



Vol. 06 No. 03 (2024).

P. 171-185

Requirements and Procedures for the Governance of the profession of an auditor in Algeria in Light of International Auditing Standards - An Applied Study Using "DEMATEL" Analysis.

Boufatah belkacem

Email address b.boufatah@cu-aflou.edu.dz

University center AL- Sheriff Bouchoucha Aflou- (Algeria)

Laboratory of economic and Legal Sciences

Received:25/01/2024

Accepted :20/06/2024

Abstract

This study aims to address the governance requirements of the profession of an auditor in Algeria by identifying the environmental variables that most influence professional practices in Algeria. To achieve this, the "**DEMATEL**" method was employed relying on expert opinions to determine the interrelationships between the necessary requirements for the governance of the profession of an auditor in Algeria, These requirements include five essential factors: Law 10-01, audit quality, harmonization with international auditing standards, artificial intelligence techniques, and the factor of accounting education and training. Through cause-and-effect relationships, the study concludes that the "standardization and compliance with international auditing standards" requirement is the most impactful perspective with the highest influence value (5.939), while the "accounting education and training system" is the least important perspective with a value of (4.159), reaching a suitable approach for the governance of the profession of an auditor in Algeria.

✓ **Keywords:** Governance. profession of an auditor. Law 10-01. audit quality. international auditing standards. artificial intelligence. accounting education and training.

✓ **JEL Classification:** M42, G34

1. INTRODUCTION

With the emergence of economic globalization, countries around the world have faced numerous challenges, with the development of accounting systems being a key focus. Algeria, like other countries, has embarked on a series of reforms, especially in the accounting field, by adopting the financial accounting system and issuing Law 10-01. This law emphasizes the practice of the profession of an auditor. In this context, and considering the audit environment in Algeria's need for standards and guidelines to guide practitioners and improve their performance, the Algerian legislature issued Algerian Auditing Standards (NAA) starting in 2016. These standards, inspired by International Auditing Standards (ISA), are rigorously enforced. Algeria aims to move towards a market economy to attract foreign investors looking for a modern environment that responds to international developments, especially by implementing international auditing standards. To achieve the requirements of governing the profession of an auditor in Algeria in accordance with international environmental requirements, it is essential to understand the environmental variables that can impact the profession. This involves seeking the opinions of experts and professionals to find a suitable approach based on the requirements of the international environment. The above sets the stage for the problem statement of our study, which aims to discuss the existing debate on the requirements and procedures for the governance of the profession of an auditor in Algeria in light of international auditing standards.

What are the Requirements and Procedures for the Governance of the profession of an auditor in Algeria in Light of International Audit Standards?

Research Hypothesis: To answer the main question of the study, we formulated the following primary hypothesis:

The Algerian Law 10-01, standardization and compliance with international audit standards, audit quality, artificial intelligence, and accounting education and training contribute to achieving the governance requirements of the profession of an auditor in Algeria in the context of international audit standards.

Research Objectives: Through addressing the topic of governance requirements for the profession of an auditor in Algeria in light of international audit standards, we aim to achieve the following objectives:

- Identify the local factors influencing the profession of an auditor in Algeria.
- Understand the essential requirements for the governance of the profession of an auditor in Algeria.
- Assess the alignment of Algerian audit standards with international audit standards.

Research Methodology: In pursuit of the study's aspirations, we relied on methodologies adopted in economic and financial studies. Descriptive methodology was employed to highlight key concepts, tools, and approaches related to the topic. Statistical methodology was utilized in the practical aspect. In this context, the "DEMATEL" method was applied, relying on expert opinions and mathematical analysis to reach results.

2. Requirements for the Governance of the profession of an auditor in Algeria

2.1 Law 10-01:

The government decided to restructure the regulation of auditing and accounting professions, dismantling the former national body for accounting experts, auditors, and certified accountants. This body represented professionals in this sector, attempting to regain many authorities lost after the issuance of Law 91-08 in 1991. Law No. 10-01, dated 16 Rajab 1431 corresponding to June 29, 2010, concerning accounting expert and accountant professions, was enacted. This law came shortly after Algeria adopted the financial accounting system. Among the main measures introduced by this law are the following:

- Dissolving the former body and replacing it with the new National Council for Accounting (CNC), under the Ministry of Finance, tasked with supervising the auditing and accounting professions in Algeria;
- Separating the three professions by establishing a professional body affiliated with the National Council for Accounting which is as follows:
 - The National Body for Accounting Experts;
 - The National Chamber of Accountants;
 - The National Organization for Certified Accountants;
- The Ministry of Finance exercises oversight over these professional bodies through the National Council for Accounting and by appointing representatives to various professional councils;
- Accreditation for practice becomes the authority of the Minister of Finance.
- Monitoring the professional and technical quality of accounting experts, accountants, and certified accountants falls under the responsibility of the Minister of Finance;
- Accounting experts, accountants, and certified accountants are supervised by a specialized educational institution affiliated with the Ministry of Finance, responsible for the training of certified accountants by institutions under the Ministry of Vocational Training (Law 10-01, 2010).

-

2.2 Standardization and Compliance with International Audit Standards:

Standardization aims to narrow the scope of differences regarding the foundations and international audit standards that can be followed when applying standardized principles. It requires limiting the objectives of the audit and modifying alternatives that can achieve these objectives. Standardization involves defining audit objectives, adjusting alternatives to achieve these objectives, and selecting principles and alternative standards that align with these goals;

As for the compliance of audit practices at the international level, it is a political process aimed at reducing variations in audit practices worldwide to enhance their consistency and comparability. Interest in international standard convergence has been evident for decades on regional and global levels. The success of these efforts varies economically, financially, politically, and socially. In Europe, convergence efforts are integrated into building the European economy, considering standardization as a means to create a single market capable of competition. In this context, it was necessary to identify accounting information from institutions listed in member countries. Therefore, the degree of convergence in auditing depends significantly on social and demographic considerations, including the political integration of the European Union (Brigitte & Raybaud-Turrillo, 2001).

2.3 Audit Quality:

Most of the studies conducted by researchers have utilized various approaches to define audit quality. Some have correlated audit quality with the external auditor's likelihood of detecting errors in financial statements. Others have linked audit quality to the extent of compliance with professional standards. Meanwhile, a third group has connected audit quality with achieving the objectives of all parties involved in the auditing process.

(De Angelo) was among the pioneers who linked audit quality to the principle of the external auditor discovering errors in financial statements. Audit quality was defined as "the probability of the auditor detecting a breach in the client's accounting system and reporting it," (koligor, 2007) reflecting the auditor's increased ability to detect accounting errors and enhance independence.

In 1988, Palmrose defined audit quality as "the degree of credibility provided by the external auditor to users of financial statements." (Salehi, 2010) This definition aligns with the objective of the external audit process, emphasizing that audit quality is the likelihood of financial statements being free from errors and violations that affect their credibility (koligor, 2007).

2.4 Artificial Intelligence Techniques (Electronic Auditing):

The use of artificial intelligence (AI) techniques can help reduce audit risks related to issuing an incorrect opinion or failing to detect substantial errors in the internal control system or financial data due to relying on a limited sample of the statistical population. The importance of AI techniques lies in their ability to examine the entire statistical population, regardless of its size. This enables auditors to identify abnormal or suspicious operations that would be challenging to discover when using a sample. Increased efficiency is considered a significant benefit of AI in auditing, allowing auditors to achieve higher levels of assurance with less time and effort. Instead of spending long hours auditing contracts, machines can do it in record time, allowing auditors to save time and dedicate more time to crucial aspects that machines cannot achieve, such as communicating with clients, building strong relationships, and better understanding their needs (Saputra, 2016).

2.5 Accounting Education and Training:

The accounting profession plays a crucial role in economic growth, with the most rapidly growing countries also showing advancements in accounting education and professional training. The accounting organizational process is a joint effort between the government and professional organizations, involving auditors and accountants in the accounting reform process as active participants. Their involvement contributes to providing solutions and suggestions for accounting-related problems. Participation in the accounting organizational process nurtures a sense of belonging, creating an incentive for good application of accounting systems and regulations. Consequently, it improves the quality of accounting information, enhancing the organization's ability to compete internally and externally, leading to economic growth (Abdolmohammadi, Mohammad, Tucker, & Robert, 2002).

3. Applied Study

In the practical aspect, we employed the "DEMATEL" method: a composite term consisting of seven components. "DE" represents "Decision," "MA" stands for "Making," "E" signifies "Evaluation," "T" denotes "Trial," and "L" refers to "Laboratory." This method aims to identify the cause-and-effect relationship among the requirements of professional governance in the profession of an auditor in Algeria, determining the interrelationships through causal diagram analysis (Tyagi, Pradeep, & Dinesh, 2015).

3.1 Study Data and Standards Analysis

In our current study, to identify the key or optimal requirements for the governance of the profession of an auditor in Algeria in light of international auditing

standards, five requirements leading to achievement were determined. The following table shows this:

Table 1. requirements for the governance of the profession of an auditor in Algeria

Definition	Factor code	The number
law 10-01	F1	1
standardization and compliance with international auditing	F2	2
quality audit	F3	3
artificial intelligence technologies (electronic audit(	F4	4
accounting education and training	F5	5

Source: prepared by the researcher

3.1.1 DEMATEL Method Steps: The following steps are employed:

a. Step 1:

In this step, a consensus is obtained among the three experts using the "DEMATEL" method by calculating the "Mode" matrix, denoted by " $\hat{M}$." It was observed that human perceptions or opinions on the measured factors are often subjective, characterized by uncertainty and ambiguity in preferences. To address this uncertainty and ambiguity in judgments, it is necessary to involve "fuzzy logic" in the data collection phase from field experts, using a fuzzy scale based on the following criteria: (0) No Effect, (1) Low Effect, (2) Moderate Effect, (3) High Effect, (4) Very High Effect (Peleckis, 2021).

The following table shows the experts' opinions on governance requirements for the profession of an auditor in Algeria:

Table 2. illustrates the opinions of the three experts on the governance requirements for the profession of an auditor in Algeria.

The expert 1	factor	F1	F2	F3	F4	F5
	F1	0	1	2	1	2
	F2	2	0	1	1	1
	F3	1	2	0	1	1
	F4	3	1	1	0	3
	F5	1	1	2	1	0
The expert 2	factor	F1	F2	F3	F4	F5
	F1	0	4	3	1	2
	F2	3	0	2	3	4
	F3	2	4	0	2	1
	F4	4	3	4	0	3
	F5	2	1	2	1	0
The expert 3	factor	F1	F2	F3	F4	F5
	F1	0	4	3	1	4
	F2	4	0	3	3	4
	F3	3	4	0	2	2
	F4	4	3	4	0	4
	F5	3	2	2	3	0

Source: Prepared by the researcher based on expert responses.

After collecting expert opinions on the evaluation of governance requirements for the profession of an auditor in Algeria, it is necessary to find a common opinion among the three experts. This can be achieved by various methods, including the method of collecting row values on the number of factors. Thus:

$$\sum F_1^{row} = \frac{i_{F_{11}} + i_{F_{12}} + \dots i_{F_{1n}}}{N_{Fi}} \sum F_1^{col} = \frac{j_{F_{11}} + j_{F_{12}} + \dots j_{F_{1n}}}{N_{Fj}}$$

the following table shows the " $\dot{M}$ " matrix as follows:

$$X = \begin{bmatrix} 0 & \dots & x_{n1} \\ \vdots & \ddots & \vdots \\ x_{1n} & \dots & 0 \end{bmatrix}$$

Table 3. shows the "Mode"Matrix

	F1	F2	F3	F4	F5
F1	0	4	3	1	2
F2	3	0	2	3	4
F3	2	4	0	2	1
F4	4	3	4	0	3
F5	2	1	2	1	0

Source: prepared by the researcher

b. Step 2:

The sum of each row and column of the matrix is calculated by utilizing the experts' expertise and evaluation according to the following criteria: (0) No Effect, (1) Low Effect, (2) Moderate Effect, (3) High Effect, (4) Very High Effect

Table 4. shows the average matrix of the requirements for the governance of the profession of an auditor keeper in Algeria

	F1	F2	F3	F4	F5	Total
F1	0	4	3	1	2	10
F2	3	0	2	3	4	12
F3	2	4	0	2	1	9
F4	4	3	4	0	3	14
F5	2	1	2	1	0	6
Total	11	12	11	7	10	51

Source: prepared by the researcher

Through the previous table, it is evident that the highest value for the sum of factors among the row factors "Max row" is (14), and the highest value for the sum of factors among the column factors "Max col" is (12).

c. Step 3:

Calculate the initial natural direct relationship matrix using the average matrix (A), where $D=m*A$. Thus, the value of (m) can be computed according to the following equation (Hodgett, 2016):

$$m = \min \left[\frac{1}{\max_j \sum_{j=1}^n a_{ij}}, \frac{1}{\max_i \sum_{i=1}^n a_{ij}} \right], \quad i, j = \{1, 2, 3, \dots, n\}$$

Through the calculation of the equation (m), we obtain the “normalized matrix” for five factors of the governance requirements for the profession of an auditor in Algeria. The following table show this:

Table 5. shows the natural matrix of the requirements for the governance of the profession of an auditor keeper in Algeria

		F1	F2	F3	F4	F5
$m = \frac{1}{14} * M$	F1	0	4/14	3/14	1/14	2/14
	F2	3/14	0	2/14	3/14	4/14
	F3	2/14	4/14	0	2/14	1/14
	F4	4/14	3/14	4/14	0	3/14
	F5	2/14	1/14	2/14	1/14	0

Source: prepared by the researcher

d. Step 4:

Calculate the diagonal matrix, denoted as (I), where the “identity” or “diagonal” matrix indicates that its elements are zero, except for the center, which is one. The following table show this:

Table 6. shows the country Matrix "Identity matrix"

		F1	F2	F3	F4	F5
I	F1	1	0	0	0	0
	F2	0	1	0	0	0
	F3	0	0	1	0	0
	F4	0	0	0	1	0
	F5	0	0	0	0	1

Source: prepared by the researcher

Subsequently, the subtraction operation is performed between the identity matrix (I) and the matrix (m).

Table 7. shows the subtraction of the diagonal matrix from The Matrix "**I-m**"

		F1	F2	F3	F4	F5
I-m	F1	1	-4/14	-3/14	-1/14	-2/14
	F2	-3/14	1	-2/14	-3/14	-4/14
	F3	-2/14	-4/14	1	-2/14	-1/14
	F4	-4/14	-3/14	-4/14	1	-3/14
	F5	-2/14	-1/14	-2/14	-1/14	1

Source: prepared by the researcher

Then, the inverse of the resulting matrix (**I-m**) is found, denoted as (**I-m**)⁻¹. The condition for matrix inversion is met, meaning the determinant of the matrix is non-zero. To calculate the inverse matrix, the determinant of the matrix is computed using the following process (Chandra Prakash, 2020):

$$\det(A) = \sum_{\sigma \in S_n} \text{sgn}(\sigma) \prod_{i=1}^n a_{\sigma(i)}$$

Following that, we search for the algebraic complements of all its elements and then form a new matrix from these complements. Consequently, this matrix, referred to as the "transfer matrix," represents the inverse of the original matrix around the diagonal elements. An alternative approach to conceptualize this process involves the use of the transpose matrix, denoted as "**A**", which swaps rows and columns while retaining the arrangement of element positions. Finally, each element of the new matrix is divided by the determinant of the original matrix. The following table show this:

Table 8. depicts the inverse matrix (**I-m**)⁻¹:

		F1	F2	F3	F4	F5
Inverse I-m	F1	0.515	0.366	0.577	0.682	0.407
	F2	0.675	0.504	0.595	0.512	0.649
	F3	0.453	0.411	0.39	0.667	0.524
	F4	0.686	0.383	0.771	0.786	0.772
	F5	0.236	0.246	0.379	0.357	0.377

Source: prepared by the researcher

e. Step five:

Calculate the Total Relation Matrix, denoted as (**T**), and it is computed according to the following equation (Tyagi, Pradeep, & Dinesh, 2015):

$$\check{T} = D(I - D)^{-1}$$

Here, the symbol **(I)** signifies the Identity Matrix or Diagonal Matrix, where all entries outside the main diagonal are zero. The values for **(c)** and **(r)** are determined when **(n*1)** and **(1*n)**, representing the sum of rows and columns of matrix **($\check{T}$)**. The following table show this:

Table 9. demonstrates the calculation of the Total Relation Matrix (**$\check{T}$**).

	F1	F2	F3	F4	F5
F1	0	0	0.577	0.682	0
F2	0.675	0	0.595	0	0.649
F3	0	0	0	0.667	0.524
F4	0.686	0	0.771	0.786	0.772
F5	0	0	0	0	0

Source: prepared by the researcher

From the results of the previous table, it is evident that the bold values are the highest values compared to the threshold values. The threshold value (**$\tilde{a}$**) is calculated using the following equation (Das & Chakraborty, 2019):

$$\tilde{a} = \frac{\sum_{i=1}^n t_{ij} \sum_{j=1}^n t_{ij}}{N}$$

Where **(N)** represents the total number of elements in the matrix. After substitution, we obtain a threshold value (**$\tilde{a}$**) equal to **(0.517)**. This value serves as the threshold that distinguishes values above and below in the previous table, aiming to construct the interaction matrix for the requirements of the tourism market, considering the threshold value (**$\tilde{a} = 0.517$**).

Table 10. shows the interaction Matrix "Interaction matrix" of the requirements for the governance of the profession of an auditor keeper according to the threshold value

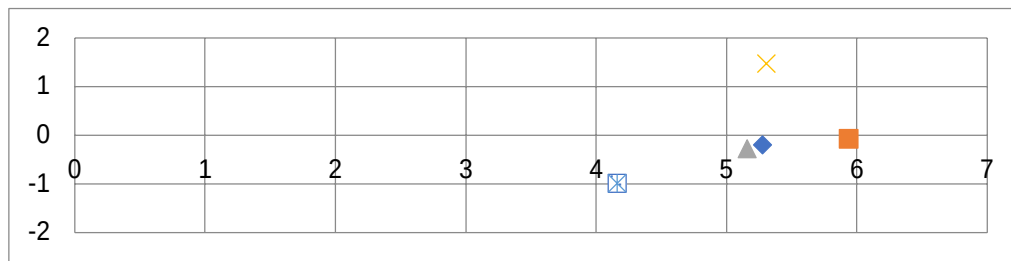
	F1	F2	F3	F4	F5
F1			#	#	
F2	#		#		#
F3				#	#
F4	#		#	#	#
F5					

Source: prepared by the researcher

f. Step six:

Direct and Indirect Relationship Mapping (Cause and Effect) for the requirements of the tourism market is performed based on the results of the table related to the Total Relation Matrix. The figure are show the Network Relationship Map (NRM):

Fig.1. the Network Relationship Map (NRM):



Source: prepared by the researcher

From the above figure, it is evident that the DEMATEL method is a comprehensive approach for constructing and analyzing the cause-and-effect relationship for complex factors;

Determining the Importance of Factors for the governance requirements of the profession of an auditor in Algeria using $(r+c)$ by "DEMATEL", as shown in the following table (Das & Chakraborty, 2019):

$$T = [t_{ij}]_{m \times m} R = \left[\sum_{j=1}^m t_{ij} \right]_{m \times 1} = [t_i]_{m \times 1} C = \left[\sum_{i=1}^m t_{ij} \right]_{1 \times m} = [t_j]_{1 \times m}$$

Table 11. shows the importance of the governance requirements of the profession of an auditor in Algeria

	r_i	C_i	$r + c$	$r - c$	Rank($r + c$)	Cause and effect
F1	2.729	2.547	5.276	0.182	3	Effect
F2	3.004	2.936	5.939	0.068	1	Effect
F3	2.711	2.445	5.156	0.267	4	Effect
F4	1.909	3.397	5.306	-1.488	2	Cause
F5	2.565	1.594	4.159	0.971	5	Effect
F5	2.565	1.594	4.159	0.971	5	Effect

Source: prepared by the researcher

From the previous table, it is observed that the symbol " r_i " represents the sum of each row of the Total Relation Matrix, and the symbol " C_i " represents the sum of each column of the Total Relation Matrix. The governance requirements for the

profession of an auditor in Algeria were identified using "DEMATEL" by using the value of " $r+c$," which combines the value of each row " r_i " with each column " C_i " related to each factor " F " individually.

Based on the cause-and-effect relationship, the "Standardization and Compliance with International Audit Standards" requirement is considered the most significant perspective for evaluation with the highest value (**5.939**). The "Artificial Intelligence Techniques (Electronic Audit)" requirement is the second most important with a value estimated at (**5.306**). On the other hand, the "Education and Accounting Training" requirement is the least important with a value of (**4.159**). In terms of prioritizing the requirements, the order is as follows:

- ✓ Standardization and Compliance with International Audit Standards with an impact value of (5.939).
- ✓ Artificial Intelligence Techniques (Electronic Audit) with an impact value of (5.306).
- ✓ Law 10-01 with an impact value of (5.276).
- ✓ Audit Quality with an impact value of (5.156).
- ✓ Education and Accounting Training with an impact value of (4.159).

This analysis emphasizes to Algerian decision-makers, experts, and professionals the importance of paying significant attention to factor " F_2 " due to its positive impact on other factors for the governance requirements of the profession of an auditor in Algeria. Governance requirements can be divided into two groups: the Cause group and the Effect group.

If the value of ($r - c$) is positive, in this case, the perspective or requirement is classified into the Cause group, influencing others directly (direct impact), and the higher the value, the more influential it is on others. Requirements " F_1 ," " F_2 ," " F_3 ," and " F_5 " are classified into the Cause group, with values (**0.971**), (**0.267**), (**0.182**), and (**0.068**), respectively.

If the value of ($r - c$) is negative, in this case, these factors are classified as the Effect group. In our study, " F_4 " is a requirement from the Effect group, where factor " F_4 " affects all other factors, and its value is (**-1.488**). In this case, decision-makers can focus on these factors to achieve the governance requirements of the profession of an auditor in Algeria by developing strategies based on the cause-and-effect principle.

4. Study results:

The study has revealed several critical outcomes regarding the essential prerequisites for governing the profession of an auditor in Algeria within the framework of international auditing standards. The key findings are as follows:

- ✓The necessity to modernize legislative, legal, and regulatory frameworks by focusing on the quality of management and information technology. This enables the adaptation of political and legal requirements for the governance of the profession of an auditor in Algeria.
- ✓Emphasizing the move towards disclosure and transparency by ensuring a minimum level of financial and accounting information. This can only be achieved by enforcing the application of governance principles.
- ✓The imperative to promote the widespread use of artificial intelligence techniques contributing to ensuring the quality and efficiency of the auditing process and the ability to utilize electronic data to facilitate accurate and high-quality auditing procedures.
- ✓The importance of providing training courses for auditors regarding information technology usage.
- ✓The necessity of utilizing advanced software in the auditing process to enhance the reliability of presented information, with an emphasis on evaluating information technology risks by auditors.
- ✓The need for a review of many provisions of Law 10-01 that do not align with governance principles, particularly its introductory section.
- ✓The importance of reinforcing ethical and professional concepts in training programs for the profession of an auditor.
- ✓The necessity to adapt accounting education programs in Algeria to align with international accounting education standards.
- ✓The requirement to establish a legislative framework specific to information technology security by relevant authorities to instill confidence among all stakeholders.
- ✓Urgency in revitalizing the financial market, as its inactivity negatively impacts accounting practices.
- ✓The emphasis on the concept of quality in performing the external auditing task at various stages for its effectiveness in enhancing the application of corporate governance principles.
- ✓The obligation to keep pace with developments in governance and the profession of an auditor in Algeria alongside global developments through strict adherence to agreed-upon procedures and policies.
- ✓The imperative to establish audit committees at the level of all economic institutions to achieve full supervision of operations and ensure effective coordination among various stakeholders within them.
- ✓Granting more independence to the profession of an auditor by adhering to international auditing standards as a professional reference, similar to advanced countries. This places it under the supervision of independent professional organizations working to enhance its effectiveness in the field.

- ✓ Working on completing the Algerian Auditing Standards (NAA) and obliging accountants to adhere to them as a reference for auditing. This aims to develop the profession, increase its flexibility, and open it up to the external world, especially advanced countries.

5. Conclusion:

Achieving governance in the profession of an auditor in Algeria under international auditing standards is contingent on economic reforms aligned with global environmental requirements. Institutional factors influencing this process must be considered by intensifying efforts to align the profession of an auditor in Algeria with international auditing standards. This alignment will facilitate the development and improvement of external auditing in Algeria, establishing a reference framework for the profession. A reassessment of legislative texts regulating the profession, particularly Law 10-01, which does not grant full independence to the profession, is essential. Auditors must enhance their competence through continuous training, control of information technology, and staying abreast of auditing standards updates to improve their professional performance, positively impacting audit quality.

The governance of the profession of an auditor in Algeria relies on the strength of economic, political, legislative, judicial, educational institutions, etc., which constitute the general and objective conditions for its effectiveness.

This study, employing the "DEMATEL" method to avoid ambiguity, enhance judgment accuracy, simplify the problem, and make sound decisions, indicates that the cause group and the effect group for governance requirements of the profession of an auditor in Algeria highlight the unification and compliance with international auditing standards as the most impactful requirement on various governance aspects of the profession. Thus, concerted efforts should focus on this requirement.

6. Bibliography List :

Abdolmohammadi, M., Mohammad, J., Tucker, & Robert, R. (2002). The Influence of Accounting and Auditing on a Country's Economic Development. *Review of accounting and finance* , 03 (01), 42-53.

Brigitte, & Raybaud-Turrillo. (2001). ACCOUNTING STANDARDIZATION PROCESSES: AN EXAMPLE OF POSTMODERN LAW. *International journal of economic law* , t. XV, 1 (1), 9-40.

Chandra Prakash, G. (2020). A robust hybrid decision model to evaluate critical factors of reverse logistics implementation using Grey-DEMATEL framework. *OPSEARCH* , 57 (3), 837-873.

- Das, P. P., & Chakraborty, S. (2019). Parametric analysis of a green electrical discharge machining process using DEMATEL and SIR methods. *OPSEARCH* , 57 (2), 513-540.
- Hodgett, R. E. (2016). Comparison of multi-criteria decision-making methods for equipment selection. *The International Journal of Advanced Manufacturing Technology* , 85 (5-8), 1145-1157.
- koligor, A. (2007). Corporate Governance Professional Regulation and Audit Quality. *Malaysian Accounting Review* , 6, 65-83.
- Law 10-01, L. 1.-0. (2010, 06 10). relates to the professions of expert accountant and governor. (42) . algeria, official gazette of the Algerian Republic.
- Peleckis, K. (2021). Application of the DEMATEL Model for Assessing IT Sector's Sustainability. *Sustainability* , 13 (24), 1-14.
- Salehi, M. (2010). international comparative Management Review. 11 (05).
- Saputra, W. (2016). the audit process of e-commerce systems,the state Islamic University of Sultan Syarif Qasim University Bandung. *Journal Elmo akontancy* , 09 (01).
- Tyagi, M., Kumar, P., & Kumar, D. (2015). Assessment of Critical Enablers for Flexible Supply Chain Performance Measurement System Using Fuzzy DEMATEL Approach. *Global Journal of Flexible Systems Management* , 16 (02), 115-132.