The contribution of Internal Audit Diamond Model in Preventing Fraud and Corruption

Abstract

Internal audit is a powerful policy tool in private sector and public administration and aims to enhance sound financial management of organizations and ensure their sustainability by preventing fraudulent actions. The success of its implementation is focused on a multitude of factors concerning the internal environment in which it operates as well as the evolving dynamic external environment. Methodologically, the paper is based on the Internal Audit Standards and provides a systematic literature review. The theoretical model, known as the 'Diamond Model', is formulated and four main pillars of internal audit effectiveness are developed. Namely, i) inputs (budget, staffing, internal auditors' adequacy, digital assets), ii) outputs (audit reports, recommendations, assurance services, consulting services), iii) processes (planning, execution, reporting, follow-up) and iv) internal audit relationships with all stakeholders (senior management, audit committee, auditees, external auditors). Those pillars are constrained by the time, quality, ~~quantity~~quantity, and cost. The research results illuminate key aspects of internal audit effectiveness in terms of sustainable governance with emphasis on ESG criteria. The research novelty is evident in the practical usage of the Diamond Model that serves as an innovative tool to a sound governance improving internal processes and operations, monitoring compliance with policies, ~~laws~~laws, and regulations, aligning objectives of the organization with its mission, preventing fraud and ~~corruption~~corruption, and finally adding value to the organization and improve performance of its operations.

Keywords

Internal audit, Sustainable governance, ESG, Innovative management, Fraud, Corruption.

1. Introduction

Internal audit function plays an important role in the modern operation of organizations, whether they are for-profit or not-for-profit, ~~private~~private, or public. The decision-making process by management ~~takes into account~~considers ~~a number of~~several factors, one of which is the assessment of identified relevant risks. In this context, the internal audit function supports the organization to achieve its objectives by adopting a systematic and disciplined approach to optimizing corporate governance, risk management and internal control mechanisms. The need for an effective internal audit function is self-evident, for the achievement of which it is necessary to develop and implement a methodology that ~~takes into account~~considers both the current environment in which organizations operate and internationally accepted principles and frameworks.

Within this context, our research focuses on determining the influential factors that affect internal audit effectiveness. ~~In order to~~To achieve this, we ~~consider~~consider, or we take into consideration or explore that over the years have drastically influenced and continue to influence the way organizations are managed and make decisions ~~taking into account~~considering the aspirations and objectives of all stakeholders, in the context of the corporate governance practices. These positions are also considered in the light of the effectiveness of the internal audit function by identifying those elements of the International Professional Practice framework of Internal Audit that are affected by them and influence the degree of effectiveness of the internal audit activity.

The diamond model we focus our attention ~~in~~on this paper is a model which helps to identify multiple dimensions of microeconomic competitiveness and understand how they interact. Using this model, we identified the key elements that affect the effectiveness of internal audit services by distinguishing the four pillars and examining them in terms of time, quantity, ~~quality~~quality, and cost. Those key elements were identified using a mandatory part of International Professional Practices Framework for internal audit, the Internal Audit Standards, and afterwards, based on our methodology, we categorized them at the appropriate pillars of the diamond model ~~in order to~~to extract useful conclusions.

The remaining of the paper is as follows: Section 2 frames the theoretical background of internal audit based mainly on agency theory, managerial theories, theory of organization behavior and resource-based theory. Section 3 describes the methodology. Thereafter, Section 4 presents the research results, and the last section summarizes the concluding remarks.

2. Theoretical framing of internal audit

Several theories set the appropriate conceptual framework for better understanding of the effectiveness of internal audit and its linkage to fraud and corruption prevention that leads to an innovative strategic management. Each theoretical approach provides a different content to the internal audit effectiveness and its conceptual definition varies according to the assumptions made and the variables chosen. In this way, a series of theoretical contributions to the internal audit effectiveness emerged where one fills in the gaps of the other following an evolutionary trajectory. They are born, enriched and reproduce to new theories not only because the existing theories are complemented by new more dynamic theories but also because they change the historical reality, where the institutional framework, the structure and behavior of the internal audit function mutate over time becoming incomplete existing theories and creating a strong need to synthesize new ones.

2.1 Agency theory

Agency Theory is a continuation of Coases' theory (2012), and key representatives of the theory were Alchian and Demsetz (1972). It posits that the organization is a nexus of contracts between the principal and the agent, and their relationships are in strong interaction with each other. The contract is defined as a mutually binding relationship that, depending on its form (formal, informal) determines commitments, claims, ~~rights~~rights, and obligations to the contracting parties. In its simple context the theory examines the situations in which there are two main actors who play a decisive role in organization. The principal (organizations' owner) who is usually the owner of an asset and gives orders to agent (internal auditors) who accepts the order to make decisions affecting the value of the asset and acts on behalf of the principal.

In a real environment the public sector represents a principal-agent relationship. The principal (citizen) seeks to maximize social utility, and the agent (public officials at every level of hierarchy) is accountable for the management of resources and the achievement of public goals. Effective internal audit exists to limit the inherent risks in the principal-principal relationship and thereby enhance accountability, transparency and prevent fraud and corruption.

The principal-agent theory focuses on how contracts are performed on the base that "the interests of the contracting members are not the same" (Smith, 1776:66). The impossibility of concluding a perfect contract lies both in limited knowledge and limited predictability. At this point several problems arise. The first problem is imperfect knowledge or asymmetric information. It is essentially a removal of a basic condition of the neoclassical model in which perfect information was a given. Usually, the principal has more information than the agent about the details of the project, about his actions, ~~preferences~~preferences, and abilities.

Specifically, there are two types of asymmetry information. The first one is the hidden information, where the principal possesses information that the agent does not and adverse selection results from it. The second one is the hidden action, where the principal cannot observe the agents' actions. It only observes the result of the agents' actions, and thus results in moral hazard, an issue that is an ex-post problem (Arrow, 1978). According to Knight (1921) the solution is given through control and audit.

Internal audit and other internal control mechanisms (audit committee, external auditors) bond the relationship between principal and agents. They also overcome the information asymmetry problems monitoring the activities if parties' cost-efficiently (Adams, 1994:2), offer high level of risk awareness (Sarens & Abdolmohammadi, 2011) and mitigate principal-agent conflicts (Rönkkö, Paananen & Lahikainen, 2024).

2.2 Managerial Theories

Berle and Means (1932) emphasize the new reality that dominates the period 1880-1930 with an emphasis on the phenomenon of ownership separation from control, which prevailed as a 'managerial revolution' (Shepherd, 1990). Managerial theories study the dimension of interests between shareholders and managers and the goals each pursues. In our research we focus our theoretical review on the main contributions of Baumol, Marris and Williamson.

According to the sales maximization model, Baumol (1959) argued that the objective goals of managers may differ significantly from those of organization owners. The last are concerned with maximizing profits, while managers are concerned first with their salary, compensation and then with firms' sustainability. Given that the sustainability depends primarily on its competitiveness, ~~size~~size, and market share.

Marris (1963) hypothesized that managers aim to maximize their utility rather than profits but unlike Baumol this is achieved by growing the organization rather than increasing sales revenue. Managers' salaries and position depend on the size of the departments they manage. As it is difficult to assess the manager's contribution to the organizations' profits, his ability to have good relations with the rest of the staff and execute his operations efficiently is chosen as the organizations' performance indicator. The manager wants to oversee more activities and improve the reputation of his organization.

Williamson's model (1967) concerns the maximization of managers' utility and explains the organizations' behavior in terms of 'managerial discretion'. Managers pursue those policies that give them personal pleasure, while shareholders equate their level of satisfaction or utility with profits. Managers have utility functions that include several personal goals and values and refer to maximizing their recognition, prestige, and wealth (expensive cars, luxury offices). Of course, Williamson does not ignore the importance of profits.

Under these theories internal audit function conceals opportunistic behavior (Adeneye, et al., 2024), prevents earnings' manipulation (García, Barbadillo & Pérez, 2012) especially accruals manipulation in term of sales, detects financial misstatements in terms of fraudulent financial reporting and misstatement resulting from the misappropriation of assets (Mao & Ye 2023) and ensures credibility in ESG reporting (Rakipi & D'Onza, 2023).

2.4 Theory of organizational behavior

The theory of organizational behavior began to develop in the 1950s as a response to the weaknesses of the assumptions of neoclassical theory. Professor Simon (1947) was the pioneer of the theory and Cyert and March (1958) continued it. The essence of the theory lies in the analysis and interpretation of organizations as decision-making systems focusing on administrative, ~~economic~~economic, or managerial issues which operate in an entrepreneurial environment of uncertainty and lack of information. Organization is not a unit of making a single decision or achieving a single goal, but a coalition of many decisions and goals. It consists of different members (managers, employees, customers, suppliers) who have different goals.

Workers aim for higher wages, better ~~pensions~~pensions, and satisfactory working conditions. Managers demand higher salaries, professional ~~development~~development, and reputation. Shareholders seek high profits, increasing corporate capital. Customers target to lower prices and good quality products and services. Suppliers seek firm contracts for the materials they supply to businesses.

Thus, there is a conflict of interest, and the satisfaction of the different members' demands is achieved through a bargaining process. The decision-making criteria are not unequivocally maximizing in nature but are limited to the relatively satisfactory solutions. Therefore, the maximizing criterion of the absolute rationality of the homo *economicus* aiming at maximizing profits was replaced by the satisfactory rationality of the more prudent *homo administrativus* aiming at the satisfaction of workers, and business ethics. Consequently, internal audit effectiveness is determined by an overall organizational perspective based on relationships, structures, ~~processes~~processes, and outputs (Grima, et al., 2023).

2.5 Resource-based theory

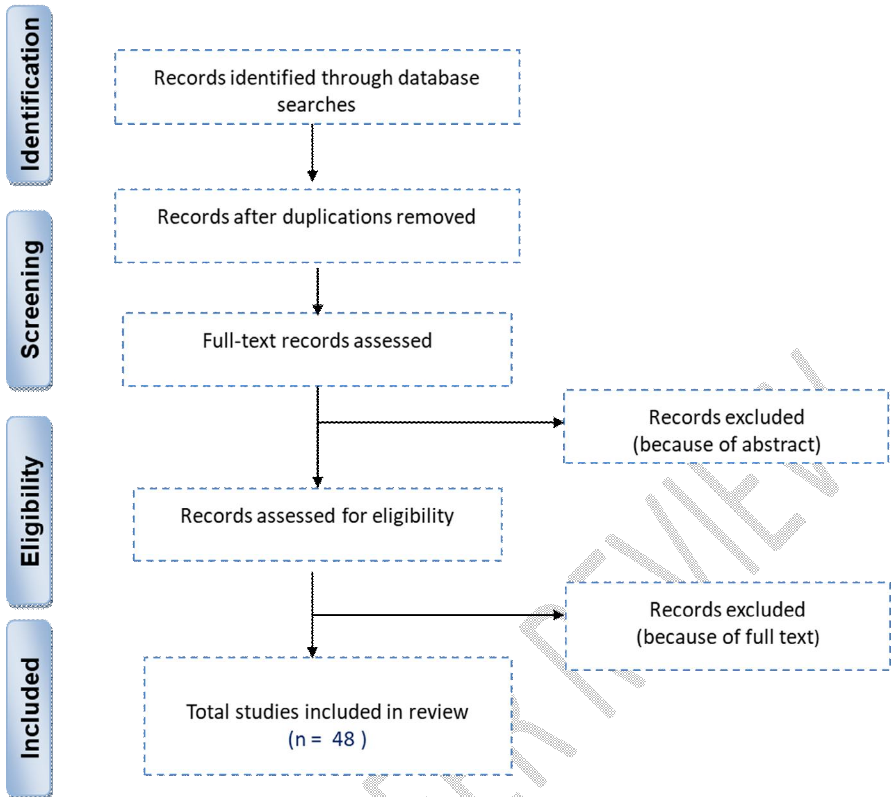
A business is considered more than an administrative unit. As Penrose (1959) noted business is a nexus of productive resources, the arrangement of which, between different uses and over time, is determined by administrative decisions. Firms' natural resources are the materials used in the operational process. Some of them are resistant to use and some turn into intermediate products. Human resources (human capital, ~~skills~~skills, and training programs) and intangible resources (innovation, experience, knowledge, fraud consciousness) which are vitally important part in strategic management contributing to the creation of economic value and competitive advantage (Kor & Mahoney, 2004). By offering information on resource use and dependency concerns, effective internal audit assist firms in managing and controlling their vital resources.

3. Methodology

Literature review is widely used in academic research of internal audit (Hamdan & Al Habashneh, 2024; Handoyo, 2024; Hamdan & Al Habashneh, 2024; Hazaea, et al., 2023), as it compiles existing knowledge and provides a comprehensive overview of the field. The research question guiding the literature review is “Which influential factors determine internal audit effectiveness in fraud and corruption?” The basis of our review was the International Professional Practices Framework for Internal Auditing (IPPF) and the Global Internal Audit Standards. For retrieving systematic literature review in the field of internal audit effectiveness, the study used the PRISMA protocol to identify emerging themes in the underlying research area.

The search encompassed electronic databases, including Google Scholar, Web of Science, Scopus and ResearchGate. No restrictions were applied to publication year or study design; however, only articles published in the English language were included. Moreover, subject area of interest was limited to Business and Management. Figure 1 provides a view of the literature review process.

Figure 1. Literature review process



Source. Authors' elaboration.

4. Results of the Systematic literature review

The systematic literature review revealed that the internal audit effectiveness in fraud and corruption depends on many and different factors related to the internal and external environment of an organization.

4.1 Internal audit effectiveness factors

The effectiveness of internal audit is determined by its assurance and advisory activity (Abu-Azza, 2012). The principal aim of internal audit is to add value to the organization (Burnaby & Hass, 2009; Bota-Avram, Popa & Stefanescu, 2011; Drogalas, et.al. 2017; Baiden, et.al. 2016; Dellai and Omri, 2016; Coetzee and

Erasmus, 2017; Huong, 2018; Alsharif, 2022) contributing to effective governance (Baiden, et. al. 2016; Coetzee and Erasmus, 2017; Bilal, et. al. 2018; Koutoupis & Pappa, 2018). It assesses the alignment of the organization's objectives with its mission (Alzeban and Gwilliam, 2014; Mustika, 2015; Dellai and Omri, 2016) satisfying the principles of ESG and mitigate the ESG risks (Kolsi & Al-Hiyari, 2024). The information we get from the internal audit department are valuable input into the managerial decision-making process (Cohen and Sayag, 2010; Barišić and Tušek, 2016; Coetzee and Erasmus, 2017). The ~~Still, its~~ effectiveness is still determined by the improvement of internal processes and the performance of the organization's operations ((Alzeban and Gwilliam, 2014; Shamsuddin, et. al. 2015; Barišić and Tušek, 2016; Dellai and Omri, 2016; Drogalas, et.al. 2017; Tsai, et. al. 2017; Huong, 2018; Musah, et.al. 2018; Alsharif, 2022).

Also, internal audit monitors compliance with procedures, policies, ~~laws~~laws, and regulations (Dellai and Omri, 2016; Temesgen and Estifanos, 2018; Temesgen and Estifanos, 2018; Musah, et.al. 2018). It also improves the effectiveness of the internal control system (Cohen and Sayag, 2010; Alzeban and Gwilliam, 2014; Mustika, 2015; Baiden, et al., 2016; Dellai and Omri, 2016; Udeh, & Nwadialor, 2016; Musah, et.al. 2018; Temesgen and Estifanos, 2018). Finally, internal audit detects fraud and corruption (Coetzee and Erasmus, 2017; Drogalas, et.al. 2017; Pappa, et al., 2024) and prevents fraud and corruption (Salameh, et. al. 2011; Coetzee and Erasmus, 2017).

4.1.1 Inputs

The internal audit budget is prepared on an annual basis and is reflected in the annual audit plan (Tackie, et.al. 2016) with the aim of satisfying the execution of the tasks of the internal audit unit (Abu-Azza, 2012; Alzeban and Gwilliam, 2014; Alkebsi, et.al. 2014; MacRae and Van Gils, 2014; Coetzee & Fourie, 2019; Asaolu, et. al. 2016; Dellai and Omri, 2016; Huong, 2018; Musah, et.al. 2018).

An important input of internal audit is the human resources element. There is internal auditor job description, where the internal auditors are sufficient to perform their duties (Tackie, et.al. 2016; Temesgen and Estifanos, 2018). Internal audit unit staff is not assigned non-audit tasks (Alzeban and Gwilliam, 2014), although it performs some advisory tasks. Moreover, the Management assigns the internal audit to external auditors (Burnaby & Hass, 2009, Abu-Azza, 2012; Drogalas, et. al. 2017; Coetzee & Fourie, 2019). Usually, the strategy of internal auditors' rotation is applied (Coetzee & Fourie, 2019). The internal auditor receives competitive remuneration based on qualifications, ~~experience~~experience, and achievement of objectives (Coetzee & Fourie, 2019; Baiden, et. al. 2016) and the organization provides incentives to recruit and retain internal auditors in private sector (Burnaby & Hass, 2009; 2015; Abu-Azza, 2012).

Competency is also an important input affecting the internal audit function. The organization includes in the HR development plan the regular training of internal auditors (Udeh and Nweke, 2016; Bilal, et. al. 2018; Temesgen and Estifanos, 2018~~), and~~), and thus the internal auditor benefits from the training program (Udeh and Nweke, 2016). The goal of education is maintaining and strengthening the competence to provide efficient internal audit services (Udeh and Nweke, 2016). The internal audit unit is equipped by the necessary professional skills, ~~qualifications~~qualifications, and experience (Tackie, et.al. 2016; Drogalas, et al., 2017; Temesgen and Estifanos, 2018; Huong, 2018).

Internal auditors perform only these services on which they have the necessary knowledge, ~~skills~~skills, and experience. The internal audit unit has a continuous professional development program (Asaolu, et. al. 2016; Tackie, et.al. 2016; Huong, 2018) and some of its members voluntarily participate in internal audit training programs (Tackie, et.al. 2016). Internal auditors following internal audit ~~deontoly~~deontology and ethics are prudent in the use and protection of information obtained in the course of their duties (Coetzee & Fourie, 2019), they do not use information for personal gain or for illegal and unethical purposes, and adopt ethics rules and anti-fraud policies incorporate ethics and fraud considerations in audit engagements (Coetzee & Fourie, 2019; Pappa & Filos, 2019).

Also, internal auditors have communication skills (oral, written) (MacRae and Van Gils, 2014), behavioral skills (collaboration, critical thinking, negotiation) (Bailey, 2010; Burnaby & Hass, 2009; MacRae and Van Gils, 2014; Djukic & Djordjevic, 2015; Coetzee & Fourie, 2019; Elmghaamez and Ntim, 2016; Bilal, et. al. 2018) and technical skills (problem solving and information analysis tools) (Bailey, 2010; Burnaby & Hass, 2009; Djukic & Djordjevic, 2015; Elmghaamez and Ntim, 2016; Bilal, et. al. 2018; Coetzee & Fourie, 2019). The performance of internal auditors is based on objectivity and non-conflict of interest (Alzeban and Gwilliam, 2014; MacRae and Van Gils, 2014; Mustika, 2015; Ariga and Gathogo, 2016; Bilal, et. al. 2018; Musah, et.al. 2018).

Finally, the internal audit unit's key input is its digital assets. More specifically, the internal audit unit uses widely used software, special internal control software (Coetzee & Fourie, 2019; Cohen and Sayag, 2010), risk analysis techniques (Gain, 2009), data analysis tools and Computer Assisted Audit Techniques- CAATs) (Gain, 2009; Burnaby & Hass, 2009; Sarens, Abdolmohammadi & Lenz, 2012; Jiang, et al. 2014).

4.1.2 Outputs

The results of the internal audit are shown by the internal audit reports which are free from distortions and include only the information, findings and conclusions that are supported by sufficient and appropriate evidence (accuracy). They give objectivity to the findings after fair treatment of the tested (objectivity), they are presented in an unbiased way to their correct extent, without exaggeration (reliability), they are easy to understand and formulated in a simple way (clarity) (Cohen and Sayag, 2010).

In addition, internal audit reports are concise, to the point and without unnecessary details (comprehensiveness). They contain all the results of the audit to document the conclusions (completeness) (Cohen and Sayag, 2010), are prepared and submitted without undue delay, allowing immediate action to be taken (timeliness) and finally are classified and the findings are calibrated (Sarens, Abdolmohammadi & Lenz, 2012).

The recommendations are the result of the internal audit engagements. They are implemented only to a small extent by the organization (reverse scored) (Cohen and Sayag, 2010) and provide practical cost-saving solutions (Cohen and Sayag, 2010; Sarens, Abdolmohammadi & Lenz, 2012; Baiden, et. al. 2016). They are adopted early, ~~efficiently~~efficiently, and easily (Alkebsi, et.al. 2014; Mustika, 2015; Bednarek, 2017; Coetzee and Erasmus, 2017), correcting deviations and preventing fraud and corruption. Finally, the assurance services certify the adequacy and effectiveness of internal controls, while the consulting services include staff training actions and sometimes the costs may exceed the possible benefits of the organization.

Comment [ZJEK1]: In Internal Audit, while recommendations are key components of the audit report, they are not typically referred to as the "results" of the internal audit engagement.

Results are findings, conclusions, and assessment based on the audit engagement.

Recommendations are suggestions for improvement that arise from the results of the audit.

4.1.3 Process

Internal audit planning is time-based (Abu-Azza, 2012; Coetzee & Fourie, 2019) and focused on risk assessment (Allegring and D' Onza, 2003; Burnaby & Hass, 2009; Sarens, Abdolmohammadi & Lenz, 2012; Jiang, et. al. 2014; Dejnaronk, et. al. 2016; Dellai and Omri, 2016; Chamoun and Greuning, 2018). Internal audit plan is carried out at least once a year and it is approved by the Top Management. The audit unit draws up an internal audit charter approved by the Board or the Chief Executive and also uses ~~a procedures~~a procedures manual (Mihret and Woldeyohannis, 2008; Jiang, et. al. 2014; Baiden, et. al. 2016; Temesgen and Estifanos, 2018).

The internal audit unit operates in accordance with a Code of Ethics (Burnaby & Hass, 2009; Baiden, et. al. 2016; Jiang, et. al. 2014) and the International Standards for the Professional Practice of Internal Auditing (Burnaby & Hass, 2009, Jiang, et. al.

2014; MacRae and Van Gils, 2014; Asaolu, et. al. 2016; Baiden, et. al. 2016; Dellai and Omri, 2016; Dejnaronk, et. al. 2016; Tackie, et.al. 2016; Drogalas, et. al. 2017; Coetzee & Fourie, 2019). The internal audit unit has full and unrestricted access to information, ~~records~~records, and procedures (Abu-Azza, 2012; Alzeban and Gwilliam, 2014; MacRae and Van Gils, 2014; Coetzee & Fourie, 2019; Mustika, 2015; Asaolu, et. al. 2016; Dellai and Omri, 2016; Endaya and Hanefah, 2016; Salehi, 2016; Tackie, et.al. 2016; Egbunike & Egbunike, 2017; Drogalas, et.al. 2017; Huong, 2018; Nyaga, et. al. 2018; Temesgen and Estifanos, 2018; Alsharif, 2022) and takes the appropriate measures to protect personal data. Reference to the access to information and records is made in a special provision of internal audit charter.

Internal auditors may be subjected to coercion (intense pressures) to change audit findings (Burnaby & Hass, 2009) and may even receive administrative or political interference and/or retaliation in the performance of their duties (MacRae and Van Gils, 2014; Mustika, 2015; Ariga and Gathogo, 2016; Dellai and Omri, 2016; Huong, 2018; Musah, et.al. 2018; Temesgen and Estifanos, 2018).

Reporting and follow-ups are still basic processes of internal audit. Regarding the first, the objectives and scope of the project are included, as well as the relevant conclusions, ~~recommendations~~recommendations, and action plans. The Chief Audit Executive (CAE) communicates the internal audit results to the auditees and to the highest administrative level of the organization. Communications must be accurate, objective, clear, comprehensive, constructive, ~~complete~~complete, and timely.

The internal audit unit has a Quality Assurance and Improvement Program (QAIP) which includes internal evaluations (Burnaby & Hass, 2009; Jiang, et. al. 2014; Dejnaronk, et. al. 2016; Azzali and Mazza, 2018) and external evaluations (Burnaby & Hass, 2009; Dejnaronk, et. al. 2014; Jiang, et. al. 2014). The Head of internal audit establishes a review process to monitor that recommendations are effectively implemented (Burnaby & Hass, 2009, Sarens, Abdolmohammadi & Lenz, 2012; Jiang, et. al. 2014; Dellai and Omri, 2016; Tackie, et.al. 2016; Bilal, et. al. 2018; Coetzee & Fourie, 2019).

4.1.4 Relationships

Internal audit develops a network of two-way relationships inside and outside the organization. More specifically, Top Management responds reasonably to audit unit reports (Alzeban and Gwilliam, 2014; Musah, et.al. 2018), rewards the work and transparency of the internal audit unit (Udeh and Nweke, 2016), imposes disciplinary sanctions in case of the audit process violation (Udeh and Nweke, 2016; Asaolu, et. al. 2016).

Top Management adopts the recommendations proposed by the internal audit unit (Dejnaronk, et. al. 2016; Udeh and Nweke, 2016). It endorses the deployment of adequate staff and resources to operate the internal audit unit (Dejnaronk, et. al. 2016; Dellai and Omri, 2016; Udeh and Nweke, 2016). It promotes constructive cooperation between the auditing unit and auditees (Dejnaronk, et. al. 2016), approves the internal audit plan based on risk assessment (Dejnaronk, et. al. 2016; Koutoupis, et al., 2020) and guarantees the autonomy and organizational independence of the internal audit unit (Cohen and Sayag, 2010; Alzeban and Gwilliam, 2014; Tackie, et. al. 2016; Coetzee and Erasmus, 2017; Bilal, et. al. 2018). It rarely interferes in the work of the internal audit unit (Alzeban and Gwilliam, 2014).

The Audit Committee discusses the findings of internal auditors (Coetzee and Erasmus, 2017), monitors the implementation of the internal audits' recommendations (Coetzee and Erasmus, 2017) expressing a high level of satisfaction with the internal audits' task (Boţa-Avram, 2010). Also, the Audit Committee is involved in the decision-making processes of the internal audit unit (Jiang, et. al. 2014; Burnaby & Hass, 2009) and allows direct and unhindered access of the CAE (Alzeban and Gwilliam, 2014; Dejnaronk, et. al. 2016). Audit Committee is also considered as the guardian of internal audit independency.

Auditees express a high level of satisfaction with internal audit interventions (Cohen and Sayag, 2010) and maintain good relationships with internal auditors (Abu-Azza 2012; Onumah and Krah, 2012). They particularly support the work of the internal audit function (Tackie, et.al. 2016) and they are informed to be properly prepared for the audit.

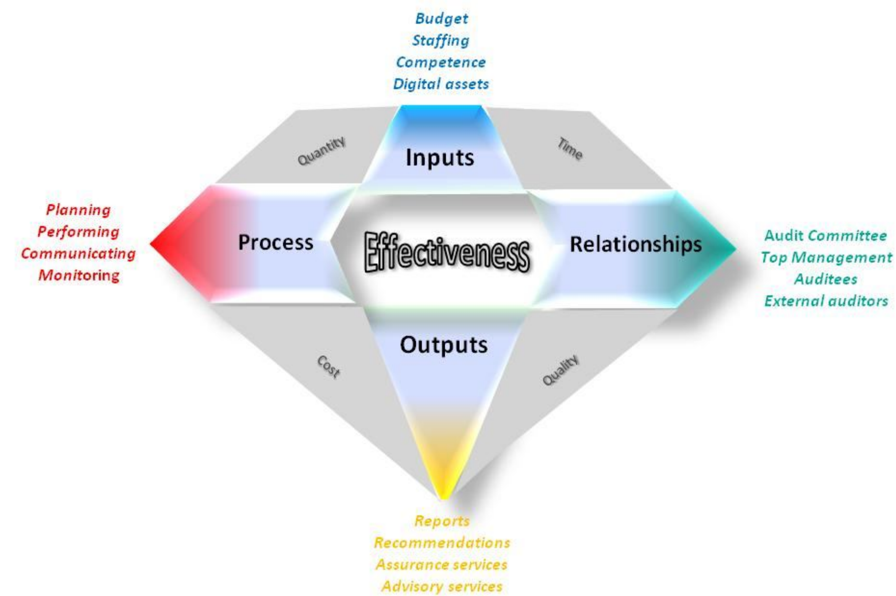
External auditors are cooperative (Alzeban and Gwilliam, 2014; Musah, et.al. 2018), therefore, have a good relationship with internal auditors (Alzeban and Gwilliam, 2014; Tabar, 2016; Musah, et.al. 2018), they are willing to discuss the concerns of internal auditors (Alzeban and Gwilliam, 2014) and coordinate their actions with internal auditors, discuss their plans with internal auditors (Musah, et.al. 2018).

External auditors rely on the actions and reports of internal auditors (Sarens, Abdolmohammadi & Lenz, 2012; Alzeban and Gwilliam, 2014; Salehi, 2016; Madawaki, et. al. 2018; Musah, et.al. 2018), hold regular meetings with the internal auditors (Alzeban and Gwilliam, 2014; Musah, et.al. 2018) and share audit reports with the internal auditors (Alzeban and Gwilliam, 2014; Musah, et.al. 2018). Finally, the audit unit cooperates with audit and inspection bodies inside and outside the organization.

4.2 The Diamond Model

The Diamond Model as it is presented in Figure 2, is a conceptual framework which was developed as a result of the systematic literature review and illustrates the four factors of internal audit effectiveness. All these factors are internationally applicable and applied by both the private and public sectors.

Figure 2: The Diamond Model of Internal Audit Effectiveness



Source: Author's design.

The first factor refers to inputs, which includes core assessment items such as budget, staffing, the competency of internal auditors and the digital assets held by the internal audit function. The second factor refers to the results of internal audit unit with assessment items the audit reports, recommendations, ~~assurance~~assurance, and advisory services. The third factor covers the internal audit procedures and measurement items such as planning, execution, reporting and follow-up. The fourth factor is focused on the relations of the internal audit with the Top Management, the Audit Committee, the auditees, the external auditors as well as the External auditors and Inspection Bodies. The above factors are always considered in the light of time, quantity, ~~quality~~quality, and cost dimensions.

5. Concluding remarks

Internal audit function plays a crucial role for the achievement of organizational objectives. Its objectives should be aligned with those of organization and both the setup of the function and its deliverables. In addition, they should be effective and efficient. Based on the aforementioned research, CAEs and Audit Committee members could utilize the results of our research based on diamond model and pursuit the accomplishment of each element included in every pillar. More specifically, input pillar is very important as it functions as a basis on which the effective implementation of the methodology and application of audit techniques is based. It includes both the quantitative and qualitative adequacy of resources that the internal audit function must possess an adequacy that does not depend solely on the actions and initiatives of the CAE.

Output pillar is perceived as the externalization of the actions of the internal audit function and serves as a basis on which the trust relationship of the internal audit function with both its reporting lines and other parties involved in the audit process is built. Regarding process pillar, those involved in ensuring the effective operation of the internal audit function, based on the level of resource adequacy they have achieved, will deploy them so as to successfully implement the required methodology and techniques. Finally, it is important to emphasize that while all of the above are both separate and joint elements that should be considered in establishing an effective internal audit function, the fourth pillar, which concerns the establishment of effective relationships, is one that alone cannot be fulfilled and should be taken into account both at the stage of fulfilling the responsibilities of the internal audit function and at the stage of communicating with stakeholders on audit and non-audit matters.

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