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Decision-Making By Auditors Of The Instituto Superior De Auditoria Y Fiscalización Del Estado De Sonora From The Perspective Of Behavioral Economics

Santini Rodriguez, Francisco Javier[1] , Ruiz Garcia, Luz Mercedes[2] , Rodriguez Montaño, Luis Carlos[3]

[1]Profesor investigador de tiempo completo en el departamento de Sociología y Administración
Pública en la Universidad de Sonora. ORCID: https://orcid.org/0000-0001-5437-4591
[2]Doctora en Administración Pública por el Instituto Sonorense de Administración Pública. ORCID: https://orcid.org/0009-0000-9755-0129
[3]Doctor en Administración Pública por el Instituto Sonorense de Administración Pública. Profesor
de Asignatura en el departamento de Sociología y Administración pública en la Universidad de
Sonora. ORCID: https://orcid.org/0000-0003-1245-8943

The objective of this research is to identify possible cognitive biases that may occur during the audit process carried out by auditors of the Instituto Superior de Auditoria y Fiscalización del Estado de Sonora (ISAF- Superior Institute of Auditing and Fiscalization of the State of Sonora). In this sense, behavioral economics provides elements to consider that in decision making there are factors that are generally perceived as supposedly irrelevant or subjective, but there is evidence that they influence or have an impact on the decision-making process. The methodology used is mixed. On the qualitative side, in-depth interviews were conducted to explore in general the institutional design and the environment in relation to auditors; in a second stage, an online questionnaire was applied to identify the probability of incurring biases in decision-making. It is specified that this research is exploratory and presents findings of 5 cognitive biases related to the audit process. The results show that ISAF auditors are highly likely to be incurring biases of cognitive overload (85.2%), overconfidence (98.3%), status quo (95.5%), and representativeness (83.1%), of the five biases that comprised this research, the complementary part of the questionnaire on discomfort factors that evidence that an 86.7% of auditors have a high degree of satisfaction with their audit activities, and it is important to recognize the existence of these factors that are known as cognitive biases.

Keywords: behavioral economics, cognitive biases, auditing.

Introduction

The application of Behavioral Economics (BE) to the study of the auditing and the auditing process represents in itself the challenge of showing whether objectivity and rationality, which are assumed from the economic and normative sciences, define the course of individuals' decisions, or whether it is accepted that other subjective factors such as biases and supposedly irrelevant factors could have some impact on auditors' decision-making.

The audit process involves a series of steps established under a set of rules that define the auditor's performance, which must be objective and impartial. This research seeks to identify if there is any type of bias or subjective factor when the auditor makes decisions in his performance and to show the existence of possible biases from the perspective of behavioral economics.

Auditors' decision-making has a major impact on a more complex process such as accountability, i.e., governments and public servants have to inform, explain, take responsibility, and be exposed to possible sanctions, the latter being the Achilles' heel. This issue has become relevant with the democratization process that Mexico has undergone in the last 30 years; however, the distrust of citizens in the public institutions in charge of auditing persists to this day.

This paper is divided into three sections, the first of which discusses how behavioral economics has become relevant to improve decision-making in public policy, in the exercise of public administration, in economic issues, and how cognitive biases are present during the decision-making process.

The second section explains the audit and control process carried out by ISAF, as well as its structure and operation, in order to have an approach to the case study. The third section shows and analyzes the results derived from the application of the questionnaire to identify possible biases in the decision-making of ISAF auditors, and finally, the conclusions are presented.

Behavioral Economics in decision-making

Behavioral economics is the integration of the disciplines of psychology and economics. George Katona was one of the founders of behavioral economics, who first published a general outline and agenda for the development of behavioral economics in the 1950s, he conceived behavioral economics as a discipline within economics that was primarily concerned with the human element in economic affairs (Curtin, 2016; Muñoz, Borbón, and Laborín, 2019).

The centerpiece of Katona's (1953) research was human decision-making, while a significant part of economic theory dealt with the behavior of markets. He did not attempt to replace economic theory, but rather reinforce his findings with new insights from a more accurate and comprehensive perspective of economic behavior.

In the middle of the 20th century, he achieved the recognition of this specialty as an independent field thanks to his contributions to an economy that analyzes processes from the behavioral point of view. Subsequently, other psychologists and economists such as Herbert

Simon, Amos Tversky, Daniel Kahneman, and Richard Thaler have continued to develop and improve this branch of study.

CE enters questioning the paradigms of neoclassical economics and thus seeks to make its assumptions more flexible as "it emerges as a branch that seeks to give greater comprehensiveness to what had been conceptualized as decision making (...), because it adds more realistic components to the equation, and thus allows a broader analysis of decision making" (Gallegos and Taddei, 2022, p.211).

Proponents of CE point out that it is necessary to review the traditional economist's vision, and fundamental precepts with which it seeks to explain economic facts from a rational position, since, in real life, it is necessary to include other elements (Leriche, Caloca, 2007; Sunstein, 2019; Almeida, 2020). Adam Smith, for example, in the eighteenth century presented a series of theories that still prevail, based on which various axioms were given life, such as the invisible hand that regulates markets, loss aversion, or the self-control that man has to buy only what he needs and at the price that suits him best.

According to Simon (1976), human beings cannot obtain or process all the information needed to make fully rational decisions, instead, they seek to use the information they have to produce a satisfactory outcome. In addition to cognitive limits, he also wrote about how personal relationships and the rules of the institutional environment constrain decision-making.

These cognitive and social limits shape decision making commonly referred to as the theory of bounded rationality. Under bounded rationality, decision-makers must be satisfied with finding satisfactory solutions to the problem(s) they face. Bounded rationality would become a fundamental element of behavioral economics, which also questions whether human decision-making is truly rational.

Economists aim to develop models of human behavior related to markets and how decisions are made in different economic scenarios, but humans behave in complex ways, although trying to make rational decisions, they have limited cognitive abilities and limited willpower (Madrian, 2014; Botero, 2016; Martinez, Rojas, and Scartascin, 2020). While the decisions are often guided by self-interest, fairness, and equity are other important elements con to care about. In addition, cognitive skills, self-control, and motivation can vary significantly among different individuals.

Thaler's (2018) insight incorporates insights from psychology into economics first posited how decisions are influenced by three aspects of human psychology: cognitive constraints (or bounded rationality), self-control problems, and social preferences.

According to Thaler "Paradigms only shift when experts begin to consider that there are too many major anomalies that cannot be explained based on the existing paradigm, implying that a few inexplicably isolated facts are not enough to bring about a change in traditional wisdom" (2019, p. 247).

Heuristics and cognitive biases

The brain's use of "shortcuts" to help evaluate different options makes a lot of sense. It would be a waste of time and energy if someone had to do an exhaustive analysis to decide which brand of cookies to buy or what kind of food to order. As a result, people use a series of mental shortcuts, or heuristics, to help them make decisions, which provide rules of thumb for decision-making. However, the very fact of the factors that make heuristics a convenient and quick solution to many minor problems means that they hinder decision-making on more complicated problems (Tversky and Kahneman, 1974; Diaz and Del Valle, 2016; Kasdan, 2020).

The terms biases and heuristics are related to information processing and decision making, both express the "shortcuts" that the brain takes to process the data it receives. However, they are different, since heuristics produce errors and biases are errors that occur systematically, as Kahneman points out "biases cannot always be avoided (...) and it is easier to recognize others' errors than our own" (2011, p. 45).

Heuristics are simplifications that use fewer cognitive resources. Moreover, because most people use these shortcuts automatically, they can also preempt analytical thinking in situations where a more logical process might generate better results. Although heuristics are useful shortcuts for everyday judgments, they can lead people to make hasty, sometimes incorrect, decisions about issues that are more complicated.

At this point, it is necessary to point out that CE seeks to understand the way Homo sapiens reason to support him in making decisions that are more beneficial to him; people are not immune to biases" (Kahneman, 2011, p.71). Some authors who are against CE argue that in its application it is unethical because it seems to seek to manipulate people to make a decision; however, those who defend this discipline point out that it is not manipulation, since people still have several options and could decide the one that best suits them.

Cognitive biases

Although people like to believe that they are rational and logical, the truth is that they are continually under the influence of cognitive biases. These biases distort thinking, and influence beliefs, decisions, and judgments that people make every day (Das and Bing-Sheng, 2002). Paying attention is a limited resource. This means that all possible details and events cannot be evaluated when forming thoughts and opinions, so people often rely on mental shortcuts that speed up their ability to make judgments, but sometimes lead to erroneous or otherwise information-deficient outcomes.

A cognitive bias is a systematic error in thinking that occurs when people process and interpret information from the world around them, affecting their decision-making and judgments. The human brain processes large amounts of information, but it is subject to limitations. Cognitive biases are often the result of the brain's attempt to simplify information processing, which often functions as rules of thumb that help the individual to understand the world and make decisions relatively fast (Kahneman, 2011).

Decision-making processes occur with the interaction of some cognitive processes and psychological variables. Neoclassical theories deal with rational reactions in these processes.

However, in an environment where there are excesses of information or where there is uncertainty, decisions cannot be made rationally as the mind indicates (Aren and Hamamci, 2021). In this direction, people must make many decisions with limited information or in adverse scenarios. For this reason, people resort to several simple and useful shortcuts called biases.

To select the cognitive biases possibly related to the auditor's activity, the in-depth interview, requests for information, and documents (laws, manuals, regulations, existing literature) related to the substantive activity of the auditor and the audit process were used as a basis. Five cognitive biases were selected from this exploratory study: Cognitive overload, which is related to the audit process.

Cognitive overload. Too much information exceeds a person's ability to process it. What causes cognitive overload? Four main causes of overload are identified: too much information supply, too much demand for information, constant multitasking, interruptions, and inadequate workplace infrastructure to help reduce the need for planning, tracking, reminding, and reclassification of information (Kirsh, 2000).

Status quo bias is defined as the preference for maintaining the current situation and opposing actions that may change the state of affairs. The term was coined by researchers William Samuelson and Richard Zeckhauser (1988), who conducted decision-making experiments to show that when given a choice between the status quo and a new option, people were more likely to stick with what they already knew.

The status quo bias is a cognitive bias based on emotion; people may feel uncomfortable putting themselves in situations where the outcome is uncertain. This tendency to keep things as they are, can have a considerable effect on people's behavior, however, not all change involves risk, and some changes may be adaptive in nature, but in either case, there will be resistance from those involved.

Overconfidence consists of overestimating one´s capabilities and considering that one can do it as planned in that ideal scenario, confident that the individual will perform satisfactorily. Aren and Canikli (2018) define overconfidence as the overestimation of a person's knowledge and ability. In other words, overconfidence is the difference a person may have between his or her knowledge and ability in a real situation and the greater this difference, the greater the overconfidence. For this reason, overconfidence can also be considered as the difference between confidence and accuracy.

Regarding the concept of heuristics of representativeness, psychologists Amos Tversky and Daniel Kahneman (1982) published a scholarly article on their studies on heuristics and biases. In it, they identified three new types of heuristics: representativeness, availability, and anchoring. In their studies on representativeness, they not only defined this category of heuristics but also noted that representativeness was prone to representative bias (assesses the probability of an event occurring taking into account another similar event).

In relation to the Discomfort factors or the Hassle Factor, the theory that the accumulation of discomfort can lead to stress and inaction is relevant because psychological factors are

important barriers (Amel et al. 2017; Steg and Vlek 2009); that is, facing factors that make a person uncomfortable in front of a situation, person, wording, or graphics.

In general, people respond unexpectedly and irrationally to rewards and sanctions that were intended to stimulate their behavior. As a result, governments and institutions are increasingly monitoring these factors; however, in the field of behavioral public administration, they have only recently begun to act.

An approach to the auditing process in the state of Sonora

In the state of Sonora, there are two institutions directly related to the audit and control processes, the first is the Superior Institute of Audit of the state of Sonora (ISAF) that in 2017 obtained full autonomy, ceasing to be an agency with technical and managerial autonomy dependent on the Congress of the state of Sonora. Its main function is to perform audits of the public account of public entities at the state and municipal level and is external in nature.

The second is the Secretariat of the Comptroller General of the State of Sonora (SCG), which is a centralized public administration institution under the executive branch, hence its internal control nature, and is assisted by decentralized agencies called Internal Control Organs (ICO).

Table 1 Control and Oversight Bodies in Mexico

Scope	Authority	Power of Attorney	Type of control
Federal	Secretary of Public Function (SFP)	Executive	Internal
Federal	Superior Audit Office of the Federation (ASF)	Legislative	External
State	Secretary of the Comptroller General (SCG)	Executive	Internal
State	Instituto Superior de Auditoria y Fiscalización (ISAF) (Superior Institute of Audit and Fiscalization)	Self-employed	External

Source: Own elaboration

According to O'Donnell (1997), there are two types of accountability, one called horizontal, which is carried out through mechanisms of control and oversight, and the other called vertical, that is, through citizen mechanisms, such as the periodic elections held every 3 and 6 years in the case of Mexico, in which citizens-voters can reward or punish their rulers. This mechanism is considered ineffective for the representatives to take responsibility for their acts of government, i.e., the possibility of being sanctioned is null or unlikely.

Horizontal accountability has mechanisms such as auditing through audits of the public account at first, where the use and destination of public resources are exposed in detail, in case of observations of the public account. An investigation can be opened and then a report of alleged responsibility can be prepared, depending on the type of fault, and will be turned

to the internal control body (OIC) for non-serious faults or to the Administrative Justice Tribunal (TJA) for faults considered serious.

The new General Law of Administrative Responsibilities (LGRA, 2016) comes to establish the substantive activities of the ISAF, which performs audits of state and municipal entities and detects possible irregularities known as a statement of observations. The following is the investigation area responsible for following up on the alleged administrative responsibilities and finally, the Substantiation area, which determines whether the administrative misconduct is not serious (FNG) or serious (FG).

Throughout the audit process, auditors must be making decisions, and these must be in full compliance with the law, objective, and impartiality. This work intends to identify whether auditors could be exposed (this is a possibility and not an assertion) to bias in their decisions.

Auditing is not a fortuitous event, but a planned process that seeks through an audit to ensure that public institutions comply with their raison d'être, following the legal framework that regulates them. It is important to note that the auditing process continues to evolve and the agencies that carry out audits of the State seek to move from being an entity responsible for highlighting errors to one that can also develop the ability to identify economic and social changes of a structural nature.

The State audit is carried out in three stages during its development: the first one is focused on all the activities performed by the auditor before he/she is present in the entity to be audited; at this moment, it is necessary to make a plan that will imply a previous preparation where he/she will know in advance the audited entity, its raison d'être, laws that regulate it, documents to be reviewed during the process, who will be part of the audit team, and the roles each one will play, among other functions.

Planning the audit is fundamental because the results of good or bad planning will be seen in the execution of the audit. During this phase, administrative steps are also taken to provide the resources necessary to conduct the audit and to ensure that the entity to be audited has been notified. The execution phase of the audit is divided into three stages: At the beginning of the audit, when the auditor opens the protocol, this moment is brief and serves only to clarify the scope of the audit, the established times, and the officials responsible for providing information.

The second moment is when the auditor reviews all the documents and records presented and makes sure that the institution is complying with legal requirements, making good use of public resources, or providing the expected results (depending on the objective of the audit).

The last moment of the audit is when the reports are elaborated and the evidence that supports any fault is compiled. At present, auditors have several tools to help them. A fundamental one is a program called SIGAS (Audit and Follow-up Management System) where not only communication with the audited entity is improved, but in general, the whole process since it supports planning, standardizes the preparation of reports, and ensures the identification of evidence. Although, indeed, the audit process does not end with the preparation of reports,

once the auditors present the results of their review, the Administrative Investigation Unit is in charge of following up on them, and subsequently the Substantiation Unit.

Methodology

It is a mixed research, using qualitative methods, two in-depth interviews, and requests for information conducted to have a broad knowledge about the case study: Instituto Superior de Auditoria y Fiscalización del Estado de Sonora (ISAF), to collect quantitative evidence from an online questionnaire was applied to ISAF auditors, to measure the possibility of incurring in biases when making decisions at the time of performing the audit and audit process.

The target population consisted of 213 auditors participating in the audit process, who perform almost two thousand audits per year (2022), being the simple random sample 139 for the application of the questionnaire. The universe of this research is made up of auditors who perform the audit process in the State of Sonora, from the administrative units of State, Municipal, Public Works, and Performance, belonging to the Instituto Superior de Auditoría y Fiscalización (ISAF).

Data collection instruments: Multiple-choice questionnaire in digital format, with a scale from one to ten, in addition to being conditioned assertions, i.e., it was not possible to advance in the answers. The Microsoft Forms program was used, which made it possible to condition the form so that it could only be answered from the official account. In addition, the hyperlink generated by this platform was sent as a link to the official email accounts.

Table 2. Audit and sample personnel

ISAF Structure	Staff	Sample	Pilot
Public Debt Audit Directorate	2	**1**	0
Public Policies and Programs Evaluation Unit	7	**5**	0
Deputy Audit Office of State Government Auditing	85	**55**	9
Deputy Audit Office of Municipal Audits	75	**49**	8
General Directorate of Public Works Auditing	33	**22**	2
General Directorate of Performance Audits	11	**7**	1
Total	213	**139**	20

Source: Own elaboration with data provided by ISAF.

The information gathering instrument is a questionnaire that was designed and contains two sections: the first one collects information based on categories of the auditor's profile: age, gender, years of experience, and administrative unit to which he/she belongs; the second section contains statements that describe the possible biases that the auditor may incur when making decisions during the audit process.

According to the sources, the research is mixed, as it collected information showing auditor behavior and then analyzed and presented a result. The qualitative data (auditor behavior) sought to be translated into statistical data showing measurable data.

This research is basic because it seeks to expand the information and understanding of the object of study; that is, to improve the understanding of the audit process. When accepting that in the audit event, the human part cannot be left aside and that; therefore, people's behavior impacts their decision-making, according to its scope, the research is micro-sociological because it will only be applied in an audit institution and to a specific area such as auditing.

The in-depth interviews conducted with two experts in the audit process and the information requests made to ISAF (January 2022) allowed to detect possible cognitive biases related to the audit activity, after a cross-check between the activities and responsibilities of the auditor. 5 biases were selected (cognitive overload, status quo, overconfidence, representativeness and discomfort factors, representativeness and discomfort factors). The questionnaire was designed to identify the existence of possible biases which ISAF auditors could be incurring. This exercise does not intend to be decisive with the findings, seeking to present exploratory information on a little-studied topic and above all to take it to the application in empirical work in such a way that it has limitations because it only addresses 5 cognitive biases.

Discussion of results

The instrument used was an online questionnaire applied to auditors participating in the audit process to collect primary information. The purpose was to identify possible cognitive biases that could be present in the decision-making of ISAF auditors. The first major challenge was to identify possible cognitive biases related to the auditor's activity, which were five.

Once the results of the questionnaire were obtained, it was necessary to identify whether ISAF Sonora auditors made decisions based on behavioral economics, through the biases of cognitive overload, status quo, overconfidence, representativeness, and discomfort factors.

Each bias had between three and four statements, which meant that when two out of three or three out of four were present. It was concluded that the bias existed, and it was necessary that, within the value scales, the sum of the percentages was equal to or greater than 50%. The bias was determined from the range of 6 to 10, when the answers are in the range of 1 to 5, they are not identified with the bias.

Cognitive load bias

The cognitive load bias refers to the tendency of people to underestimate the amount of information, tasks, or activities that can be processed simultaneously. It is related to a misconception that the brain can handle large amounts of information without feeling overwhelmed or that the brain discards relevant information. This bias can occur when people use a lot of information that may exceed the capacity to process it and, in that case, the brain makes decisions where important information may be omitted or some type of information may be discarded.

The results of the questionnaire show that there is an 85.2% possibility that ISAF auditors are incurring this bias. The auditors who answered the questionnaire and specifically to the question “How do I handle different sources of consultation simultaneously?” represented

98% in the range of 6-10 that identify with the statement, showing a high possibility that this bias is occurring in the auditors' decision-making.

Table 3. Cognitive overload bias.

Too much information exceeds the person's ability to process it.	Range	
	1 - 5	6 - 10
I handle large volumes of information at the same time.	7.5	92.5
Simultaneous management of several sources of consultation (laws, norms, codes, etc).	1.9	98.1
The amount of information I analyze demands a mental effort from me.	11.7	88.3
The amount of information I analyze causes me “mental fatigue” when they are “large” entities.	38	62
Average	14.8	85.2

Source: Own elaboration

To avoid cognitive overload bias, it is important to assess the amount of information that can be processed simultaneously, institutions have to address this problem strategically and prioritize substantive tasks, working on these aspects can reduce cognitive overload.

Status quo

This bias implies that the current situation is maintained, that the state of affairs does not take into account changes, or that things remain the same. This is contrary to an activity such as auditing, which is so dynamic and involves constant updating of laws and procedures, in addition to the fact that dealing with different people in each audit requires behavioral skills that allow good communication between the actors that are part of the audit process. The results of the questionnaire regarding this bias show that 95.5% of the auditors agree or identify with the current situation, i.e. the status quo of ISAF.

This bias shows a certain degree of conformism with respect to the statement “I aspire to change jobs in the next 5 years. 90.6% of the auditors do not aspire to change jobs, meaning that it is not even an idea or a possibility, and it may also indicate that they are in their comfort zone and have no intention of leaving it or putting it at risk.

This bias can be transferred to the activity of the auditors, who according to the in-depth interviews have a tendency or preference to want to audit the same entities they audited in previous years, i.e., the agencies they are already familiar with in terms of auditing.

Table 4. Status quo bias

Maintaining the current situation	Range

	1-5	6-10
I like my job, I enjoy it	0.9	99.1
I am considering changing jobs this year.	5.2	94.8
I aspire to change jobs within the next 5 years.	9.4	90.6
I like the idea of retiring from my job at ISAF	2.6	97.4
Average	4.5	95.5

Source: Own elaboration

Overconfidence

Overconfidence bias is the tendency to overestimate our knowledge and skills in a given area, people often have incorrect ideas about their performance or behavior, and their estimates of risk and success regularly deviate from reality.

Considering that auditors are 100% objective and impartial when performing their work increases the risk of incurring the bias of overconfidence since they overestimate their capabilities and consider that they can provide satisfactory results in an ideal scenario. The legal framework that regulates their behavior demands that they be objective and impartial, so this assertion is likely so forceful because of the very laws that demand it.

The statement: “For the results I provide to ISAF, if it were my boss, I would evaluate the results of my work with a rating of...” is located in the overconfidence bias and seeks to identify whether auditors overestimate their capabilities, considering that the results they plan in the ideal scenario, they will surely achieve them. The value scale that reflects this bias would be located in the extremes since considering that the rating should be ten or one is the same. At the institutional level, 58.7% say that they deserve a rating of 10, while 35.3% say that a nine is what they deserve, and in last place would be 6% of the auditors who believe that their work deserves a rating of eight.

Table 5. Overconfidence

Overestimating our capabilities	Range	
	1-5	6-10
I have the necessary competencies to perform my duties.	1	99
My experience allows me to ensure that the audit reports I develop are error-free.	6	94
I am 100% objective and impartial in my work.	0	100
if you were my boss, in the performance evaluation you would give me a rating of....	0	100
Average	1.8	98.3

Source: Own elaboration

Representativeness heuristics

The last bias to be identified is that of representativeness, which occurs at the moment of making a decision when the probability of an event occurring is evaluated taking into account another similar event. The scale of values representing this bias is from ten to six, and by grouping them, the results in this section are as follows: 74.7% of the auditors feel identified with the expression that an audited entity that has committed fraud once will commit it again in the same administration; likewise, 91.5% consider that an audited entity with a good record has a good prognosis when evaluating it, and 17.3%: "If one day I suffered an accident in the Commission, it is likely to happen again". Although two statements indeed reach a percentage higher than 50%, they are two out of three statements, which confirms that there may be a bias.

Table 6. Bias Representativeness

assesses the probability of occurrence of an event taking into account another event	Range	
	1-5	6-10
An audited entity that presented fraud on one occasion will likely present it again in the same administration.	24.7	75.3
If I experience a car accident at the commission one day, it is likely to happen again.	17.3	82.7
An audited entity with a good track record has a good prognosis when rating it.	8.7	91.3
Average	16.9	83.1

Source: Own elaboration

Discomfort factors

The discomfort factor bias is used at the time of making a decision and seeks to avoid facing situations (person, events, wording, graphics, etc.) that are not pleasant. Therefore, the fourth bias will be identified with the value scale from one to five, i.e., the auditors should feel identified with the lowest scale.

The analysis of the results shows that ISAF Sonora auditors would not be making decisions with this bias, since when grouping the results of the value scale from one to five, which is the one that shows the bias, the results are as follows: 99% express that they feel comfortable when performing the audit and the same percentage, 99%, feel satisfied with their work. Even though there is a representation in the ranges from one to five, which would mean that they would feel uncomfortable, it does not exceed the average. 77.8% of the auditors say that they find it pleasant to deliver results that show fraud, so only 22.2% would find it uncomfortable. The last item shows that 71.3% of the auditors find it gratifying that the result of the audit is

the basis for an investigation process that leads to imprisonment, i.e., only 28.6% are uncomfortable. This leads to the conclusion that this bias is not likely to occur.

Table 7. Bias Discomfort factors.

You do not want to face factors that make you uncomfortable.	Range	
	1-5	6-10
I feel comfortable when performing the audit.	1	99
I feel satisfied with my work	1	99
I am happy to deliver results that show that fraud is occurring	22.7	77.3
I am gratified that the result of my audit is the basis for an investigative process that proceeds to incarcerate the individuals.	28.5	71.5
Average	13.3	86.7

Source: Own elaboration

Conclusions

If one were to consider all possible options when making a decision, the process would be exceedingly lengthy, even for the most straightforward choices. Given the complexity of the world and the vast amount of information available, it is not uncommon for individuals to rely on mental shortcuts that allow them to act swiftly. Cognitive biases can be attributed to a multitude of factors. However, it is these mental shortcuts, known as heuristics, that frequently play a pivotal role. Despite their often surprising accuracy, these heuristics can also result in erroneous thinking.

The exploratory research indicates that cognitive biases such as cognitive overload, overconfidence, status quo, and representativeness are likely to influence ISAF auditors' decision-making processes. These biases are present in approximately 80% to 95% of auditors, with only 13% indicating that they are not present.

The results indicate that ISAF auditors are highly susceptible to cognitive overload (85.2%), overconfidence (98.3%), status quo (95.5%), and representativeness (83.1%) biases of the five biases that comprise this research. Additionally, the discomfort factors demonstrate that (86.7%), auditors exhibit a high degree of satisfaction with their audit activities.

The initial step in mitigating the influence of cognitive biases is to improve the classical frameworks for understanding work environments. It is crucial to recognize that the workplace is a conglomerate of numerous specific environments, within which one navigates. The auditor's workplace is a complex knowledge environment in which the flow of information is mediated by a range of technologies, available resources, and changing teams of people. This first approach to identifying possible biases in auditors' decision-making processes paves the way for further research into the possible existence of other cognitive biases in the context of public administration.

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