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The effect of audit environment on reducing dysfunctional auditor behavior in Algeria

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Abstract---The study aims to investigate the impact of the AS on reducing DAB using a sample of Auditor professionals in Algeria. In addition, the AE variable consists of the social environment (SA); the economic environment (EE); and the institutional environment (IE), and DAB variable was divided into: Time budget pressures (TB); Complexity of tasks (CT); Importance of Client (IC); and finally, Regulatory Framework (RF). The primary data was collected using an electronic questionnaire survey to reach a sample size of 150 Ecxternal auditors, and a partial least squares (PLS) structural equation model was used in Analysis process. The study concluded that AE contributes to explain 59.7 percent of the reducing DAB. Also, the effect size reached 81.6 percent, which is a high impact of the audit environment variables in Algeria on reducing DAB that would negatively affect the quality of assurance performance and expose the auditors in Algeria to social accountability risks.

Keywords---Social Environment, Economic Environment, Institutional Environment, Audit Profession, Dysfunctional Behavior.

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Introduction

The study of dyfunctional Auditor's Behavior has garnered considerable academic and professional interest due to their critical impact on the quality of audit processes and outcomes. Behavioral deviations among auditors affect key audit procedures, including planning, test selection, adherence to timelines, and cost management. These deviations arise from various factors, particularly environmental conditions, which encompass socio-economic and institutional realities that define the audit context. When unmanaged, these deviations can undermine the effectiveness of assurance services, reduce audit quality, and impair the reliability of financial reports. In this research, dyfunctional Auditor's Behavior refer to professional actions influenced by psychological and occupational pressures that affect decision-making during the auditing process. These deviations may compromise professional judgment, particularly when assessing and addressing risks inherent to audit engagements. The process of evaluating management's assertions on financial disclosures relies heavily on both auditors' behavioral tendencies and external environmental factors, which together shape the development of audit strategies and their application to risk responses. The auditing process is further constrained by external conditions, including economic pressures and business practices, which may lead to deviations in auditors' behavior. Such deviations not only hinder the detection of material misstatements in financial statements but also compromise the credibility of audit reports, negatively impacting users' decisions. Recognizing the role of the audit environment in mitigating these deviations is thus critical. Improving audit quality requires the adoption of well-structured strategies, policies, and procedures that align with the audit context and are effectively implemented. Effective audit planning involves acquiring detailed information about the client's business activities and associated factors, allowing the auditor to develop a comprehensive strategy for determining the scope, timing, and execution of audit procedures. This ensures the collection of sufficient and appropriate evidence to form impartial professional opinions on the fairness of financial statements. However, deviations in the auditing process, whether unintentional or deliberate, may lead to erroneous audit opinions that significantly affect stakeholders' decisions. The audit environment, encompassing socio-economic, institutional, and operational factors, plays a crucial role in influencing auditors' behavioral patterns. It determines whether auditors adhere to professional and ethical standards during assurance engagements or consulting services authorized by law. While a favorable environment fosters behavioral conformity, adverse conditions may lead to behavioral deviations that compromise audit quality. Consequently, this study investigates the central question: To what extent does the audit environment affect the mitigation of dyfunctional Auditor's Behavior?

Research Problem

The central research problem can be articulated as follows: "To what extent does the audit environment contribute to mitigating dyfunctional Auditor's Behavior from the perspective of audit professionals in Algeria?" This general question is further refined into the following sub-questions:

- 1. Does the auditors' social environment significantly reduce dyfunctional Auditor's Behavior from the perspective of External Auditors in Algeria, at a significance level of ($\alpha \le 0.05$)?
- 2. Does the economic environment significantly influence the reduction of dyfunctional Auditor's Behavior from the perspective of External Auditors in Algeria, at a significance level of ($\alpha \le 0.05$)?
- 3. Does the institutional environment significantly affect the mitigation of dyfunctional Auditor's Behavior from the perspective of External Auditors in Algeria, at a significance level of ($\alpha \le 0.05$)?

Research Hypotheses

To address the research problem and its sub-questions, the following null hypotheses were formulated:

- 1. The auditors' social environment has no statistically significant effect on reducing dyfunctional Auditor's Behavior from the perspective of External Auditors in Algeria, at a significance level of ($\alpha \le 0.05$).
- 2. The economic environment has no statistically significant effect on reducing dyfunctional Auditor's Behavior among auditors from the perspective of External Auditors in Algeria, at a significance level of ($\alpha \le 0.05$).
- 3. The institutional environment has no statistically significant effect on mitigating dyfunctional Auditor's Behavior from the perspective of External Auditors in Algeria, at a significance level of ($\alpha \le 0.05$).

Research Objectives

This study aims to explore the role of the audit environment in addressing dyfunctional Auditor's Behavior and to assess its impact on improving audit quality within the Algerian context. The primary objectives of this research are:

- 1. To identify the socio-economic and institutional factors influencing auditors' behavior and their role in mitigating behavioral dysfunction in the Algerian audit profession.
- 2. To provide a comprehensive theoretical framework that explains the determinants of dyfunctional Auditor's Behavior and the factors contributing to their mitigation.
- 3. To analyze the legal and regulatory frameworks governing auditors in Algeria and assess their adequacy in addressing behavioral deviations relative to international professional standards.
- 4. To propose actionable recommendations and strategies aimed at enhancing audit practices by reducing dyfunctional Auditor's Behavior, taking into account the practical realities and challenges faced by auditors in Algeria.

Theoretical Framework of the Study Dyfunctional Auditor's Behavior

Dysfunctional behavior in auditors refers to actions that deviate from expected professional standards and ethical conduct, often arising from pressures within

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the organizational or environmental context. Argyris (1953) introduced the concept of dysfunctional behavior in organizational settings, identifying it as a response to misalignments between organizational demands and personal values or ethical standards. In auditing, these behaviors are typically exacerbated by factors such as time constraints, performance pressures, and the competitive nature of the profession (Hartmann, 2000). Scholars like Argyris (1953) and Hartmann (2000) have emphasized that dysfunctional behaviors in auditors often emerge due to organizational structures and external pressures that distort ethical decision-making. For example, auditors may overlook irregularities, adjust findings, or compromise on quality to meet deadlines or client expectations. Studies such as those by Binu (2012) in Malaysia and Sulistiyo et al. (2018) in Indonesia show that factors like time pressures and financial constraints significantly influence auditors' decisions. However, much of this literature focuses primarily on individual and organizational factors without considering the wider institutional and societal influences that shape auditors' behaviors. The existing research provides a valuable understanding of the micro-level factors such as individual behavior and organizational pressures-that contribute to dysfunctional behavior. However, there is a noticeable gap in the literature regarding how macro-level institutional and societal factors interact with organizational pressures to influence auditor behavior. For example, Binu's (2012) study highlights the influence of time and financial pressures on auditors in Malaysia, but does not explore how these pressures interact with regulatory or societal contexts. Similarly, Sulistivo et al. (2018) emphasize auditor independence but overlook how external economic or institutional pressures may undermine independence in different socio-economic environments.

The Audit Environment

The audit environment includes both internal organizational contexts and external macro-environmental factors that influence auditor behavior. Research on this topic has emphasized the role of organizational culture, economic pressures, and regulatory frameworks in shaping audit quality. Argyris (1990) and Jansen and Von Glinow (1985) identify how these pressures can lead auditors to compromise on ethical standards and quality. In periods of financial uncertainty, auditors may rush audits, overlook material misstatements, or adjust findings to meet client expectations, increasing the likelihood of dysfunctional behavior. While much of the literature focuses on individual behaviors and organizational dynamics, fewer studies have explored how institutional and economic factors influence auditors' decisions. For instance, McNair (1991) and Jansen and Von Glinow (1985) acknowledge the impact of economic pressures but do not fully consider the broader institutional and regulatory context in shaping auditor behavior.

The Social Environment

The social environment of auditors plays a critical role in shaping their behavior, as societal norms, professional identity, and organizational culture influence decision-making. Scott (1995) argues that institutions such as professional bodies and regulatory frameworks create structures that define acceptable behaviors within the auditing profession. Studies such as those by Binu (2012) and Mills

and Bettner (1992) highlight the importance of social dynamics, such as trust, power, and professional identity, in shaping auditors' decisions. However, these studies focus primarily on individual and organizational factors and often overlook the broader societal and cultural context that influences auditor behavior. The literature on social dynamics within the auditing profession has tended to focus on organizational and interpersonal factors, such as professional identity and relationships with clients. However, less attention has been paid to how the broader social and cultural environment shapes auditors' ethical behavior. For example, Mills and Bettner (1992) examine how rituals and conflicts within audit firms influence auditor behavior, but do not explore how external societal pressures or cultural expectations may alter auditors' decision-making.

The Economic Environment

Economic pressures play a significant role in shaping auditors' behavior, particularly when financial constraints, market competition, and client demands influence ethical decision-making. Studies by Argyris (1952), Solistio et al. (2018), and Jansen and Von Glinow (1985) have shown how economic factors, such as time constraints and performance targets, can lead auditors to engage in unethical behavior. For example, financial pressures might incentivize auditors to cut corners, reduce audit scope, or compromise on quality to meet client expectations or organizational targets. While previous research has acknowledged the role of economic pressures in influencing auditor behavior, most studies have focused on short-term financial constraints. For instance, Argyris (1952) and Jansen and Von Glinow (1985) emphasize the impact of immediate financial pressures on auditor behavior but fail to consider how long-term economic trends, such as market volatility or economic crises, affect auditors' decisions.

The Institutional Environment

The institutional environment, including regulatory bodies, professional associations, and legal frameworks, significantly influences auditors' behavior. Institutional theory (DiMaggio and Powell, 1983) argues that organizations and individuals are influenced by the pressures of conforming to institutional norms, which may conflict with ethical standards. These institutional pressures can lead auditors to adopt practices that align with industry norms rather than ethical guidelines, a phenomenon known as isomorphism (Scott, 1987). While much of the research on institutional pressures in auditing focuses on regulatory frameworks and professional norms (Thornton et al., 2005), there has been limited exploration of how these pressures interact with organizational and individual factors to shape auditors' behavior. For instance, institutional theory suggests that auditors may conform to industry norms that compromise audit quality, but the extent to which regulatory environments and societal pressures shape these behaviors remains underexplored.

Methodology and Tools: Research Methodology:

This study employs a descriptive approach suitable for the theoretical aspect of the research, aiming to present data that describe the phenomenon under investigation. The study seeks to gather the necessary scientific material to understand the core factors and conditions influencing dysfunctional Auditor's behavior. On the other hand, it describes the auditing environment appropriately by researching specialized sources, references, books, articles, and research papers through a survey method. Additionally, the study adopts an analytical approach to analyze and interpret the data to reach conclusions. The objective is to test the proposed hypotheses through a set of questions directed to a sample of audit firms in Algeria in the form of a questionnaire, with well-defined dimensions. The outcomes of the study tool will be described and analyzed using structural equation models (SEM-PLS) and Partial Least Squares (PLS) techniques, which are appropriate for analyzing the relationships represented by the paths between the study variables, in line with the theoretical framework and testing the study's hypotheses.

Population and Sample:

According to Decree No. 75, issued by the Ministry of Finance on March 15, 2023, the total population of auditors consists of 2,967 individuals, including 2,950 accountants and 343 accounting experts. Therefore, the study population is clearly defined. Using the a priori method to determine the sample size for structural equation modeling (SEM), which is based on Cohen's study, the required sample size for the study using the SEM model was calculated by considering factors like the number of latent variables in the model, expected effect size, required probability, and statistical power. This method determines the minimum sample size needed to detect the appropriate effect size for the study's complexity. As a result, the sample size for the study was determined to be 150 auditors.

Study Tool:

The questionnaire tool was developed based on the latent variables at both the first and second levels, as shown in the study model. The development of environmental factors in Algeria was based on a set of items distributed across three first-order latent variables. At the same time, the behavioral dysfunctions of auditors were modeled based on several references relevant to the study.

Reliability and Validity Testing of the Study Model: Indicator Reliability:

The reliability of the indicators is demonstrated through the saturation coefficients, which refer to the correlation matrix showing how each item correlates with the corresponding latent variable. The saturation coefficients range between -1.0 and +1.0, and the higher the value within this range, the stronger the correlation between the item and its underlying construct, as shown in Table 01 below:

Latent Variables (High Order)	Saturation Coefficients	Variance Inflation Factor (VIF)	Composite Reliability (CR)	Cronbach's Alpha (ɑ)	Average Variance Extracted (AVE)
TB	TB1: 0.804	1.702	0.855	0.774	0.779
IC	IC1: 0.741	1.579	0.879	0.835	0.840
CA	CA2: 0.820	1.504	0.839	0.712	0.712
RF	RF1: 0.763	1.391	0.815	0.703	0.737
SE	SE1: 0.867	2.635	0.922	0.895	0.895
EE	EE1: 0.827	1.648	0.878	0.792	0.794
IE	IE2: 0.904	2.422	0.818	0.715	0.785

Table 01: Saturation Coefficients of Measurement Indicators After Removing Inappropriate Measures

Source: based on the outputs of the SMART-PLS4 software.

As shown in Table 01, most of the correlation values for the items with the corresponding latent dimension are good, with values exceeding the threshold of 0.70. However, items such as CA1, TB5, TB6, and IE1 were deleted from the model due to their negative impact on the Average Variance Extracted (AVE) and Composite Reliability (CR). The deletion of these items is essential to ensure consistency and construct validity in the measurement model. It is also important to note that the removed items were problematic due to difficulty in understanding by the survey respondents. This process of eliminating inconsistent items ensures the measurement model's validity and accuracy.

1. Multicollinearity Indicators:

Variance Inflation Factor (VIF) is an important measure for testing the presence of multicollinearity between the measurement indicators. The results shown in Table 01 indicate that no significant multicollinearity exists among the latent variables, as all VIF values are below 5 (VIF < 5). Therefore, multicollinearity is not a concern in this study, suggesting that the model does not suffer from this issue.

2. Internal Consistency Reliability:

Table 01 shows that all Cronbach's Alpha values are greater than 0.70, which indicates that the measurement tool is highly reliable and produces consistent results when reused in the same conditions. Furthermore, the Composite Reliability (CR) values for all variables exceed 0.70, further affirming the reliability and internal consistency of the measurement model.

Validity of the Study Model:

1. Convergent Validity:

Convergent validity is indicated by the Average Variance Extracted (AVE) values, which for each dimension exceed the threshold of 0.50. This means that the latent variables explain more than 50% of the variance in the indicators, ensuring that the constructs have adequate convergent validity. Thus, all elements exhibit acceptable reliability. These results confirm that the scale used in the study is valid and reliable, providing an accurate representation of the variables under investigation.

Validation of the Study Model First: Convergent Validity:

As shown in Table 01 above, the average extracted variance (AVE) for all the statements forming the latent variable 'minimum limit' exceeds the value of 0.50, indicating that the dimensions have sufficient convergent validity. This suggests that the construct explains more than 50% of the variance in the indicator, and thus all the items have acceptable reliability. It is worth noting that the values of the average extracted variance are acceptable. Based on the results of internal consistency for both Cronbach's Alpha and CR, and the values of the average extracted variance (AVE) displayed in the table above, the questionnaire can be relied upon to measure the studied variables. This is because it provides results that are consistent with the responses of accounting and auditing professionals in Algeria regarding the questionnaire results to the study sample.

Discriminant Validity:

Discriminant validity refers to the extent of variation in the relationship between statements and the underlying latent variables or composite variables to which the statement belongs. The discriminant validity should be greater than the shared variance of the latent variable with itself. Discriminant validity is tested through the following analysis:

1. Fornell-Lacker Criterion:

This involves comparing the squared correlations with the average extracted variance (AVE), where the AVE should be larger than the accompanying correlations. As shown in Table 02, the variance values for the relationship between the construct and the square root of the indicator (AVE) are acceptable and appropriate. The diagonal values, which represent the square root of the average extracted variance explained by all the latent variables in the study, are larger than the discriminant relationships between the other constructs. This indicates that the model meets the requirements of discriminant validity. Based on these results, it can be said that the recommended values for the Fornell-Lacker test are acceptable, and all the latent variables in the study are independent of each other and non-overlapping, which is also confirmed by the HTMT test.

LV	Dysfunctional Auditors Behavior				Audit Environment		
	TB	IC	CA	RF	SE	EE	IE
ТВ							
IC	0.627	0.741					
CA	0.627	0.623	0.797				
RF	0.182	0.240	0.157	0.727			
SE	0.299	0.354	0.211	0.253	0.839		
EE	0.624	0.497	0.558	0.021	0.146	0.840	
IE	0.669	0.571	0.607	0.207	0.229	0.589	0.738

Table 02: Discriminant Validity (Fornell and Lacker Criterion)

Source: based on the outputs of the SMART-PLS4 software.

It should be noted that there are similar values for the cross-loadings of the same latent variable and other latent variables. The statements with large crossloadings compared to the calculated values for their primary variable were dealt with by deleting these statements by calculating the differences in the crossloadings of the same latent variable with the other latent variables to determine the statements to be deleted, which have differences less than 0.1.

3. Heterotrait-Monotrait Ratio (HTMT) Analysis:

The Heterotrait-Monotrait Ratio (HTMT) refers to the ratio of inter-construct correlations to intra-construct correlations, where a value close to 1.00 indicates a lack of validity, and a value of 0.90 may represent the upper acceptable threshold if the path includes theoretically similar constructs.

LV	Dyst	Dysfunctional Auditors Behavior			Audit Environment		
	TB	IC	CA	RF	SE	EE	IE
ТВ							
IC	0.775						
CA	0.842	0.803					
RF	0.249	0.309	0.211				
SE	0.354	0.405	0.263	0.299			
EE	0.795	0.607	0.744	0.108	0.173		
IE	0.832	0.690	0.796	0.289	0.278	0.750	
	~			0.1 07	AND DIGA	0	

Table 03: Discriminant Validity by HTMT Ratio (HTMT Criterion)
Image: Comparison of the second s

Source: based on the outputs of the SMART-PLS4 software.

As shown in Table 03, all the results of the HTMT criterion values are less than the threshold level of 0.9, and the highest value recorded in the table is 0.842 after deleting the statements from the model. This indicates that the dimensions enjoy discriminant validity in the measurement model of this study.

Third: Validity and Reliability of the Higher-Order Reflective-Reflective Constructs:

1. Dysfunctional Auditor's Behavior:

dyfunctional Auditor's Behavior represent the higher-order latent variable, which depends on the reflective-reflective construct of four lower-order latent variables, namely: behavioral deviations related to budgetary time; client; task complexity; and legal framework. To ensure reliability, the outer loadings and the validity and reliability indicators of the lower-order ranks were examined. As shown in Table 04, all the indicators for internal consistency reliability came out with values greater than the recommended threshold of 0.50, and all the outer loadings for the lower-order latent variables transformed into scores (Latent Variable Scores) had appropriate values, except for the outer loading related to behavioral deviations concerning laws, which had a value of 0.40. However, it was not deleted as it did not affect the indicators of internal consistency and convergent validity.

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Latent Variables	Outer Loadings	Cronbach's Alpha (a)	Composite Reliability (CR)	Average Extracted Variance (AVE)	Variance Inflation Factor (VIF)
ТВ	0.854			0.580	1.861
IC	0.849	- 0722	0 0 2 0		1.949
CA	0.842	42 0.733	0.838		1.919
RF	0.400	_			1.073

Table 04: Outer Loadings and Internal Consistency Reliability Indicators for Higher-Order Constructs

Source: based on the outputs of the SMART-PLS4 software.

Regarding the evaluation of discriminant validity for the construct, it was tested through the Fornell-Lacker test and the HTMT test. According to Table 05, which presents the results of the Fornell-Lacker test, the results for the higher-order latent variable are acceptable, with the largest value being with itself, which represents the square root of the average extracted variance.

Table 05: Discriminant Validity for Higher-Order Constructs (Fornell-Lacker Criterion)

Latent	High-Rank	Social	Economic	Institutional	Behavioral
Variables	Construction	Environment	Environment	Environment	Disorders
Symbol	SE	EE	IE	BAD	
DAB	0.370	0.611	0.708	0.761	

Source: based on the outputs of the SMART-PLS4 software.

Regarding the second indicator for evaluating discriminant validity, Table 06 below shows the HTMT test values, which are all less than 0.90. Overall, the discriminant validity indicators are acceptable for the latent variable representing dyfunctional Auditor's Behavior, which belongs to the higher-order construct of the reflective-reflective type.

Table 06: Discriminant Validity for High-Rank Construction (HTMT)

Latent Variables	Social	Economic	Institutional	Behavioral
for High-Rank	Environment	Environment	Environment	Disorders
Construction				
Symbol	SE	EE	IE	DAB
DAB	0.472	0.753	0.884	

Source: based on the outputs of the SMART-PLS4 software.

Table 07 presents the values of the cross-loading matrix, which shows the crossloadings with the primary latent variable of the higher-order rank (DAB) are higher than the cross-loadings with the other lower-order latent variables. This is an acceptable indicator that the lower-order latent variables calculated as scores for the higher-order latent variable significantly express the underlying construct to which they belong. Table 05 below shows the values of the linear correlation, expressed as the Variance Inflation Factor (VIF), which had values less than the recommended threshold of 5, with the highest value being 1.949.

Latent	Social	Economic	Institutional	Dysfunctional
Variables for	Environment	Environment	Environment	Auditor's
High-Rank	(SE)	(EE)	(IE)	Behavior (DAB)
Construction	()	()		· · · ·
ТВ	0.324	0.601	0.658	0.854
IC	0.353	0.497	0.572	0.849
CA	0.210	0.558	0.607	0.842
RF	0.252	0.031	0.201	0.400

Table	$07 \cdot$	Cross-l	Loadings	Matrix
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Source: based on the outputs of the SMART-PLS4 software.

2. Audit Environment:

The audit environment represents the higher-order latent variable of the reflective-reflective type, which is expressed through the reflection of three lowerorder latent variables, namely: the social environment of the auditor; the economic environment; and the institutional environment. To ensure the reliability of the study model, the outer loadings and the validity and reliability indicators were examined. As shown in Table 08, all the outer loadings came out with values greater than the acceptable level of 0.50, and none of them were deleted.

Latent Variables	Variance Inflation Factor (VIF)	Average Variance Extracted (AVE)	Composite Reliability (CR)	Cronbach's Alpha (ɑ)	Outer Loadings
Social Environment	1.055				0.527
Economic Environment	1.532	0.562	0.787	0.587	0.814
Institutional Environment	1.582				0.864

Table 08: Internal Consistency Reliability for High-Rank Construction

Source: based on the outputs of the SMART-PLS4 software.

According to Table 08, Cronbach's Alpha came out with a low value, but the composite reliability (CR) had a value greater than 0.70, which is considered a good representation of the construct's reliability. As for the convergent validity, the average extracted variance had a value of 0.562, which is an acceptable value for the higher-order construct. Regarding discriminant validity, the results of the Fornell-Lacker test for the higher-order latent variable are acceptable, with the largest value being with itself, which represents the square root of the average extracted variance. As for the linear correlation, Table 08 shows the values of the Variance Inflation Factor (VIF), which had values less than the recommended threshold of 5 for all the lower-order latent variables calculated as scores for the

higher-order latent variable 'audit environment', with the highest value being 1.582 for the institutional environment.

Table 09: Discriminant Validity for High-Rank Construction (Fornell-Larcker
Criterion)

Latent	Time	Client	Task	Regulations	Audit
Variables for	Budget	Importance	Complexity	(RF)	Environment
High-Rank	(TB)	(IC)	(CA)		(AE)
Construction					
AE	0.634	0.644	0.641	0.203	0.750
Source: based on the outputs of the SMART-PLS4 software.					

Regarding the HTMT criterion, Table 10 below shows the values of the audit environment with the other lower-order variables, which are all less than 0.90. As a result of the validity and reliability analysis, the indicators are considered acceptable for the higher-order latent variable of the reflective-reflective type, which represents the audit environment.

Table 10: Discriminant Validity for High-Rank Construction (HTMT)

Latent	Time	Client	Task	Regulations	Audit	
Variables for	Budget	Importance	Complexity	(RF)	Environment	
High-Rank	(TB)	(IC)	(CA)		(AE)	
Construction						
AE	0.899	0.810	0.897	0.343		
Sources based on the outputs of the SMADT DISA software						

Source: based on the outputs of the SMART-PLS4 software.

Table 11 shows the values of the cross-loadings between the lower-order latent variables and the higher-order latent variable, where the cross-loadings values for the latent variables of the social environment, economic environment, and institutional environment are higher than the cross-loadings values with the other lower-order latent variables. This indicates that the cross-loadings values with the audit environment are the most significant in expressing it.

Latent Variables	Time	Client	Task	Regulations	Audit
for High-Rank	Budget	Importance	Complexity	(RF)	Environment
Construction	(TB)	(IC)	(CA)		(AE)
SE	0.299	0.353	0.211	0.245	0.527
EE	0.624	0.497	0.557	0.026	0.814
IE	0.668	0.571	0.607	0.209	0.864

Table 11: Cross-Loadings Matrix

Source: based on the outputs of the SMART-PLS4 software

Evaluation of the Structural Model of the Study: First: Coefficient of Determination:

The most commonly used measure to evaluate the structural model that explains the predictive power of the model is the coefficient of determination (R^2), which is calculated as the squared correlation between the actual and predicted values of the specified internal construct. The coefficient represents the combined effects of the external latent variables on the internal latent variable. In other words, the coefficient represents the amount of variance in the internal constructs that are explained by all the external constructs associated with it. Since R^2 is the squared correlation of the actual and predicted values, it includes all the data used to estimate the model and judge its explanatory power. Therefore, the value of R^2 ranges from 0 to 1 to be acceptable, and R^2 values of 0.75, 0.50, or 0.25 for the dependent variables can be described as high, medium, or weak, respectively.

Table 12: Coefficients of Determination (R²)

Variables	R ²	Adjusted R ²	Explanation Size
Behavioral Disorders of the Auditor	0.599	0.597	Medium
Source: based on the output	s of the	SMART-PLS4 s	oftware.

From Table 12, it is observed that the R^2 coefficient is statistically significant and acceptable, with medium R^2 values having an acceptable ability to explain the reduction in dyfunctional Auditor's Behavior as a whole. In other words, R^2 for the dyfunctional Auditor's Behavior variable is 59.9%, which means that the audit environment, represented by the social, economic, and institutional environments, contributes to explaining and explaining 59.9% of the variance in the dyfunctional Auditor's Behavior variable, which is an acceptable percentage.

Second: Effect Size:

The effect size indicator represents the extent of the impact of each external latent construct on the internal latent construct. When an independent construct is deleted from the path model, it changes the value of the coefficient of determination (R²) and determines whether the removed external latent construct has a large effect on the internal latent construct. The guidelines for evaluating f² are that values of $0.02 > f^2 > 0.15$ represent a small effect; $0.15 \ge f^2 > 0.35$ represent a medium effect; and $f^2 \ge 0.35$ represent a large effect, respectively, for the external latent variable. Values of the effect size less than 0.02 indicate no effect.

Table 13: Effect Size Coefficient (f²)

Relationship	f^2	Effect		
Relationship	1	Blicet		
		Size		
Audit Environment \rightarrow Behavioral Disorders of the Auditor	0.816	High		
Source: based on the outputs of the SMART-PLS4 software.				

It is clear from Table 13 above that all the effect size coefficients for all variables are statistically significant and acceptable, indicating that the external variables have a large impact on the internal variables they form. This clarifies the importance of including these latent variables in the model. We note that the \mathbf{f}^2 value for the audit environment towards dyfunctional Auditor's Behavior is 0.816, which indicates a large effect of the audit environment on reducing dyfunctional Auditor's Behavior.

Third: Predictive Quality of the Model:

 Q^2 indicates the extent to which the independent variables can predict the dependent variable. According to Chin, the model shows good predictive importance when the Q^2 value is greater than zero for the independent variables in the model. It can be said that the Q^2 values in the study model were all greater than zero, which supports the predictive quality of the model, as shown in the results in Table 13 below:

Variables	Q^2	Prediction Level
Dysfunctional Auditor's Behavior	0.590	Acceptable
Time Budget Related	0.515	Acceptable
Client	0.384	Acceptable
Task Complexity	0.398	Acceptable
Regulatory Framework	0.023	Acceptable
		-

Table	14:	Predictive	Quality	(Q^2)
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Source: based on the outputs of the SMART-PLS4 software.

As it is clear from Table 14 above, all the Q^2 coefficients are statistically significant and acceptable, as they are all greater than zero, indicating that all the latent variables in the study model have a large ability to predict. This means that the Q^2 values for dyfunctional Auditor's Behavior are acceptable for exceeding the zero threshold, and thus we can rely on the audit environment variable to predict the reduction in dyfunctional Auditor's Behavior.

III- Results and Discussion:

Table 15 shows the results of the tests of the basic hypothesis and its partial hypotheses related to the direct paths of the relationship between the audit environment and the reduction of dyfunctional Auditor's Behavior.

Hypothesis	Relationship	ß	Standard	t-	p-value	Decision
	Symbol	Coefficient	Deviation	value		
01	$AE \rightarrow DAB$	0.774	0.043	17.903	***0.000	Reject
01-01	$SE \rightarrow DAB$	0.215	0.051	4.201	***0.000	Reject
01-02	$EE \rightarrow DAB$	0.293	0.069	4.227	***0.000	Reject
01-03	$IE \rightarrow DAB$	0.486	0.067	7.253	***0.000	Reject
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Table 15: Results of Testing the Second Hypothesis and Its Branches

Source: based on the outputs of the SMART-PLS4 software

First: Discussion of the Results of Testing the Basic Hypothesis:

The second basic hypothesis was rejected, and the alternative hypothesis was accepted, which is: There is a significant and statistically significant effect of the audit environment on reducing dyfunctional Auditor's Behavior from the perspective of the study sample members at a significance level of ($a \le 0.05$): This hypothesis explains that the audit environment contributes significantly to controlling dyfunctional Auditor's Behavior. The strong positive relationship between the audit environment and the reduction of dyfunctional Auditor's Behavior indicates that the environment surrounding the auditor, with which he interacts when performing his tasks, affects his professional behavior by reducing the most important behavioral deviations (b = 0.774; t = 17.903; P = 0.000). This effect can be translated as the environment surrounding the professional reflecting on his perceptions, thoughts, and intentions, such that it forms the pattern of behavior he adopts as a response to those reflections. In some cases, the environment becomes the main source of pressure, which leads the auditor to behavioral deviations when performing his tasks, but the results of testing the basic hypothesis led to the fact that the environment helps in reducing these behavioral deviations, and perhaps this is due to other factors outside the study model, which may be personal, religious, or moral factors, which may push the auditor to resist the impact of negative environmental pressures.

Second: Discussion of the Results of Testing the First Partial Hypothesis:

The first partial hypothesis was rejected, and the alternative hypothesis was accepted, which is: There is a significant and statistically significant effect of the social environment of the audit on reducing dyfunctional Auditor's Behavior from the perspective of the study sample members at a significance level of $(a \le 0.05)$: The positive path coefficient and the probability value indicate the existence of a significant positive relationship between the social environment and the reduction of behavioral deviations (b = 0.215; t = 4.201; P = 0.000), meaning that the more the social environment factors influence the auditor's behavior, the more there is a decrease in the effect of the important behavioral deviations that must be reduced from the perspective of the study sample. The results of testing this partial hypothesis indicate the importance of the influence of social environment factors. Social accountability may impose on the auditor the commitment to a sound professional behavior and the exercise of sufficient professional care in order to avoid this accountability, which entails legal responsibilities in the event of failure to comply with it. This aspect has a reverse effect on the emergence of behavioral deviations and their impacts on the auditor's professional performance. Also, the expectations of society from the auditor push him to strive to reduce the gap between what society expects from his services and what he can do when performing his tasks, and the more this gap is reduced, the more there is satisfaction from the social category interested in the outputs of the audit tasks, which reflects on the non-allowance of behavioral deviations, as it may create a wide gap in expectations, which obliges the auditor to resist the impact of negative environmental pressures. On the other hand, the legitimacy of the auditor's tasks with regard to society contributes to reducing the behavioral deviations of the auditor, which indicates that the implicit recognition of society of the importance of the auditor's role reflects positively on the performance of the

latter, thus pushing the auditor to reduce behavioral deviations and resist their occurrence, and focusing on performing his tasks, which society grants him legitimacy with full confidence, and avoiding all forms of weakness that may arise in the absence of recognition of the legitimacy of his tasks. In addition, both the social status granted to the auditor and the influences of the family environment have a positive impact in reducing the behavioral deviations of the auditor. We conclude that the absence of social environment factors for the auditor may lead to a lack of control over the behavioral deviations of the auditor and resistance to their occurrence, as well as the absence of the social role as one of the important parties and beneficiaries of the auditor's services may increase the likelihood of a negative impact and the emergence of behavioral deviations when performing the auditor's tasks, with the absence of other factors such as personal, moral, and religious factors, which may have an impact in reducing deviations despite the absence of social environment factors.

Third: Discussion of the Results of Testing the Second Partial Hypothesis:

The second partial hypothesis was rejected, and the alternative hypothesis was accepted, which is: There is a significant and statistically significant effect of the economic environment of the audit on reducing dyfunctional Auditor's Behavior from the perspective of the study sample members at a significance level of ($\alpha \leq \beta$ 0.05): The positive path coefficient and the probability value indicate the existence of a significant positive relationship between the economic environment and the reduction of behavioral deviations (b = -0.293; t = 4221; P = 0.000), meaning that the more the economic environment factors influence the auditor's behavior, the more there is a decrease in the effect of the important behavioral deviations that must be reduced from the perspective of the study sample. The results of testing this partial hypothesis indicate the importance of the influence of the macroeconomic environment factors. It can be said that the economic situation of the country in which the auditor works leads to a reduction in dyfunctional Auditor's Behavior, through the role of the auditor, which is represented in protecting assets and including transparency for economic entities, in addition to nonassurance services, which grant economic operators the field for financial consultations from experts. This role and the responsibilities resulting from it constitute the incentive for the auditor's commitment to a sound professional behavior, whether the economic situation is at its best or worst. On the other hand, the size of the commercial and industrial fabric subject to audit operations has a positive impact in reducing behavioral deviations of importance to the auditor, and this is through the influences resulting from the nature of the economic entities subject to audit, which are characterized by having a legal personality and consisting of contributions of others, who need a third party to issue important information about the veracity of these entities in the process of investing others' funds, and this situation helps the auditor to reduce behavioral deviations due to its great importance in influencing the level of invested capital by others. In addition, the factor of competitiveness between audit offices may impose on auditors the raising of the quality of their work and their ability, which may lead to a reduction in the behavioral deviations of the auditor according to what came in the second partial hypothesis.

Fourth: Discussion of the Results of Testing the Third Partial Hypothesis:

The third partial hypothesis was rejected, and the alternative hypothesis was accepted, which is: There is a significant and statistically significant effect of the institutional environment of the audit on reducing dyfunctional Auditor's Behavior from the perspective of the study sample members at a significance level of ($\alpha \leq 0.05$): The positive path coefficient and the probability value indicate the existence of a significant positive relationship between the institutional environment and the reduction of behavioral deviations, meaning that the more the institutional environment factors influence the auditor's behavior, the more there is a decrease in the effect of the important behavioral deviations that must be reduced from the perspective of the study sample (b = 0.486 t = 7.253; P = 0.000). From the perspective of the study sample members, both the developments that affected the accounting framework and the local audit standards through the adoption of international standards help in reducing deviations, and this may be due to the fact that these developments increase the auditor's awareness and commitment towards the ways of professional performance, as well as increase the auditor's effectiveness in dealing with cases that generate behavioral pressure for the auditor, especially since such standards related to accounting frameworks and audit standards are characterized by being compulsory and mandatory, and this feature pushes the auditor to fully comply with the content of these standards and ways, as the incentive is what results from the case of non-compliance by professionals of penalties. All these factors, such as developments and updates in both the legal text and the standards related to the audit profession and the punitive procedures, lead to a reduction in dyfunctional Auditor's Behavior in the medium and long term.

IV- Conclusion:

Results:

- 1. The audit environment is represented by the factors surrounding the audit profession and influencing it, and the study results showed that there is a significant and positive relationship between the audit environment and the reduction of dyfunctional Auditor's Behavior. This is attributed to the fact that the behavioral patterns adopted, including those related to the professional aspect of the auditor, are influenced by several factors, including the environmental factors surrounding him. Also, the relationship between the audit environment and the reduction of dyfunctional Auditor's Behavior includes a level of complexity that is explained by the influences of other factors or factors belonging to other environmental fields or personal, psychological factors related to the auditor and his affiliations.
- 2. The social environment is considered one of the most important environmental fields influencing the auditor's behavior, as the study results showed the existence of a significant positive relationship between the social environment of the auditor and the reduction of dyfunctional Auditor's Behavior. This is attributed to the fact that the factors of the social environment, such as social accountability, the level of legitimacy of his tasks, expectations with regard to his society, social status, and family influences, all may contribute to reducing behavioral deviations out of the auditor's motivation to maintain a good social

image, in addition to avoiding all that negatively affects the quality of the outputs of the audit process. This proves the negation of the first partial hypothesis associated with the second basic hypothesis.

- 3. Regarding the economic environment, the study showed the existence of a significant and positive relationship between the economic environment and the reduction of dyfunctional Auditor's Behavior. This can be attributed to the current economic data witnessed by Algeria, especially regarding the amendment of the investment law and the formation of social capital through partnership, and the greater interest in the economic entity and the emerging institutions in order to intensify the local industrial and commercial fabric, especially that subject to audit operations. On the other hand, it may be attributed to the density of audit offices and companies, which is linked to competition. This proves the negation of the second partial hypothesis associated with the second basic hypothesis.
- 4. The institutional environment is considered one of the largest environmental factors influencing the reduction of behavioral deviations among the other environmental fields constituting the audit environment. This is attributed to the fact that the characteristics of the institutional environment impose a set of regulatory and behavioral constraints that contribute more to controlling the professional behavior of the auditor and reducing the behavioral deviations associated with the professional practices of the auditor, through the coercive, normative, and cultural elements that contribute to shaping and directing the audit profession.

Recommendations:

- 1. Dyfunctional Auditor's Behavior, especially those that have a significant impact, must be avoided through the design of a comprehensive training program that focuses on improving and raising the awareness of auditors in Algeria about the correct professional practices, in addition to drawing attention to the risks of behavioral deviations.
- 2. It is necessary to emphasize the acquisition of auditors in Algeria of professional judgment and skepticism skills, in addition to acquiring awareness towards the ethical behavior of the profession.
- 3. It is necessary to encompass the details of the audit environment and monitor the potential pressures affecting both the professional behavior of the auditor and the auditor's performance when designing appropriate audit programs for the audit process context, as auditors and professional organizations must be aware of the wider context in which they work by considering the particular challenges of the industry, organizational dynamics, and external pressures.
- 4. Conduct comprehensive assessments of external and internal influences to better align behavioral improvements with strategic improvements.

Appendices:

First Axis: Audit Environment

Statement Number

Statement Likert Scale (Strongly Disagree-Strongly Agree)

To what extent do you agree on the level of importance of each of the social environment factors regarding the professional behavior of the auditor? 1 2

- 3 4 5
- 1 Social accountability of the auditor
- 2 Society's expectations from the auditor
- 3 Legitimacy of the auditor's tasks with regard to society
- 4 Social status of the auditor and his reputation
- 5 Family environment

To what extent do you agree on the level of importance of each of the economic environment factors regarding the professional behavior of the auditor? 1 2

- 3 4 5
- 6 Economic situation
- 7 Size of the commercial and industrial fabric represented by economic units
- 8 Number of audit offices and increased competition

To what extent do you agree on the level of importance of each of the institutional environment factors regarding the professional behavior of the auditor? 1 2

4 5

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- 9 Developments in the adopted accounting frameworks
- 10 The pace of adopting international audit standards

5

- 11 Degree of mandatory for laws, standards, and instructions
- 12 Degree of application of punitive procedures and penalties
- 13 Issuance and updating of laws and regulations by the supervisory bodies

Second Axis: dyfunctional Auditor's Behavior

First Dimension: Budgetary Time Pressure

To what extent do you agree on the importance of the most important behavioral deviations related to budgetary time pressure that must be reduced for each of the following statements: 1 2 3 4 5

- 14 Avoiding some audit procedures to conform the process with the time frame
- 15 Working extra hours outside the specified period without reporting in order to comply with the set deadlines.
- 16 Focusing on performing risk assessment tests and control testing without performing the basic tests in order to comply with the set deadlines
- 17 Delaying the issuance of the report within the specified deadlines when the time frame for the audit process is tight.
- 18 Avoiding reporting the insufficiency of the time budget when performing audit operations
- 19 Avoiding discussing the issues of the time budget with the parties concerned with the process.

Second Dimension: Client Importance

To what extent do you agree on the importance of behavioral deviations related to client importance that must be reduced for each of the following statements: 1

2 3 4

- 20 Accepting the assignment of the task to clients without performing the initial risk assessment in order to obtain market shares
- 21 Convincing the client's explanations and assurances
- Ignoring the client's interventions in the audit process 22
- 23 Accepting the determination of the scope of audit operations by the client and limiting his access to the required documents and persons
- 24 Performing formal audit operations and issuing positive reports according to the client's request
- 25 Assigning individuals to perform audit operations who have good relations with the client

Third Dimension: Task Complexity

To what extent do you agree on the importance of behavioral deviations related to task complexity that must be reduced for each of the following statements: 1 2 5

3 4

- 26 Accepting to perform audit tasks for clients who have a complex organizational structure
- 27Assigning work teams to perform audit tasks without sufficient experience in the client's industry
- Appointing work teams that are not appropriate in terms of number with 28 the scope and nature of the audit task
- 29 Avoiding seeking external experts when performing audit operations in a complex environment.
- Fourth Dimension: Behavioral Regulatory Framework

5

To what extent do you agree on the importance of behavioral deviations related to the legal framework that must be reduced for each of the following statements: 1

> 3 4

2

- 30 Interpreting laws and standards related to the profession in a personal manner
- Performing audit operations without sufficient knowledge of the legal and 31 regulatory frameworks related to the profession
- 32 Ignoring the application of mandatory laws and regulations
- 33 Continuing the work relationship when one of the factors that violate the ethical code of conduct is available"

References

- P R Halgin and Susan Krauss Whitbourne, Abnor Mal Psychology: Clinical Perspectives on Psychological Disorders (4th), 2003. P: 207.
- Chris Argyris, 'Human Problems with Budgets', Harvard Business Review, 31.1 (1953), 97-110.
- Frank G H Hartmann, The Appropriateness of RAPM: Toward the Further Development of Theory', Accounting, Organizations and Society, 25.4–5 (2000), 451–482.
- Indrawati Yuhertiana, Soeparlan Pranoto, and Hero Priono, 'Dysfunctional Behaviour in The Government Budgeting CycleM Budget Planning Stage', Journal of Accounting and Auditing Indonesia, 19.01 (2015), 25–38.
- Sharon M Lightner, Steven J Adams, and Kevin M Lightner, 'The Influence of Situational, Ethical, and Expectancy Theory Variables on Accountants' Underreporting Behavior', Auditing: A Journal of Practice and Theory, 2.1 (1982), 1–12.
- E Jansen and M A Von Glinow, 'Ethical Ambivalence and Organizational Reward Systems', Academy of Management Review, 10.4 (1985), 814–822.
- C Argyris, 'The Dilemma of Implementing Controls: The Case of Managerial Accounting', Accounting, Organizations and Society, 15.6 (1990), 503–511.
- Jansen and Von Glinow. Ethical Ambivalence and Organizational Reward Systems. 1985.
- McNair. Proper compromises: The management control dilemma in public accounting and its impact on auditor behavior .1991.
- Suyanto. Pressure on auditors and dysfunctional behavior as institutional work .2014, p162.
- P Coram and others, 'The Moral Intensity of Reduced Audit Quality Acts', AUDITING: A Journal of Practice & Theory, 27.1 (2008), 127–149.
- K Kosmala and O Herrbach, 'The Ambivalence of Professional Identity: On Cynicism and Jouissance in Audit Firms', Human Relations, 59.10 (2006), 1393-1428.
- D Flint, Philosophy and Principles of Auditing (Hamsphire: Macmillan Education Ltd, 1988). P:109.
- B.J.M Almeida, 'Audit Role in Today's Society: The Portuguese Perspective', Review of Applied Management Studies, 15.01 (2017), 42–57.
- M Ikabal, International Accounting: A Global Perspective, 2nd ed (cincinnati: South-Western: Thomson Learning, 2002). P: 99.
- R Gray, D Owen, and C Adams, Accounting and Accountability (Edinburgh: Prentice Hall, 1996). P: 143.
- M Sharer and D Kent, Auditing and Accountability (London: Pitman, 1983). P: 68.
- T Lee, Corporate Audit Theory (New York: Chapman Et Hall, 1996). P: 243.
- S Mills and M. Bettner, 'Ritual and Conflict in Audit Profession', Critical Perspective in Accounting, 3.2 (1992), 185–200.
- Kyungha Lee and Carolyn Levine, 'Audit Partner Identification and Audit Quality', Review of Accounting Studies, 2019, 1–32.
- A. Mitchell and others, 'Accounting for Change: Proposals for Reform of Audit and Accounting', in London: The Fabian Society, 1991.
- P. N Michas, 'The Importance of Audit Profession Development in Emerging Market Countries', Accounting Review, 86.05 (2011), 1731–1764.

- Thomas B. Lawrence, Roy Suddaby, and Bernard Leca, Institutional Work: Actors and Agency in Institutional Studies of Organizations, (Cambridge University Press, 2009).53
- I. Gray and S. Manson, The Audit Process: Principles, Practice and Cases (Thomson Learning, 2005). P: 177.
- R. S Roussey, 'A Case for Global Corporate Governance Rules: An Auditor's Perspective', International Journal of Auditing, 4 (2000), 203–211.
- P. N Michas, 'The Importance of Audit Profession Development in Emerging Market Countries', Accounting Review, 85.5 (2011), 1731–1764.
- T Kostova, K Roth, and M T Dacin, 'Institutional Theory in the Study of Multinational Corporations: A Critique and New Directions', Academy of Management Review, 33.4 (2008), 994–1006.
- M T Dacin, J Goodstein, and W R Scott, 'Institutional Theory and Institutional Change: Introduction to the Special Research Forum', Academy of Management Journal, 45.1 (2002), 45–56.
- C R Hinings and P S Tolbert, 'Organizational Institutionalism and Sociology: A Reflection', in Handbook of Organizational Institutionalism, ed. by H Gunz and M Peiperl (London: SAGE, 2008), pp. 473–490.
- W R Scott, 'The Adolescence of Institutional Theory', Administrative Science Quarterly, 32.4 (1987), 493–511.p 493
- W R Scott, 'Reflections: The Past and Future of Research on Institutions and Institutional Change', Journal of Change Management, 10.1 (2010), 5–21.
- P J DiMaggio and W W Powell, 'The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields', American Sociological Review, 48.2 (1983), 147–160.
- Pierre-Marc Lanteigne, Institutional and Organizational Unconscious Theories: An Alternative Way for Explaining Challenges in Inter-Agency Cooperation, 2012.
- W R Scott, 'Approaching Adulthood: The Maturing of Institutional Theory', Theory and Society, 37.5 (2008), 427–442.
- J W Meyer and B Rowan, 'Institutionalized Organizations: Formal Structure as Myth and Ceremony', American Journal of Sociology, 83.2 (1977), 340–363.
- DiMaggio and Powell.
- P H Thornton, C Jones, and K Kury, Institutional Logics and Institutional Change in Organizations: Transformation in Accounting, Architecture, and Publishing', Research in the Sociology of Organizations, 23 (2005), 125–170.
- Desmond C Y Yuen and others, 'Dysfunctional Auditing Behaviour: Empirical Evidence on Auditors' Behaviour in Macau', International Journal of Accounting & Information Management, 2013.
- Heru Sulistiyo, Darsono Darsono, and Subchan Subchan, 'An Empirical Study on the Role of Auditor Independence in Reducing Dysfunctional Audit Behavior of Public Accountants in Indonesia', Calitatea, 19.167 (2018), 93–97.
- Halil Paino, Malcolm Smith, and Zubaidah Ismail, 'Auditor Acceptance of Dysfunctional Behaviour: An Explanatory Model Using Individual Factors', Journal of Applied Accounting Research, 2012.
- Halil Paino, Zubaidah Ismail, and Malcolm Smith, 'Dysfunctional Audit Behaviour: An Exploratory Study in Malaysia', Asian Review of Accounting, 18.2 (2010), 162–173.
- D.S Soper, 'A-Priori Sample Size Calculator for Student t-Tests [Software]', 2023.
- J. Cohen, Statistical Power Analysis for the Behavioral Sciences (Hillsdale, NJ: Lawrence Earlbaum Associates, 1988).J.C Westland, 'Lower Bounds on Sample

Size in Structural Equation Modeling', Electronic Commerce Research and Applications, 9.2 (2010), 476–487.

- Joseph. Hair et al, 'When to Use and How to Report the Result of PLS-SEM', European Business Review, 31.1 (2019), p. 8.
- A.M Farrel, Insufficient Discriminant Validity: A Comment on Bove, Pervan, Beatty, and Shiu(2009)', Journal of Business Research, 63.3 (2010), 324–327 (p. 326).
- J. Henseler, C. M. Ringle, and M. Sarstedt, 'A New Criterion for Assessing Discriminant Validity in Variance-Based Structural Equation Modeling', Journal of the Academy of Marketing Science, 43 (2015), 115–35 (p. 121).
- Hair and Alamer, Partial Least Squares Structural Equation Modeling (PLS-SEM) in second language and education research: Guidelines using an applied example p. 136.
- M. Sarstedt and others, 'How to Specify, Estimate, and Validate Higher-Order Constructs in PLS-SEM', Australlasian Marketing Journal, 27.3 (2019), 197– 211. p200
- Sarstedt and others, How to Specify, Estimate, and Validate Higher-Order Constructs in PLS-SEM p. 201.
- Wong.K, 'Technical Note: Mediation Analysis, Categorical Moderation Analysis, and Higher-Order Constructs Modeling in Partial Least Squares Structural Equation Modeling (PLS-SEM): A B2B Example Using SmartPLS', The Marketing Bulletin, 26 (2016), 1–22 (p. 10).
- C. Shmueli, G., Sarstedt, M., Hair, J., Cheah, J., Ting, H., Vaithilingam, S., & Ringle, 'Predictive Model Assessment in PLS-SEM: Guidelines for Using PLSpredict.', European Journal of Marketing, 53.11 (2019), 2322–2347 (p. 2331).