



Impact of personal, task, and environmental factors on auditor's judgment and decision-making: Evidence from Lebanese certified public accountants

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Abstract

This study aims to examine how audit judgment and decision-making (JDM) is impacted by personal variables, task factors, and environmental factors. Audit judgment is crucial for forming opinions on financial statements since it is not feasible to conduct an audit on every type of evidence. We sent a questionnaire to all auditors who are members of the Lebanese Association of Certified Public Accountants (LACPA) in order to collect the data. Before analysis, we collected and completed 310 questionnaires for the study. We employed various statistical analyses, such as multiple linear regression analysis, data quality tests, and regression assumptions tests, to examine the relationships between different factors and JDM. The findings of the study showed that there is a positive association between factors like professional skepticism, the use of decision aids, professional commitment, the structure of tasks, time pressure, and the effectiveness of corporate governance/internal controls, and audit JDM. Conversely, adverse correlations emerge between factors like knowledge levels, task complexity, and the level of accountability, and audit JDM. However, there were no statistically significant correlations between audit JDM and factors including skills, experience, familiarity, trust, professional development, relationships with audit firms, and group or individual information processing. By being aware of and recognizing these effects, audit companies in Lebanon may put strategies in place to improve the quality of JDM and the trustworthiness of audit results.

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1. Introduction

The auditing and accounting community has acknowledged the judgement and decision-making (JDM) of professionals, including standard setters, auditors, managers, accountants, and financial specialists, due to the critical nature of their decisions (Mala & Chand, 2015). However, JDM in audit has been getting more and more attention for several reasons, including the fact that it examines each stage of the audit process in depth, incorporates varied interests, and affects the quality and type of decisions made (Sila, Subroto, Baridwan, & Rahman, 2016).

The failure of auditors causes many firms to fail or become insolvent, which undermines the accuracy of financial statements, and mandates the use of audit judgment as an essential process in the preparation of audit reports (Aida, 2021). To prevent the occurrence of repeated instances of audit failure, auditors must

demonstrate professionalism in their work because the reliability of the audited financial statements is dependent on the auditor's ability and accuracy in making professional judgment (Gunawan & Indarto, 2022). Thus, due to the impracticality of auditing all sources of evidence, audit judgments becomes critical (Krida & Pontjoharyo, 2024). To carry out this process, auditors must rely on their JDM, which may be influenced by several factors, such as their own personal factors, the nature of the task at hand, and the surrounding environment.

According to previous research by Halim, Jaafar, Janudin, and Idris (2018) auditors' JDM practices could be affected by a number of factors. According to Mala and Chand (2015) there are two main types of JDM research. One type examines the factors that contribute to high or poor JDM quality, while the other type examines the extent of JDM at the individual or group level. Their review study primarily included auditing studies that studied the factors impacting JDM from personal, task, and environmental perspectives. In addition, Moustafa Abdallah, Ghanem, and Hijazi (2024) examined the effects of task, personal, and environmental factors on JDM in audit firms in Lebanon and indicated that personal factors are the most significant factor affecting auditors' JDM. Therefore, recognizing character traits that positively correlate with judgment may improve cognitive abilities, performance, and outcomes.

Several studies have examined how these factors affect JDM (Hendar & Harahap, 2023; Iskandar & Sanusi, 2011; Sastri, Saputra, & Apsari, 2019; Sila et al., 2016). However, the inconsistencies hindered the generalization of the JDM impacting factors' findings. This study's inconsistent results highlight the complexity of the factors' relationships with JDM in auditing and show that more research is needed to understand how these factors affect auditors' JDM in Lebanon. By gaining a comprehensive understanding of these factors, auditors can increase the value of their work and enhance their JDM abilities (Sukiswo & Rachman, 2023). This study aims to explore the various factors that impact an auditor's JDM by answering the following three questions: (1) How do auditors' personal factors affect their JDM in audit firms in Lebanon? (2) How do task factors affect JDM of auditors in audit firms in Lebanon? (3) How do environmental factors affect JDM of auditors in audit firms in Lebanon?

The study has made significant theoretical contributions. By focusing on auditors in Lebanon, this study contributes to the current body of literature regarding various factors that impact the JDM in audit by investigating auditors' personal factors, the nature of the task at hand, and environmental factors. Furthermore, from a practical standpoint, this research is significant because it helps audit firms in understanding the effects of factors with respect to their occupation and in developing standards for evaluating the audit environment when working with clients. Furthermore, the study provides useful information for regulatory authorities like the Lebanese Association of Certified Public Accountants (LACPA), which they may use to improve industry efficiency and professionalism. As a result, understanding the cognitive processes linked to human JDM is critical to improving audit procedures and problem-solving strategies, as well as the overall financial market.

Six distinct sections organize the study. The first section provides background information and acts as an introduction to the study. In section two, the notion of audit judgment is discussed. In section three, a comprehensive review of the existing literature and hypothesis development is presented. The fourth section emphasizes the research method. Section five reveals the findings and their discussions. Finally, the study's limitations, recommendations, conclusions, and suggestions for further research are included in section six.

2. Theoretical Background

Behavioral accounting theory, particularly social cognitive theory (SCT), provides the basis for audit judgment theory (Sastri et al., 2019). Consequently, we will present this theory in this section, with JDM following closely behind.

2.1. Social Cognitive Theory

The SCT is a useful framework for understanding and enhancing audit JDM (Bandura, 1977). In this context, cognitive means having any kind of information, opinion, or belief, including awareness of one's own and other people's environments (Winanto & Saputro, 2019). Organizations may help their auditors improve their JDM, audit quality, and the trust of investors by encouraging self-efficacy, feedback from others, observational learning, and a culture of continuous development (Sukiswo & Rachman, 2023). Therefore, the auditor's knowledge and experience, shaped by their social and cognitive processes in information analysis, determine the quality of their audit judgment (Pawitra & Suhartini, 2019).

2.2. Judgment and Decision-Making

Judgment is an individual's perceptive ability to formulate JDM based on the data acquired and accessible (Sukiswo & Rachman, 2023). The process of arriving at a conclusion, opinion, or estimate regarding an item, event, state, or other phenomenon is our definition of judgment, often perceived as the act of predicting events or evaluating the current state of situations before making decisions (Bonner, 1999). A decision is a final choice on how to proceed with a problem (Bonner, 1999). Nonetheless, judgment will follow the consideration of

circumstances and assumptions (Hamdam, Jusoh, Yahya, Jalil, & Abidin, 2021). Therefore, JDM is an essential auditing application (Sila et al., 2016).

Krida and Pontjoharyo (2024) argue that there are three levels of audit judgment evaluation: levels of materiality, risk, and going concern, which refer to the continuation of the business. Auditing uses the accounting-derived concept of materiality, which includes improved audit quality as a key component (David & Abeysekera, 2021). Financial statement auditors take materiality into account while developing their audit strategy and conducting their examinations (International Auditing and Assurance Standards Board (IAASB), 2021) and auditors must possess sufficient financial skills to plan, execute, and make materiality judgments in order for audited financial statements to provide a reasonable guarantee that no substantial misstatements or omissions are present (David & Abeysekera, 2021).

A crucial part of the auditing JDM process is evaluating audit risk, particularly material misstatement risk, as the assessment of risks relies on professional judgment rather than an exact quantification (International Auditing and Assurance Standards Board (IAASB), 2021). Moreover, an auditor's responsibilities include assessing the viability of a business's operation (going concern) and verifying the accuracy of the financial reports (Nugraha & Suryandari, 2018). Decisions about a company's going concern should be based on a thorough evaluation of all relevant factors. If an auditing firm finds substantial doubt about a company's capacity to stay in business, the auditor has a responsibility to evaluate how this will affect the financial statements and whether sufficient disclosures have been made (International Auditing and Assurance Standards Board (IAASB), 2021).

3. Literature Review and Hypothesis Development

This section conducted an analysis to investigate the factors that influence JDM and generated hypotheses. Personal, task, and environmental factors are the three main domains in the literature.

3.1. Auditor Personal Factors and Judgment and Decision-Making

Several personal factors impact auditors' JDM during audits (Moustafa Abdallah et al., 2024). These factors include skills, self-efficacy, professional skepticism, experience, trust, knowledge, decision aids, familiarity, professional development, and professional commitment. This study focuses on investigating how these factors impact audit JDM. Thus, a hypothesis is formed, and a literature review is presented on the basis of these personal factors.

Skills have a substantial effect on enhancing audit judgment (Akib & Dharmawati, 2022; Nugraha & Suryandari, 2018; Sastri et al., 2019). These studies support the idea that an auditor's skill set, and audit judgment are positively correlated. On top of that, most studies show a favorable correlation between self-efficacy and audit judgment quality (Atmaja & Sukartha, 2021; Erlina & Muda, 2018; Iskandar & Sanusi, 2011; Lee, Su, Tsai, Lu, & Dong, 2016; Tandean, Pagalung, & Syamsuddin, 2022). Zelumawani and Suputra's (2021) research, on the other hand, found a negative correlation between audit judgment and self-efficacy. While Ghani, Respati, Darsono, and Yusoff (2019) discovered that audit judgment is unaffected by self-efficacy.

Research have demonstrated a positive correlation between audit JDM and professional skepticism (Atmaja & Sukartha, 2021; Hussin, Iskandar, Saleh, & Jaffar, 2017; Rose, 2007). Auditor skepticism makes them better at identifying aggressive reporting and deliberate misstatements (Rose, 2007). Hussin et al. (2017) and Atmaja and Sukartha (2021) found that when individuals are more skeptical, they are more cautious when evaluating the possibility of major mistakes and making audit JDM. Alternatively, Nugraha and Suryandari (2018) and Ghani et al. (2019) did not find any correlation between audit judgment and professional skepticism.

In addition, various studies by Rose (2007); Aida (2021); Iskandar and Sanusi (2011); Mala, Chand, and Patel (2018); Sila et al. (2016); Siregar (2023) and Tandean et al. (2022) have shown a positive and statistically significant correlation between auditor experience and audit JDM. Auditors who possess greater experience demonstrate higher capacities for making JDM by improving their abilities to predict and solve challenges encountered during the auditing process effectively. However, other studies (Pawitra & Suhartini, 2019; Pravitasari & Hirmantono, 2020) found no significant correlation between audit judgement and experience.

Furthermore, many studies have examined how trust affects audit judgment, with contradictory conclusions drawn. Although Rose (2007) suggests that auditors' judgment could be better with less trust since aggressive reporting gets more attention, Kerler III and Brandon (2010) contend that auditor trust significantly affects audit JDM. Furthermore, Kadous, Leiby, and Peecher (2013) and Santos and Cunha (2021) conducted empirical studies that offer evidence supporting the notion that trust enhances auditor judgment, resulting in more reliable and advantageous decision-making.

Additionally, a large body of prior research supports the idea that knowledge is significantly associated with audit JDM in a positive way (Hendar & Harahap, 2023; Sastri et al., 2019; Sila et al., 2016). For all studies, auditors with more extensive knowledge could make better audit judgments. On the other hand, Halim et al. (2018) indicated that there is no correlation between knowledge acquisition and audit judgment. Furthermore, prior research has shown that decision aids have varying effects on audit judgment depending

on the tool used, with the reliability of the tool potentially influencing these effects (Arnold, Collier, Leech, & Sutton, 2004; DeZoort, Harrison, & Taylor, 2006; Lowe, Reckers, & Whitecotton, 2002; Ng & Tan, 2003).

As well, audit judgment is impacted by familiarity. When it came to complex tasks, Asare and McDaniel (1996) found that familiar preparer reviewers performed better than unfamiliar preparers. However, there was no correlation between task familiarity and audit judgment performance (Iskandar & Sanusi, 2011). Additionally, Lee et al. (2016) and Erlina and Muda (2018) found that professional development improves audit judgment.

Lastly, research by Lord and DeZoort (2001) and Nasution and Östermark (2012) indicates that auditors who are highly committed to their work have unique characteristics that influence their JDM. These include a strong sense of professional purpose and a strong connection to the professional network. Finally, Lord and DeZoort (2001) and Nasution and Östermark (2012) discovered that auditors who possess a high level of professional commitment demonstrate unique characteristics that significantly influence their decision-making. These qualities include a firm belief in professional objectives and a strong sense of belonging to the professional community.

Ultimately, this literature review offers a thorough examination of the personal factors that auditors possess and their impact on JDM in the field of auditing. The inconsistent results of the examination allow for formulation of a hypothesis.

H1: There is a significant relationship between the auditor's personal factors and audit JDM.

3.2. Task Factors and Judgment and Decision-Making

Several task factors impact auditors' JDM during audits (Moustafa Abdallah et al., 2024). These factors include task complexity and task structure. This study focuses on investigating how these factors impact audit JDM. This study formulates a hypothesis and presents a literature review based on these task factors.

The amount of irrelevant data and considerable ambiguity are two aspects that affect task complexity; these characteristics may make it difficult and complicated for auditors with limited abilities to complete the task (Zelamewani & Suputra, 2021), which can lead to improper audit judgments in certain situations. Previous studies (Aida, 2021; Gunawan & Indarto, 2022; Iskandar & Sanusi, 2011; Santos & Cunha, 2021; Siregar, 2023) have corroborated this negative correlation. However, other research has indicated that task complexity can have a significant and positive impact on audit judgment. For instance, Sastri et al. (2019) and Zelamewani and Suputra (2021) found evidence supporting this relationship. In contrast, Pawitra and Suhartini (2019) and Pravitasari and Hirmantono (2020) discovered that there was no correlation with audit judgment. We could attribute this result to the successful implementation of the audit process or clear technical guidelines that auditors adhere to.

On the other hand, Duh, Chang, and Chen (2007); Mohd-Nassir, Mohd-Sanus, Ghani, Johari, and Solichin (2021) and Holt and Loraas (2021) found that audit JDM is influenced by task structure. Duh et al. (2007) discovered that a task with less structure results in a lower JDM, as it varies significantly depending on the reviewer's choice. In contrast, Mohd-Nassir et al. (2021) discovered that structured risk judgment for fraud was superior to unstructured. Nevertheless, as Holt and Loraas (2021) highlighted, judgments made using unstructured data tend to be more cautious.

In light of the conflicting findings in the existing literature on audit JDM and task factors, we formulate the following hypothesis:

H2: There is a significant relationship between task factors and audit JDM.

3.3. Environmental Factors and Judgment and Decision-Making

Several environmental factors impact auditors' JDM during audits (Moustafa Abdallah et al., 2024). These factors include time pressure, audit firm relationships, corporate governance and internal control, accountability, and group as opposed to individual information. This study focuses on investigating how these factors impact audit JDM. Therefore, we formulate a hypothesis and present a literature review based on these environmental factors.

Time pressure may affect Audit JDM, and the outcomes may differ. Previous research (Akib & Dharmawati, 2022; Hussin et al., 2017; Santos & Cunha, 2021) has demonstrated a negative impact on audit judgment. Based on these results, it is unlikely that an auditor working under time pressure could conduct a comprehensive analysis of the data and reach an audit JDM. However, Tandean et al. (2022) showed that auditors' judgment improves when they are under time pressure. Conversely, Hendar and Harahap (2023) discovered that time pressure did not impact audit judgement.

In addition, Ng and Tan (2003) and Kulset and Stuart (2018) found that audit firm relationships impact audit JDM. When auditors negotiate an audit change that affects the client's ability to meet analysts' estimates, they look at the outcome in terms of the client's audit committee (Ng & Tan, 2003). The auditor-client relationship has an impact on JDM. Whereas, Kulset and Stuart (2018) explain how variables, including the complexity of accounting rules, past negotiating experiences, and the nature of the auditor-client relationship, affect the ways in which auditors agree on negotiation tactics.

The importance of company governance and internal controls is critical in understanding the ways in which control systems and organizational structure impact auditors' JDM procedures. Mala and Chand (2015)

emphasize the importance of corporate governance and internal control in shaping an organization’s overall control environment and risk judgment. DeZoort and Salterio (2001) argue that audit committee members’ competence and experience help resolve auditor-management disagreements, especially over accounting policies. This emphasizes the need for qualified and experienced audit committee members to ensure excellent JDM. However, Jennings, Pany, and Reckers (2006) show how strong corporate governance systems hold auditors responsible for their decisions and actions.

Accountability is also critical for understanding the ways in which different stakeholders hold auditors and other decision-makers accountable for their outcomes. According to DeZoort et al. (2006) found that, auditors’ judgment was better and there was better and there was less variation when accountability pressure was high. According to Mala et al. (2018) accountable accountants utilize more relevant information and make better JDM. Lastly, there are contradictory results in the literature when considering audit judgments based on group vs. individual information processing. Regardless of the amount of knowledge available, Stocks and Harrell (1995) and Ahlawat (1999) discovered that groups always outperform individuals regarding making JDM. On the other hand, Johnson (1995) offers contradictory findings, showing that auditors’ biases impact both their individual and group judgment revisions. Furthermore, Trotman, Tan, and Ang (2011) emphasized the substantial effect of JDM on behavior.

Overall, the contradictory findings in the current research on environmental factors and audit JDM demonstrate the challenges auditors face in adapting to various environmental pressures while performing JDM. As a result, the following hypothesis is formulated:

H3: There is a significant relationship between environmental factors and audit JDM.

4. Research Method

This study explored the effects of personal, task, and environmental factors on auditors’ JDM in Lebanon using quantitative data gathered via a questionnaire and multiple regression analysis.

4.1. Participants and Method of Data Collection

All LACPA members from audit companies in Lebanon, ranging in size, were included in the study. We delivered the survey to them via email and WhatsApp in both English and Arabic formats, allowing them to select their preferred language. A total of 310 completed surveys were received from 1700 that were sent out after many phone calls and three reminders. In terms of sample size, the suitable and representative sample satisfied (Conroy, 2016) recommendations of a 95% confidence level and a 5% margin of error. Finally, the data were entered, encoded, and analyzed using the statistical software SPSS 25.0 (Statistical Package for Social Sciences).

4.2. Variables

All of the study variables’, together with their indicators and operational definitions, are listed in Table 1.

Table 1. Variable definitions and indicators.

Variables	Definition	Indicators
Skills (SK)	Refer to skills or abilities that some people have that others may not have (Sastri et al., 2019).	The ability to communicate clearly and effectively with the client. Making an extensive use of audit aid software. Having adequate certification and training (Nugraha & Suryandari, 2018).
Self-efficacy (SE)	Beliefs about a person’s ability to perform a certain task (Bandura, 1977).	Confidence in accomplishing difficult tasks. The belief that effort and hard work to perform well on the audit task (Pawitra & Suhartini, 2019).
Professional skepticism (PS)	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 & Suryandari, 2018).
Experience (Exp)	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 & Suryandari, 2018).
Trust (Tr)	Trusting that other people can take action to improve the first is a key component of JDM, which helps keep things clear when co-workers offer advice (Anderson & Narus, 1990).	Allowing my manager to decide on important audit matters. Trusting manager professional judgment. My fear of what my immediate superior might do to me at work. Reporting to my manager’s mistakes I have made even if they could damage my reputation (Mayer &

Variables	Definition	Indicators
		Gavin, 2005).
Knowledge (Kn)	Fact or condition of having full understanding as a result of education and practice (Sastri et al., 2019).	General knowledge of the entity environment. Knowledge about accounting and auditing standards. Passing the Dip IFRS exam (Nugraha & Suryandari, 2018).
Decision aid (D-aid)	The knowledge of many decisionmakers is pooled in software-intensive systems (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).
Familiarity (Fa)	Relevant to the user's level of expertise and familiarity with the work at hand (Arnold et al., 2004).	Performing similar tasks in the past. Familiarity with the task (Iskandar & Sanusi, 2011).
Professional development (PD)	An increase in the quality of audit reports, as well as improvements to auditing abilities, work procedures, and individual growth (Erlina & 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 (PC)	Pertains the bond or strength that an individual feels for their work (Nasution & Östermark, 2012).	Proud to be in the accounting profession. Feeling responsibility to the accounting profession to continue in it (Meyer, Allen, & Smith, 1993).
Task complexity (TC)	Refers to difficulties encountered during auditing as a result of limitations in the ability, memory, and analysis of problems (Umar, Sitorus, Surya, Shauki, & Diyanti, 2017).	The task effort into coming up with the best possible solution. The challenging and demanding of the task (Umar et al., 2017).
Task structure (TS)	Refers to the level of task and activity specification (Simon, 1973).	My firm provides clear procedures on the required audit tasks and documentation (Duh et al., 2007).
Time pressure (TP)	Occurs when the time allotted for an audit program falls short of what is required to complete the task (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).
Audit firm relationships (With outside entities) (AFR)	Professional accounting firms engage in customer and labor competition, maintain formal and informal relationships with auditees, and employ value experts (Bratten, Gaynor, McDaniel, Montague, & Sierra, 2013).	Audit firms' relationship with their clients. Audit firm relationship with other participants (External valuation specialists) (Bratten et al., 2013).
Corporate governance and internal control (CG&IC)	Incorporate risk judgment and establish the tone for the control environment (Sharma et al. 2008 cited by Mala and Chand (2015).	Minimal compliance with regulatory corporate governance requirements. Strong compliance with regulatory corporate governance requirements (Jennings et al., 2006).
Accountability (A)	It entails decision-makers being accountable to stakeholders—including potentially conflicting interests among boards of directors, investors, management, and regulators (Mala & 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 (GvrIIP)	Analyzing how well individual or groups process data (Mala & Chand, 2015).	Group participation in audit task. Individual participation in audit task (Mala & Chand, 2015; Stocks & Harrell, 1995).
Judgment and	Judgment is the process of	In providing judgment on audit results, auditors

Variables	Definition	Indicators
decision-making (JDM)	cognition of decision-making that entails an ongoing search for information, taking actions, and accepting more information (Krida & Pontjoharyo, 2024).	must consider materiality at the financial report level. In planning a judgment on audit results, the auditor must consider materiality at the account balance level. In providing judgment on audit results, auditors must consider the inherent risks associated with the account balance. In providing judgment on audit results, auditors are required to determine control risk in a particular account balance. In providing judgment on audit results, auditors must consider the going concern of a company. The determination of audit judgment is based on management's ability to assess going concern of the company (Aida, 2021).

4.3. Analytical Method

This study analyzed the data using a variety of statistical methodologies. Initially, descriptive statistics were run to shed light on the companies and participants' demographics. The dependability of the collected data was further ensured using Cronbach's Alpha, a reliability metric, to evaluate the study instrument's internal consistency. The next step was to use the Pearson Product Moment Correlation for validity assessment, which determined the credibility of the study results. We also reviewed the assumptions supporting the regression model to ensure the validity of the subsequent regression analysis. These presumptions include normality, multicollinearity, independence of error terms, homoscedasticity, and linearity. Finally, we administered a number of statistical tests, including regression analysis, coefficient of determination (R-square), and F statistics, to assess the hypotheses.

5. Results and Discussion

This section presents the study's descriptive data, analyzes the results, and delves into the research hypothesis.

5.1. Descriptive Statistics

Male respondents accounted for 50.3% of the total, and female respondents for 49.7%. Those between the ages of 35 and 44 made up the biggest demographic of respondents, with 30% of them being auditors. Several categories distribute the respondents' years of auditing experience. The largest group, comprising 36.5% of the total, has about 21 years of experience. However, respondents' categorize their companies in various ways. The most significant share of respondents (33.2%) came from individual enterprises. Table 2 summarizes the demographic information provided by the respondents.

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%
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%

5.2. Data Quality Tests

At this point, the research examined validity and reliability, which are two important parts of data quality. The Cronbach's Alpha coefficient was used to evaluate reliability, whereas the Pearson Product Moment Correlation coefficient was used to verify validity. These steps ensure that the study's results are consistent and accurate.

5.2.1. Reliability Measure (Cronbach's Alpha)

The reliability test was carried out using Cronbach's alpha, a coefficient of alpha ranging from 0 to 1. A value of 0.7 or above shows that the scale questions assess the same construct (Saunders, Lewis, & Thornhill, 2012). According to Table 3, the instrument has strong and adequate internal consistency, since all items have Cronbach's alpha values greater than 0.9.

Table 3. Reliability testing.

Cronbach's alpha	Cronbach's alpha based on standardized items	N of items
0.943	0.947	46

5.2.2. Validity Test

The validity of a questionnaire is defined as its capacity to provide reliable results when administered to the target population (Saunders et al., 2012). This study use the Pearson Product Moment Correlation (Fowler, 1987) to examine how each item's score relates to the total score. To be valid, an item's value must be positive, and the r count must be higher than the r table. If the count of r is lower than the table of r, we deem this item invalid (Silvia & Irwansyah, 2023). Table 4 shows the results of the Pearson correlation test: all 41 items were found to be greater than the required value of 0.113, proving that the questionnaire was valid.

Table 4. Validity test results.

Variable	Item	Pearson correlation
Skills	Sk1	0.732
	Sk2	0.653
	Sk3	0.662
Self-efficacy	SE1	0.657
	SE2	0.710
Professional skepticism	PS1	0.644
	PS2	0.694
Experience	Exp1	0.645
	Exp2	0.685
Trust	Tr1	0.602
	Tr2	0.390
	Tr3	0.554
	Tr4	0.635
Knowledge	Kn1	0.690
	Kn2	0.687
	Kn3	0.538
Decisionaid	D-aid1	0.653
	D-aid2	0.307
	D-aid3	0.426
Familiarity	Fa1	0.606
	Fa2	0.734
Professional development	PD1	0.685
	PD2	0.638

Variable	Item	Pearson correlation
	PD3	0.713
Professional commitment	PC1	0.683
	PC2	0.702
Task complexity	TC1	0.706
	TC2	0.625
Task structure	TS1	0.573
Time pressure	TP1	0.318
	TP2	0.368
Audit firm relationships	AFR1	0.480
	AFR2	0.499
Corporate governance and internal control	CG&IC1	0.454
	CG&IC2	0.496
Accountability	A1	0.264
	A2	0.541
	A3	0.528
Group as opposed to individual information processing	GvsIIP1	0.544
	GvsIIP2	0.408
Judgment and decision-making	JDM1	0.300
	JDM2	0.247
	JDM3	0.305
	JDM4	0.299
	JDM5	0.380
	JDM6	0.275

5.3. Regression Assumptions Tests

The regression model relies on five assumptions that need to be tested: normality, multicollinearity, independence of error terms, homoscedasticity, and linearity (Ho, 2013; Keith, 2014). Scatter plots of standardized residuals vs. standardized predicted values revealed linearity and homoscedasticity. The homoscedasticity assumption is satisfied because the variation of JDM remains consistent across different scores (Ho, 2013) as shown in Figure 1, which also shows that there is a good linear correlation between the independent variables and JDM. As the independent variables increase, JDM also increases (Ho, 2013).

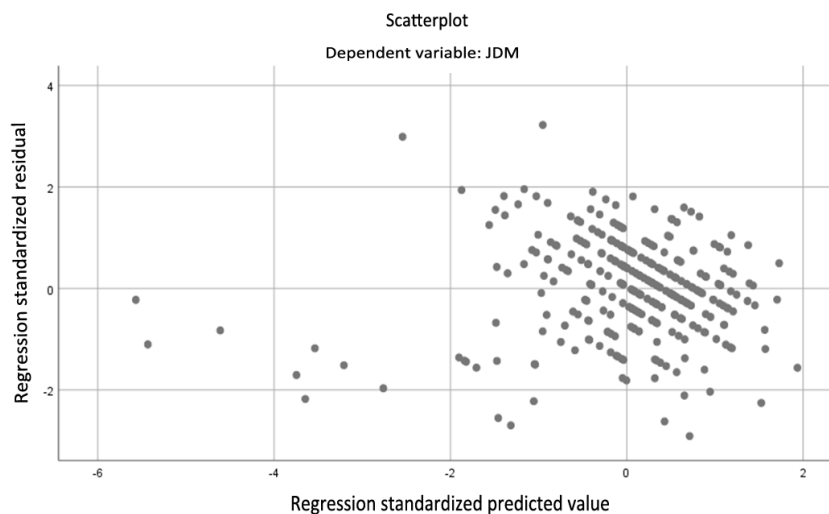


Figure 1. Testing linearity and homoscedasticity assumptions.

We use the Durbin-Watson statistic to test the assumption of error independence. Ho (2013) suggests that if the value is between 1.5 and 2.5, it indicates that the data does not have linear autocorrelation. Table 5 shows that the outcome for JDM is 1.919. Since the Durbin-Watson statistics fall within the threshold limits of $1.5 < d < 2.5$, it may be inferred that the adjacent error terms do not exhibit serial correlation.

Table 3. Results of the coefficient of determination (R²) and Durbin-Watson.

Model summary					
Model	R	R square	Adjusted R square	Std. error of the estimate	Durbin-Watson
JDM	0.723	0.522	0.495	0.456	1.919

Normality can be identified through the graph of a normal P-plot and examination of the residual values when approximating a normal curve (Keith, 2014). Figure 2 shows that the dots are close and not distributed from the straight line, which meets the normality assumption.

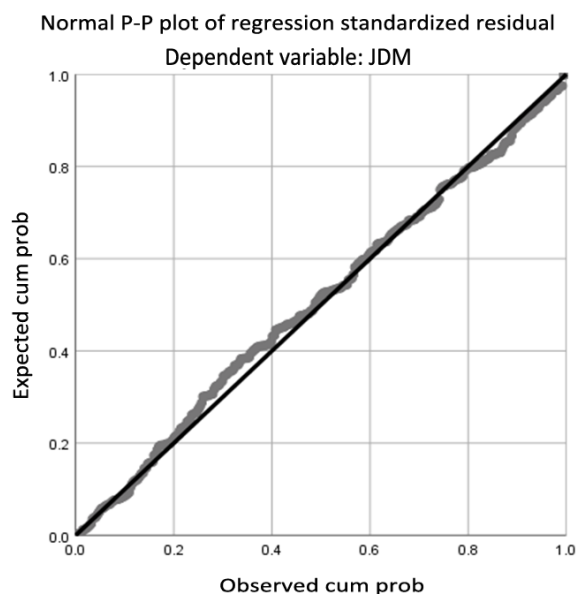


Figure 1. Testing normality assumptions.

In order to assess the presence of multicollinearity, it is necessary for the tolerance value to exceed 0.10 and for the variance inflation factor (VIF) to be below 10 (Ho, 2013). As shown in Table 6, the VIF is less than 10 and the tolerances of all variables are greater than 0.10. This study’s regression model does not include any multicollinear variables.

5.4. Regression Analysis

Multiple regression is an effective tool for studying the interplay between a list of independent factors and a dependent variable (Landau & Everitt, 2003). We created the following regression model to explore the association of personal, task, and environmental variables with JDM, based on the findings of the multiple linear regression analysis in Table 6.

$$JDM = 1.781 + (0.057) Sk + (0.006) SE + 0.396PS + (0.102) Exp + 0.015Tr + (0.237) Kn + 0.131D-aid + 0.109Fa + (0.040) PD + 0.157PC + (0.125) TC + 0.250TS + 0.072TP + 0.074AFR + 0.095CG\&IC + (0.128) A + (0.037) GvrIIP + \epsilon$$

We used the model to examine the relationship between JDM and the independent factors. The coefficients, which are integers in parentheses, show the intensity and direction of the correlations between each independent variable and JDM. This model consists of several independent variables that reflect personal, task-related, and environmental factors. This model may provide a more comprehensive understanding of JDM variables’ than previous studies, which may have concentrated on a restricted number of variables. These factors have also been noted by Lebanese audit firms. Instead of just identifying them, this research investigates their relationship within a formalized model, which is different from past studies. Based on the provided model, we interpret the findings as follows:

Table 4. Multiple linear analysis test, t-test, and multicollinearity test results.

Model		Unstandardized coefficients		Standardized coefficients	T	Sig.	Collinearity statistics	
		B	Std. error	Beta			Tolerance	VIF
JDM	(Constant)	1.781	0.203		8.761	0.000		
	Skills	-0.057	0.065	-0.067	-0.884	0.378	0.288	3.468
	Self-efficacy	-0.006	0.059	-0.007	-0.095	0.925	0.292	3.425
	Professional scepticism	0.396	0.043	0.492	9.099	0.000***	0.560	1.787
	Experience	-0.102	0.055	-0.123	-1.846	0.066	0.369	2.712
	Trust	0.015	0.051	0.017	0.288	0.774	0.482	2.075
	Knowledge	-0.237	0.065	-0.273	-3.617	0.000***	0.287	3.487
	Decision aid	0.131	0.047	0.142	2.796	0.006**	0.635	1.574
	Familiarity	0.109	0.058	0.128	1.895	0.059	0.356	2.809
	Professional development	-0.040	0.074	-0.045	-0.538	0.591	0.233	4.301
	Professional commitment	0.157	0.050	0.219	3.176	0.002**	0.343	2.913
	Task complexity	-0.125	0.055	-0.145	-2.276	0.024*	0.401	2.492
	Task structure	0.250	0.040	0.328	6.255	0.000***	0.595	1.681
	Time pressure	0.072	0.032	0.118	2.213	0.028*	0.578	1.732
	Audit firm relationships	0.074	0.042	0.096	1.759	0.080	0.551	1.816
Corporate governance and internal control	0.095	0.048	0.113	1.984	0.048*	0.507	1.972	
Accountability	-0.128	0.059	-0.146	-2.170	0.031*	0.361	2.769	
Group as opposed to individual information processing	-0.037	0.042	-0.044	-0.878	0.381	0.644	1.553	

Note: ***Significant at 0.001 level, **Significant at 0.01 level, *Significant at 0.05 level.

The coefficient of skills is -0.057, which indicates that for every one-unit change in skills, JDM decreases by 0.057 units, given that all other factors remain constant. The coefficient of self-efficacy is -0.006, which indicates that for every one-unit change in self-efficacy, JDM decreases by 0.006 units, given that all other factors remain constant. The coefficient of professional skepticism is 0.396, which indicates that for every one-unit change in professional skepticism, JDM increases by 0.396 units, given that all other factors remain constant. The coefficient of experience is -0.102, which indicates that for every one-unit change in experience, JDM decreases by 0.102 units, given that all other factors remain constant. The coefficient of trust is 0.015, which indicates that for every one-unit change in trust, JDM increases by 0.015 units, given that all other factors remain constant.

The coefficient of knowledge is -0.237, which indicates that for every one-unit change in knowledge, JDM decreases by -0.237 units, given that all other factors remain constant. The coefficient of decision aid is 0.131, which indicates that for every one-unit change in decision aid, JDM increases by 0.131 units, given that all other factors remain constant. The coefficient of familiarity is 0.109, which indicates that for every one-unit change in familiarity, JDM increases by 0.109 units, given that all other factors remain constant. The coefficient of professional development is -0.040, which indicates that for every one-unit change in professional development, JDM decreases by -0.040 units, given that all other factors remain constant. The coefficient of professional commitment is 0.157, which indicates that for every one-unit change in professional commitment, JDM increases by 0.157 units, given that all other factors remain constant.

The coefficient of task complexity is -0.125, which indicates that for every one-unit change in task complexity, JDM decreases by -0.125 units, given that all other factors remain constant. The coefficient of task structure is 0.250, which indicates that for every one-unit change in task structure, JDM increases by 0.250 units, given that all other factors remain constant. The coefficient of time pressure is 0.072, which indicates that for every one-unit change in time pressure, JDM increases by 0.072 units, given that all other factors remain constant. The coefficient of audit firm relationships is 0.074, which indicates that for every one-unit change in audit firm relationships, JDM increases by 0.074 units, given that all other factors remain constant. The coefficient of corporate governance and internal control is 0.095, which indicates that for every one-unit change in corporate governance and internal control, JDM increases by 0.095 units, given that all other factors remain constant. The coefficient of accountability is -0.128, which indicates that for every one-unit change in accountability, JDM decreases by -0.128 units, given that all other factors remain constant. The coefficient of the mode of information processing (group versus individual) is 0.037, which indicates that for every one-unit change in mode of information processing, JDM increases by 0.037 units, given that all other factors remain constant.

5.5. Coefficient of Determination(R-square)

The amount of variance in the dependent variable that the independent variable can explain is known as the R-squared value (Ho, 2013). According to Table 6, the coefficient of determination is 0.522, which equals 52.2%. Personal, task, and environmental factors account for 52.2% of the JDM variable, while other factors, not included in this study, contribute 47.8%.

5.6. F Statistics Test

According to Table 7, the p-value, or significant F result, is 0.000, which means the value is less than 0.05. This indicates that audit JDM generated by LACPA auditors in Lebanon is influenced by all independent variables at the same time, including personal, task, and environmental factors. Thus, the model in this study is suitable for further study.

Table 7. F statistics test results.

ANOVA						
Model		Sum of squares	df	Mean square	F	Sig.
JDM	Regression	64.801	17	3.812	18.782	0.000
	Residual	59.263	292	0.203		
	Total	124.064	309			

5.7. Discussion

There have been mixed findings on the relationship between JDM and the variables linked to each factor. This discussion examines each variable's factor and their relationship with JDM.

5.7.1. Variables Related to the Auditor Personal Factor

There was no statistically significant correlation between skills and audit JDM. This suggests that having skills does not seem sufficient to improve JDM without clear objectives or taking into account the use or support of these skills within JDM. Prior studies have shown a positive correlation (Akib & Dharmawati, 2022; Sastri et al., 2019), which contradicts the current findings.

There was no statistically significant correlation between self-efficacy and audit JDM. This result contradicts SCT, as individuals with higher self-efficacy enhance their performance and achieve better JDM. The results are in line with Ghani et al. (2019) whereas they contradict Iskandar and Sanusi (2011) who discovered a positive correlation, and Zelumewani and Suputra (2021) who discovered a negative correlation.

There is a significant positive correlation between audit JDM and professional skepticism. Professional skepticism improves JDM by motivating people to aim for precision and thoroughness in their decision-making. It is consistent with establishing high standards and objectives for critical assessment. Previous research (Atmaja & Sukartha, 2021; Hussin et al., 2017) has achieved similar results.

The correlation between audit JDM and experience was not statistically significant. This implies that experience may not consistently affect JDM behavior through social learning mechanisms. Pawitra and Suhartini (2019), in their research indicated that audit JDM and experience are not correlated. Despite this, Aida (2021) and Siregar (2023) indicated a favorable association, contradicting the existing findings.

The correlation between trust and audit JDM was not statistically significant. This means that without enabling frameworks or well-defined objectives, trust may not have a direct impact on JDM results, even if it is critical for assistance. According to Rose (2007) reduced trust may improve JDM. In contrast to the findings of Santos and Cunha (2021) which suggested that trust had a positive impact on auditor JDM.

There is a significant negative correlation between audit JDM and knowledge. This implies that higher knowledge acquired by individuals results in greater satisfaction and confidence, leading them to assume that they have a good understanding and reducing their abilities to critically evaluate events, worsening their JDM. This result contradicts prior research (Hendar & Harahap, 2023; Sastri et al., 2019) which showed a positive relationship, and Halim et al. (2018) who did not find any correlation with audit judgment.

There is a significant positive correlation between audit JDM and decision aid. SCT may provide the explanation for this result. Decision aids provide auditors with access to additional materials and tools, which may boost their confidence and self-awareness, allowing them to make more informed decisions. Decision aids affect audit judgment, according to other studies (Arnold et al., 2004; DeZoort et al., 2006).

The correlation between familiarity and audit JDM was not statistically significant. This contradicts SCT, which posits that becoming familiar with a certain activity or setting may improve one's self-awareness and ability to handle and performing well in familiar events. Consistent with the present results, Iskandar and Sanusi (2011) also found that familiarity with the task had no substantial impact on audit judgment performance.

There was no statistically significant correlation between audit JDM and professional development. These developments may not directly improve JDM, possibly due to the broad scope of the training or an inability to adapt it to JDM circumstances. In addition, it contradicts SCT, as development and learning through observation, analysis, and social interaction improve JDM. These findings contradict Lee et al. (2016) and Erlina and Muda (2018) who showed a positive correlation with audit judgment.

There is a significant positive correlation between audit JDM and professional commitment. SCTs can explain the results. Auditors with higher professional commitment are more confident in their ability to make informed JDM. Lord and DeZoort (2001) and Nasution and Östermark (2012) among others, found a positive relationship with audit judgment, which is consistent with the current findings.

5.7.2. Variables Related to Task Factor

There is a significant negative correlation between task complexity and audit JDM. Goals may seem unattainable or too difficult to reach when complexity is present, which could demotivate JDM progress. While several studies have shown that task complexity does not affect audit judgment (Pawitra & Suhartini, 2019; Pravitarsi & Hirmantono, 2020) this finding is consistent with Aida (2021) and Siregar (2023).

There is a significant positive correlation between task structure and audit JDM. This study suggests that the use of structured tasks may enhance auditors' JDM abilities. The results align with Mohd-Nassir et al. (2021), who demonstrated that the implementation of a well-organized task resulted in improved judgment. In contrast to the findings of Duh et al. (2007) which indicated that a structured task had no impact on the auditor's JDM.

5.7.3. Variables Related to Environmental Factor

There is a significant positive correlation between audit JDM and time pressure. SCT prioritizes the significance of environmental influences on behavior, specifically highlighting the effect of time pressure on JDM. This conclusion aligns with the findings of Tandean et al. (2022) contrary to previous research (Hendar & Harahap, 2023; Santos & Cunha, 2021).

There was no statistically significant correlation between audit JDM and audit firms. This suggests that audit companies' goals and objectives may be unaffected by their external relationships. The results of this study contradict the research of Kulset and Stuart (2018) and Ng and Tan (2003) which demonstrated that audit JDM is affected by the relationships between audit firms.

There is a significant positive correlation between audit JDM, corporate governance, and internal controls. Based on the findings, it seems that excellent company governance and internal controls provide

measurable standards for improving JDM. Both DeZoort and Salterio (2001) and Jennings et al. (2006) agree with this finding.

There is a significant negative correlation between accountability and audit JDM. The findings could be explained by SCT. Conflicts and pressures ensnare auditors held accountable, potentially affecting their self-awareness and their ability to apply JDM effectively. The findings of DeZoort et al. (2006) and Mala et al. (2018) who found that audit judgment improved with accountability, are contradictory to this result.

In comparison to individual processing, there was no statistically significant correlation between audit JDM and group data processing. This result implies that auditors' JDM is unaffected by whether information is processed individually or in a group. The result is consistent with Johnson (1995) and contrary to Ahlawat (1999) who found that groups make better judgments.

Overall, our examination of several variables impacting JDM within audit firms revealed several significant relationships. In particular, professional skepticism, decision aid, professional commitment, task structure, time pressure, corporate governance, and internal control showed positive relationships with JDM. Therefore, audit firms should prioritize training programs emphasizing critical thinking and problem-solving skills, providing decision aids, establishing clear goals, providing supportive structures, managing environmental contexts effectively, and implementing effective governance and control systems that can enhance JDM effectiveness. On the other hand, negative relationships emerge between knowledge, task complexity, and accountability, highlighting issues that require resolution. By addressing these variables, audit firms can enhance JDM effectiveness, improve audit quality, and mitigate the potential risks associated with JDM within the organization.

6. Conclusion and Recommendation

The objective of this study was to examine the impact of personal, task, and environmental factors on auditors' JDM at audit firms in Lebanon. The results indicate that professional skepticism, professional commitment, decision aid, task structure, time pressure, and corporate governance or internal control all had a positive correlation with JDM. In contrast, JDM had negative associations with knowledge, task complexity, and accountability. Conversely, no significant correlation was found between audit JDM and skills, self-efficacy, experience, trust, familiarity, professional development, audit firm relationships, or group information processing compared with individual information processing.

This study has provided numerous suggestions that audit firms might use to improve their audit JDM procedures. Audit firms can implement training programs and activities designed to cultivate professional skepticism in their auditors. This may be achieved by developing a culture that promotes critical thinking, skepticism toward audit evidence, and dedication to conducting comprehensive examinations. Create and execute knowledge management strategies that seek to combine theoretical knowledge with practical JDM. We will achieve this by providing training programs and materials that specifically focus on applying knowledge in real-world audit situations. Offer auditors tools and resources to back up their JDM application. Checklists, templates, and technology-based audit tools (TBATs) are all examples of decision aids that may help in audit evidence review and analysis. Foster a working environment that rewards integrity, hard work, and dedication to the profession of audit. Recognize and reward auditors who have a strong commitment to their job and to the organization's objectives.

In addition, auditing companies should figure out how to deal with and lessen the impact of complicated tasks on JDM quality. Provide auditors with clear instructions and support materials to help them handle difficult JDM circumstances, and break down large jobs into smaller, more manageable portions. Provide auditors with structured methods for JDM by developing clear work instructions and standard operating procedures. Offering seminars or workshops focusing on job prioritization, realistically estimating audit workloads and due dates, and efficiently allocating time for JDM will help auditors learn how to manage their time more effectively. To make JDM easier for auditors, improve internal control mechanisms and corporate governance frameworks. Effective oversight systems, corporate risk management, and clear reporting processes must be in place to achieve this goal. Adopt a policy that encourages auditors to take responsibility for their decisions and provides them with the resources they need to learn from their mistakes and enhance their JDM without fear of retaliation or punitive action.

6.1. Limitations and Future Research

It is critical to acknowledge the limitations of the results obtained. The study focuses on external auditors from several Lebanon-based audit companies. A combination of external and internal auditors may be a part of future research. Additionally, further research on the potential effects of other factors, such as cultural and ethical attitudes, on JDM should be conducted in the future. Adding moderating factors to JDM may help us better understand the mechanisms that drive audit JDM results by enhancing or diminishing the influence of each independent variable. Finally, one possible direction for future research is to examine how technology, such as TBATs and artificial intelligence, may enhance audit JDM.

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