

# The Relationship Between the Size of Regulatory Outputs and Regulatory Tasks practiced by the Jordanian Audit Bureau and the Achieved Affluence of the State's Public Treasury Through the Bureau's Efforts

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## Abstract

This study generally aimed to investigate the relationship between the size of regulatory outputs and the control tasks performed by the Jordanian Audit Bureau and the achieved affluence of the state's public treasury through the Bureau's efforts. In order to accomplish the objective of this study, the researcher conducted an analytical study adopting the descriptive analytical approach. That was done through the use of the Audit Bureau's data and reports regarding the size of clarifications, control books, previous auditing on the spending documents, subsequent audit of accounts, participation with committees, and the affluence accomplished during the period (2008-2014). All of which were presented in the Bureau's reports during the period (2008-2014), where the statistical analysis of the independent variable's relationship with the dependent variable in connection with the realized affluence. The results of the study have shown the lack of a statistically significant relationship between each of the clarifications, control books, review memos and subsequent audit, participation committees, with the abundance achieved through the Bureau's efforts. On the other hand, the findings of the study concluded the presence of a statistically significant relationship between each of the previous audit on spending documents and the profusion achieved through the Bureau's efforts.

**Keywords:** Audit Bureau, The affluence achieved, Clarifications and control books, Previous control, Subsequent audit of accounts, committees.

## 1. Introduction

Through its important role, the Audit Bureau aims at maintaining, well managing and protecting public funds. It also seeks to control all aspects of spending carried out using the public funds, and tracing them wherever they are to prevent misusing them with wastefulness and squandering, and that according to the law of its inception No. 28 of 1952 and its amendments which came as an application of what article 119 of the constitution of the Hashemite Kingdom of Jordan stipulated. That is carried out through performing several types of control that can be classified into several types depending on the timing of its implementation or on the field and domain which these tasks cover. Through the audit control tasks implemented on the entities subject to the supervision of the Bureau resulted in an affluence in the state's treasury estimated by millions of dinars. This prompts the researcher to conduct this study to determine the relation of regulatory outputs and control tasks with the annual affluence realized by the Bureau's efforts.

## 2. Study Problem

The significance of the control exercised by the Audit Bureau stems from the susceptibility of public fund and directing the latter to serving the economic and social development of the state, which requires it to adopt control or regulation that keeps pace with the substantial role assigned to it in protecting public money (funds) and guidance to recover any deficiency in collecting revenue and any squandering of expenses. The fact that the researcher has worked in the Jordanian Audit Bureau for many years and has practiced all kinds of control, the following question occurred to his mind " is there any statistically significant relationship between the size of regulatory outputs and control tasks exercised by the Jordanian Audit Bureau and the affluence achieved for the state's public treasury? ". To answer this, this study has developed the appropriate hypotheses to attain the results that fulfill the objectives of this study.

## 3. Objectives of the study

This study aimed to examine the relation of regulatory outputs and control tasks exercised by the Audit Bureau with the affluence achieved for the treasury through the Bureau's efforts. In order to fulfill this main objective, this study sought to compare the regulatory outputs represented in clarifications, control books, review memos, with the control tasks exercised by the Bureau represented in previous and subsequent audit, and participation committees, all of that with the affluence accomplished.

## 4. Study Importance

There is no doubt that the subject of the Audit Bureau's financial control over the state's public institutions is of

extreme importance because of its profound impact controlling government spending in light of the financial crisis and the scarcity of resources from which the state is suffering, also the financial control's active and primary crucial contribution in fighting financial corruption. So the financial control's relationship with financial corruption in an inverse one, the more the financial control effectiveness increases, the less financial corruption appears, hence comes the importance of this study because it focuses on studying the relationship of regulatory outputs and control tasks performed by the Audit Bureau with the realized affluence of the treasury through the Bureau's efforts.

## 5. Methodology of the Study

This study adopted the descriptive analytical approach through exposure to the concept of regulatory outputs and control tasks relationship which the Audit Bureau practices the achieved affluence of the treasury through the Bureau's efforts. And so, utilising the practical knowledge about the various aspects of the study through referring to the previous studies and scientific references enabled the researcher to become acquainted with all aspects of the problem raised, it also enabled forming a necessary knowledge to carry out the search, in addition to the use of statistical methods for analysing the study's data based on the Audit Bureau's data and reports relevant to the period (2008-2014).

## 6. Previous Studies

- 1- **Rababa's study 2004 :entitled "the extent to which the Audit Bureau's auditors apply the control procedures on the state's public revenue"**. This study aimed to identify to what extent auditors of the Audit Bureau carry out and adhere to the control procedures on public revenue, and that with recourse to the laws, regulations, and instructions relating to public revenue such as the financial system, and applied instructions for financial affairs, in addition to identifying the difficulties faced by the auditors so as to practice control on the revenue and to suggest the necessary means to address them. This study found out the most crucial difficulties and problems faced by auditors in the field of their work and in their relationship with the executive system.
- 2- **Rahalah study 2006 :entitled " the Audit Bureau's role in preserving public funds in the Hashemite Kingdom of Jordan in light of the modern variables"**. This study aimed to shed the light on the Jordanian Audit Bureau's role in maintaining public funds and carrying out its duties in light of the modern variables. This study adopted descriptive analytical approach by studying the Audit Bureau's law and the regulations and instructions issued thereunder, and comparing its law with some Arab countries' laws and international standards in the area of government control, and also primary data collected from a questionnaire prepared for this purpose from a sample of workers in the Bureau. The study showed that the Bureau's laws do not comply to the international standards and that some Arab countries' laws are more up to date and their texts are consistent with the international standards of supreme audit.
- 3- **Hayek study 2007 : entitled " the influential factors on the Jordanian Audit Bureau's control in the computerized accounting information systems environment (the environment of computerized accounting information systems) "**. this study endeavoured to discover the factors affecting the Audit Bureau's control in the computerized accounting information systems environment. A questionnaire was distributed on a sample of auditors working in the control of government departments and institutions which utilize computer in accounting work. This study relied on the descriptive analytical method. The study then found out that in a computerized accounting information systems' environment, the Bureau's control role is affected by recognition factors, qualification and practice factors, and auditing steps and methods.
- 4- **Mutairi study 2012 : entitled " the effectiveness of financial control measures on the spending applied by the Kuwaiti Bureau of Audit from the viewpoint of the entities subjected to the Bureau's control "**. this study aimed to assess the effectiveness of financial control's procedures which the Kuwaiti Audit Bureau applies over spending from the viewpoint of the structures subject to the Bureau's control. The study's sample consisted of a random sample class consisting of 86 out of 110 entities subjected to the control of the Kuwaiti Audit Bureau. The most important findings arrived at through this study is the effectiveness of each of the measures that the Kuwaiti Audit Bureau applies in controlling government spending, and the procedures of previous and subsequent financial control, and also the effectiveness of performance evaluation procedures.
- 5- **Bani Khaled and Hatamleh study 2013 : entitled " the Audit Bureau control role and its effectiveness in the Jordanian public universities "**. this study aimed to identify the controlling role of Jordan's Audit Bureau and its effectiveness in controlling the Jordanian public universities. This study's sample consisted of 224 employees from the Audit Bureau's auditors, also the staff of the financial departments in the Jordanian public universities. This study adopted the analytical method,

and concluded that the Bureau's control is a precautionary one with a moderate impact, and the decline of response to the recommendations provided by the Bureau to the relevant authorities, and the increase of each regulatory outputs and the affluence realized by the Bureau's efforts. It also turned out that the variables most influential on the efficiency, the examination of regulations and procedures of the audit work, the moral principles of the auditors, and there is no impact for each the audit pattern and the audit standards on the effectiveness.

- 6- **Rihawi and Hayek study 2014 : entitled " the impact of the Audit Bureau's previous audit in reducing violations in the Greater Amman Municipality "**. this study aimed to determine the impact of the Jordanian Audit Bureau's audit in the reduction of financial violations in the Greater Amman Municipality. In order to achieve the objective of this study, the researcher conducted a study that adopted the descriptive analytical method through analyzing the data of the Audit Bureau's reports regarding the Greater Amman Municipality's alleged violations which the Bureau has presented in its reports during the period (2009-2013). This study relied on statistical analysis to measure the impact and the relationship of the independent variable of the size of the Greater Amman Municipality's violations.
- 7- **Alshboul and Alrabba study 2014 : entitled " evaluating the effectiveness of analytical tool ; of the Jordanian Audit Bureau in detecting accounting fraud "**. this study endeavoured to evaluate the effectiveness of the analytical procedures used by the Jordanian Audit Bureau in the process of auditing to detect accounting fraud in public institutions. The study focused on identifying the types of fraud, what are the types of fraud that can be discovered, and it also focused on the challenges that face the Audit Bureau in the detection of fraud, and that face the Audit Bureau in Jordan in preserving public funds. This required the use of analytical methods and tools in auditing these institutions' accounts. The sample was taken from the Jordanian Audit Bureau's auditors, and the study showed that the current analytical tools that the Bureau utilizes to detect fraud in institutions has a significant impact on fraud in public institutions. The study has also indicated that the majority of experienced auditors tend to consent that there is a need for more analytical tools to fight accounting fraud.
- 8- **Shariha et.al study 2014 : entitled " the role of the Audit Bureau in eradicating financial corruption in Libya "**. this study aimed to assess the role of the Audit Bureau in eradicating financial corruption in Libya through the audit procedures relating to the application of the international control standards, the training and expertise of the Bureau's auditors. The study has also focused on evaluating the factors that affect auditors to develop the auditing performance, and the use of these factors as a tool to eradicate financial corruption. The researcher used e-mail and personal interviews to collect the study's data. The study arrived at the conclusion that the Libyan Audit Bureau did not adopt the international standards, in addition to the weakness in qualification and training, and the use of modern technology to carry out auditing government institutions.
- 9- **Jaara et.al study 2015 : entitled " measuring the adequacy of the Jordanian Audit Bureau procedures in anti-corruption efforts "**. this study aimed to measure the Jordanian Audit Bureau's suitability of anti-corruption measures from the standpoint of the Bureau's auditors ( the study's population ), that was through a questionnaire that had been prepared for this purpose. The study concluded that the work procedures which the Audit Bureau employes to audit the public sector, through financial control, administrative control, performance control, and legal control, is somewhat appropriate or suitable to some extent in fighting corruption in spite of a weakness in the implementation of certain control procedure.
- 10- **Al-Quarioti study 2015 : entitled " Kuwaiti Audit Bureau role in auditing government agencies from employees perspectives : an exploratory study.** This study aimed to assess the role of Kuwaiti Audit Bureau in auditing government agencies from the perspective of the Bureau's employees regarding directing public spending, exposing deviations and violations, and taking corrective procedures in a timely manner to stop any violation. Through a questionnaire distributed on a random sample of 500 employee of the Kuwaiti Audit Bureau and on the agencies subject to auditing. The study has shown a high degree of effectiveness in auditing these agencies.

## 7. Summary of previous studies

This study benefited from previous studies in the enrichment of some theoretical aspects, it also profited from some of the commonalities between this study and the previous studies. What distinguishes this study from previous studies and in particular those conducted in Jordanian environment, is that most of previous studies- according to the researcher's awareness- discussed the Audit Bureau's role from a theoretical aspect, and legal, the problems and the difficulties faced by the Bureau through its relationship with the executive device, while this study differs from other studies because it explores the relationship between regulatory outputs and the tasks that the Audit Bureau performs the realized affluence by the Bureau's efforts as an independent variable. Where

this subject is of crucial importance and deserves a lot of independent studies to discuss and cover all of its aspects.

### 8. The Study Hypotheses

The researcher relied on the following main premise (hypothesis) to achieve the study's objectives:

" There is no statistically significant relationship between the regulatory outputs and the control tasks of the Audit Bureau and the affluence achieved through the Bureau's efforts " or " there is no statistically significant relationship between the Audit Bureau's regulatory outputs and control functions and the affluence realized through the Bureau's efforts " . Several subset hypotheses were derived regarding the lack of a statistically significant relationship between each of the clarifications, regulatory books, review memos, previous and subsequent audit, and participation committees, all of those with the affluence achieved by the Bureau's efforts.

### 9. The study population and sample

The researcher relied in achieving the study's objectives, and testing its hypotheses on the data extracted from the Jordanian Audit Bureau's data and reports relevant to the years (2008-2014) and relating to the clarifications, control books and review memos, previous and subsequent audit, also the participation committees, with the realized affluence through the Bureau's efforts.

### 10. Operational definitions

**-Regulatory outputs of the Audit Bureau :** are the irregularities and errors that are discovered by the Audit Bureau and which are directed to the departments concerned in the form of a clarification, a control book, or an audit memo.

**-The control tasks (functions) of the Audit Bureau :** are regulatory and evaluative activities exercised by the Bureau on the institutions and departments subject to its control, such as previous and subsequent audit, and participation with various committees.

### 11. The variables used in the research :

The following variables were used in testing the validity of the research's hypotheses. The study's variables have been classified and determined of what nature they are as in the following table :

The variable	The variable's nature
The affluence achieved through the Bureau's efforts	dependent
Clarifications and control books (regulatory)	independent
Audit diaries	independent
Former audit of spending documents	independent
Subsequent audit of accounts	independent
Participation committees	Independent

### 12. About the Jordanian Audit Bureau

The beginning of the Jordanian Audit Bureau's establishment goes back to 1928 when a branch of accounts auditing had been established to audit the financial accounts of the Emirate of Transjordan. In 1931 the law of " auditing and accounts checking " was released whereby a department of audit and accounts checking was established according to Art19 of the basic law of the Emirate. This department's mission was to examine government accounts related to the incomes, expenses, secretariats, and advances (loans, debts). ( Audit Bureau in Fifty Years, 2002).

With the issuance of the Constitution of the Hashemite Kingdom of Jordan for the year 1952, Art19 stated (dictated) : " by law, the Audit Bureau is formed to monitor the state's revenues, expenses, and the waysof disbursement ". In light of this article, the Audit Bureau's law number (28) for the year 2007, and it is read with law number (28) for the year 1952 and its amendments.

### 13. The Audit Bureau's tasks and duties :

The Audit Bureau in Jordan handles executing the following tasks and duties based on the text of Art 3 of its law :

- 1- Monitoring the state's imports and expenses, and auditing secretariats, advances, loans (debts), settlements (adjustments), and warehouses.
- 2- Provideing financial advice to the relevant authorities.
- 3- Preserveing or maintenance of public funds.
- 4- Ensure the application of the relevant legislation.
- 5- Ensure matching the decisions and administrative procedures to the legislation in force.

#### 14. The powers of the Audit Bureau

The Audit Bureau's law grants the Bureau the following powers to enable it to fulfill its control duties :

- 1- Auditing accounts and records, inventory of cash, stamps, documents and supplies (Art11).
- 2- Auditing any document, record, or required papers, and access to computational and financial transactions at any stage of their roles, and the right to contact the staff responsible for the accounts and writing to them (Art12).
- 3- Ensure the correctness (validity) of the laws, regulations, and instructions implementation concerning financial matters, and it- the Audit Bureau-is entitled to draw attention to any failure or error (Art13).
- 4- Consult inspectors' reports, and investigation reports of irregularities affecting the financial and administrative matters (Art14).
- 5- Use of consultants, experts and specialists in the matters that require technical expertise's knowledge of them (Art7/c).

#### 15. Entities subject to the Bureau's control

The Audit Bureau's control includes, according to the fourth article of its law, the following :

- 1- Ministries and government departments.
- 2- Official public institutions.
- 3- Municipal councils and boards of common services.
- 4- Any entity that the cabinet (council of ministers) decides to commission the Bureau to audit ( to entrust the Bureau on auditing it).
- 5- Companies that the government holds 50% or more of its shares.

#### 16. The control exercised by the Audit Bureau

The Bureau practices the following control and evaluation activities on the institutions and government departments subject to its control.

([http:// www. audit\\_ bureau. gov. jo/AB 9620 web](http://www.audit_bureau.gov.jo/AB9620web))

- 1- The financial and accounting control (s) :this control aims to ensure the safety of the financial situation of the authorities subjected to auditing (being audited), through documentary and accounting audit on the revenues and expenses from public funds, to ensure realizing and collecting revenue, the validity and proper use of the allocated funds, also the safety of restrictions and their compliance to accounting rules (Jaara et al. , 2015).
- 2- Legal control : this control aims to ensure that the procedures of the entities subject to financial and administrative control correspond to the laws, regulations and instructions related, and pointing out any shortage (lack) or conflict in financial or administrative legislations (Rihawi and Hayek, 2014).
- 3- Economic control : this control handles reasonableness of costs and overhead (expenses) taking into consideration the appropriate quality, where the Bureau performs control on public authorities, institutions, departments and their credit, and expenses control, and participation in technical committees and economic committees (Rihawi and Hayek, op. Cit).
- 4- Performance control (audit) : performance control (audit) represents a an advanced dimension of financial control exercised by the Jordanian Audit Bureau, which -performance control- aims to measure the actual results of the projects, programs, and activities, and compare them with the objectives sought to be achieved, and whether the style of performing these activities and achieving its results efficiently and effectively.
- 5- Administrative control : the Jordanian Audit Bureau practices administrative control according to articles (13,14) of its law, where Art (13) grants (gives) the Bureau the power to draw the attention of the parties subject to any dereliction that has an impact on the financial and administrative part, Art 14 also it gives the Bureau the power to look into the reports and financial and administrative information, and into investigation reports on irregularities affecting the financial and administrative matters. The Bureau also follows in light of this kind of control, control of appointments, promotions, promotions and vacations, and the staff's commitment to official hours, and checking their assessment and their achievements, and complaints of staff grievances, and the validity of administrative decisions (Jaara et al. , Op. Cit).

#### 17. Financial control departments in terms of chronological time

- 1- **Previous control** :this control aims to ensure the validity of the financial transactions of the entities (departments) under auditing through documentary and accounting audit of the financial transactions before discharging them. These operations are done (take place) on the expenditure side and some transactions of revenue collecting such as building licenses and tax files. Previous control can extend to include the examination of each processes documents and to verify the integrity of the process from all



aspects, such as the existence of a commitment to the expense, and that the reception committees and their records, and the expenses documents are in accordance with laws and regulations, and financial regulations in force. Previous control is called preventive control since it prevents mistakes and deviations that may occur in the execution (implementation) of financial operations. This type of control also leads to handling the responsibility with the different ministries and institutions (Bani Khaled and Hatamleh, 2013).

From the disadvantages of this control is the difficulty of auditing and reviewing all parts of the financial process, especially in large construction projects and financial commitments, but are audited as parts according to the percentage of completion, thus fraud or manipulation might not be detected. The process of control also leads to a slowness in procedures and disrupts workflow, and in an intervention in the specialties of the executive authority and the emergence of a kind of administrative centralization leads to complicating procedures and growing conflicts between ministries and the Bureau, for that (so), units of internal control must be assigned from within the executive authority with this kind of control.

- 2- **Subsequent Control** :namely the control that begins after the end of the fiscal year and the preparation of the final accounts, in which it includes the expenditure side and the general revenue side to ensure the executive authority's application of the laws and regulations on expenses, and collecting the due taxes and supplying them to the state's public treasury ( Bani Khaled and Hamtamleh, op. Cit ).

Also the subsequent audit allows auditing all financial operation parts, and studying them thoroughly, making it easier to detect errors and misrepresentations in the records, also having enough time to complete the audit process without any disruptions of the progress of government business. In addition to that, this control does not lead to shared responsibility with the executive authority, and it leads the officials to be accurate and to comply with the laws, and the financial regulations and instructions to avoid falling in mistakes (errors).

One of the main disadvantages of this control is that it reveals financial irregularities or fraud and embezzlement in the later period of the spending process or revenue collecting, which reduces the importance of the discovery and the timing of submission to the legislative authority to be corrected, and also the difficulty of prosecuting the originators of these irregularities to leave their work place (to dismiss them).

### **18. Objectives of the Bureau's control**

The main objective of the Audit Bureau is to achieve effective control over public funds to protect them and ensure the optimal use of them in the purposes for which they were allocated fo) in the general budget law, and the Bureau considers financial control the main (primary) tool to ensure the validity and accuracy of the implementation of the government tasks and activities that are non-profitable but are concentrated on delivering different servicesto citizens.

The objectives of government audit differ from the goals of private sector's auditing, the objectives of the Audit Bureau's financial control can be summed up, according to the Bureau's law, which gives it authorityiesto achieve these goals, which are as follows (Hayek, 2007) :

- 1- Ensure compliance with laws, regulations and instructions in force.
- 2- Verify that the revenues were obtained in accordance with the laws, regulations and instructions in force.
- 3- Ensure that the expenses were spent according to what is allocated (in accordance with the allocation).
- 4- Ensure the validity of the financial policies followed.
- 5- Ensure achieving the objectives planned, and frugality.
- 6- Classifying the problems and obstacles that affect work.

### **19. The evolution of the Audit Bureau in the field of control**

Since its establishment, the Audit Bureau accompanied the economic and social developments the Kingdom witnessed, and the significant increase in the State's budget size. The Bureau's control has gone through several stages and comprehensive strategic plans, which led to a quantum that coincided with the local and international developments ( Rihawi and Hayek, 2014 ).

As for the mechanism of setting the quality of the control work, the Bureau has issued the standards of government auditing and a set of control evidence, such as the audit guide using statistical samples, and the guide of auditing the final accounts of the government, and the guide of examining the systems of internal control, and evaluating the performance of field observations.

## 20. Analytical statistics and testing the study's hypotheses

### 20.1 Descriptive analysis

#### Preface :

This section presents the results of the study concerning the impact of the clarifications size and audit books, memos and previous audit of spending documents, and the subsequent audit of accounts, and participation committees, on the value of the achieved affluence during the period (2008-2014). This section also addresses the search of the statistically significant relationship between the size of these variables and the affluence realized through analyzing the influence of the independent variables on the affluence achieved. It also – this section – presents the correlation coefficients between the independent variables and the results of the descriptive analysis of the variables.

#### Descriptive analysis of the study's independent variables :

Table n°2 shows the results of the descriptive analysis of this study's variables during the period (2008-2014), using the methods of statistical analysis of (represented in) the arithmetic mean, the standard deviation, the highest (top) value, and the minimum value.

Table n°2 : the descriptive analysis of the independent variables of the study.

The variable	N°	Arithmetic mean	Standard deviation	Lowest value	Highest value
Clarifications and audit books	7	1501,86	235,86	1134	1780
Memos number	7	4615,00	902,99	3314	5769
The previous audit on spending documents	7	255843,43	69588,83	190415	353439
The size of subsequent audit of (on) account	7	12163,71	788,13	11330	13690
Committees size	7	65154,43	4764,26	58484	73056
The affluence achieved ( in million dinars)	7	54,852	12,01	35,40	71,20

We notice from table n°2 the following :

- The total arithmetic average of the clarifications' size, and control books reached ( 1501,86 ), with a standard deviation of ( 235,86 ), which indicates a disparity in the size of clarifications and control books between the years of the study, where it – the size – ranged during the period (2008-2014) between a minimum (lowest) size of ( 1134 ), and top (highest) size ( 1780 ).
- Also the total average number of memos during the study's period reached ( 4615 ) memo, with a standard deviation of ( 902,98 ), indicating by that the existence ( presence) of a dispersion in the size of memos during the period (2008-2014), ranging between a minimum size of ( 3314 ) and a top (highest) size of ( 5769 ).
- As for the average size of previous audit of spending documents during the period of the study, they amounted to ( 255843,43 ), with a high standard deviation ( 6958,83 ), which indicates that the proportion of previous audit of spending documents is disparate between the study's years, ranging from a minimum size of ( 190415 ), and a top (highest) size of ( 353439 ), whereas the average of post-audit (subsequent audit) of accounts amounted to ( 12163,71 ), with a low standard deviation of ( 788,13 ) indicating that the proportion of the subsequent audit of accounts is close between the years, and the reason to that may be due to the existence of organized subsequent audit(post-audit) plans, which ranged between a minimum size of ( 11330 ), and top size of ( 13690 ) to subsequent audit (post-audit).
- As for the participation with various committees, the average size of committees amounted to ( 65154,43 ) committee, with a standard deviation of ( 4764,26 ), suggesting a variation between the size of committees during the period (2008-2014), where it extends between a minimum size of ( 58484 ), and a highest number of committees ( 73056 ).
- Concerning the rate of the affluence achieved, it amounted to an average of ( 54,85 ) million dinars, with a standard deviation of ( 12,01 ), this refers to the presence of inequality in the proportion of the affluence earned between the years of the study, which varied from the minimum level of affluence of ( 35,4 ) million dinars, and the highest (top) level of affluence ( 71,2 ) million dinars.

### 20.2 Reciprocal links between the variables of the study :

The regression model was examined to verify the absence of high-reciprocal links between the independent variables, whereas the existence of these links makes it difficult to determine the contribution of each variable in explaining the changes that occur in the dependent variable, and according to (Kennedy, 1985, Anderson et al., 1993), the existence of a correlation is more than 70% between two or more independent variables is considered

a high correlation which could result in distorting the relationship between one of the two variables and the dependent variable and to verify the absence of this problem for the regression model used in this study, a matrix of reciprocal correlations between the study's independent variables has been prepared, and table n°3 shows that.

Correlation coefficients between the study's independent variables.

The variable	Clarifications and control books	Memos	previous audit	Post-audit (subsequent audit)	committees
Clarifications and control books	1				
Memos	0.397	1			
Previous audit of spending documents	0.606	-0.351	1		
Post-audit (subsequent audit)	0.628	0.107	0.529	1	
Committees	-0.565*	-0.416	-0.170	-0.486	1

- Statistically significant at the level ( $\alpha \geq 0,05$ )

The previous table shows that the values of the correlation coefficient between the independent variables were less than ( 70% ) and is statistically significant at the level of significance ( 0,05 ), this refers to (indicates) the lack of high reciprocal links between the study's independent variables to the extent that it may affect the results of the regression analysis.

### **20.3 Multicollinearity test :**

The power of the General Linear Model (G.L.M) relies mainly on the premise of the independency of each variable of the independent variables. In case this condition is not met, the General Linear Model is not fit for application, as it works to inflate the value of the coefficient of determination ( $R^2$ ) and makes it larger than its actual value, and it can't be considered good for estimating parameters ( Sifo and Meshaal, 2003 ). In order to achieve this, the Collinearity Diagnostic scale has been used, which is based on calculating the coefficient of variation for each one(variable) of the independent variables, and then finding the Variance Inflation Factor (VIF) of each one(variable) of the independent variables. (Gujarati, 2003) has showed that getting a (VIF) value higher than (10) points indicates the existence of a multicollinearity problem for the independent variables concerned. The results showed that the values of (VIF) belonged to independent variables were greater than (1) and less than (10), and ranged between (1,037- 6,541), and that the values of variation (Tolerance) test ranged between (0,180- 0,964) which is greater than (0,05), this indicates (suggests) that there is a problem of multicollinearity between the variables of the study.

### **20.4 Autocorrelation test :**

This test verifies that the data is free from the autocorrelation problem in the regression model, which weakens the model's ability to predict, and to ensure the absence of this problem in the model, Durbin Watson test has been used. This test is considered one of the most commonly used methods, this test's value ranges between (0-4). (Bashir, 2003) showed that the result close to (0) indicates that there is a strong positive correlation, whereas the result close to (4) indicates a strong negative correlation, while the ideal result for this test ranges between (1,5-2,5), and which indicates the lack of an autocorrelation between the variables. Economists feel reassured of their findings when the value of Durbin Watson Test turns out close to (2), in which case the problem of autocorrelation is weak (Montgomery, et al., 2001, p16).

The results have shown that the calculated value of D-T is (2,487) which is considered according to previous decision rule to fall within the appropriate range, which signifies that the data is free from the autocorrelation problem, and these data's validity to be used in the regression model.

### **20.5 Hypotheses testing :**

The main premise states that : " there is no statistically significant relationship between control outputs and control tasks of the Audit Bureau, and the affluence achieved through the Bureau's efforts", from this main premise branched several sub-hypotheses regarding the lack of a statistically significant relationship between each of the clarifications, control books and review memos, previous and subsequent audit , and participation committees, all with the affluence achieved through the efforts of the Bureau. To test these hypotheses, simple regression analysis has been utilised, and what follows are the results of this test.

#### **20.5.1 The first hypothesis : the initial premise**

" there is no statistically significant relationship between the size of clarifications and control books, and the affluence achieved ".

Table n°4 shows the results of simple regression analysis of the relationship between the size of clarifications



and control books, and the affluence realized.

Table n°4 : the results of testing the relationship between the size of clarifications and control books, and the realized affluence.

The Dependent Variable	Model Summary		Analysis of Variation ANOVA			Coefficients				
	Correlation Coefficient R	Coefficient of Determination R <sup>2</sup>	F Calculate	Degree of Freedom Df	Significance level Sig.F*	Descriptive	Coefficient of Determination β <sub>i</sub>	Standard Error	T Calculate	Significance Level Sig.T*
The Affluence Achieved	0.706	0.499	4.975	1	0.076	Clarifications and Control Books	0.706	9.315	2.231	0.076

- The relationship is statistically significant at the level of significance ( $0.05 \geq \alpha$ )
- The results of the analysis indicate that the value ( $R=0,706$ ) is not statistically significant at an abstract level ( $\alpha \geq 0,05$ ), which shows a lack of a statistically significant correlation between the variable of size of clarifications and control books, and the affluence achieved. The analysis results also indicate that the size of clarifications and control books issued does not lead to achieving affluence. It also turns out (appears) that the value of the coefficient of determination reached ( $R^2=0,499$ ), this means that the variable of clarifications' size and the control books have interpreted (49,9%) of the variation (disparity) in the affluence realized, and that this variable can interpret (explain) the changes that occur on the achieved affluence.
- The transaction table also displays (demonstrates) or as can also be seen from the transaction table, the lack of a statistically significant effect (influence) at the level ( $\alpha \geq 0,05$ ) of the size of clarifications and control books issued on achieving affluence, and that the influence's (effect's) level reached (0,706), which is explained as the change in the level of the size of clarifications and the issued control books is not accompanied with a change in achieving affluence. This confirms that the (T value) amounted to (2,231) and is not statistically significant at the level of significance ( $\alpha \leq 0,05$ ).
- Based on the above the nihilism hypothesis which states that : " there is no statistically significant relationship between the size of clarifications and control books, and the affluence achieved" is accepted.

### 20.5.2 The second hypothesis :

" there is no statistically significant relationship between the number of memos and the affluence achieved ".

Table n°5 represents the results of the simple regression analysis of the relationship between the number of memos and the affluence achieved.

Table n°5 : the results of testing the relationship between the number of memos and the abundance achieved.

The Dependent Variable	Model Summary		Analysis of Variation ANOVA			Coefficients				
	Correlation Coefficient R	Coefficient of Determination R <sup>2</sup>	F Calculate	Degree of Freedom Df	Level of Significance Sig.F*	Descriptive	Coefficient of Determination β <sub>i</sub>	Standard Error	T Calculate	Level of Significance Sig.T*
The Affluence	0.017	0.000	0.001	1	0.971	Memos	-0.017	13.155	-0.038	0.971

- The relationship is statistically significant at the level of significance ( $\alpha \geq 0,05$ )
- Table n°5 shows that the value ( $R=0,07$ ) is not statistically significant at the abstract level ( $\alpha \geq 0,05$ ), which shows the lack of statistically significant correlation between the number of memos and the affluence achieved, this also indicates that the number of the memos issued does not lead (outcome in) and the affluence achieving affluence. The table also demonstrates (displays, exhibits) that the value of the coefficient of determination was very weak (low) ( $R^2=0,000$ ), and this means that the number of memos has interpreted an amount of (0,000%) of the variation in the affluence achieved, and that this variable cannot explain the changes that occur in the affluence achieved.
- It also appears through the transaction table the lack of a statistically significant effect (influence, impact) at the level ( $\alpha \geq 0,05$ ) for a number of memos on the affluence achieved, and that the effect level was very low it reached (-0,017), it is explained that the change in the level of the number of memos is not accompanied by a change in the affluence achieved, and it confirms that (T value) amounted to (-0,038) and is not statistically significant at the level of significance ( $\alpha \geq 0,05$ ).
- So the nihilism hypothesis which states that : " there is no statistically significant correlation between the number of memos and the affluence achieved " is accepted.

### 20.5.3 The third hypothesis :

" there is no statistically significant relationship between the previous audit on (of) spending documents and the affluence achieved ".

Table n°6 demonstrates the results of simple regression analysis of the relationship between the size of previous audit on spending documents and the affluence realized.

Table n°6 : the test results of the relationship between the size of previous audit on spending documents and the achieved affluence.

Dependent Variable	Model Summary		Analysis of Variation ANOVA			Coefficients				
	Correlation Coefficient R	Coefficient of determination R <sup>2</sup>	F Calculate	Degree of freedom Df	Level of significance Sig.F*	Descriptive	The coefficient of determination βi	The standard error	T Calculate	Level of significance Sig.T*
The Affluence Achieved	0.826	0.619	10.747	1	0.022	The Previous Audit	0.826	0.000	3.278	0.022

- The relationship is statistically significant at the level of significance ( $\alpha \geq 0,05$ )
- Table n°6 shows that the value ( $R=0,826$ ) is statistically significant at an abstract level of ( $\alpha \geq 0,05$ ), which indicates the existence of a statistically significant correlation between the variable of the size of previous audit on(of) spending documents and the profusion(multitude), this also indicates that the size of previous audit of spending documents leads to achieving affluence, it also turns out that the value of the coefficient of determination reached ( $R^2=0,619$ ), and this means that the variable of the size of previous audit on(of) spending documents has interpreted up to (61,9%) of the variation in the achieved affluence, and that this variable can explain the changes that occur in the achieved affluence.
- As can be seen from the table, there is also a statistically significant influence at the level ( $\alpha \geq 0,05$ ) of the size of previous audit on the spending documents onto achieving affluence, and that the effect level reached (0,826). This explains that the change in the size of previous audit of spending documents is accompanied by a change in realizing affluence, and that ensures that the (T Value) amounted to (3,278) and is statistically significant at the level of significance ( $\alpha \geq 0,05$ ).
- According to the above, the nihilism hypothesis is rejected, and the alternative hypothesis which states that " there is a statistically significant relationship between the size of previous audit of spending documents and the affluence achieved " is accepted.

#### 20.5.4 The fourth hypothesis :

" there is no statistically significant relationship between the size of subsequent audit of accounts and the affluence realized ".

Table n°7 displays the results of simple regression analysis of the relationship between the size of subsequent accounts audit and the affluence achieved.

Table n°7 : test results of the relationship between the size of subsequent audit of accounts and the affluence achieved.

The Dependent Variable	Model Summary		Analysis of Variation ANOVA			Coefficients				
	Correlation Coefficient R	Coefficient of Determination R <sup>2</sup>	F Calculate	Degree of Freedom Df	Level of Significance Sig.F*	Descriptive	Coefficient of Determination βi	Standard Error	T Calculate	Level of Significance Sig.T*
The Affluence Achieved	0.243	0.129	0.314	1	0.599	Subsequent Audit	0.243	0.007	0.561	0.599

- The relationship is statistically significant at the level of significance ( $\alpha \geq 0,05$ ).
- It is demonstrated from table n°7 that the value ( $R=0,243$ ) is not statistically significant at the abstract level ( $\alpha \geq 0,05$ ), which shows the lack of a statistically significant correlation between the size of subsequent audit of accounts and the affluence attained, meaning that the size of subsequent audit of accounts does not result in fulfilling affluence, it also turned out that the value of the coefficient of determination reached ( $R^2=0,129$ ), suggesting that the size of subsequent audit of accounts justifies what amounts to (12,9%) of the variation in the affluence attained, and that this variable poorly explains the changes that happen in the abundance reached.
- As can also be noticed from the transaction table, the lack of a statistically significant effect at the level ( $\alpha \geq 0,05$ ) of (to) the size of subsequent audit of accounts on the affluence reached (achieved), that also explains that the (T Value) amounted to (0,561) and is not (which means it's not) statistically significant at the significance level ( $\alpha \geq 0,05$ ).
- Hence the nihilism hypothesis which states that : " there is no statistically significant relationship between the size of subsequent audit of accounts and the affluence achieved " is accepted.

#### 20.5.5 The fifth hypothesis :

" there is no statistically significant relationship between the size of committees and the affluence achieved ".

Table n°8 presents the results of the simple regression analysis of the relationship between the size of committees and the abundance realized.

Table n°8 : test results of the relationship between the size of committees and the affluence achieved.

The Vependent variable	Model Summary		Analysis of Variation ANOVA			Coefficients				
	Correlation Coefficient R	Coefficient of Determination $R^2$	F Calculate	Degree of Freedom Df	Significance Level Sig.F*	Descriptive	Coefficient of Determination $\beta_1$	Standard Error	T Calculate	Significance Level Sig.T*
The Affluence Achieved	0.158	0.170	0.128	1	0.735	Size of Committees	-0.158	0.001	-0.357	0.735

- The relationship is statistically significant at the level of significance ( $\alpha \geq 0,05$ ).
- From table n°8 it is clear that the value ( $R=0,158$ ) is not statistically significant at the abstract level ( $\alpha \geq 0,05$ ), which shows the lack of a statistically significant correlation between the size of committees and the affluence achieved, and this signals that the size of committees does not result in achieving affluence, it also turned out that the coefficient of determination's value reached ( $R^2=0,17$ ), suggesting that the size of the committees explains what amounts to (17%) of the variation in the affluence attained, and that this variable poorly explains the changes that occur in the affluence achieved.
- From the table, it can also be seen the lack of a statistically significant effect at the level ( $\alpha \geq 0,05$ ) of the size of committees on the affluence attained, this is explained as the change in the level of the size of committees is not accompanied by a change in the affluence achieved, and confirms that the (T Value) reached (-0,357) and is not statistically significant at the significance level ( $\alpha \geq 0,05$ ).
- As is shown through the table also the lack of statistically significant effect at the level ( $\alpha \geq 0,05$ ) of the committees' size on the affluence realized, that's explained as the change in the level of the size of committees is not accompanied by a change in the affluence achieved, that is confirmed with the fact that the (T Value) reached (-0,357) and is not statistically significant at the significance level ( $\alpha \geq 0,05$ ).
- Accordingly the nihilism hypothesis which states that : " there is no statistically significant relationship between the size of committees and the affluence achieved " is accepted.

## 21. Results and recommendations

### 21.1 The Results :

The major findings of this study are summed up as follows :

- 1- There were no statistically significant relationship between each of the clarifications and controlbooks, review memos, subsequent audit, and participation committees, with the affluence achieved through the efforts of the Bureau of Audit.
- 2- There exists a statistically significant relationship between each of the size of previous audit on spending documents and the affluence achieved through the Bureau's efforts, the researcher believes the reason why there is a statistically significant relationship is due to the lack of effective internal controls in the audit of the spending documents before discharging them.

### 21.2 Recommendations :

- 1- Reorganizing, reactivating, and restoring the autonomy of internal control units in government institutions so they can perform their role to the fullest especially in the previous audit of the spending documents.
- 2- Work on developing and strengthening the role of the Audit Bureau in the previous audit of the spending documents.
- 3- Re-conduct this study, with the addition of new independent variables.

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