knowledge, experience, cognitive limitations, information processing, decision aids, prior beliefs, and familiarity. These mixed results highlight the complex nature of the relationship between these auditor personal factors and JDM in auditing and highlight the need for more research to analyze these factors in different contexts and environments to have a greater understanding of them.

3.3. Task Factors That Have an Impact on JDM

Task variables are task features or dimensions that change among tasks and, more importantly, within tasks (Bonner 2008). Task factors play an important role in influencing JDM processes in the context of auditing. This literature review explores the impact of

task complexity, task structure, presentation format, and risk on audit judgment, drawing insights from various empirical studies conducted in the field.

The previous literature has shown empirical evidence supporting the relationship between higher task complexity and lower audit judgment performance (Iskandar and Sanusi 2011; Cahyaningrum and Utami 2015; Santos and Cunha 2021). Auditors might be unable to make JDM due to underlying information that makes analysis difficult or requires additional data. In contrast, prior research indicates that task complexity has a positive and statistically significant impact on audit judgment (Siregar et al. 2019; Sastri et al. 2019; Zelumewani and Suputra 2021; Astuti et al. 2022). The results indicate that the audit task's high complexity will likely motivate the auditor to approach their tasks with more attention and accuracy, resulting in a better judgment. On the other hand, Hasan and Andreas (2019), Pawitra and Suhartini (2019), and Pravitasari and Hirmantono (2020) observed that there was no impact of audit complexity on audit judgment.

Similarly, studies have shown a variety of results with respect to the impact of the task structure on audit judgment (Duh et al. 2006; Mohd-Nassir et al. 2021; Holt and Loraas 2021). In a study conducted by Duh et al. (2006), it was shown that when the audit task is less structured, the JDM would be lower since it will significantly vary according to the reviewer's preference, but for more structured tasks, the reviewer's preference has no impact on auditor JDM. Conversely, Mohd-Nassir et al. (2021) showed that the task structure type has a positive impact on fraud risk judgment. However, Holt and Loraas (2021) indicated that unstructured data result in more conservative judgment than structured data.

In addition, the selection of the presentation format plays an important role in effectively supporting the judgment process (Anderson and Mueller 2005). Previous research has shown that the presentation format does not affect audit judgment (Kaplan 1988). However, other studies have demonstrated that the presentation format does influence audit judgment, based upon the structural method in which the presentation is given (Anderson and Mueller 2005; Cardinaels 2008). Also, there are mixed findings of research on how risk in auditing affects JDM. Some studies have found that practice risk affects audit judgment (Kadous and Magro 2001; Kadous et al. 2008). However, Merdekawati (2022) have found no substantial impact of practice risk on audit judgment; this may be because the study's responders were largely junior and senior auditors and individuals responsible for making audit judgments were typically managers and partners.

In conclusion, understanding the different aspects of task factors is critical for enhancing audit judgment. Because there are inconsistent findings, this study will analyze the task factors that affect JDM in auditing, opening the way for future research and practical application.

3.4. Environmental Factors That Have an Impact on JDM

Environmental factors surround the auditor, but are not distinctive to either the person or the activity being performed; rather, they are common to all people and all tasks in a given setting (Bonner 2008). This paper reviews the impact of assigned goals, time budget pressure, obedience pressure, audit firm relationships, corporate governance and internal control, accountability, and group as opposed to individual information processing on audit judgment.

Some researchers have studied the impact of assigned goals on audit judgment (Asare and Cianci 2009; Kerler III and Brandon 2010). According to Kerler III and Brandon (2010), auditor goal commitment positively affects judgment-based audit decision acceptability. This highlights the significance of ensuring that individual goals agree with the overall goals of the organization for better audit JDM. Also, Asare and Cianci (2009) revealed that auditors who have accuracy goals tend to make conservative accounting modifications compared to auditors with other goal conditions. Additionally, their judgments are appropriately calibrated; however, there are conflicting data regarding conformity. Previous researchers have found a negative relationship between time budget pressure

and audit judgment (Hussin et al. 2017; Santos and Cunha 2021; Akib and Dharmawati 2022). When auditors operate under time pressure, they may have difficulties in effectively executing the required audit processes and simply take audit evidence as adequate, resulting in a higher degree of uncertainty in audit JDM. In contrast, Tandean et al. (2022) found that time budget pressure positively impacts audit judgment.

Studies between obedience pressure and audit judgment have produced mixed results. Several studies have shown a negative relationship between obedience pressure and audit judgment (Lord and DeZoort 2001; Nasution and Östermark 2012; Cahyaningrum and Utami 2015; Hasan and Andreas 2019; Astuti et al. 2022; Suryarini et al. 2022). Others (Pratama et al. 2018; Sastri et al. 2019; Zelamewani and Suputra 2021) indicate that obedience pressure has a positive and significant impact on audit judgment. However, the study by Pravitasari and Hirmantono (2020) demonstrated that there is no statistically significant impact of obedience pressure on audit judgment. This study suggests that auditors may have resistance towards complying with instructions from superiors and clients when such instructions conflict with established professional standards.

Furthermore, the relationship between audit firms and external entities significantly influences audit judgment (Ng and Tan 2003; Kulset and Stuart 2018). The study conducted by Ng and Tan (2003) found that the auditor–client relationship impacts JDM. However, Kulset and Stuart (2018) found that the auditors' agreement that contending tools were used in their own negotiation strategies increased as the relevant accounting standard became more specific, as the auditor's task-specific negotiation experience increased, and as the auditor's and client's relationship became less positive.

Additionally, DeZoort and Salterio (2001) and Jennings et al. (2006) have shown that corporate governance and internal control impact audit judgment. On the other hand, previous research has shown that higher accountability impacts judgment conservatism and variability in auditors' tasks (DeZoort et al. 2006; Mala et al. 2018). The heightened cognitive effort and increased accuracy in their judgment processes underlie the positive impact of accountability on JDM. However, research examining the differential effects of group vs. individual information processing on audit judgment has shown inconclusive findings. While Stocks and Harrell (1995) and Ahlawat (1999) have shown that groups exhibit enhanced judgment, Johnson (1995) suggests that groups may not possess the ability to make sound judgments, and Trotman et al. (2011) indicate that JDM greatly influences an individual's behavior.

In conclusion, this literature review provides a deep understanding of the impact of environmental factors on audit JDM. The contrasting results highlight the complex nature of auditors' JDM processes in response to diverse environmental pressures. Thus, additional research is required to understand and analyze these factors that impact JDM in different contexts to have better audit judgment in practice.

4. Research Method

This study was designed to collect data on the factors that affect audit JDM in Lebanon. The population in this research is defined as external auditors of Lebanese audit firms, all of which are members of the LACPA. This study used a survey methodology and exploratory factor analysis (EFA) to analyze factors that may be the fundamental cause of the underlying collection of variables.

4.1. Participants and the Data Collection Method

The research included the participation of external auditors from audit companies of varying sizes in Lebanon, all of whom are members of the LACPA. The participants were given access to online surveys as questionnaires in both English and Arabic formats, allowing them to choose the language they preferred via email and WhatsApp. The questionnaires contain four sections. Section A involves respondents' demographics such as gender, age, level of education, years of experience, certification, and audit firm category. Section B measures auditor personal factors, section C measures task factors, and section

D measures environmental factors. Respondents were required to choose the proper answer from a 5-point Likert scale, ranging from one (strongly disagree) to five (strongly agree), in these sections.

The questionnaire completed a pre-testing phase with 12 participants, consisting of 7 accounting and auditing academics and 5 auditors actively engaged in professional practice. During this phase of testing, respondents were informed that the statements had been developed and requested assistance in improving them. They are especially helpful for identifying bad question phrasing or ordering, faults in the format or instructions, and issues caused by the questionnaire’s length or the incapability or unwillingness to answer questions (Nelson 1985). Their comments were taken into consideration and some changes were completed.

4.2. Sample Selection

The sample was selected from the entire population of auditors registered as members of the LACPA. According to the LACPA’s 2023 data, there were around 1700 auditors who were registered members and offered audit services. This research used a probability sampling technique by using a simple random sampling technique. A simple random sample is a method in which a researcher selects a sample from a larger population in a random manner (Saunders et al. 2012), ensuring that each element in the population has an equal and known probability of being chosen as a subject (Sekaran and Bougie 2016). One of the main benefits of this approach is its simplicity and lack of bias, making it a representative method for the entire population (Saunders et al. 2012; Sekaran and Bougie 2016).

The data for this study were collected in the year 2023, with the data collection period lasting from June to November. After three reminders and several phone calls, out of the 1700 questionnaires that were distributed, 310 completed questionnaires were returned, indicating a return percentage of 18.24%. The reasons are that certain participants are no longer practicing the audit, some have reported difficulties in accessing external links, while others have expressed being too busy and apologies. Additionally, some participants have mentioned being abroad, unfamiliar with the nature of the questions, or facing health issues that hinder their ability to respond. It is worth noting that the majority of participants did not provide any kind of reply.

An approach to evaluate the unit non-response bias has been undertaken in this study by performing a wave analysis to compare the response patterns of those who responded early with those who responded later¹ (Armstrong and Overton 1977). However, the sample size was adequate and represents a population as recommended by Conroy (2016), with a 95% confidence level and a 5% margin of error in the sample size measurement. Finally, the responses obtained from the questionnaire were encoded, inputted, and analyzed using the SPSS 25.0 (Statistical Package for Social Sciences) statistical software.

4.3. Variables

Table 1 presents the variables used in this study, with their operational definitions and corresponding indicators.

Table 1. Variable definitions and indicators.

Variables	Definition	Indicators
Skills	Refer to skills or abilities that some people the client have that others may not have (Sastri et al. 2019).	The ability to communicate clearly and effectively with Making an extensive use of audit aid software. Having adequate certification and training (Nugraha and Suryandari 2018).
Self-efficacy	Beliefs about a person’s ability to perform a certain task (Bandura 1977).	Confidence in accomplishing difficult tasks.

		The belief of effort and hard work to perform well on the audit task (Pawitra and Suhartini 2019).
Professional Skepticism	Critical thinking and judgment on audit evidence employing public accountant knowledge, skills, and talents (Nelson 2009).	Carrying out the task with a diligent and cautious attitude. Gathering detailed and sufficient audit evidence (Nugraha and Suryandari 2018).
Experience	The amount of time spent working as an auditor for the audit firm (Sila et al. 2016).	Having a technical qualification in auditing an industry. Having a lot of knowledge in the field of work done (Nugraha and Suryandari 2018).
Trust	The belief that others can do activities that advance the first, including reducing ambiguity in JDM when work colleagues exchange advice (Anderson and Narus 1990).	Allowing my manager to decide on important audit matters. Trusting manager’s professional judgment. My fear of what my immediate superior might do to me at work. Reporting to my managers mistakes I have made even if they could damage my reputation (Mayer and Gavin 2005).
Knowledge	A fact or the state of knowing something well, which comes from experience and training (Sastri et al. 2019).	General knowledge of the entity environment. Knowledge about accounting and auditing standards. Passing the Dip IFRS exam (Nugraha and Suryandari 2018).
Cognitive Limitations	A person’s tendency to take difficult mental tasks, while limitations by auditing standards’ ambiguity, estimating uncertainty, and other variables (Bratten et al. 2013).	Anticipating and avoiding situations where there is more in-depth thinking about something. Getting the job done without caring how or why it works (Cacioppo et al. 1984; Setiawan 2017).
Information processing	Cognitive processes that identify, accumulate, analyze, and derive conclusions from information (Ruhnke 2022).	Using intuitive processing (thinking fast, using automatic and heuristic processes to make decisions). Using deliberative processing (slow thinking engages in more controlled and systematic reasoning) (Rose et al. 2017; Hamdam et al. 2021).
Decision aid	Software-intensive systems combine the experience of one or more experts in a decision area (Arnold et al. 2004).	Choosing to rely on the recommendation of decision aids. The absence of audit decision aid. Choosing to override the recommendation of the decision aids (Lowe et al. 2002).
Prior belief	People use a heuristic rule of anchoring and adjustment, beginning with an anchor (e.g., past experience) and then adjusting based on new information (Tversky and Kahneman 1974).	Strong prior client knowledge. No prior client knowledge (Bhattacharjee et al. 2007; Bhattacharjee et al. 2017).
Familiarity	Related to the user’s familiarity with the task and prior experience with it (Arnold et al. 2004).	Performing similar tasks in the past. Familiarity with the task (Iskandar and Sanusi 2011).
Professional Development	Improvement of personal development, auditing skills, work processes, and audit report quality (Erlina and Muda 2018).	Providing opportunities to learn new knowledge from your work. Seeking opportunities to learn rather than wait for the occasion. Holding formal meetings by organization to discuss and share knowledge (Lee et al. 2016).

Professional Commitment	Refers to a person’s connection to a profession or its strength, which an individual identified in a profession (Nasution and Östermark 2012).	Proud to be in the accounting profession. Feeling responsibility to the accounting profession to continue in it (Meyer et al. 1993).
Locus of Control	The level to which people attribute things that happen in their lives to actions or forces they cannot control (Nasution and Östermark 2012).	Your success depends on your work performance. Fate often gets in doing my audit tasks (Dewi et al. 2020).
Task Complexity	Refers to challenges in the process of audit due to limitations in the ability, memory, and analysis of problems (Umar et al. 2017).	The task effort into coming up with the best possible solution. The challenging and demanding nature of the task (Umar et al. 2017).
Task Structure	Refers to the degree of task specification (Simon 1973).	My firm provides clear procedures on the required audit tasks and documentation (Duh et al. 2006).
Presentation format	Refers to techniques used to provide users with information (Kelton et al. 2010).	Receiving information from clients supported by graphs, tables, or ratios (Kaplan 1988; Anderson and Mueller 2005; Cardinaels 2008).
Risk	Risk refers to the possibility of failing to detect mistakes or intentional misrepresentations while examining financial statements (Pratama and Innayah 2019).	High-risk client described as difficult to handle, responding slowly to information, unable to substantiate soft numbers, involved in several lawsuits, and sued its prior accountant (Kadous and Magro 2001; Kadous et al. 2008).
Assigned goals	Refers to goals that an organization or person tries to make someone follow (Bonner 2008).	Commitment to achieve audit objectives. Your expectation to achieve audit objectives (Kadous et al. 2008; Kerler III and Brandon 2010).
Time pressure	Occurs when the budgeted time to perform an audit program is less than the actual time needed to perform this activity (Hussin et al. 2017).	Having obstacles in completing audit procedures due to limited time. Having obstacles in collecting audit data due to limited time (Umar et al. 2017).
Obedience Pressure	Refers to the type of social pressure that happens when people are told directly what to do by other people (Sastri et al. 2019).	Avoiding confrontation with client. Avoiding confrontation with my superior (firm manager, firm partner) and implementing all his recommendations (Hasan and Andreas 2019).
Audit Firm Relationships (with outside entities)	Audit companies compete with other audit firms for clients and labor, have official and informal ties with auditees, and use valuation specialists (Bratten et al. 2013).	Audit firms’ relationship with their clients. Audit firms’ relationship with other participants (external valuation specialists) (Bratten et al. 2013).
Corporate Governance and Internal Control	Set the tone for the control environment and impact risk judgment (Mala and Chand 2015).	Minimal compliance with regulatory corporate governance requirements. Strong compliance with regulatory corporate governance requirements (Jennings et al. 2006).
Accountability	Consists of the fact that decision makers are accountable to investors, management, boards of directors, and regulators, who may have opposing interests (Mala and Chand 2015; Mala et al. 2018).	The absence of clear reporting lines and accountability structure. Receiving explicit formal feedback on my performance. My performance will be or could be reviewed (DeZoort et al. 2006).
Group as Opposed to Individual Information Processing	Evaluation of information processing by groups or individuals (Mala and Chand 2015).	Group participation in audit task. Individual participation in audit task (Stocks and Harrell 1995; Mala and Chand 2015).

Developed by the researcher.

4.4. Analytical Method

Initially, descriptive statistics were employed to provide insights into the demographics of the participants and firms. After that, a reliability test was conducted using Cronbach’s Alpha to ensure the internal consistency of the instrument. An EFA was conducted using principal component analysis (PCA) and varimax rotation to evaluate the validity of the tool measured in the research field. However, the determination of the number of factors was based on eigenvalues and total variance. In addition, during the preparation of this work the author used the paraphrasing tool QuillBot Artificial intelligence (AI) and Trink AI tools to perform grammatical error checks. After using these tools, the author reviewed and edited the content as needed and takes full responsibility for the content of the publication.

5. Results and Interpretation

This section provides descriptive statistics, interprets the findings of the study, and addresses the research questions.

5.1. Descriptive Statistics

Descriptive statistics provide insights into the participants’ demographics and firm profiles.

5.1.1. Participant Demographics

The survey participants were divided almost equally between male (50.3%) and female (49.7%) respondents. The largest group of respondents fell in the 35–44 age category, primarily working as auditors (30%). The respondents’ years of experience in auditing are distributed across several categories, with the largest group having over 21 years of experience (36.5%). Most of the participants have achieved a bachelor’s degree (36.1%) or possess an MBA (30.3%), with a limited number of participants who possess certifications such as US CPA and CMA. Table 2 summarizes the respondents’ demographic characteristics, including gender, age, position in auditing firms, years of experience, level of education, and certification.

Table 2. Demographic characteristics of the respondents.

	Respondent Profiles	Frequency	%
Gender	Male	156	50.3%
	Female	154	49.7%
	Total	310	100.0%
Age	20–34 years	53	17.1%
	35–44 years	111	35.8%
	45–54 years	69	22.3%
	>55 years	77	24.8%
	Total	310	100.0%
Position in auditing firm	Partner	70	22.6%
	Director	27	8.7%
	Audit manager	48	15.5%
	Assistant audit manager	10	3.2%
	Senior auditor	34	11.0%
	Auditor	93	30.0%
	Audit trainee	4	1.3%
	Others	24	7.7%
	Total	310	100.0%
Experience in auditing	0–5 years	25	8.1%

	6–10 years	46	14.8%
	11–15 years	65	21.0%
	16–20 years	61	19.7%
	>21 years	113	36.4%
	Total	310	100.0%
Level of education	High school	3	1.0%
	Bachelor’s	112	36.1%
	Master’s	85	27.4%
	MBA	94	30.3%
	PhD	14	4.5%
	DBA	2	0.7%
	Total	310	100.0%
Certification	US CPA	26	8.4%
	CMA	12	3.9%
	CIA	4	1.3%
	CFA	3	1.0%
	IFRS DIP	6	1.9%
	LACPA	259	83.5%
	Total	310	100.0%

Source: Output from SPSS program.

5.1.2. Firm Demographics

The respondents’ firms are classified into several categories, with the largest proportion of respondents being from individual firms (33.2%). Also, the age of the surveyed firms varied, with the most significant group being firms that are 21–30 years old (25.2%). The majority of firms have 1–4 auditors in their audit departments (64.8%) and have 1–9 employees (63.9%), indicating that they are smaller in size. Table 3 summarizes the firms’ characteristics, including their categories, ages, sizes of audit departments, and overall firm sizes.

Table 3. Demographic characteristics of the firms.

	Firm Profiles	Frequency	%
Category of firm	Big four firm	19	6.1%
	International firm	35	11.3%
	Large local	34	11.0%
	Medium local	66	21.3%
	Small local	53	17.1%
	Individual firm	103	33.2%
	Total	310	100.0%
Firm age	<10 years	64	20.6%
	10–20 years	76	24.5%
	21–30 years	78	25.2%
	31–40 years	32	10.3%
	>41 years	60	19.4%
	Total	310	100.0%
Size of audit department	1–4 auditors	201	64.8%
	5–9 auditors	48	15.5%
	10–20 auditors	29	9.4%
	21–50 auditors	10	3.2%
	>50 auditors	22	7.1%

	Total	310	100.0%
Size of audit firm	1–9 employees	198	63.9%
	10–49 employees	74	23.9%
	50–99 employees	6	1.9%
	100–499 employees	16	5.2%
	500–999 employees	5	1.6%
	>1000 employees	11	3.5%
	Total	310	100.0%

Source: Output from SPSS program.

5.2. Reliability Measure (Cronbach’s Alpha)

A reliability test was conducted to ensure the internal consistency of the instrument. There are numerous ways to calculate internal consistency, with Cronbach’s alpha being one of the most popular. Typically, this statistic is used to quantify the consistency of responses to a group of questions (scale items) that test a given notion. It is a coefficient alpha with a value between 0 and 1, where more than or equal to 0.7 indicates that the questions on the scale measure the same thing (Saunders et al. 2012; Ragab and Arisha 2018). Table 4 shows that all items possessed Cronbach’s Alpha values of more than 90%, indicating that the internal consistency of the instrument is good and, therefore, acceptable.

Table 4. Reliability testing.

Cronbach’s Alpha	Cronbach’s Alpha Based on Standardized Items	N of Items
0.926	0.933	25

Source: Output from SPSS program.

5.3. Exploratory Factor Analysis

PCA and varimax rotation were used to conduct EFA. Kaiser–Meyer–Olkin (KMO), communalities, and Bartlett’s Test of Sphericity were used to assess sample adequacy and the accuracy and appropriateness of the factor analysis. Factor analysis is considered appropriate when the KMO measure of sample adequacy (MSA) has a high value between 0.5 and 0.1 (Malhotra 2010). The result of the KMO value is very high at 0.943 (see Table 5), which indicates that the data are highly suitable and appropriate for factor analysis.

Table 5. KMO measure and Bartlett’s test.

KMO and Bartlett’s Test		
Kaiser–Meyer–Olkin Measure of Sampling Adequacy		0.943
	Approx. Chi-Square	4420.930
Bartlett’s Test of Sphericity	df	300
	Sig.	0.000

Source: Output from SPSS program.

The Bartlett’s Test of Sphericity is a statistical measure that assesses the likelihood of significant correlations among the components of a correlation matrix and is derived from a chi-square transformation of the determinant of the correlation matrix (Malhotra 2010). As shown in Table 5, the analysis yielded a chi-square value of approximately 4420.930 with 300 degrees of freedom, and the significance level (Sig.) was less than 0.05. This suggests that the data significantly depart from an identity matrix, and the correlations between variables are not equal to zero. Hence, the data are appropriate for factor analysis.

The scale’s communality, which measures the extent of variation in each dimension, was evaluated to guarantee satisfactory levels of explanation. Communalities refer to the amount of variation accounted for by a common factor (Malhotra 2010). Low values

suggest variables that are not well fit to the factor solution and may be considered for exclusion from the study. It is necessary for all indicators to have a load factor above 0.5 (Zeynivandnezhad et al. 2019). Therefore, all values below 0.5 were eliminated. Table 6 presents the communalities of all variables before and after the use of PCA. Before performing PCA, the communalities for each variable are first set to 1.000, indicating that each variable accounts for its own variation completely. Following the application of PCA, the values were observed to fall between the ranges of 0.250 to 0.735. Consequently, any variables with values below 0.5 were excluded from further analysis because these variables may not exhibit a significant correlation with the underlying factors identified using PCA. Initially, based on communalities results, the variables that were removed from the analysis were prior belief, presentation format, risk, and obedience pressure.

Table 6. Communalities test.

Component	Initial	Extraction
Skills (Sk)	1.000	0.735
Self-Efficiency (SE)	1.000	0.729
Professional Skepticism (PS)	1.000	0.698
Experience (Exp)	1.000	0.655
Trust (Tr)	1.000	0.554
Knowledge (Kn)	1.000	0.685
Cognitive Limitation (CL)	1.000	0.634
Information Processing (IP)	1.000	0.517
Decision Aid (D-aid)	1.000	0.613
Prior Belief (PB)	1.000	0.485
Familiarity (Fa)	1.000	0.588
Professional Development (PD)	1.000	0.686
Professional Commitment (PC)	1.000	0.639
Locus of Control (LoC)	1.000	0.579
Task Complexity (TC)	1.000	0.672
Task Structure (TS)	1.000	0.625
Presentation Format (PF)	1.000	0.402
Risk (R)	1.000	0.250
Assigned Goals (AG)	1.000	0.650
Time Pressure (TP)	1.000	0.552
Obedience Pressure (OB)	1.000	0.471
Audit Firm Relationships (AFR)	1.000	0.521
Corporate Governance and Internal Control (CG&IC)	1.000	0.540
Accountability (A)	1.000	0.667
Group as Opposed to Individual Information Processing (GvrIIP)	1.000	0.561

Extraction Method: Principal Component Analysis.

Ordering Criterion: Variables are ordered by their communalities within each factor (personal, task, environment).

Source: Output from SPSS program.

5.4. Determining the Number of Factors

The determination of the required number of factors to represent the variables to be examined is based on eigenvalues and the percentage of total variance. Only factors with eigenvalues larger than or equal to one are included in the factor analysis; however, the extraction of components should explain at least 60% of the variance (Malhotra 2010). Initially, the researcher did not achieve the intended outcomes because some variables were

associated with other factors, whereas others were associated with their underlying component to a very limited extent. Therefore, the four variables, the locus of control, assigned goal, cognitive limitation, and information processing, were excluded from further analysis. The researcher repeated the EFA without including these variables. The findings indicate that the analysis is based on three factors, each with eigenvalues over 1, as expected. Furthermore, this three-factor solution accounts for 66.192% of the variance. Table 7 shows the factor extraction process and the cumulative percentage of variance.

Table 7. Factor extraction.

Component	Eigenvalues	% of Variance	Cumulative %
1	7.949	46.756	46.756
2	2.222	13.068	59.824
3	1.082	6.367	66.192
4	0.656	3.857	70.049
5	0.648	3.814	73.862
6	0.565	3.321	77.183
7	0.552	3.248	80.432
8	0.513	3.020	83.451
9	0.434	2.553	86.004
10	0.416	2.447	88.451
11	0.370	2.177	90.628
12	0.320	1.880	92.508
13	0.304	1.789	94.297
14	0.286	1.682	95.979
15	0.254	1.491	97.471
16	0.228	1.343	98.813
17	0.202	1.187	100.000

Source: Output from SPSS program.

5.5. Factor Rotations and Interpretation

Factor loadings provide simple correlations between variables and factors (Malhotra 2010). This matrix displays the loadings of the variables on the extracted components (factors) after the rotation, where each variable is loading only on its own factor. The three factors revealed in this EFA are consistent with the theoretical proposition of this study. The first factor includes self-efficiency, skills, knowledge, familiarity, decision aid, professional skepticism, trust, professional development, experience, and professional commitment, referring to auditor personal factors. The second factor includes corporate governance and internal control, the audit firm's relationship, accountability, and time pressure, referring to environmental factors. The third factor includes the task structure and task complexity, referring to the task factors. Table 8 shows the extracted indicators loaded for each component, and Figure 1 presents the formed factor.

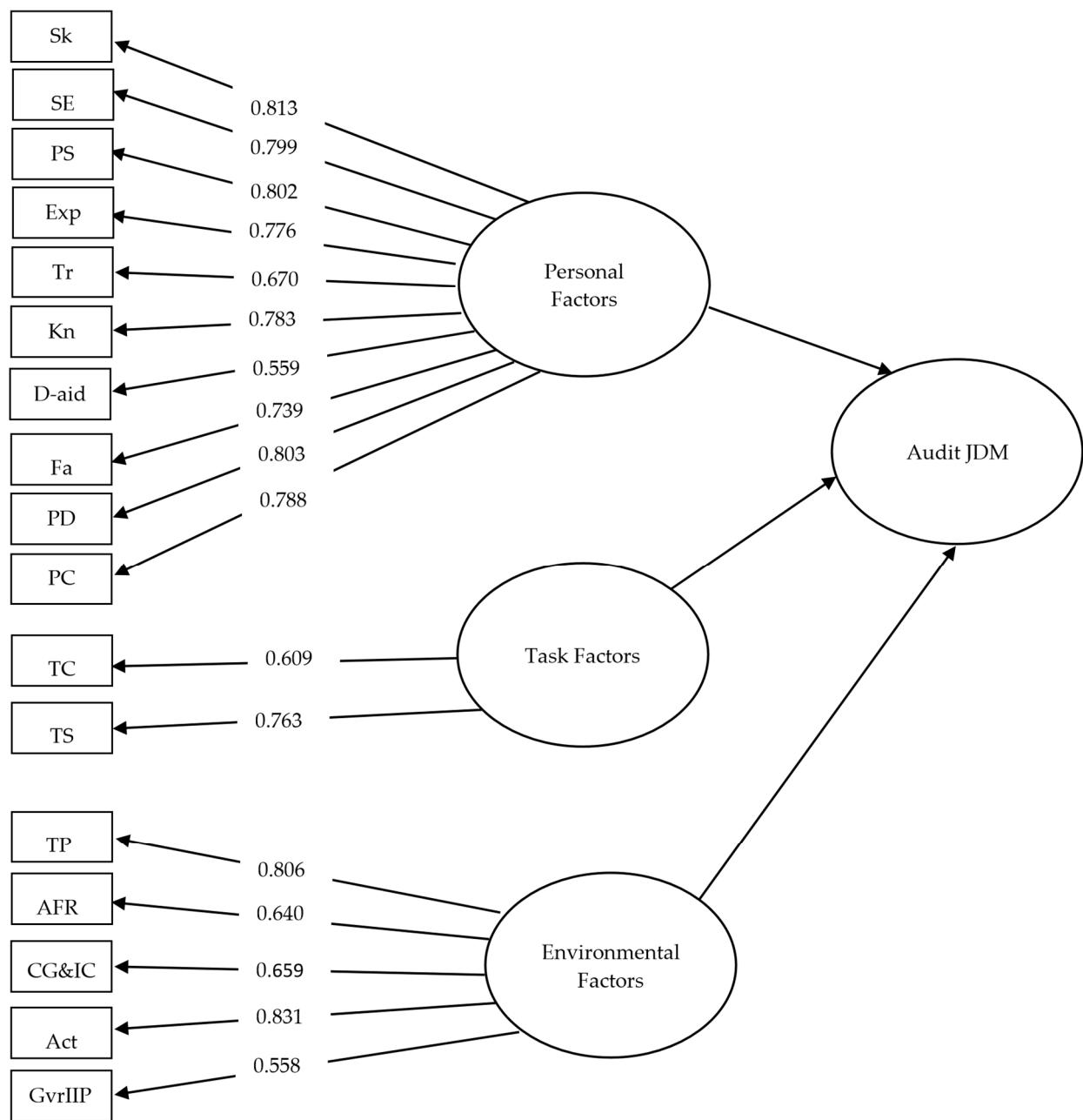


Figure 1. The Formed Factors.

Table 8. Rotated component matrix.

	Component		
	1	2	3
Skills	0.813		
Self-Efficiency	0.799		
Professional Skepticism	0.802		
Experience	0.776		
Trust	0.670		
Knowledge	0.783		
Decision aid	0.559		
Familiarity	0.739		
Professional Development	0.803		
Professional Commitment	0.788		

Task Complexity	0.609
Task Structure	0.763
Time Pressure	0.806
Audit Firm Relationships	0.640
Corporate Governance and Internal Control	0.659
Accountability	0.831
Group as Opposed to Individual Information Processing	0.558
Extraction Method: Principal Component Analysis	
Rotation Method: Varimax with Kaiser Normalization	

a. Rotation converged into 6 iterations

Ordering Criterion: Variables are sorted by their loading on each factor/component (personal, task, environment)

Source: Output from SPSS program.

5.6. Discussion

The research results showed that there were three factors that could affect auditors in considering and carrying out audit JDM. The factors are described below.

1. Auditor personal factors consist of the following variables:

Skill is a critical attribute that auditors must possess in order to operate in a professional capacity. The greater skills and auditing abilities possessed by the auditors, the better audit judgment and opinion will be produced. Hasan and Andreas (2019) and Nugraha and Suryandari (2018) conclude that audit judgment is positively impacted by skills. There is a consistent positive relationship between auditors' skills and audit judgment, with the majority on these studies being conducted in Indonesia. Hence, doing additional research is important in order to generalize these results to other countries and contexts, thereby providing more dependable conclusions on this relationship.

Self-efficacy has an impact on auditors' performance, including their ability to assess audit evidence with the intention of generating more accurate audit judgments. Iskandar and Sanusi (2011) found evidence supporting the notion that auditors who possess a high level of self-efficacy are more likely to exhibit superior audit judgment compared to auditors who have a low level of self-efficacy. There is a consistent positive relationship between self-efficacy and audit judgment in different countries.

Professional skepticism arises when there is uncertainty over the accuracy and reliability of the information being received. Adopting a skeptical approach will enable auditors to gather more reliable evidence, which may then be used to make more informed judgments. However, the impact of professional skepticism differs between countries, with some studies showing a positive relationship and others finding no significant impact. Hussin et al. (2017) provide evidence that as professional skepticism rises, auditors become more cautious and careful when evaluating the likelihood of substantial misstatements and in formulating audit judgments.

Experience allows auditors to identify new risks, remove irrelevant information in judgment, and reach agreement, particularly when auditors collaborate within the same audit team across many audit assignments. Sila et al. (2016) showed that experience improves professional judgment by enhancing their capacity to effectively solve and predict challenges encountered throughout the auditing process. However, other researchers found no significant relationship, suggesting that the duration of an auditor's experience does not have a significant impact on making judgments.

Trust can have an influence on audit JDM through the sharing of advice among trustworthy colleagues, increasing the perceived acceptability of this information, and leading auditors to more strongly incorporate this advice into their JDM processes, making it more consistent and improving the overall quality of audit work. This is supported by Santos and Cunha (2021), who revealed that trust has a significant role in influencing the JDM process of auditors, ultimately leading to a beneficial effect on the final decision.

Knowledge acquired is essential for enabling auditors to make precise and reliable judgments throughout the audit process. This is supported by the findings of Pawitra and Suhartini (2019), who found that knowledge improves audit judgment through identifying financial statement mistakes and creating an effective audit strategy to correct these mistakes. This positive relationship between knowledge and audit judgment is generally consistent across countries, highlighting the importance of continuous learning and education for auditors.

Decision aids are meant to offer a particular solution to a problem or professional advice to help the user make a better judgment. Bonner et al. (1996) and Ng and Tan (2003) support this notion, respectively, by demonstrating that the use of decision aids significantly enhanced auditor judgment.

Familiarity can have an influence on audit JDM through enhancing the performance of the auditor in a complex audit task. This is supported by Asare and McDaniel (1996), who indicated that when the work presented a high level of complexity, familiar preparer reviewers found more conclusion mistakes than unfamiliar preparers and performed better on complicated tasks than unfamiliar preparers.

Professional development through learning has the opportunity to increase the auditors' knowledge base, foster open-mindedness, strengthen their ability to detect fraudulent activities, establish career objectives, and facilitate collaborative learning with peers, ultimately leading to a better performance and audit judgment. Erlina and Muda (2018) explained that professional development positively affects auditor work quality by expanding their abilities and personal value.

Professional commitment makes auditors exhibit distinct qualities such as a firm belief in and acceptance of the objectives of their profession, a willingness to invest substantial effort in developing the profession, and a strong need to preserve their affiliation with the professional community, ultimately leading to better JDM. Lord and DeZoort (2001) and Nasution and Östermark (2012) demonstrated that auditors' judgment would be influenced by higher professional commitment.

2. Task factors consist of the following variables:

Task complexity is ambiguous, unstructured, and difficult to understand. Auditors may exhibit diminished judgment capabilities when faced with more complicated audit assignments due to the presence of linked information that poses challenges in analysis or necessitates a greater amount of data for thorough examination. However, the impact of task complexity differs between countries, with some studies showing a positive relationship and others finding no significant impact. Iskandar and Sanusi (2011) and Cahyaningrum and Utami (2015) found a negative effect of task complexity on audit judgment. As the complexity of the task increases, the auditor's judgment worsens.

The task structure has an influence on audit JDM as auditors can perform better with a more structured task than with a less structured task. This finding is corroborated by Mohd-Nassir et al. (2021) who show that participants performed better with the fraud risk judgment as a structured task than as a less structured task. In contrast, Holt and Loraas (2021) indicate that unstructured data result in better judgment. These differences might be the result of variations in audit practice and techniques used.

3. Environmental factors consist of the following variables:

Time pressure is a variable that affects auditors in evaluating and carrying out audit JDM. Santos and Cunha (2021) found that time budget pressure negatively impacts JDM. These findings indicate that an auditor under time pressure will have difficulties in performing a complete and in-depth analysis of the information, resulting in a difficulty in considering and carrying out audit JDM. This negative relationship between time pressure and audit judgment is generally consistent across countries, highlighting the needs for firms to manage time budgets effectively and consider the quality of judgments made under pressure.

The audit firms' relationships may have an influence on audit JDM, and this is supported by Ng and Tan (2003), who show that the auditor–client relationship impacts JDM

as auditors accept aggressive reporting if the client makes concessions, but this is less likely if there is authoritative guidance for a conservative posture or a strong audit committee on the board to back the auditor.

Corporate governance and internal control may have an influence on audit JDM. This is supported by DeZoort and Salterio (2001), who found that the experience and knowledge of audit committee members has an impact on judgment when there is a conflict between auditors and management over a particular accounting policy selection.

Accountability requires auditors to display enhanced cognitive effort and demonstrate increased accuracy in their judgment processes. In accordance with Mala et al. (2018) the study revealed that accountants with more accountability use more relevant information and make better JDM than non-accountable ones, highlighting the importance of the responsibilities in the auditing process.

Group as opposed to individual information processing has an impact on audit JDM as individuals tend to have more difficulties in processing information compared to groups, especially when the amount of information increases. Stocks and Harrell (1995) and Ahlawat (1999) have shown evidence that groups have superior judgment compared to individuals, whereas Johnson (1995) indicates that groups may not have the ability to carry out good JDM. Therefore, the degree of its effectiveness might differ based on the culture of audit firms towards cooperation and working together.

Audit firms should acknowledge the importance of auditors' skills, knowledge, self-efficiency, and trust in their audit teams. Allocating resources towards training and professional development may strengthen those variables and improve audit judgment. Additionally, efficiently allocating time resources and ensuring auditors have the assistance and resources to address time constraints is crucial for maintaining audit quality, whereas promoting a culture of professional skepticism, accountability, and cooperation within audit teams may enhance the quality of JDM. In summary, despite similarities, personal, task, and environmental factors affect audit judgment differently across countries. By recognizing these differences and similarities, it is possible to develop audit procedures and regulatory frameworks that are more effective, which will eventually result in an improvement in audit quality.

6. Conclusions

The purpose of this study was to analyze the factors that affect the audit JDM of Lebanese auditors. The key findings reveal that auditors' JDM is influenced by three main factors: personal, environmental, and task-related variables. However, auditors' personal factors, which consist of self-efficiency, skills, knowledge, familiarity, decision aid, professional skepticism, trust, professional development, experience, and professional commitment, are the dominant factors that affect auditors in making audit JDM according to the perception of auditors in Lebanon.

These findings have significant implications for Lebanese audit firms seeking to enhance their audit practices and improve the quality of their services. First, Lebanese audit firms should prioritize the continuous training and development of their auditors. This includes enhancing their skills, knowledge, and self-efficacy. Offering opportunities for learning and professional growth can lead to more competent auditors who are more capable of making accurate judgments. In addition, encouraging auditors to adopt a skeptical approach can contribute to the reliability of audit evidence. For instance, audit firms can foster professional skepticism by providing regular training on critical thinking, emphasizing the importance of independence, promoting a culture that values questioning and rewarding auditors for thorough and challenging examinations rather than simply completing tasks. Encouraging open communication channels and facilitating discussions about challenging issues can also contribute to a mindset of healthy skepticism within the auditing team. Furthermore, it create a workplace culture that promotes trust among auditors and their colleagues, which may result in more consistent and improved JDM processes.

Second, Lebanese audit firms should be mindful of the impact of corporate governance, internal control, and auditor–client relationships on audit JDM. Ensuring transparent and effective governance structures, as well as maintaining healthy client relationships, can positively influence auditors' judgments. In addition, recognizing the detrimental effects of time pressure on JDM, auditors should implement strategies to manage and mitigate such pressures. Adequate time budgeting and workload management can lead to more thorough analysis and better audit judgments. Finally, when assigning audit tasks, Lebanese audit firms should consider the level of structure and complexity involved. Structured tasks may lead to better JDM outcomes, particularly for auditors facing complex assignments.

This study has several limitations that necessitate consideration for future research. First, this research samples external auditors from Lebanon's various audit companies. Thus, future research may involve public and internal auditors. Second, this research only included external auditors in one country. To confirm this study's conclusions, future studies may conduct cross-country analyses to improve the generality and accuracy of the study's findings. Third, this research included only some participants from one country. This may introduce potential biases because the participants may tend to provide responses that align with the researchers' expectations. Consequently, this study can serve as an initial guideline for further research. Fourth, this research uses questionnaires exclusively. Interviews or case study questions may be used in future research to further understand auditor professional judgment. Finally, this study only analyzed the factors that impact audit JDM; future studies may examine their relationships with audit JDM.

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Conflicts of interest: The authors declare no conflicts of interest.

Note

- ^{1.} Due to the uneven distribution of response times, the sample was separated based on the time of response in a further examination. The initial group comprises individuals who provided a response within the initial two-month period after receiving the link via email and WhatsApp (June–July 2023). The subsequent group encompasses those who responded during the subsequent two-month period (August–September 2023). Lastly, the final group consists of individuals who responded within the last two months following the reminder (October–November 2023). This technique is predicated on the assumption that individuals who reply late exhibit a response behavior that is comparable to those who do not respond at all. The two-tailed t-test is used to compare the outcomes of the initial and final groups. It indicates that out of the 25 variables examined, only two variables exhibit differences in response patterns at a significance level of 5%. Thus, the further examination verifies that the sample does not contain a substantial unit non-response bias.

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