

Analysis of the Effectiveness of the Internal Control System

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Abstract

This study investigates the feasibility of implementing the Self-Assessment of Internal Control (SAIC) within the Ministry of Youth and Sports in Algeria, focusing on its effectiveness in enhancing internal control systems. The research evaluates the awareness of management and employees regarding SAIC, the availability of necessary implementation requirements, and the challenges hindering its adoption. Utilizing a descriptive and analytical methodology, data were collected through a questionnaire distributed to 54 respondents, achieving a 90% response rate. Statistical analysis using SPSS v26 confirmed that both management and employees recognize the importance of SAIC, and the ministry possesses adequate resources for its implementation. However, challenges such as insufficient training, lack of trust, and inadequate incentive mechanisms impede its success. The study proposes recommendations, including tailored training programs, fostering a culture of trust, and developing clear operational guidelines to enhance SAIC adoption. This research contributes to the discourse on participatory internal control evaluation in public administrations, offering practical insights for improving governance and operational efficiency.

Keywords: Internal Control, Self-Assessment, Ministry of Youth and Sports, Public Administration

Introduction

The internal control system is considered an essential mechanism for the success of any institution, serving as the protective framework that safeguards its assets and properties. It aims to achieve the institution's objectives related to operations, reporting, and compliance. Establishing a sound internal control system and maintaining its continuous effectiveness has become a key indicator of proper management and sound governance due to the valuable services it offers. It provides reasonable assurance of achieving organizational goals.

However, the internal control system may become ineffective due to several inherent factors, such as outdated procedures, evolving economic environments, and the failure to adapt the system accordingly, in addition to both intentional and unintentional human errors. Therefore, the system must be continuously evaluated to avoid any deficiencies.

An institution's management strives to maintain the system's effectiveness through various ongoing and independent evaluation tools such as internal and external auditing, along with the Self-Assessment of Internal Control (SAIC). This is a modern model for evaluating internal control systems, where efforts are jointly undertaken by management, internal auditors, and employees at all levels to assess the system's effectiveness and identify its strengths and potential weaknesses. This method saves time and effort while providing valuable and more accurate results. Hence, management must ensure its successful implementation by creating a suitable environment, identifying application requirements, and removing all obstacles to its success.

1.1 Problem Statement

Based on the above, the central research question of this study can be framed as follows:

To what extent can the Self-Assessment of Internal Control be applied in the Ministry of Youth and Sports?

From this main problem arise the following sub-questions:

- To what extent are the administration and employees in the Ministry of Youth and Sports aware of the importance of self-assessment of internal control?

- To what extent are the necessary requirements for implementing the self-assessment method of internal control available in the Ministry?
- What are the challenges that hinder the implementation of this method in the Ministry of Youth and Sports?

1.2 Research Hypotheses

To answer the research problem, the study proposes the following main hypothesis: **Despite being aware of the importance of the self-assessment method of internal control, the administration of the Ministry of Youth and Sports is unable to benefit from its application.**

This leads to the following sub-hypotheses:

- The administration and employees of the Ministry of Youth and Sports have adequate knowledge of the importance of internal control and its self-assessment method.
- The essential requirements for implementing the self-assessment method are available within the Ministry.
- There are challenges that hinder the implementation of this method in the Ministry of Youth and Sports.

1.3 Significance of the Study

The importance of this study stems from the critical role internal control plays in protecting the organization's assets and achieving its objectives. Institutions are increasingly required to establish and maintain effective internal control systems and to continually assess and report on their effectiveness. This research seeks to explore the possibility of applying the self-assessment method for internal control, identify the key requirements for its proper implementation, and highlight the main obstacles preventing its adoption in Algerian public administrations—both theoretically and practically—through a case study of the Ministry of Youth and Sports.

1.4 Research Methodology

To fully grasp the aspects of the study and achieve its objectives, as well as to test the proposed hypotheses, the descriptive and analytical method will be adopted.

1.5 Research Tools

The researchers designed a questionnaire aimed at collecting data on the feasibility of applying the self-assessment method of internal control within administrative institutions, and particularly the extent to which the Ministry of Youth and Sports recognizes its importance, along with the key challenges to its implementation.

1.6 Research Axes

To comprehensively address the topic of self-assessment of internal control, the following key areas will be covered:

- A detailed presentation of internal control
- A detailed explanation of the self-assessment method of internal control
- A field study examining the feasibility of applying this method within the Ministry of Youth and Sports

1.7 Terminology Clarification

It is worth noting that in ministries, the responsibilities of internal auditing are carried out by members of the General Inspectorate. Therefore, the term “inspection” will be used instead of “internal audit,” as the latter is not adopted in central public administration.

1.8 Previous Studies

- **Study by Maida Mohammed Faisal** titled *"The Role of Account Auditors in Evaluating the Internal Control System – A Field Study"* aimed to highlight the auditor's role in evaluating internal control systems in Algeria and their contribution to the smooth operation of institutions. The study distributed 45 questionnaires to various economic institutions, audit firms, and academics, concluding that strong and effective internal control systems exist in institutions and that auditors play a significant role in enhancing their performance and quality.
- **Study by Louiza Nahar et al.** titled *"The Role of Internal Auditing in Activating Internal Control in Economic Institutions"* sought to determine the extent to which internal auditing contributes to strengthening internal control. It found that internal auditing and internal control are interdependent concepts, sharing managerial and financial

objectives. While internal control focuses on applying institutional rules and procedures, internal auditing acts as a mechanism to verify the proper operation of these systems.

What distinguishes the current study from previous research is its focus on evaluating the effectiveness of internal control systems through a participatory approach involving internal self-assessment workshops coordinated between the administration and internal inspection teams, conducted by the employees themselves, rather than relying solely on external or internal auditors.

2. Theoretical Framework of Internal Control

In this section, we will address the nature of internal control, its objectives, and the criteria for its effectiveness, as follows:

2-1 Concept of Internal Control

Initially, internal control was viewed as synonymous with the term "internal check," and it was considered merely a tool for internal regulation. However, this concept quickly evolved, and internal control came to be recognized as an integrated system with its own methods and resources (Lutfi, *Dr. Amin Lutfi's Encyclopedia of Auditing: Reviewing Internal Control Systems*, 2003, p. 8).

The **American Institute of Certified Public Accountants (AICPA)** was the first to provide a comprehensive definition of internal control (Maida, 2018, p. 172). It defined internal control as:

"The organizational plan and all the coordinated methods and measures adopted within an institution to safeguard its assets, verify the accuracy and reliability of accounting data, increase operational efficiency, and ensure adherence to established managerial policies."

(Bahaz, Ajila, & Mostafa, 2019, p. 29)

Thus, it is a system comprising a sound organizational structure, along with all the procedures, practices, and production methods that ensure internal control over assets, the quality of information, efficiency and effectiveness of operations, and compliance with administrative instructions, policies, and laws.

In 2013, the **Committee of Sponsoring Organizations of the Treadway Commission (COSO)** defined internal control as:

"Internal control is a process, effected by an entity's board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives relating to operations, reporting, and compliance." (COSO, 2013, p. 03)ⁱ

Internal control is therefore a process embedded in all of an institution's operations and at all levels. It is carried out daily through the activities and behaviors of individuals and aims to provide reasonable assurance that the organization's objectives are being achieved. These objectives are generally classified into three categories:

- **Operational Objectives:** These relate to the effectiveness and efficiency of operations, including both operational and financial performance as well as the safeguarding of assets.
- **Reporting Objectives:** These relate to the preparation of internal and external reports—financial and non-financial—that must be reliable, timely, transparent, and compliant with the requirements of regulators, recognized standard-setting bodies, or internal administrative policies.
- **Compliance Objectives:** These refer to adherence to laws and regulations applicable to the organization. (COSO, 2014, p. 20)

2-2 Components of Internal Control

Numerous internal control frameworks have identified five key components of internal control: **Control Environment, Risk Assessment, Control Activities, Information and Communication, and Monitoring.** We will address these components based on the latest COSO Internal Control – Integrated Framework, issued on **May 14, 2013** (COSO, 2014, pp. 20–22).

2-2-1 Control Environment

The control environment comprises the set of standards, processes, and structures that form the foundation for carrying out internal control across the organization. It is characterized by the board of directors and senior management setting the tone at the top regarding the importance of internal control and expected ethical values. Management reinforces and

communicates these expectations across all levels of the organization. The control environment has a pervasive influence on the overall internal control system.

2-2-2 Risk Assessment

Every organization faces a range of risks stemming from both internal and external sources. Risk is defined as the possibility of an event occurring that will have a negative impact on achieving objectives. Risk assessment is a dynamic, iterative, and ongoing process used to identify and analyze risks that may hinder the achievement of the entity’s objectives and to evaluate these risks against established tolerance thresholdsⁱⁱ.

2-2-3 Control Activities

Control activities are the actions established through policies and procedures that help ensure management’s directives to mitigate risks are carried out. These activities are performed at all levels of the organization and at various stages of business operations. They can also be applied within the IT environment. Control activities include both **preventive and detective** controls and consist of both manual and automated processes, such as authorizations, approvals, verifications, reconciliations, and operational performance reviews.

2-2-4 Information and Communication

To fulfill its internal control responsibilities and achieve its objectives, an organization requires relevant and quality information. Management obtains or produces such information from internal or external sources. Communication is the continuous and iterative process of providing, sharing, and obtaining necessary information. There are two types:

- **Internal communication** facilitates the dissemination of information across all levels of the organization.
- **External communication** is twofold: it allows for the receipt of relevant external information internally, and the provision of the organization’s information to external stakeholders based on their needs and expectations.

2-2-5 Monitoring Activities

Organizations conduct ongoing evaluations, separate evaluations, or a combination of both to determine whether each of the five components of internal control and their associated principles are present and functioning. Ongoing evaluations are integrated into the organization’s business processes, while separate evaluations vary in scope and frequency depending on risk assessments and the effectiveness of ongoing monitoring. The results are assessed based on standards set by regulators, standard-setting bodies, senior management, and the board of directors. Deficiencies are communicated to management and the board as appropriate.

In addition, the COSO framework identifies 17 principles that support the five components of internal control. These principles serve as indicators of the system's effectiveness. Each principle is backed by focus points that highlight its key attributes (Hirth, 2015, p. 18). The principles are outlined in the table below:

Table 1: The 17 Principles of Internal Control According to COSO Framework

Component	Principles
Control Environment	1. Demonstrates commitment to integrity and ethical values
	2. Exercises oversight responsibility
	3. Establishes structure, authority, and responsibility
	4. Demonstrates commitment to competence
	5. Enforces accountability
Risk Assessment	6. Specifies suitable objectives
	7. Identifies and analyzes risks
	8. Assesses fraud risk
	9. Identifies and analyzes significant changes

Component	Principles
Control Activities	10. Selects and develops control activities 11. Selects and develops general controls over technology 12. Deploys control activities through policies and procedures
Information & Communication	13. Uses relevant information 14. Communicates internally 15. Communicates externally
Monitoring	16. Conducts ongoing and/or separate evaluations 17. Evaluates and communicates deficiencies

Source: Robert Hirth, 2015, p. 18

The COSO (2013) framework emphasizes that for an internal control system to be considered effective, all five components and their associated principles must be present and operating in both the design and implementation of the system. These components should continuously function in the organization's operations and guide its internal control practices. Furthermore, the five components must operate together in an integrated and cohesive manner.

3. Theoretical Framework of Internal Control Self-Assessment

In this section, we address the nature of internal control self-assessment, its objectives, stages of implementation, and the conditions necessary to benefit from it, as follows:

3-1 Concept of Internal Control Self-Assessment

Internal control self-assessment was first introduced in **1986** by an internal auditor at **Gulf Oil Company**. It is not a new approach to internal auditing and is based on two simple concepts:

1. Employees should be responsible for both evaluating and applying internal control measures;
2. Auditors can enhance internal control by facilitating employees' understanding and evaluation of it.

This concept stems from the well-known proverb: *"Give a man a fish and you feed him for a day; teach a man to fish and you feed him for a lifetime."* Helping employees understand internal control procedures has a greater impact than simply conducting periodic audits on selected departments.

(Lutfi, *Advanced Studies in Auditing and Assurance Services*, 2010, p. 506)

Definitions of internal control self-assessment include:

- The **Institute of Internal Auditors (IIA)** defines it as:

"A process through which the effectiveness of internal controls is tested and evaluated in order to provide reasonable assurance that all operational objectives will be achieved."
(Tawab, 2016, p. 19)

- **Amin El-Sayed Ahmed Lutfi** describes it as:

"A process involving a workshop that brings employees together to assess the status and effectiveness of management practices in supporting the achievement of the organization's objectives."
(Lutfi, *Advanced Studies in Auditing and Assurance Services*, 2010, p. 506)

- **Khalaf Abdullah Al-Wardat** defines it as:

"A process for testing and evaluating the effectiveness of the internal control system within a company. All employees participate in this process, thereby increasing their responsibility for internal control and turning them into owners of the process. The primary goal is to ensure the organization achieves its business objectives efficiently and effectively."
(Al-Wardat, 2014, p. 373)

Based on these definitions, internal control self-assessment can be defined as a workshop-style process where employees themselves—considered experts in their operational areas—discuss and evaluate the effectiveness of the internal control system, with coordination and support from the internal audit department. It reflects a collaborative effort between employees and internal auditors.

3-2 Objectives of Internal Control Self-Assessment

The **main objective** of internal control self-assessment is to raise employee awareness regarding internal control and to foster and develop a culture of control within the organization. Its specific objectives vary depending on the level and roles of the stakeholders involved:

3-2-1 Objectives of Senior Management

Senior management aims to:

- Improve operations through targeted interventions and workshops.
- Obtain insights into the effectiveness of internal controls and risk assessments across different organizational levels.

3-2-2 Objectives of Lower Management and Operational Staff

The goals for lower management and operational personnel include:

- Ensuring that all their activities are covered by internal control systems that support optimal use of the organization's assets and efficient, secure operation. (IFACI, 2005, p. 12)
- Enhancing employees' understanding of risks and control mechanisms relevant to their work.
- Increasing awareness of control issues and facilitating early detection of risks.
- Encouraging open communication, teamwork, and continuous improvement.
- Empowering employees and enhancing accountability and responsibility. (Al-Wardat, 2014, p. 375)

3-2-3 Objectives of Internal Auditing

For the internal audit function, the objectives include:

- Contributing to the development of the annual internal audit plan by providing insights from self-assessment results regarding control weaknesses.
- Refining the scope of audit interventions for each assignment based on the outcomes of the internal control self-assessment.

3-2-4 Objectives of Other Functional Departments

Other organizational units (e.g., risk management, finance, etc.) benefit from self-assessment by:

- Responding to regulatory or management requests regarding internal controls.
- Obtaining information to verify compliance with applicable laws and regulations.
- Contributing to the overall risk assessment of the institution.
- Raising awareness among management about the importance of internal control to enhance and take ownership of business operations. (IFACI, 2005, p. 13)

Let me know if you need this reformulated for inclusion in an academic paper, thesis, or presentation slide.

3-3 Stages of Internal Control Self-Assessment

The process of internal control self-assessment involves the following stages (Al-Ghoul, 2013, pp. 15–19):

- Promoting the self-assessment system among employees, ensuring they understand and are convinced of its purpose and the reasons behind its implementation.
- Planning the workshops.
- Conducting the workshops and providing the necessary resources to ensure their success.
- Preparing the assessment report.

3-4 Methods and Approaches of Internal Control Self-Assessment

There are various methods used to carry out internal control self-assessment. The most prominent include (Tawam, 2016, pp. 19–20):

- Workshop method
- Questionnaire method
- Management-prepared analysis method

This study will focus specifically on the workshop method as the primary self-assessment approach, given its widespread use and numerous advantages for both management and the organization.

3-5 General Requirements for an Effective Internal Control Self-Assessment Program

Key success factors for effectively implementing the internal control self-assessment approach include:

- Availability of qualified personnel to support implementation
- Allocation of sufficient time, resources, and tools for workshop preparation and execution
- Provision of adequate training, expertise, and support for both auditors and participants to ensure effective workshop facilitation
- Proper and efficient design and implementation of the internal control system, along with its clarity and flexibility to avoid misinterpretation (Mohammed, 2017, p. 51)
- Support from senior management
- Clear understanding of internal control concepts and objectives
- Minimizing barriers to implementation of the self-assessment process (Al-Jamal, 2014, p. 197)

3-6 Challenges to Implementing Internal Control Self-Assessment

The self-assessment process faces several obstacles that can hinder its success. Management must identify and address these challenges to ensure effective implementation. These include:

- Employee resistance to change
- Concerns about relinquishing responsibility for maintaining effective internal control by management
- Inaccurate workshop results due to lack of experience among facilitators
- Insufficient employee training
- Lack of training and supervisory skills within the internal audit team
- Perceived threat to HR and institutional development personnel, as well as total quality management staff who may view self-assessment workshops as a challenge to traditional roles
- Lack of honesty and openness among employees (Al-Ghoul, 2013, pp. 33–34)
- Demotivation caused by failure to implement suggestions for improvement
- Low employee motivation
- Lack of senior management support
- Limited resources to implement the process
- Difficulty in selecting a suitable facilitator (Sharidiya, 2018, p. 200)

4. Methodological Framework of the Study

After briefly addressing the key concepts of internal control and internal control self-assessment, this section presents the methodological framework aimed at:

- Bridging the gap between the theoretical background and practical application.
- Answering the research questions and validating or refuting the proposed hypotheses.

This will be achieved by discussing the study population, the research tool, the tool's validity and reliability, the statistical methods used, and a description of the characteristics of the study population.

4-1 Study Population and Sample

The study population consists of individuals responsible for internal control and its implementation at the Ministry of Youth and Sports, holding the following job titles: Secretary General, Director, Deputy Director, Inspector, Head of Department, Head of Division, and Employees.

Accordingly, the total number of individuals in the study population amounted to 54, all of whom fall under the aforementioned positions and represent those directly involved with the internal control system in the ministry.

A total of 60 questionnaires were distributed to the entire study population. 54 questionnaires were returned, resulting in a response rate of 90%, which is considered acceptable. No returned questionnaires were excluded, meaning the number of valid questionnaires used in the study was 54.

4-2 Study Instrument

The researchers designed a questionnaire which was distributed to individuals within the study population. The purpose of this questionnaire was to collect data on the feasibility of implementing the internal control self-assessment system, as well as to identify the main challenges and obstacles associated with its application.

The study instrument included the following parts and dimensions:

- Part One: Concerned with the personal and professional data of respondents, including educational qualification, professional experience, and job position.
- Part Two: Comprised of three dimensions, collectively including 25 items. A five-point Likert scale was adopted, and the response options were defined as shown in the following table:

Table 2: Five-Point Likert Scale

Response	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Score	1	2	3	4	5

Source: Prepared by the researchers

4-3 Statistical Methods Used in the Study

The researchers used SPSS version 26 to conduct the analysis, and the following statistical tests were employed:

- Cronbach's Alpha Coefficient to test the reliability and internal consistency of the questionnaire items.
- Measures of central tendency (mean) and measures of dispersion (standard deviation) to analyze the general data of the study sample.
- One-sample t-test to evaluate the questionnaire items.

4-4 Validity and Reliability of the Study Instrument

To assess the reliability of the questionnaire items, **Cronbach's Alpha coefficient** was used. This coefficient ranges between 0 and 1: the closer the value is to 1, the higher the reliability; the closer it is to 0, the lower the reliability.

After conducting the reliability test on the study items, the results obtained are presented in the following table:

Table 3: Cronbach's Alpha Reliability Coefficients

No.	Dimension	Number of Items	Cronbach's Alpha
01	Perception of the Importance of Internal Control Self-Assessment	08	0.814
02	Availability of Requirements for Implementing Self-Assessment	07	0.771
03	Challenges to the Implementation of Internal Control Self-Assessment	10	0.892
04	Entire Questionnaire	25	0.843

Source: Prepared by the researchers based on SPSS v26 output

From the table above, we note that the overall Cronbach's Alpha value is 0.843, which is considered a strong indicator of the high reliability of the questionnaire tool.

4-5 Analysis of the Characteristics of the Study Sample

Analyzing the sample characteristics provides insight into the attributes of the study participants and highlights the target population. After processing the questionnaire data related to the respondents' personal variables, the results shown in the following table were obtained:

Table 4: Distribution of Study Sample According to Personal Variables

Variable	Statement	Frequency	Percentage
Respondent's Age	Under 30 years	10	18.5%
	30 to 40 years	18	33.3%
	41 to 50 years	14	25.9%
	Over 50 years	12	22.2%
	Total	54	100%
Academic Qualification	Doctorate	2	3.7%
	Master's	16	29.6%
	Bachelor's	18	33.3%
	Professional Studies Certificate	15	27.8%
	Other qualifications	3	5.6%
	Total	54	100%
Professional Experience	Less than 5 years	3	5.6%
	5 to 10 years	21	38.9%
	11 to 20 years	13	24.1%
	More than 20 years	17	31.5%
	Total	54	100%
Job Position	Secretary General	1	1.9%
	Inspector	3	5.5%
	Director	2	3.7%
	Deputy Director	5	9.3%
	Head of Department	5	9.3%
	Head of Division	7	13%
	Staff Member	25	46.2%
	Other Position	6	11.1%
	Total	54	100%

Source: Prepared by the researchers based on SPSS V26 output.

Table 4 above reveals diversity in educational qualifications, with most participants holding university degrees. Specifically, 33.33% of the sample holds a Bachelor's degree, and 29.6% hold a Master's degree. This indicates a positive aspect, as the sample members possess high academic qualifications that enable them to understand the questionnaire items and respond professionally, thus enhancing the quality and reliability of the results.

Regarding professional experience, the table shows that 21 individuals (38.9%) have between 5 and 10 years of experience, 13 individuals (24.1%) have between 11 and 20 years, and 17 individuals (31.5%) have more than 20 years of experience. This suggests that the majority of the sample has substantial practical experience. Additionally, there is a notable variety in job titles and administrative levels among the participants.

In terms of job positions, the participants span over eight different titles, ranging from Secretary General, Inspector, Director, and Deputy Director to regular staff members. They are distributed across all job titles within the ministry, indicating a representative and inclusive sample.

5- **Results** **Analysis**

5-1 Analysis of the First Axis Items

We have prepared the following table, which presents the statistical results for the first axis: “The extent to which the management and employees of the Ministry of Youth and Sports are aware of the importance of self-assessment of internal control.”

Table 5: Analysis of the Items Related to the Perception of the Management and Employees of the Ministry of Youth and Sports Regarding the Importance of Self-Assessment of Internal Control

No.	Item	Mean	Std. Deviation	t-value	Significance Level
01	Self-assessment of internal control helps maintain a sound and effective internal control system.	4.00	0.583	12.61	0.000
02	Self-assessment of internal control serves as a means to raise employee awareness and understanding of internal control, its objectives, and its importance.	3.93	0.508	13.38	0.000
03	Self-assessment of internal control helps employees better understand institutional goals and associated risks.	3.93	0.866	7.86	0.000
06	Self-assessment of internal control enhances the effectiveness and efficiency of inspection processes by enabling early detection of internal control weaknesses and early diagnosis of risks with minimal effort and cost.	3.87	0.702	9.12	0.000
08	Self-assessment of internal control contributes to encouraging employees to adhere to objective policies and procedures.	3.87	0.702	9.12	0.000
07	Self-assessment of internal control improves communication and cooperation between senior management, operational management, and employees, promoting teamwork.	3.83	0.795	7.70	0.000
04	Self-assessment of internal control contributes to training management and staff on how to assess internal control systems, evaluate risks, and report them.	3.76	0.612	9.11	0.000
05	Self-assessment of internal control enhances employees' motivation for the continuous development of the internal control system.	3.63	0.808	5.73	0.000
Axis One (Overall)		3.85	0.466	13.44	0.000

Source: Prepared by the researchers based on SPSS V26 output.

From the table, the following can be observed:

- The mean for item 1 was 4.00, which was the highest among the first axis items. This indicates that the study sample believes that self-assessment of internal control contributes significantly to maintaining a sound and effective internal control system.
- The mean for item 5 was 3.63, the lowest mean among the items in this axis. Nonetheless, the sample agreed that self-assessment of internal control enhances employees' motivation for the continuous development of the internal control system.
- The overall mean for all items in the first axis was 3.85, with a standard deviation of 0.466. The t-value was 13.44, and the significance level was 0.000, which is less than 0.05. This categorizes the first axis under the "agree" level, indicating that most of the sample members recognize the importance of self-assessment as a tool for evaluating internal control systems.

Therefore, the null hypothesis is rejected, and the alternative hypothesis is accepted, which states the following: The management and employees of the Ministry of Youth and Sports possess a clear understanding of the importance of internal control and the self-assessment method of internal control.

5-2 Analysis of the Second Axis Items

We prepared the following table which presents the statistical results for the second axis: "Availability of necessary requirements for implementing self-assessment of internal control."

Table 6: Analysis of Items on the Availability of Requirements for Implementing Self-Assessment of Internal Control

No.	Item	Mean	Std. Deviation	t-value	Significance Level
01	Participants in the workshops are aware of the importance and objectives of internal control.	3.94	0.685	–	–
06	The internal control system is characterized by sound, effective design and implementation, and flexible application.	3.72	0.856	–	–
03	The management has sufficient time, resources, and tools to prepare and implement self-assessment workshops.	3.65	0.914	–	–
02	The management has qualified personnel to support and implement self-assessment of internal control.	3.63	0.917	5.044	0.000
07	The internal control system is clearly designed to facilitate ease of understanding and proper application.	3.57	0.690	6.117	0.000
05	Implementation of self-assessment of internal control is supported by senior management.	3.52	1.145	3.328	0.002
04	Inspectors and workshop participants have received adequate training and possess sufficient experience.	2.37	0.623	-7.423	0.000
Axis Two (Overall)		3.49	0.551	6.489	0.000

Source: Prepared by the researchers based on SPSS V26 output.

Observations from the table:

- Item 1 recorded the highest mean value of 3.94 and a standard deviation of 0.685, indicating that participants in self-assessment workshops at the Ministry of Youth and Sports are aware of the importance and objectives of internal control.
- Item 5 had a mean of 3.52 and a standard deviation of 1.145, showing that self-assessment of internal control receives support from senior management in the Ministry.
- Item 4 scored the lowest mean of 2.37 with a standard deviation of 0.623, placing it in the "disagree" category. This suggests that coordinators and inspectors responsible for the workshops lack the appropriate training and experience to effectively carry out their roles in self-assessment.
- The overall mean for the second axis was 3.49, with a standard deviation of 0.551, a t-value of 6.489, and a significance level of 0.000, which is less than 0.05. Therefore, the second axis falls within the "agree" range, indicating that the Ministry of Youth and Sports possesses the necessary requirements to implement self-assessment of internal control.

Accordingly, the null hypothesis is rejected and the alternative hypothesis is accepted, stating: The necessary requirements for implementing the self-assessment method of internal control are available in the Ministry of Youth and Sports.

5-3 Analysis of the Third Axis Items

We prepared the following table presenting the statistical results for the third axis: "Difficulties in implementing self-assessment of internal control."

Table 7: Analysis of Items on the Difficulties of Implementing Self-Assessment of Internal Control

No.	Item	Mean	Std. Deviation	t-value	Significance Level
10	Employees in HR, institutional development, and total quality management feel uncomfortable with the application of self-assessment.	3.78	0.883	6.472	0.000
05	The administration faces a lack of training and supervisory skills among inspectors and workshop coordinators.	3.72	0.920	5.770	0.000
03	Self-assessment results are deemed inaccurate due to participants' lack of experience.	3.67	0.890	5.503	0.000
06	The work environment lacks trust, which affects openness and honesty between employees and all administrative levels.	3.63	1.051	4.400	0.000
09	The administration lacks incentive mechanisms to encourage and motivate employees to adopt self-assessment.	3.56	1.093	3.735	0.000
02	The administration lacks confidence in delegating the responsibility of maintaining and continuously evaluating effective internal control.	3.48	0.818	4.324	0.000
01	The administration struggles to convince employees to adopt the self-assessment approach.	3.35	0.894	2.894	0.006
04	The administration suffers from a lack of training for staff participating in the self-assessment process.	2.28	0.492	-10.785	0.000
07	The administration lacks the will and desire to implement the self-assessment method.	2.22	0.538	-10.626	0.000
08	The administration faces a shortage of resources necessary for implementing self-assessment.	1.83	0.720	-11.902	0.000
Axis Three (Overall)		3.15	0.431	2.588	0.012

Source: Prepared by the researchers based on SPSS V26 output.

From the table, the following observations can be made:

- The mean score for item 10 was 3.78, the highest among all the third-axis questions. This indicates that employees in Human Resources, Institutional Development, and Total Quality Management departments perceive the implementation of self-assessment for internal control as a threat to their roles.
- The mean score for item 6 was 3.63, with a standard deviation of 1.051, which suggests that the work environment in the Ministry of Youth and Sports is characterized by a lack of trust, negatively impacting the openness and honesty between employees and management—a key prerequisite for successful internal control self-assessment.
- The mean score for item 9 was 3.56, with a standard deviation of 1.093, indicating that the ministry lacks incentive mechanisms to motivate employees and encourage them to adopt the internal control self-assessment approach.
- The mean score for item 2 was 3.48, with a standard deviation of 0.818, suggesting that the ministry struggles with trusting the delegation of responsibility for maintaining effective internal control and continuously evaluating it across the organization.
- The mean scores for items 4 and 8 were 2.28 and 1.83 respectively, with standard deviations of 0.492 and 0.720, implying that the Ministry does not face significant shortages in material or qualified human resources needed for applying self-assessment of internal control.
- The mean score for item 7 was 2.22, with a standard deviation of 0.538, indicating that the Ministry does possess the willingness and commitment to adopt the internal control self-assessment method.
- The overall mean for the third axis was 3.15, with a standard deviation of 0.431, a t-value of 2.588, and a significance level of 0.012, which is less than 0.05. This places the third axis in the “neutral” category, indicating

that participants believe the Ministry of Youth and Sports does face certain difficulties that hinder the implementation of internal control self-assessment. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted, which states: There are difficulties that hinder the implementation of the internal control self-assessment approach at the Ministry of Youth and Sports.

6- Conclusion

No matter how well an internal control system is designed, it can only provide reasonable assurance of achieving management's objectives. Therefore, it must be continuously evaluated and improved. One of the most effective tools for ongoing evaluation is the internal control self-assessment, which relies on the collaborative efforts of employees—as experts in their functional areas—and coordinators from the internal audit team—experts in internal control and risk management.

Through our field study, we found that implementing this approach is feasible within the Ministry of Youth and Sports. The following conclusions were drawn:

- Internal control is a process implemented by employees through the institution's daily operations and offers reasonable assurance of achieving organizational objectives.
- Self-assessment of internal control is a process involving senior management and employees at all levels, coordinated by internal auditors. It integrates employees' expertise with auditors' knowledge of internal control and risks. It involves serious workshops and discussions that evaluate each component of internal control, identify issues, and propose immediate improvements to ensure the system's effectiveness.
- The management and employees of the Ministry of Youth and Sports are fully aware of the importance of internal control and the self-assessment approach.
- The requirements necessary for the successful implementation of self-assessment are available, including sufficient time and material resources, qualified human resources, a clearly designed internal control system, and support from senior management.
- However, certain difficulties limit the application of the self-assessment approach, including:
 - Lack of training and supervisory skills among inspectors and workshop coordinators.
 - Trust deficits among employees, which affect openness and honesty.
 - Lack of incentive mechanisms.

In light of these findings, the following recommendations are proposed:

- I. Establish a reference framework for internal control and risk management tailored to the Algerian context.
- II. Train inspectors in public institutions on internal control, risk management, and the self-assessment approach.
- III. Develop a clear strategy and operational guide outlining the stages and procedures of the self-assessment process.
- IV. Enhance human resources through continuous training and development, with greater reliance on information technology.
- V. Raise awareness across all organizational levels about the importance of internal control, risk management, and self-assessment.
- VI. Involve external experts to assess workshops at least once a year.
- VII. Work on building a culture of trust and openness among all employees and promote teamwork.
- VIII. Develop accurate incentive mechanisms to motivate employees to adopt the internal control self-assessment approach.
- IX. Ensure continuous follow-up of the process and address the weaknesses identified through self-assessment.

7- References

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ⁱ The Sponsoring Organizations Committee of the Treadway Commission, also known as COSO, is a joint initiative of five professional organizations: the American Accounting Association (AAA), the American Institute of Certified Public Accountants (AICPA), Financial Executives International (FEI), the Institute of Management Accountants (IMA), and the Institute of Internal Auditors (IIA). The aim of this committee is to help organizations improve performance by developing thought leadership.

ⁱⁱ Which promotes internal control, risk management, governance, and fraud prevention. It developed a comprehensive framework and vision for the design, implementation, and evaluation of internal control. This framework was first issued in 1992 and updated in 2013. <https://www.coso.org/Pages/default.aspx> (Accessed on 2021/04/26)