

The Effect of Psychological Biases on External Auditor's Professional Skepticism: Overconfidence Bias, Anchoring Bias, and Availability Bias

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ABSTRACT

Despite their professional recognition, auditors' failure to exercise an appropriate level of skepticism continues to be a global issue. This study aimed to prove potential psychological barriers and traps that lead to biases and skeptical behaviors. We examined the potential existence of three psychological biases in auditors' professional skepticism in particular overconfidence, anchoring, and availability. The application of professional skepticism is also necessary for effective auditor decision-making." Indeed, the foundation of sound auditor decision-making is the right application of professional skepticism throughout the judgment process. To conduct our research, we designed a questionnaire containing thirty questions. The questionnaires were distributed to 300 public and private auditing institutes. In total, we could rely on 158. It has been found out that the three psychological biases can affect auditors' professional skepticism. The existence of overconfidence bias will lead auditors to believe that they are doing a better job of auditing than they truly are. Show how auditors' anchoring bias exists. This bias leads to improper adjustment of auditors' expectations, especially numerical ones. When auditors do not adjust their assessments and estimates sufficiently, they cannot exercise an appropriate level of professional skepticism when they perform. The results also show that availability bias exists among auditors. There is a relationship between the three psychological biases and auditors' professional skepticism.

Keywords: Auditor, Skepticism, Overconfidence, Anchoring, Availability Bias

1. INTRODUCTION

Nowadays people, according to their innate nature, can reach solutions to their outstanding problems. It is known that innate experience or innate knowledge

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cannot always overcome the problems of bias. Nevertheless,

innate experience sometimes plays an important role in judging things in professional practices. Furthermore, accountants and auditors, through their scientific experience and innate abilities, can help in formulating decisions. This would help them to train their thinking and increase their awareness of traps, and biases that can influence their judgment (Ali, et. al, 2022). For this purpose, professional opinions should consider the following three main points:

Considering all relevant facts and circumstances that were known to be available at the time the decision was reached, as well as reasonable alternatives.

The effect of psychological biases on an external auditor's professional skepticism, particularly the overconfidence bias, is a fascinating topic that highlights the intricacies of human cognition and its impact on decision-making. Overconfidence bias refers to the tendency for individuals to have more confidence in their abilities and judgments than is objectively warranted. In the context of external auditing, this bias can have significant implications. An overconfident auditor may be more likely to overlook red flags or dismiss contradictory evidence, leading to a potential lack of skepticism in their assessment of financial statements. This bias can be particularly dangerous as it may cause auditors to rely too heavily on their intuition and expertise, often disregarding the need for thorough and unbiased analysis. Recognizing and mitigating the effects of the overconfidence bias is crucial for auditors to maintain a high level of professional skepticism and ensure the accuracy and reliability of financial reporting.

Being mindful of the level of uncertainty that could exist in the decision, by the relevant professional guidelines.

This is due to the fact that "the application of professional skepticism is also necessary for effective auditor decision-making." Indeed, the foundation of sound auditor decision-making is the right application of professional skepticism throughout the judgment process (Ahmed and Al-Kake, 2019, 1012-1049). It is almost impossible to express a professional judgment completely devoid of traps, or biases. However, any auditor should be aware of them to diminish their impact on his decision-making process. This would guarantee a more transparent and efficient course of action when required. The biased judgments by the reviewer have been studied and analyzed by many academic studies. Availability or increased confidence may place the audit work in question and the existence of one of these cases cannot be easily overcome.

We create our conceptual model by integrating previous theories of auditor professional skepticism with the Theory of Planned Behavior (Ali, et. al, 2022). This model serves as the foundation for our empirical investigations. The initial phase of our model takes into account several individual variations, such as gender, experience, and knowledge, as well as personality qualities that could influence the professional skeptical traits of auditors. Our model recognizes a range of skepticism perspectives, such as presumptive doubt (which recognizes the possibility of management bias despite prior honesty and integrity), neutral (which assumes neither honesty nor dishonesty on the part of management), and the moral courage to act skeptically.

develops the Theory of Planned Behavior concerning professional skepticism among auditors, expanding on earlier accounting research that uses the theory to examine subjects like tax compliance, career choices, financial reporting fraud, and the usage of support systems by auditors (AL-Shatnawi, et. al, 2021, 1962-1978).

In this research, we conduct the following process:

Section 1: Understanding professional skepticism in auditing.

Section 2: Exploring the overconfidence bias and its impact on professional skepticism.

Section 3: The role of anchoring bias in influencing auditor judgment and skepticism

Section 4: The effect of availability bias on auditors' professional skepticism

Section 5: Strategies to mitigate the impact of psychological biases on professional skepticism.

Section 6: Conclusion and the importance of continuous professional development for auditors.

2 PROFESSIONAL SKEPTICISM

Regulators, practitioners, and academics differ on the appropriate use of professional skepticism in practice, despite standards of due professional care characterizing it as "an attitude that includes a questioning mind and a critical assessment of audit evidence (AU 230)". On this subject, there are two primary schools of thought: A presumption doubt approach vs a neutral one: In the belief that he will assess all evidence equally, the auditor "does not assume any bias ex-ante" (Sultan, 2021), according to a neutral viewpoint (Sharif & Azeez, 2021). However, until sufficient information is gathered to demonstrate otherwise, a presumptive doubt approach assumes some degree of dishonesty from client management (Sultan, 2021). This essay will evaluate the benefits and drawbacks of each strategy. It will first examine the distinctions between the two professional skepticism viewpoints next, how their implementation affects the efficacy and efficiency of audits.

Auditing standards emphasize the importance of skepticism (IAASB 2012; PCAOB 2003; PCAOB 2006) and note its role in the collection and critical evaluation of evidence (Sharif & Azeez, 2021, p 6177-6187). Regulators provide many examples of deficiencies in skepticism leading to audit quality detriments, and researchers offer several conceptual models concerning auditor professional skepticism. Nelson (2009) model describes how auditors apply knowledge, leverage personal traits, and respond to incentives concerning audit-evidence judgments. Auditor knowledge can have both positive and negative effects on skepticism, whereby it may enable auditors to correctly recognize evidence patterns, but it may also lead auditors to default to (common) non-

error explanations even in the presence of a misstatement. Individual personality traits may predispose auditors toward adopting a neutral view of skepticism – one in which the auditor seeks to verify management assertions without any directional bias (i.e., ‘trust but verify’) – or may predispose auditors toward adopting a presumptive doubt view – one in which the auditor assumes that management has a predisposition to bias financial statement assertions (Basariya & Al Kake). In addition to knowledge and personality traits, situational characteristics yield incentives for auditors to adopt varying levels of skepticism. For example, a complex, risky client may trigger a more skeptical mindset, whereas budget pressure may trigger a less skeptical mindset.

3. PERSPECTIVES OF PROFESSIONAL SKEPTICISM

Neutral Perspective

Professional skepticism has adopted a neutral perspective by formal standards, for example, (Mohammad & Ahmed, 2017). The professional care that must be met in the performance of auditors has been emphasized in SAS No. 1, and objective evidence must be present in the audit work (AU 230). Therefore, a neutral auditor works with an unbiased mechanism, whether the results of his work are positive or negative. Likewise, when an auditor is skeptical, this does not mean that the administration is honest or dishonest. Since skepticism is defined as "the propensity of an individual to defer concluding until the evidence provides sufficient support for one alternative/explanation over others, this method has been deemed to be "symmetric" in nature (Mohammad & Ahmed, 2017), (Hurt, et. al 2013). For this reason, an impartial auditor also exhibits a propensity for a "suspension of judgment" (Hurt, et. al 2013), by delaying determining the existence of a misstatement until after a sufficient amount of competent evidence has been gathered. (Ahmed and Al-Kake, 2019, 1012-1049), believes that the independence of the auditor positively affects the impartiality of the auditor.

Presumptive Doubt Perspective

Conversely, modern standards may also view fraud as potentially non-neutral suspicion (Mohammad & Ahmed, 2017), (Rahim, 2023, p 1298–1319). For example, SAS No. 99 sees fraud in its audited financial statements and recommends that "the auditor, regardless of the auditor's belief about the honesty and integrity of management, should conduct the engagement with a mindset that recognizes the possibility that a material misstatement due to fraud could be present". The presumptive doubt approach is also highlighted by the International Standards on Auditing (ISA), which calls for the auditor to acknowledge the possibility of fraud-

related misstatement "notwithstanding the auditor's experience of the honesty and integrity of the entity's management and those charged with governance" (ISA 240, Paragraph 12). From this aspect, the risks of misrepresentation may be more exposed by the skeptical auditor, as well as the possible bias of management and the availability of insecurity by the auditor is another factor for the distortion until other objective evidence is available to prove otherwise. In the same context, confirm that an auditor with high skills and certificates is less likely to be subject to suspicion and fraud.

Academic literature also contains references to a professional skeptic's presumptive doubt approach. For instance, skepticism is defined "as indicated by auditor judgments and decisions that reflect a heightened assessment of the risk that an assertion is incorrect, contingent on the auditor's access to information," according to (Mohammad & Ahmed, 2017), Similarly, a non-neutral position.

According to them, skepticism is an increased sensitivity to evidence that casts doubt on an audit or evidence that lessens the possibility that an audit will fail (Hoffrage, et. al, 2000), (Hurt, et. al, 2011).

Overconfidence

Even when people have access to perfect information, it takes time and effort to gather it all and remember it accurately. People would still be less rational than the hypothetical homo economics in processing the information. Usually, people believe in large percentages that they are more likely to succeed in their professional careers and their marriages than the average person. This over-optimism has the effect of underestimating potential risks. Besides, most people believe that they can exert control over purely random events (the illusion of control), and this leads them to illude themselves into an "inappropriately higher than the objective probability would probably warrant. Because frauds are the exception rather than the rule, an auditor might view the probability of client fraud as being quite low and then largely ignore it (Karim, et al, 2020).

Lange Voort has argued that securities frauds committed by corporate managers are possibly not ones, but simple recklessness because they usually express overly optimistic views of their firms' prospects. Usually, these expectations do not have real bases, even though they are honestly held. (Mohammad, 2015). This attitude confirms that managers tend to favor their interests at the expense of the public interest by using legal financial methods, but they are not fairways.

Some of this undue optimism stems from overconfidence in one's abilities. For example, most people believe that they are above-average drivers; 97% of consumers believe that they possess either average or

above-average ability to avoid accidents from bicycles and power mowers. Studies show that eyewitnesses are chronically overconfident. People also overestimate their own knowledge and ability to make accurate judgments (Sharif & Azeez, 2021). Strong biases toward optimism and overconfidence can be used to explain a variety of events, such as excessive litigation and high takeover premiums. All in all, people exhibit what Hanson and Kysar deem "the Lake Wobegon effect."

An overconfident auditor is more likely to exaggerate his estimates when performing audit work. It can also be a psychological condition of the auditor, or he/ she may have this bias for the sake of personal interest. Bias may result from excessive objectivity of the auditor's professional work, for example, lack of careful review due to excessive self-confidence or the auditor's unwillingness to consult others for the same reason. Excess confidence may result in several factors, including information available to the auditor giving the auditor a false sense, and this feeling makes the auditor feel the correctness of his/her decisions and judgment. When the state interferes with critical decisions, for example, by issuing laws to reduce financial corruption, it is also a factor in increasing investor confidence (Al-kake & Ahmed, 2019).

Anchoring

Adjustment and anchoring refer to the heuristic method used by people when they make estimates by beginning with a baseline value - the anchor - and then adjusting the values to yield the final answer (MIR, et al, 2020). It is therefore a two-step process where the anchor can either be selected by the individual or given by an external source. In the original Participants in an experiment by Tversky and Kahneman were asked to estimate the proportion of African member countries in the UN. At the same time, a random number was generated on a spinning wheel. Between the estimated numbers of the control group and of those who generated random numbers, the unrelated number had a clear effect on the estimations that were made. These effects persisted even though the subjects were reminded that it was a randomly generated number and they adjusted from the anchored number. These results have been replicated in further experiments, for example when subjects were asked to estimate the population of Chicago, or the willingness to pay for certain items (Sharif & Azeez, 2021), (Prentice, 2000). The argument that has been put forward in the subsequent research was that the adjustment that was made to the initial value was insufficient and left the result too close to the anchor, therefore leading to a bias. (Kangarluei, et al, 2012) argued that these insufficient adjustments are the result of a practice that resembles the idea of satisficing, originally presented by Simon (1964) in the context of

bounded rationality. They argue that the adjustment process is only continued until the value reaches "a range of plausible values", which implies a kind of cost-saving method of cognitive capacities.

Anchoring is the psychological state of the auditor through which it makes the desire to conduct evaluations insufficiently from the beginning until the issuance of judgments, especially when the source of knowledge is information from a specific party or a specific circumstance. For example, an auditor audits a specific department's work for consecutive periods, so it does not review data accurately and is more susceptible to bias compared to the work of another auditor who deals with a certain department for the first time (Karim, et al, 2020).

Repetition of work with a specific party may prevent the consideration of views that may be in favor of or against the work. This would increase the possibility of taking into consideration information that is not completely relevant to the issue the auditor is working on at that specific moment and applying it to gather information techniques not fit for the purpose (Kangarluei, et al, 2012).

Availability

One of the biases that were developed by (Al-Kake, et al, 2019) in papers with the very same name was the availability bias. It is a heuristic bias that affects an individual's judgment of the probability of an event through the "ease with which examples or connections" (p. 729). The individual's estimation of this probability can be distorted by evidence from the environment. For example, recent similar events are still fresh in his/her memory. The concreteness or vividness of these examples can increase the availability effect and, if the examples are not related, they lead to errors in judgment.

When it comes to the examination of availability bias in auditing, the body of research is far more voluminous, albeit not necessarily definite in its evaluation of its consequences. One example of how audit planning might be influenced by availability heuristics is the development of the current auditing plan. During this process, auditors are usually tempted to base their estimations on last year's audit results. The bias that comes into play is not only availability bias but also the (similar) familiarity bias, which refers to the tendency of individuals to prefer familiar alternatives, which are similar to past decisions, over new ones (Dixit & Sharif, 2019).

The probability trend of information retrieval easily by the auditor is called availability or living memory as this possibility is more relevant to objectivity than to judgment. Moreover, evaluation or prediction in the work of the auditor may be avoided when judgments are made by auditors through the information that affects

availability. The presence of great importance in the work of the auditor can lead to auditor bias.

The choice of who links certain sources without considering the objectivity of the selection process is greatly influenced by this trend and the current environment is very suitable for this direction (Basariya and Rahim, 2019). In other words, this trend may cause the auditor to use the same estimates of previous years to judge financial statements for this year as well, due to the frequent work with certain management for successive periods (Basariya and Rahim, 2019).

4 HYPOTHESIS DESIGN

According to what was mentioned in the previous section, we designed the main hypothesis which has three sub-hypotheses. We are going to find out whether the three biases mentioned affect an auditor's professional skepticism. Therefore, our main hypotheses are the following:

Main hypothesis: Psychological biases affect auditors' professional skepticism.

Hypothesis 1-1: Overconfidence bias has a relationship with the auditor's professional skepticism.

H0: There is not a significant relationship between overconfidence bias and auditors' professional skepticism.

H1: There is a significant relationship between overconfidence bias and auditors' professional skepticism.

Hypothesis 1-2: Anchoring bias has a relationship with the auditor's professional skepticism.

H0: There is not a significant relationship between anchoring bias and auditors' professional skepticism.

H1: There is a significant relationship between anchoring bias and auditors' professional skepticism.

Hypothesis 1-3: Availability bias has a relationship with the auditor's professional skepticism.

H0: There is not a significant relationship between availability bias and auditors' professional skepticism.

H1: There is a significant relationship between availability bias and auditors' professional skepticism.

5 METHODOLOGY AND DATA COLLECTION

To test the hypotheses, this paper used quantitative methods by using a questionnaire to collect data from external auditors who work in the Kurdistan region -Iraq. The questionnaire has been designed and made up of two sections. The first section included 6 demographic questions. The second section included 30 questions (12

questions for overconfidence, 8 questions for anchoring, and 10 questions for availability), which directly assessed the effect of each of the mentioned biases on the auditor's professional skepticism. Three hundred questionnaires were handed out among different levels of auditors in both public and private auditing institutes. 178 questionnaires were received from respondents, of which 158 were usable and filled out.

This paper will follow the same methodology used by (Mohammad, & Ahmed, 2017). To analyze the data gathered, the contingency table analysis technique was applied. The relationship between two or more category variables can be analyzed and recorded using a contingency table, which is simply a display format. When analyzing the relationship between two continuous variables, it is the categorical equivalent of a scatterplot. To analyze data gathered through questionnaires we used SPSS 22 version.

6 RESULTS AND DISCUSSION

In Table 1 we have presented descriptive statistics for three psychological biases.

As shown in Table 1, the average of points given to psychological biases is more than indifference points (i.e., 3); it means that it seems like respondents expected these biases to affect auditors' professional skepticism. Thus, we tested each one of the individual variables:

The results show that %66 percent of respondents believe that over-confidence bias affects auditors' professional skepticism. If there is not a significant difference in the average of responses, it is reasonable to claim that there is a relationship between overconfidence bias and auditors' professional skepticism. Thus, our first statistical hypothesis is designed as follows:

H0: There is not a significant relationship between overconfidence bias and auditors' professional skepticism.

H1: There is a significant relationship between overconfidence bias and auditors' professional skepticism.

Since the number of samples is more than 30, we can use parametric statistical student T. T-test results are presented in Table 2.

Table 1.
Statistics

Bias	No. of responses	Average	Median	St. deviation	First quarter	Second quarter	Third quarter
Overconfidence	145	3.693	4	0.858	3	4	4
Anchoring	132	3.429	4	0.920	3	4	4
Availability	155	3.734	4	0.912	3	4	4

Descriptive
results for

Table 2. T-test

overconfidence

T-statistics value	Freedom degree	P-value	Average difference	Confidence interval	Result
35167	1895	0/00	0.693	(0.6544-0.7317)	H0 is rejected

As it is shown in table2, the results show that the T-statistics value is greater than the corresponding value (i.e. $t_{\alpha=0.975} = 1.96$). The calculated p-value is less than 5 per cent which means that H0 is rejected. Thus, the first sub-hypothesis is accepted; it means that overconfidence bias affects auditors' professional skepticism. The responses received through the second part of the questionnaire (about anchoring bias) show that %51 of the respondents believe that anchoring bias affects auditors' professional skepticism. Thus, our second statistical hypothesis is designed as follows:

H0: There is not a significant relationship between anchoring bias and auditors' professional skepticism.
H1: There is a significant relationship between anchoring bias and auditors' professional skepticism.
If there is not a significant difference in the average of responses, the claim that there is a relationship between anchoring bias and auditors' professional skepticism can be accepted. As was noted above, since the number of samples is more than 30, we can use parametric statistical student T. T-test results are presented in Table 3.

Table 3. T-test results for anchoring

T-statistics value	Freedom degree	P-value	Average difference	confidence interval	Result
1659	1263	0.00	0.423	(0.3788-0.4804)	H0 is rejected

As it is shown in the table, the results indicate that the T-statistics value is greater than the corresponding value (i.e.). The calculated p-value is less than 5 percent which means that H0 is rejected. Thus, the second sub-hypothesis is accepted; it means that anchoring bias affects auditors' professional skepticism. The participants' responses about the third variable (availability bias) showed that 67% of respondents agree that there is an availability bias that affects auditors' professional skepticism. Thus, the third statistical hypothesis is that:
H0: There is not a significant relationship between availability bias and auditors' professional skepticism.

H1: There is a significant relationship between availability bias and auditors' professional skepticism.
To examine this hypothesis, the average of participants' responses to the relationship between availability bias and auditors' professional skepticism is calculated first. If there is not a significant difference in the average of responses, the claim that there is a relationship between availability bias and auditors professional skepticism can be accepted. We point out, again, that since the number of samples is more than 30, we can use parametric statistical student T. T-test results are presented in Table 4.

Table 4. T-test results for availability bias

T-statistics value	Freedom degree	P-value	Average difference	Confidence interval	Result
31995	1579	0.00	0.743	(0.6898-0.7799)	H0 is rejected

As shown in the table, the results indicate that the T-statistics value is greater than the corresponding value

(i.e., $t_{\alpha=0.975} = 1/96$). The calculated p-value is less than 5 percent which means that H0 is rejected. Thus, the third

sub-hypothesis is accepted; it means that availability bias affects auditors' professional skepticism.

Finally, after testing the three sub hypothesizes and determining the difference in responses, we used the cross tabs method to find out the level of relationship between psychological factors and auditors' professional skepticism. Thus, the main hypothesis is designed as follows:

H0: There is not a significant difference between the expected frequencies of participants' responses, at different levels (overconfidence, anchoring, and availability).

H1: There is a significant difference between the expected frequencies of participants' responses, at different levels (overconfidence, anchoring, and availability).

The summary of results obtained from the questionnaire is presented in Table 5.

Table 5. Summary of questionnaire results

Bias	Very high	High	Average	low	Very low	total
Overconfidence	260	999	463	143	31	1896
anchoring	116	541	411	162	34	1264
Availability	288	774	356	135	27	1580
Total	664	2314	1230	440	92	4740

As we mentioned for individual variables, and as shown in Table 5, the majority of participants believe that psychological biases affect auditors' professional

skepticism. The results for the main hypothesis are presented in Table 6.

Table 6. Cross tabs test results

Statistics	Statistic value	Freedom degree	P-value
Pearson's chi-squared	115.41	8	0.00
Cramer's V	% 11.03	--	0.00

According to values observed in Table 6, since Pearson's chi-squared is higher than its corresponding value ($\chi^2(8) = 115.41$) and the P-value is also lower than %5, we conclude that received responses are significantly different, and thus, the claim that psychological biases affect auditors' professional skepticism is approved. Based on Cramer's V this relationship's power is %11 percent and positive.

7 CONCLUSION

Although being skeptical is a fundamentally important quality of an auditor, auditors are nonetheless criticized for not being skeptical enough. This study finds a new and potentially significant obstacle to professional skepticism, even though there are numerous potential reasons why auditors might not be skeptical enough:

In this study, we analyzed the effect that some psychological biases may have on auditors' professional skepticism. We conducted a questionnaire study that explicitly analyzes whether those biases affect auditors' professional skepticism.

We find that the three psychological biases we discussed can affect auditors' professional skepticism:

1- The existence of overconfidence bias will lead auditors to believe that they are doing a better job of auditing than they really do. It also means that auditors overestimate

their capacity to carry out activities or to accurately evaluate risks or make other decisions and judgments, it results in a less questioning mind and, hence, implements less skepticism.

2- The results also depict the presence of anchoring bias in auditors. This bias leads to improper adjustment of auditors' expectations, especially numerical ones. When auditors do not adjust their assessments and estimates sufficiently, they cannot maintain a suitable degree of professional skepticism when they perform. Therefore, this bias leads external auditors to be less skeptical and self-critical.

3- Our results also show that availability bias exists among auditors. Therefore, we conclude that the data that can be easily retrieved from an auditor's memory influences estimates, probability assessments, and other professional judgments. The result is that, due to the existence of this bias, auditors cannot be as skeptical as needed.

Auditors can improve audits and more effectively show how they exercise appropriate professional skepticism by using an appropriate amount of skepticism in their thoughts and actions and by properly documenting the outcomes of those efforts.

8. RECOMMENDATIONS

Since doubt is a psychological state of the auditors and the effect of that doubt or excessive confidence in the performance of their work or the structure of their judgments, this paper has a set of recommendations for future studies. This research recommends a joint study of the problem of auditors by finance managers and psychiatrists. Going deeper into this field it is important

to know the factors that affect the auditors since they are the ones that investors pierce more than accountants. Studying a larger number of local and foreign auditors in Iraq as a whole to find out the extent of psychological impact on auditors' performance. This research also recommends other statistical methods to find more accurate results than those found in this study. Other recommendations also search for factors other than the three mentioned in this paper to see if other psychological factors may affect auditors in the future.

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