

## The Operationalizing and Influencing Factors of Internal Audit Effectiveness

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### Abstract:

This study has carried out a systematic literature review to examine the metrics that have been applied in the prevailing literature to operationalise or quantify the effectiveness of internal auditing, as well as to determine the factors that are thought to have impact on the influence of the internal auditing. With predefined exclusion and inclusion criteria, this research has finally selected a total of 33 primary studies that were published between 2000 and 2019.

This study has identified a total of eleven indicators will used to measure the effectiveness of auditing. These indicators have further grouped into two categories: objectively assessed effectiveness; and perceived effectiveness. The indicators in the perceived group have dominance in the prevailing literature, and therefore this study argues that the indicators used for measuring the effectiveness in objective way generally demonstrates the strides assumed by the internal auditors. Additionally, this study has identified a total of twenty factors that have been considered as the influencing factors in terms of the influence of internal audit. These twenty factors have been further grouped into two categories: factors on supply side and factors on demand side.

**Keywords:** The Operationalizing, Influencing Factors, Internal Audit, Effectiveness

### 1. Introduction

#### 1.1 The Background of the Research

The aim of this research is to identity the factors that potentially affect the influence of the internal audits. The significance of internal audit quality (IAQ) is well-recognised in the advanced nations,

wherein the Chief Audit Executives (CAEs) compile the International Standards for the Professional Practice of Internal Auditing (ISPPA) through their actions, facilitating the functions of internal audit in various ways (Komalasari *et al.*, 2016; Turley and Zaman, 2007). In this regard, the CAEs and the ISPPA try to develop an understanding of professionalism among the internal auditors and introduce organisational structures that enable the internal auditors operating unrestrictedly in the interests of the transparencies and internal control (Cameran *et al.*, 2017). The Institute of Internal Auditors (IIA, 2020) has defined the internal auditing as ‘a consulting activity, objective assurance and independent’ that adds values and enhances the operational activities of the organisations. However, in many developing countries, the CAEs’ attitudes towards the types of activities for safeguarding the internal audit function’s (IAF) independence are different, which raise impediments for the effective discharge of the duties of the internal auditors (Komalasari *et al.*, 2016; Turley and Zaman, 2007). Research (e.g. Abdolmohammadi and Sarens, 2011; Chan *et al.*, 2003; Hell and Wang, 2009; Hope *et al.*, 2008; Jeffrey *et al.*, 2004) suggests that these differing attitudes are the outcome of the varying cultural perspectives and traditions, a topic that has resulted in an increasing interest among the researchers, relating to the significant influence that culture plays on the ways in which general auditing practices are performed.

In an effort to enhance the effectiveness of internal audit, the IIA developed the International Professional Practices Framework (IPPF) in July 2015, which is also referred as the ten core principles of IAF effectiveness. According to the IIA (2019), these ten principles are: demonstrating integrity; demonstrating competencies and professional care; working independently and Secure from unnecessary interference; aligning the objectives, risks of the organisation; offering adequate resources, strategies and appropriate positioning; continuous improvements and demonstrating quality ; communicating effectively; providing risk-based assurances; being perspicuous, proactiveness and future-oriented; and encouragement of organizational change. Although management’s responsibility is to safeguard an entity’s assets, management is not trained to detect the frauds and irregularities, and these are left to the auditors (Sim, 2010). Based on the IPPF, both Alzeban & Sawan (2013) and Alzeban (2015) argued that the quality of internal audit (QIA) could be assessed by the objectivity, competence, and the tasks carried out by the internal auditors.

However, auditors do not supervise all decisions, as auditors are only desired to evaluate the audit risks based on audit evidence that are collected by the internal control's effectiveness (Sim, 2010). Therefore, when the internal control is strong or effective, the auditors evaluate the low control risks and revise their previous beliefs to the audit risk of an entity (ICAEW, 2015).

Considering the current challenging environments due to the COVID-19 pandemic, it would be difficult for entities to measure how effective the activities related to the internal auditing would be and whether the benefits of internal auditing could be achieved. Therefore, Accurate, persuasive and clear metrics are required to allow organizations to determine the efficacy of internal auditing, as it is a crucial feature of knowing the internal audit quality drivers (Cohen & Sayag, 2010). Additionally, these studies focused on the significant aspects and failed to recognise the quantification or operationalisation of the effectiveness of internal auditing in relevant empirical works. It should be anticipated that companies should not only consider potentially powerful internal auditing factors, but also evaluate their actual effect on the company through well-defined indicators.

## 1.2. Research Gap

According to Pistoni *et al.* (2018), one of the crucial features of internal audit reporting is the effectiveness of the audit quality. Although there are many research (e.g. Adams and Kuasirikun, 2000; Adams and Simnett, 2011; Alfiero *et al.*, 2018) that have focused on the reporting of the internal audit, Vitolla *et al.* (2019) noted that only few research has concentrates on the effectiveness and quality of the internal reporting. Consequently, there exists a research gap in relation to the effectiveness and quality of the internal auditing and the national culture.

## 1.3. Research Aim, Objectives, and Research Questions

The target of this study is to identify the factors that potentially affect the performance of the internal audits. In accordance with the aim, the current study has two objectives:

- To find out the indicators that are used to operationalise the influence of the internal audit; and
- To find out the factors that influence the effectiveness of the internal audit.

To fulfil these objectives, this study has two research questions:

- What are the indicators that are used for operationalising the effectiveness of internal audit?
- What are the factors that influence the effectiveness of the internal audit?

## 1.4. Structure of the Research

This study has five chapters. The history of the research was provided by the first chapter – Introduction – and developed the research aim, objectives, and research questions; the second chapter – Literature Review – has reviewed the existing literature on internal control and has identified the gaps, and based on the identified gaps, it has developed research hypotheses. The third chapter – Research Methodology – has explained the adopted research methods for the study and has explained why other research methods were not adopted for this study. The fourth chapter – Research Findings – has provided the results from the data analysis. The fifth chapter – Discussion – has discussed the findings from the data analysis chapter. The final chapter – Conclusion – has provided the summary of the findings, implications of the findings, research limitations, and future avenues for further research on audit function.

## 2. Literature Review

### 2.1. Introduction

This chapter has reviewed the literature on the effectiveness of internal audits and to understand the factors that influence audit effectiveness. This chapter has first reviewed the theoretical perspectives on internal audit, which is followed by a review on the quality of internal audit. A conclusion has been provided at the end of this chapter.

### 2.2. Theoretical Perspectives

From theoretical perspectives, the literature review has identified a number of main theories, for example the agency theory, stewardship theory, contingency theory, and institutional theory related to the effectiveness of internal audit in auditing research.

#### 2.2.1. Agency Theory

Based on financial economics literature, the agency theory posits that a firm contains the contracts nexus between the managers and owners of the economic resources,

Who are entrusted to use and control those economic resources (Adams, 1994; Mihret, 2014). The agency theory also postulates that agents have more information compared to those of the principals, Which create information asymmetry and severely affect the ability of the principals to monitor whether agents efficiently represent the needs of the principals. This theory also argues that agents and principals use the contracting processes for maximising their wealth, suggesting that agents have self-seeking motives and these results in opportunistic behaviours. According to the ICAEW (2006), a number of factors, for example economic rewards, opportunities that evolve from the labour markets and the relationships with other parties that are not associated with the principals. Furthermore, auditors could also be concerned regarding the information asymmetries wherein agents possess the information, while the principals do not have access to that information. Consequently, principals have lack of trust on their agents, and thus they will introduce mechanisms, for example internal audit for reinforcing this trust.

Traditionally, the internal audit's characteristics are related to the substantiation of accounting information's accurateness, timeliness, and completeness (Courtemanche, 1991), or broadly, to assess the evidence of accounting information for determining and reporting about how well the accounting information is reported in accordance with the recognised standards (Arnes & Loebbecke, 2000). Conventionally, the annual statements reflect the historical information and founded on accounting profits, which are increasingly employed for determining the firms' values, and therefore firms' management and external stakeholders have significant interest in the future cash flows of firms. Additionally, through the financial statements, these economic profits assure that firms have the capability of materialising these future cash flows (Swinkels, 2009).

However, the application of agency theory in internal auditing has received a number of criticisms. Firstly, Reed (2002) noted that the use of neoclassical in internal auditing research are more applicable to developed markets, and therefore the applicability of the agency theory has confinement in the explanation of the internal auditing in extensive settings. Secondly, the agency theory is founded on the supposition that the capitalist-agency relationships are based on the competitive markets (Mihret, 2014). This constrains the applicability of agency theory on internal auditing research, as the demand for internal auditing is not market driven, wherein both the capital markets and shareholders are unable to access the reports generated by the internal auditors.

Thirdly, the applicability of agency theory in internal auditing is problematic for the state-owned firms, as the principals might be indistinct and the public might not hold a single united interest (Al-Shbail & Turki, 2017).

This results in discrepancy in interest that might exist between the principals/managers and the public at large. Fourthly, the ICAEW (2006) noted that the agency theory fails to fulfil the interests of other stakeholders like the regulators, who have interest in the audit reports. In reality, the regulators act on behalf of the principals and expect that their interests are considered appropriately. However, markets are integrally unstable and fluctuate, which create problems for the regulators to act as principals. Finally, while the agency theory postulates that principals do not have trust on their agents.

### 2.2.2. Stewardship Theory

Regarding to the theoretical perspective of internal audit, a complement to the agency theory has been viewed as the stewardship theory. The stewardship theory implies that auditors are driven to work for others or for organizations to carry out the tasks and duties they have been entrusted with (Davis, Schoorman, & Donaldson, 1997; Donaldson & Davis, 1991). This theory argues that individuals are pro-organisational and collective-oriented rather than assuming individualism perspective, and thus people work towards the achievement of goals of the societies, groups, or organisations, as they find higher level of satisfaction when they act like this. In stewardship theory, a steward has been defined as an individual who assumes the responsibilities to take care of something on behalf of another individual or group of individuals (Menyah, 2013). Therefore, the steward's behaviour is collective and aims to achieve the organisational objectives, which can be beneficial at the end for the principals like the shareholders and the managerial super-ordinates. Assuming a robust relationship between the satisfaction of the principal and the organisational success, the steward 'protects and maximises shareholders' wealth through firm performance, because, by so doing, the steward's utility functions are maximised' (Davis *et al.*, 1997, p.25).

A number of studies (e.g. Davis, Allen, & Hayes, 2010; Ebimobowei & Binaebi, 2013; Hernandez, 2012) have confirmed that auditing exists due to the stewardship concept and stewardship accounting. In contrast to the agency theory, which is based on economic models, the stewardship theory is based on the aspects of sociology and psychology,

And therefore this theory is suitable to explain valuable employees' behaviours (Albrecht *et al.*, 2004), as well as the relationship amongst different cultures in family businesses (Davis *et al.*, 2010) and the interactions that exist among crucial and responsible employees, their customers, and organisations (Hernandez, 2012). Therefore, stewardship argues that managers are responsible and trustworthy, and thus they would not engage in activities that may lead to misappropriations of organisational resources.

### 2.2.3. Contingency Theory

The term 'contingency' refers to something that is only valid under specific circumstances (Chenhall, 2003). Developed by Woodward (1965), contingency theory posits that there is no best way to manage. According to Daft (2015), the contingency theory postulates that one action depends on other actions, and to be effective, these actions must have a goodness of fit between the contingent considerations and the organisational design. Consequently, the optimal structure of a firm is contingent on various aspects, for example the market conditions, the work characteristics of the firms, and firms' adopted technologies. These assumptions are in accordance with the findings of Haldma & Laats (2002) and Reid & Smith (2000), demonstrating that there is no perfect means to develop a good accounting system, but the system depends on various contingencies that establish the best options for management accounting systems in specific conditions.

Based on the contingency theory, the influence of internal auditing is affected by a number of internal factors, for example the professionalism of the auditors and the independence of auditors. According to Arens *et al.* (2020), professionalism refers to the professional skills that are possessed by the auditors when they conduct the auditing for the firms' financial statements. Similarly, independence refers to the activities that are performed objectively and are not influenced by other parties who are related to the carried out audit activities (Poltak *et al.*, 2019). When auditors are influenced by other parties, their professional activities are affected to perform the audit activities. Independence is provided through organisational status, which helps the maintenance of the objectivity of the auditors to the auditees. According to Van Peurse (2005), the success of an audit programme is determined by the absence of pressure from the auditees and the independence offered by the management.

A number of studies (e.g. Cohen & Sayag, 2010; George et al., 2015) have empirically proved that organisational independence affects the effectiveness of internal auditing. On the other hand, based on the contingency theory, the influence of the internal auditing is also affected by a number of external factors, For example, the relationship between internal auditors and external auditors, the perceptions of the auditees and top management support.

In relation to the first factor, Alzeban & Gwilliam (2014) found that the collaborations and coordination between the external and internal auditors are highly important for the firms and their external stakeholders for auditing purposes. Badara & Saidin (2014) noted that internal auditors can enhance internal audit's effectiveness when they are able to develop relationships with the external auditors. The second factor – perception refers to the process to interpret, organise, and provide meanings to the stimuli that come from the environment due to the experiences and learning processes (Sulaiman, 2011). Therefore, individuals have different perceptions when they give differing meanings to the different objects, and consequently when it is perceived value by both the audit service users and the internal auditors that internal auditing adds, the effectiveness of the internal auditing also increases (Poltak et al., 2019). Finally, top management support critically contributes in the development of circumstances that are necessary for the success of projects like the internal auditing (Staehr, 2010). According to Kandelousi et al. (2011), top management can provide support to handle obstacles, demonstrate commitments towards works, and encourage the subordinates.

#### **2.2.4. Institutional Theory**

In recent times, the effect of internal audit function on the effectiveness of internal auditing has been assessed through the application of institutional theory with increasing interest by a number of studies, for instance Al-Twajjry et al. (2003), Arena & Azzone (2007), Lenz et al. (2018), Mihret et al. (2010), and Vadasi et al. (2019). The institutional theory can explain the emergence process of the institutional standards and accepted social practices (Scott, 1987; Tolbert & Zucker, 1983). The institutional theory posits that organisations need to react with the social rules that are recognised as acceptable practices or behaviours and should not emphasise purely on performance and profit. This theory also posits that organisations are subject to institutional regulations and they need to comply with for obtaining legitimacies and accessing to resources for stability (Meyer & Rowan, 1977). The institutional theory is also applicable to internal auditing research.

For example, legitimacy is required for firms, and one means for the internal auditing of obtaining legitimacy is to offer evidence for its effectiveness. However, Lenz et al. (2018) noted that it is not an easy task for the internal auditors to provide such evidence, as the works of the internal auditors are not directly associated with the firms' profits.

Legitimacies do not essentially ensure that firms operate effectively, and therefore firms have tendency for pursuing effectiveness through the adoption of the behaviours and characteristics of other firms within their environment (Al-Twajjry et al., 2003). According to Arena & Azzone (2007), this aspect is known as the isomorphism, which could be performed through three forces, such as the normative forces, coercive forces and the mimetic isomorphism forces, which cause the 'institutional isomorphic change' (DiMaggio & Powell, 1983, p.147). Therefore, coercive isomorphism occurs through mechanisms of legitimacies, authorities, and power that compel firms establishing internal audit departments, which not only assess the suitability of the internal control systems but also involve in a broader assessment of the economy, effectiveness, and efficiency of the firm's actions and their impact on firm performance.

The second isomorphism is the normative isomorphism that refers to the process through which professionalism within a particular area affects organisations to change over time and to become more similar to one another (DiMaggio & Powell, 1983). Consequently, under the normative isomorphism, firms need to comply with the requirements like professional norms, such as the IIA guidance. Related to the internal auditing, the normative isomorphism increases the professionalism within the firms, which can arise when the internal auditors study the internal auditing as a subject at the colleges and universities and finally become a qualified CIA through certification, or when they establish chapters of the IIA as the local levels. These activities can enhance the profiles of internal auditing and the IIA within the firms, and they can also offer more motivation to the disseminations of internal audit activities to other firms. Additionally, the enhancement of the professionalization can also generate a higher level of adherence to the IIA standards. Finally, the mimetic isomorphism refers to the process through which organisations respond to uncertainty through the emulation of practices performed by other organisations (DiMaggio & Powell, 1983).

In summary, the institutional theory argues that coercive isomorphism occurs due to the result of the firms' stride for gaining legitimacies;

Normative isomorphism occurs when institutional changes take place because of firms' acknowledgment of the profession; and the mimetic isomorphism takes place when firms respond to uncertainties through emulation of other firms' practices. Therefore, the institutional theory has implications that are related to the probable context-dependence of the effectiveness of internal auditing,

For example, the establishment of internal auditing department to manage risks by emulating the practices of other firms or the professionalization that can advance the practices of internal auditing.

### 2.3. Quality of Internal Audit

The Chartered Institute of Internal Auditors (2019) identify internal auditing as 'a consulting activity, objective assurance and independent' that adds value and improvise the operational activities of the organisations. Consequently, internal auditing facilitates an organisation accomplishing its goals and objectives through introducing methodical and systematic approaches to evaluation and enhancement of the efficacy of governance, control and risk management processes (Chartered Institute of Internal Auditors, 2019). This conceot of internal auditing sets the fundamental characteristic, objective, and goal of the internal auditing. stated by the Chartered Institute of Internal Auditors (2019a), both the internal auditing and the 'code of ethics' influence the quality of internal auditing. also, there is no universally accepted concept of quality, as the notion of quality is interpreted differently and it depends on the contexts (Chartered Institute of Internal Auditors, 2019a). Despite this difficulty, the International Organisation for Standardisation (2015) has identified seven principles of quality management, such as customer focus (i.e. anticipating the future needs); leadership (i.e. providing vision and directions for achieving the results); engagement of people (i.e. delivering value through the development of individuals); process approach (i.e. increasing efficiency); continuous improvement (i.e. making performance enhancement a perpetual goal); evidence-based decision making (i.e. making decisions employing accurate data and facts); and relationship management (i.e. maintaining mutually beneficial relationships).

However, quality does not just happen, and it transforms good intents into working practices and outcomes (Chartered Institute of Internal Auditors, 2019a).

In relation to internal auditing, researchers (e.g. Al-Shetwi et al., 2011; Alzeban, 2015; Alzeban & Sawan, 2013; Arena & Azzone, 2009; Lin et al., 2011; Missier et al., 2011; Plant et al., 2013; and Prawitt et al., 2009) have tried to define the variables that impact the quality of internal auditing, and the most common attributes of the quality of internal auditing are: competence, independence, and objectivity.

### **2.3.1. Competence**

In this competence section, three aspects have been reviewed, such as internal auditing as a profession, the Internal Audit Competency Framework (IACF), and individual competency requirements.

#### **2.3.1.1. Internal Auditing as a Profession**

A number of authors (e.g. Carey, 1969; Carr-Saunders, 1928; Elliot, 1972; Larson, 1977; Larson, 2013; West, 1996) have underlined the nature of a profession. In general, these authors have identified five characteristics, such as knowledge, training and education, obedience to ethical standards, offering services to the general people, and connection to various professional bodies. As auditors are the professionals who assume critical roles in businesses to authenticate companies' financial health by examining the accurateness of the financial statements, it discusses that the identified five characteristics are also applicable to the professionals who work in accounting and internal auditing fields. According to Plant et al. (2013), individuals who aspire to be members of the internal auditing profession should possess particular standard, for example having a professional bachelor's degree, holding two years of continuous experience in internal auditing or similar fields, and should successfully complete the certification programme.

Although the internal auditing history can be traced back to centuries B.C. the actual growth of internal auditing as a profession happened during the 19<sup>th</sup> and 20<sup>th</sup> centuries with the increasing growth of the corporate businesses, which demanded for new systems of control to conduct their business activities across the globe (IIA, 2020b). Consequently, it can be argued that internal auditing is a new profession compared to other conventional professions like the law or the medicine. For example, The Institute of Internal Auditing (IIA) was established only in 1941 with its global headquarter in Lake Mary, Florida, the USA. The 1992 Cadbury Report (Cadbury, 1992) was the first feat that emphasised on the internal auditing as part of corporate governance.

Other reports like the Turnbull Report (Turnbull Committee, 1999) in 1999, which established the best practices on internal control for the UK listed companies, and the Smith Report (Smith, 2003) in 2003, which also established the guidance for the audit committees for the UK listed companies and endorsed the IIA internal standards also helped to increasing the awareness and recognition for the internal auditing as a profession.

At present, the IIA has more than 200,000 members from more than 170 countries and territories across the world (IIA, 2019a). Since its inception, the IIA has implemented various initiatives for the development of Common Body of Knowledge (CBOK) of internal auditing and the International Professional Framework (IPPF) as a competency framework with an aim to increase the professional success of the internal auditors. Therefore, the IIA can be viewed as the recognised authority, chief advocator, and principal educator for the internal auditing professionals who work in various organisational areas.

### 2.3.1.2. The Internal Audit Competency Framework (IACF)

Although the internal auditing has been considered as a well-established and well-respected activity, Mautz & Sharaf (1982) stated that the internal auditing was not clearly defined and directed till the 1980s. The business environment significantly changed during the 1980s and 1990s, and the IIA updated three its CBOK in during this time (Abdolmohammadi et al., 2006), and another two updates were carried out in 2006 and 2010 (Plant et al., 2013), and finally, it approved its updated version of IACF in October 2016, which is known as the International Professional Practices Framework (IPPF), as shown in Figure 1.



Figure (1): The International Professional Practices Framework (IPPF) (IIA, 2020b)

Figure (1) shows that the IPPF contains ten core competencies for the internal auditors that have been recommended at three broad job levels, such as internal audit staff, internal audit management, and the chief audit executive. According to the IIA (2020b), the ten core competencies are:

- Professional ethics: It applies the professional ethics among tasks that carried out by auditors.
- Internal audit management: The task of this competency is to develop and manage the audit function.
- IPPF: The competency task to apply the IPPF across the organisation.
- Control, risk and governance: This develops the understanding regarding control, risk and governance that are relevant to the firms.
- Business acumen: The task of this competency is to maintain the expertise regarding business environment, industry practices, and particular organisational aspects.
- Communication: The task of this competency is to communicate with the stakeholders for visible impact.
- Persuasion and collaborations: Through collaboration and cooperation, this competency aims to persuade and motivate others within the organisations.
- Critical thinking: The tasks of this competency are to carry out the process analyses, apply the business intelligence, and develop and apply the problem solving techniques for the internal auditors.
- Internal audit delivery: The task of this competency is to deliver the engagements related to the internal auditing.
- Improvements and innovations: The task of this competency is to embrace the changes and drive the auditors for further improvements and innovations.

### 2.3.1.3. Tasks Carried Out by the Internal Auditors

Previous studies (e.g. Brown, 1983; Messier & Schneider, 1988) have evaluated the performance of the internal auditors depend on the tasks they did, and these studies have identified five criteria that evaluated the performance of the internal auditors, such as the overall assistance for the auditing by the managers; the satisfaction of the external auditors; the procedures for follow-up;

the supervision of internal auditing works; and the scope of the internal auditing. Two more recent studies, such as Al-Shetwi et al. (2011) and Lin et al. (2011) have identified five criteria of performance measurement of internal auditing, such as controlling, internal auditing reports, and auditing feedbacks from the clients.

### 2.3.2. Independence of internal audit

The IIA (2020b) has defined independence from conditions that threaten, the capability of the internal auditors to perform their auditing tasks and any threat to independence should be achieved all the levels, including organisational, functional and individual. For example, Stewart & Subramaniam (2009) identified seven threats for the auditors. According to Stewart & Subramaniam (2009), these threats are: self-reviewing, when the internal auditors review their own works; social pressure, which arises from the auditees or from other members of the auditing team; economic interest, which arises when someone exerts his/her power to influence the employment or salary of the internal auditors; personal relationship, wherein the internal auditors are associated with the auditees; familiarities, which arises from long-term work relationship with the auditee; cultural, gender, and racial biases, which arise mainly in multinational organisations when the internal auditors do not have proper understanding regarding the local culture or customs; and the cognitive biases, which arise when the internal auditors adopt a specific psychological perspective or preconceived notions to carry out the auditing tasks.. Zhang et al. (2007) considered that internal audit's independence can be viewed as a determining aspect of the influence of internal audit. Similarly, the study of Cohen & Sayag (2010) also noted that the organisational independence of internal auditing influences the effectiveness of auditing. Additionally, the study of Alzeban & Gwilliam (2014) examined the effectiveness of internal auditing in Saudi Arabian, and this study found that along with the organisational independence, other factors like support from management, the competencies of the internal auditing department, the size of the internal auditing sector and the relationship between the external auditors and internal.

### 2.3.3. Objectivity

The Chartered Institute of Internal Auditors (2019b, p.2) defined objectivity as a balanced mental approach that enables the internal auditors performing engagements in such a way that the auditors believe in their outputs while not compromising with any quality of the works.

Reported to the Chartered Institute of Internal Auditors (2019b), objectivity attribute necessitates that the internal auditors must not subservient their judgements to others regarding the auditing matters. Both Missier et al. (2011) and Prawitt et al. (2011) identified that the internal audit's objectivity is related to the Chief Audit Executives report to the audit committees.

However, this reporting relationship for the external auditors is related to when they evaluate the objectivity of the auditing (Gramling et al., 2004).

#### 2.4. Summary

The agency theory assumes that agents are likely to have differing motivations as opposed to the principals, the internal audit will also provide independent controls on the work of the agents, which can facilitate maintaining the confidence and trust. It can also reduce the monitoring costs. the stewardship theory tries to understand the interactions that exist among the valuable employees, the organisations, and their customers. The contingency theory assumes that there is no perfect means that can offer a good management accounting system, and therefore good management accounting system depends on the circumstances that dictate the best option, as the design effectiveness of the accounting system is influenced by organisation's capability to change from both the internal and external factors. Finally, the institutional theory suggests that organisations need to conform to the societal requirements and other stakeholders' requirements, From the literature review, it has been noted that the most common attributes of the quality of internal auditing are competence, objectivity, the tasks carried out by the auditors.

#### 3. Research Methodology

The purpose of this study is to identify the variables that potentially impact the performance of the internal audits. In accordance with the aim, the current study has two objectives: to find out the indicators that are used to operationalise the influence of the internal audit to find out the variables that impact the performance of the internal audit. To fulfil these objectives, this study has two research questions. The first research question is: what are the indicators that are used for operationalising the influence of internal audit? And the other research question is: what are the variables that influence the internal audit? Due to the COVID-19 pandemic, the investigator agreed to perform a systematic literature review as a research methodology, which has reviewed the existing empirical studies related to internal auditing to answer the research questions.

The literature review has identified a research gap, which is related to the differing opinions regarding the actual or expected roles of the internal auditors. Based on the previous research, this study has inferred that the function of internal auditing could be related to the ‘jack of all trade’ in terms of governance.

A number of previous studies, for example Roussy & Perron (2018) and Turetken et al. (2020) have used the systematic literature review to define the variables that affect the performance of internal audit.

Emerged as an inverse approach to the traditional thematic literature review, the systematic literature review offers a robust demonstrative base to develop the policies in education, accounting and auditing, and medical research (Tranfield et al., 2003). A systematic review has been realised by Liberati et al. (2009, p.19) as a research method that collates all empirical evidence in accordance with the pre-defined eligibility criteria for answering some particular research questions. The systematic literature review employs explicit systematic methods for minimising biasness, which provides reliable outcomes for making conclusions and decisions. According to Liberati et al. (2009), the systematic review has four unique features: an evidently specified set of goals with reproducible methodology; a methodical exploration to identify the documents in accordance with the eligibilities; an assessment of the validities of findings for the particular studies; and a systematic arrangement and analysis of the aspects and consequences of the specified studies.

This study has adopted the systematic literature review approach suggested by Massaro et al. (2010), which contains 11 steps. This study has selected the systematic literature review approach developed by Massaro et al. (2010) for two critical reasons, such as ensuring higher level of transparency, and ensuring higher degree of replicability, as suggested by Easterby-Smith et al. (2015).

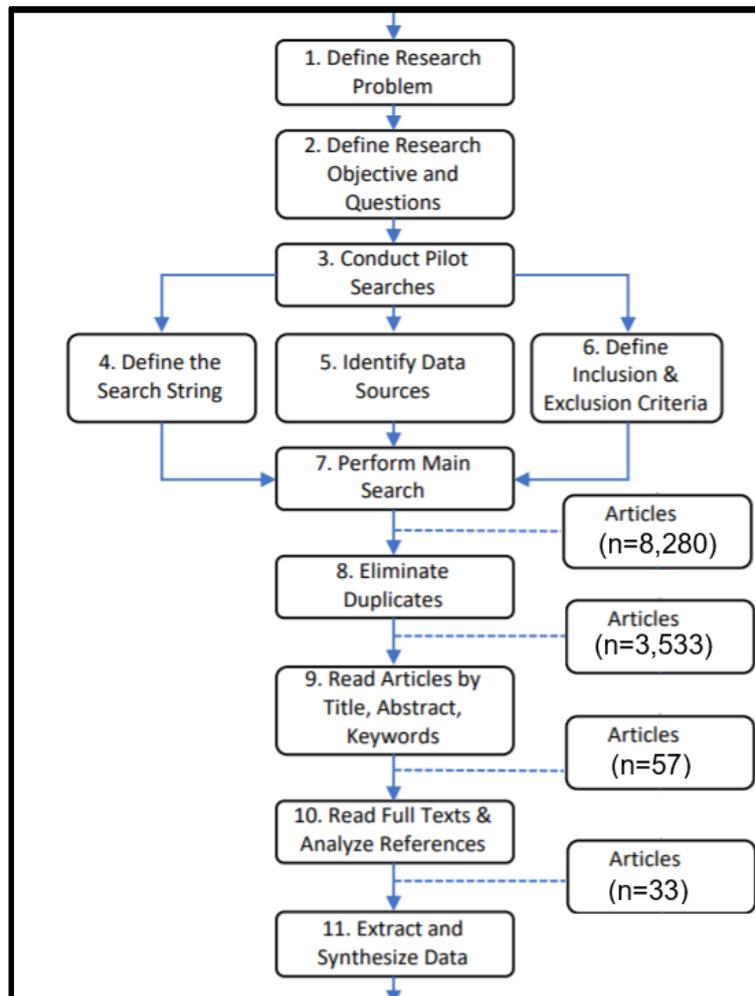


Figure (2): The PRISMA (reporting tools for meta-analyses and systematic reviews)

Figure (2) shows the PRISMA (reporting tools for meta-analyses and systematic reviews) flow chart for the current study. The researcher has defined the research problem as identified in the introduction chapter of this study, which has been followed by development of the research questions and research objectives for the current study in second step. The researcher has performed a pilot research to identify the scope of the search, and some amendments were done in the search strings to carry out the subsequent comprehensive studies.

In the fourth step, the researcher derived the search strings based on the outcomes derived from the 3<sup>rd</sup> step. In accordance with the definition provided by the IIA (2020b) on the IPPF, this study focused on the terms like ‘efficiency’ and ‘effectiveness’, and a number of studies (e.g. Abbott et al., 2016; Trotman & Duncan 2018) have interchangeably used the terms ‘effectiveness’

And ‘quality’, and therefore this study has used the following string for the retrieval of data from the website.

("internal audit") And ((effectiveness) or (quality))

In the fifth step, the research has identified the suitable electronic data sources that can provide the relevant studies for the current research. The research performed a general search on Google for the identification of the most relevant and appropriate databases for research studies that focused on the internal audit effectiveness. The Google search identified an article from Aksnes & Sivertsen (2019), which suggested for using Science Direct, Scopus, and Web of Science that can provide the highest level of relevant articles in relation to the social science research. The researcher decided to use both the Scopus and Science Direct databases for the literature search, as both the databases have well-established and multidisciplinary research platforms. Additionally, both the databases have wide variety of and up-to-date peer-reviewed journal articles. The reason for using two databases is the fact that it can ensure all pertinent studies for consideration, as there is high probability to omit a relevant study when the researcher uses only one database (Crossan & Apaydin, 2010).

In the sixth step, the researcher developed the exclusion criteria and inclusion were used to identify listed studies related to primary study research. The researcher developed the exclusion criteria and inclusion based on the research aim, objectives, and research questions. This study has identified five inclusion criteria for the search strategy, which are:

- Studies that have been published in English language;
- Studies that have been published from 2000 to 2019;
- Studies that are related to the internal auditing title;
- Studies that were reported through quantitative analyses with measurements; and
- Studies that were reported through the qualitative analyses incorporating the factors that have affected the quality or the effectiveness of the internal auditing.

The rationale to include both the quantitative studies and qualitative is due to the fact that of study has intended to enhance the findings and support the conclusions that have been derived both from the empirical studies and literature review.

In contrast to the inclusion criteria, the researcher has also developed five exclusion criteria for the systematic review, which are:

- Studies that have been considered as the grey literature, for example the papers without bibliographic information, the working papers, the white papers, and the reports produced by the auditing firms or internal auditing related organisations;
- Studies that are not explicitly related to the internal auditing;
- Studies that examined particular sub-topics on auditing related to accounting or finance;
- Studies that assessed the measurements and indicators, or evaluated the efficiency of the internal auditing rather than the effectiveness of the internal auditing; and
- studies that contain the latest versions that increase, complete, and provide a greater degree of contribution towards the original studies.

In the seventh step, the researcher carried out the main search on the digital databases for the publications that are considered as the peer-reviewed journal articles, conference proceedings, and scientific books, which were published between 2001 and 2019. As both the Science Direct and Scopus databases provided slightly differing search aspects, particular query strings and strategies have been formulated for each database considering the main search string that has been developed in the fourth step as a foundation.

The eighth step used the exclusion criteria and inclusion, and the researcher removed the duplicate entries that resulted from the use of multiple digital databases, and it resulted in a list of unique studies. In the ninth step, the researcher reviewed each study carefully based on the information supplied through the keywords, summary, and title.

In the ninth stage, Both the inclusion and exclusion criteria were applied to select the pertinent studies. In the tenth step, the researcher read all the selected studies that have been identified in the previous step. The researcher reapplied both the inclusion and exclusion criteria to these studies, which resulted in a refined list of studies. The researcher then analysed the reference lists of these studies following a snowball sampling approach, which has been defined as a way to find the research subjects (Atkinson & Flint, 2001). The tenth step resulted of primary publications. Considering these studies as a primary publish means that these studies would be explored as a source for answering the research questions in the systematic literature review.

In the final step, a data extraction scheme has been developed to facilitate the extraction, analysis, and synthesis of the main proof from the studies. It is included information regarding the research methods,

The independent variables and the dependent variables were analysed, the means through which these variables were operationalised, and the metrics that were employed for indicating these variables, such as the effectiveness of audit and the outcomes of the studies.

## 4. Research Findings

### 4.1. Introduction

It has provided the research findings from systematic literature review of the selected 33 articles for this research. This chapter has been structured into three sections: general findings; indicators of the impact of internal auditing and influencing variables in the influence of internal auditing.

### 4.2. General Findings

This section has provided a summary of the general results derived from the selected studies are related to publication types and years, study types, the methods of analyses, the participated firms based on sectors, and the analyses of measurements. Both the Table (1) and Figure (3) demonstrate the distribution of the research in accordance with the publication years between 2000 and 2019.

Year	Studies	Number
2000		-
2001	Dittenhofer	1
2002		-
2003	Al-Twajry, Brierley, & Gwilliam	1
2004		-
2005		-
2006		-
2007	Mihret & Yismaw; Mizrahi & Ness-Weisman; Rupsys & Boguslauskas	3
2008		
2009	Ahmad, Othman, Othaman, & Jusoff; Arena & Azzone; Cristina & Cristina	3
2010	Bota-Avram, Popa, & Stefanescu; Cohen & Sayag; Mihret, James, & Mula	3

2011	Al Matarneh; Karagiorgos, Drogalas, & Giovanis; Salameh, Al-Weshah, Al-Nsour, & Al-Hiyari	3
2012	Feizizadeh	1
2013	Badara & Saidin; Endaya & Hanefah	2
2014	Alzeban & Gwilliam; Badara & Saidin	2
2015	Alzeban; D'Onza, Selim, Melville, & Allegrini; Lenz & Hahn	3
2016	Barisic & Tusek; Dejnaronk, Little, Mujtaba, & McClelland; Dellai, Ali, & Omri;	3
2017	Alshbiel; Baheri, Sudarmanto, & Wekke; Lenz, Sarens, & Hoos	3
2018	Bednarek; Erasmus & Coetzee; Nurdiono, & Gamayuni; Oussii & Taktak	4
2019	Chang, Chen, Cheng, & Chi	1
	Total	33

Table (1): Distribution some of studies in accordance of year

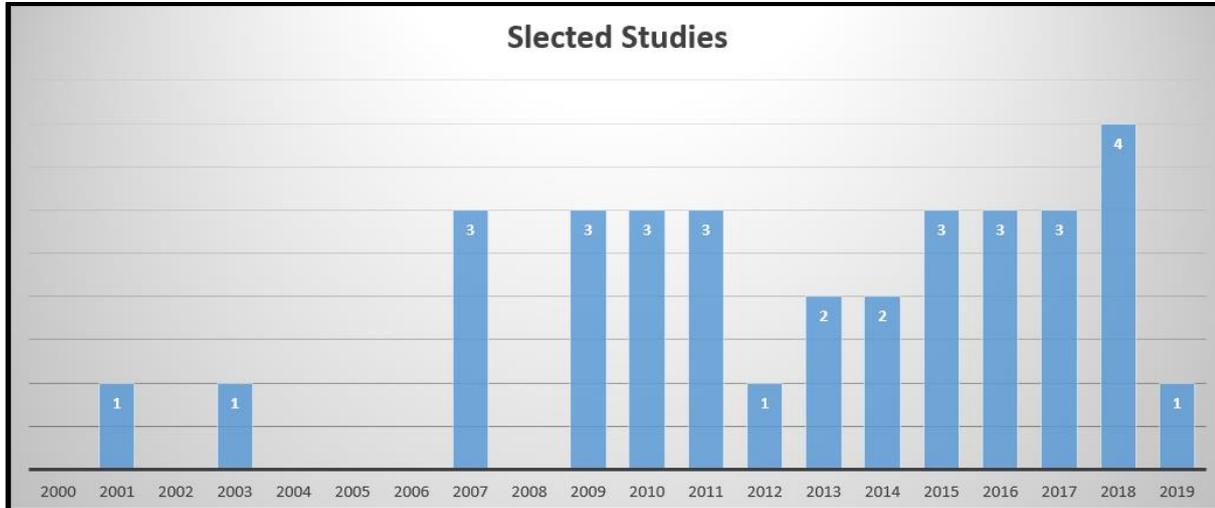


Figure (3): Distribution studies in accordance of year

Figure (3) shows that 2018 had the highest number of selected studies, while three studies were selected from 2007, 2009, 2010, 2011, 2015, 2016, and 2017. Figure (3) also implies that there was an increasing interest regarding the subject area of the effectiveness of internal auditing between 2015 and 2018. Out of the 33 selected studies, 29 studies were published as journal articles,

And the *Managerial Auditing Journal* had the highest publications of 7 studies, which is followed by *International Journal of Auditing* with 3 publications, and the *Research Journal of Finance and Accounting* with 2 publications.

In relation to the study types, 27 publications were based on empirical studies, while 6 studies were based on literature reviews that can be categorised as the secondary study. In relation to the method of analysis, 24 studies or 73% of the studies adopted the survey method to collect data from multiple stakeholders, for example, the internal stakeholders like the internal auditors and the auditees, and the external stakeholders like the management board and the external auditors. There were a total of 6 studies (18%) adopted both the survey and interview methods for the collection of their study data, while 3 studies or 9% of the selected studies used the secondary data analysis method for their reported data.

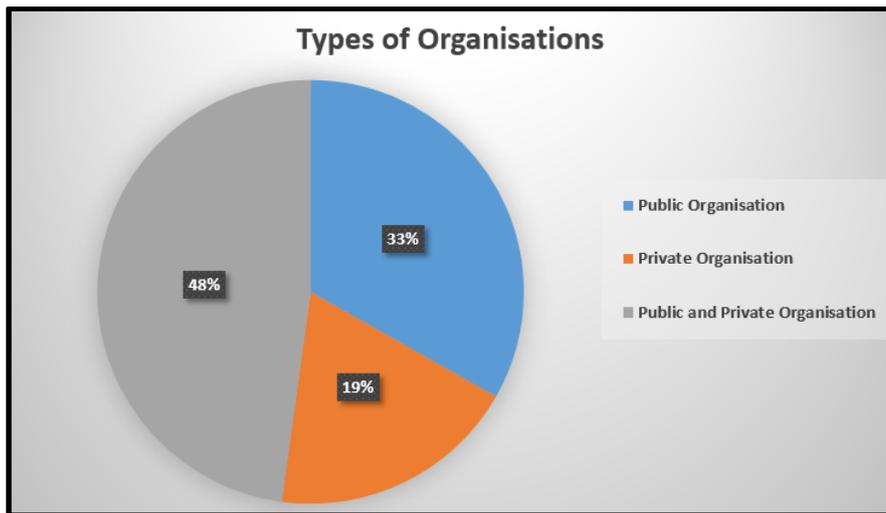


Figure (4): Types of firms based on sectors

Figure (4) demonstrates the organisational types on which the selected studies were carried out, and Figure (4) reveals that 48% of the primary studies or 13 of the out of 27 primary studies were performed on both the public and private organisations; while 33% or 9 organisations belonged to public sector and 19% or 5 organisations belonged to private sector. In relation to the analyses of measurements, nearly half of the 27 empirical studies (48.14%) performed the regression analysis for examining the variables that impact the influence of the internal auditing, while a total of 6 studies,

For example Badara & Saidin (2013); Cristina & Cristina (2009), Dittenhofer (2001); Endaya & Hanefah (2013), Feizizadeh (2012), and Lenz & Hahn (2015) were based on the literature review or secondary study to examine the impact of factors that effect on internal auditing.

### 4.3. Indicators of the Effectiveness of Internal Auditing

There are two objectives of the current study, and one of the objectives is to find out the indicators that are used to operationalise the performance of the internal audit. The development of the indicators is based on the operationalisations that are detectable and assessable entities that enable to develop the notion (Bryman, 2012; Sarantakos, 2013). Due to the level of academic studies that assessed the influence of the internal auditing, Cohen & Sayag (2010) noted that the literature proposed only few indicators, which have been substantiated and tested to assess their reliability. Consequently, although the selected studies have noted the variables that can affect the influence of internal auditing, these studies (e.g. Dittenhofer, 2001; Endaya & Haefah, 2013; Lenz & Hahn, 2015; Lenz, Sarens, & Hoos, 2017) have not presented the actual metrics that can applied to quantify the influence of the internal auditing. Additionally, from the literature review, it has been noted that there is no universally recognised metrics that can be applied for the quantification of the influence of the internal auditing. This section has synthesised the metrics that have been applied in the selected primary studies for answering this study's first research question.

Table 2 demonstrates the identified metrics to operationalise (IMO) the influence of internal auditing, along with the measurement perspectives, and many studies that applied the metrics in their research. These metrics have been divided into two groups: objectively assessed effectiveness; and the perceived effectiveness that are based on the stakeholders' subjective perceptions. Additionally, in accordance with the study of Arena & Azzone (2009), these metrics have been grouped into three categories, such as process, output, and outcome metrics based on the organisational types that were assessed. According to Arena & Azzone (2009), the process metrics evaluate the tasks carried out by the auditors, for example adhering to the standards, planning and executing the auditing tasks, and communicating the findings from the auditing tasks. The output metrics are associated with the stakeholders' expectations related to the internal auditing (Dittenhofer, 2001). According to Dittenhofer (2001), these metrics are in accordance with the changing expectations of the stakeholders. Lastly, the outcome metrics apply the impacts of the auditing process's specific outcome (Arena & Azzone, 2009).

	Identified Metrics of Effectiveness	Types of Entity	List of Studies
Objectively Assessed Effectiveness			
IMO-1	Audit Values	Outcomes	Al-Twajry, Brierley, & Gwilliam (2003); Bota-Avram, Popa, & Stefanescu (2010); Erasmus & Coetzee (2018)
IMO-2	Number of Audit Outcomes	Outputs	Bota-Avram, Popa, & Stefanescu (2010); Chang, Chen, Cheng, & Chi (2019); Dittenhofer (2001); D'Onza, Selim, Melville, & Allegrini (2015); Nurdiono, & Gamayuni (2018); Oussii & Taktak (2018)
IMO-3	Time Management	Outputs	Cristina & Cristina (2009)
IMO-4	Time for Solving the Internal Audit Findings	Outputs	Bota-Avram, Popa, & Stefanescu (2010); Cristina & Cristina (2009)
IMO-5	Time for Issuing Internal Audit Reports	Outputs	Bota-Avram, Popa, & Stefanescu (2010); Cristina & Cristina (2009)
IMO-6	Implementation Level of Recommendations	Outputs	Arena & Azzone (2009); Barisic & Tusek (2016); Bednarek (2018); Bota-Avram, Popa, & Stefanescu (2010); Erasmus & Coetzee (2018); Mizrahi & Ness-Weisman (2007)
IMO-7	Time Needed for Completing the Audit Plan	Processes	Bota-Avram, Popa, & Stefanescu (2010)
IMO-8	Fulfilment Level of Internal Auditing Plan	Processes	Bota-Avram, Popa, & Stefanescu (2010); Cristina & Cristina (2009)
Perceived Effectiveness			
IMO-9	Perceived Effectiveness of Internal Auditing	Outputs	Ahmad, Othman, Othaman, & Jusoff (2009); Al Matarneh (2011); Alshbiel (2017); Al-Twajry, Brierley, & Gwilliam (2003); Alzeban & Gwilliam (2014); Badara & Saidin (2014); Baheri,

			Sudarmanto, & Wekke (2017); Barisic & Tusek (2016); Dejnaronk, Little, Mujtaba, & McClelland (2016); Dellai, Ali, & Omri (2016); Endaya & Hanefah (2013); Lenz, Sarens, & Hoos (2017); Mihret, James, & Mula (2010); Rupsys & Boguslauskas (2007); Salameh, Al-Weshah, Al-Nsour, & Al-Hiyari (2011)
IMO-10	Satisfaction of the Stakeholders	Outputs	Bota-Avram, Popa, & Stefanescu (2010); Cohen & Sayag (2010); Erasmus & Coetzee (2018)
IMO-11	Perceived Organisational Values	Outcomes	Cohen & Sayag (2010); D'Onza, Selim, Melville, & Allegrini (2015); Erasmus & Coetzee (2018)

Table (2): Effectiveness metrics of internal auditing in accordance with the primary studies

This section has briefly described each of the metric to assess the effectiveness of the internal auditing.

IMO-1: Audit Values: Al-Twaijry et al. (2003) defined the notion of value tracking as the enhancements of revenues or savings in expenses because of the internal auditing tasks. This study has used the cost-benefit analysis for tracking and calculating the values that the internal auditing could offer to the organisations. The study of Bota-Avram et al. (2010) revealed that firms can apply the cost-benefit metrics for quantifying the effectiveness of the internal auditing.

IMO-2: Number of Audit Outcomes: Audit findings have been identified as 'products of the assessment of the audit evidence collected against audit criteria' (ISO, 2018), and therefore the findings from the audit may identify the conformities or nonconformities against the set procedures and thus can result in the development of the enhancement recommendations. Both the studies of Bota-Avram et al. (2010) and Chang et al. (2019) used a number of audit findings as indicators for measure the influence of the internal auditing.

IMO-3: Time Management: The study of Cristina & Cristina (2009) proposed this metric to measure the effectiveness of internal auditing, distinguishing the time necessary for performing the tasks related to the internal auditing and the time necessary for performing other tasks, for example administrative tasks. This finding supported by other studies like Arena & Azzone (2009) and Bender (2006).

IMO-4: Solving the Internal Audit results: From the study of Cristina & Cristina (2009), it has been noted that monitoring the time to solve the internal audit findings can be used as a measure of the effectiveness of internal auditing. Therefore, the time required to solve the findings from internal auditing may entail the time necessary for analysing and validating the findings until the findings turn into real problem, along with the time necessary for solving the real problems. In reality, workloads and time pressure can compromise the influence of internal auditing by compressing the number of days allocated for the production of the report. This finding has been supported by the study of Ali (2016).

IMO-5: Time for Issuing Internal Audit Reports: From both the studies of Bota-Avram et al. (2010) and Cristina & Cristina (2009), it has been noted that the time for publishing audit reports is used to measure the effectiveness of internal auditing.

IMO-6: Implementation Level of Recommendations: Table 2 reveals that a total of six studies used this metric for representing the influence of the internal audit. This metric identifies the proportion between the total number of approved recommendations from the auditees and the recommendations that have been executed and the numbers of proposed recommendations suggested by the auditors. Therefore, this metric facilitates the auditees determine the internal audit's impact to a large extent.

IMO-7: Time Needed for Completing the Audit Plan: From the study of Bota-Avram et al. (2010), it has been noted that the time needed to complete the audit plan and mission. However, this study did not specify how to measure the time required for the completion of the plan auditing and mission.

IMO-8: Fulfilment Level of Internal Auditing Plan: The fulfilment level of internal audit plan has been defined as the proportion of internal audit tasks which are executed in accordance with the internal audit strategy in a specific time against the planned tasks (Bednarek, 2018). Therefore, this metric counts the number of realised tasks for a specific duration and compare those against the original plan.

IMO-9: Perceived Effectiveness of Internal Auditing: Tackie et al. (2016) defined the perceived influence of internal auditing as the extent to which pre-established goals that are recognised by the audit stakeholders and accomplished through the task of an internal auditing.

Alzeban & Gwilliam (2014) noted that this metric is the key aspects for examining the effectiveness of the internal auditing, and this has been reflected in most of the selected empirical studies.

IMO-10: Satisfaction of the Stakeholders: Both the studies from Bota-Abram et al. (2010) and Cohen & Sayag (2010), it has been noted that it is necessary to measure the overall satisfaction rate of the stakeholders of the internal audit, as well as to identify the possible reasons of stakeholders' dissatisfaction related to internal audit tasks. Therefore, majority of the selected empirical studies used this metric to measure the influence of the internal auditing. However, Lenz et al. (2017) noted the disadvantage of this metric, as there are differing expectations among the stakeholders and these expectations could be contradictory to each other in practice.

IMO-11: Perceived Organisational Values: The primary goal of the internal audit is to added new value for organisations (Mihret et al., 2010), and therefore most of the selected empirical studies are tried to use this metric to estimate the influence of internal audit through organisational performance (Alzeban & Gwilliam, 2014) or enhanced organisational processes (Dellai et al., 2016). However, D'Onza et al. (2015) noted that it is not easy to create relation between the auditing tasks and financial performance that bring additional values to the organisations.

#### **4.4. Influencing Factors in the Influence of the Internal Auditing**

The second research objective of this study is to find out the factors that impact the effectiveness of the internal audit. The literature review has noted that an effective audit can bring additional values to the organisations through complying with the established regulations and procedures and can bring improvements in the existing processes and these problems are generally identified after the internal auditing tasks, which create problem to define the influence of the internal auditing (Bender, 2006). Consequently, it is important to examine the factors that impact the influence of the internal audit by addressing the second research question of this study.

Based on the scheme developed by Cohen & Sayag (2010) and Lenz & Hahn (2015), the current study has identified and categorised the potential influencing factors in the effectiveness of internal auditing to two groups: factors on the demand side and factors on the supply side. the demand side factors contain the other stakeholders' perspectives. Whereas the supply side factors are associated with the factors that emerge from the self-evaluation of the auditors.

Factors of Effectiveness (FOE) in Internal Auditing	
Supply Side	
FOE-1	Competencies of the internal audit sector
FOE-2	The size of the internal audit sector
FOE-3	Compliance with standards
FOE-4	Organisational settings
FOE-5	The limitation of the auditing scope
FOE-6	Attributes of the auditees
FOE-7	Ground of management training
FOE-8	Independence of the internal auditing
FOE-9	Objectivity of the internal auditing
FOE-10	Risk assessment
FOE-11	Outsourcing of internal auditing
FOE-12	The quality of the auditing tasks
FOE-13	The leadership style of the Chief Audit Executive
Demand Side	
FOE-14	Support from management
FOE-15	Relationships between external and internal audits
FOE-16	Relationships with the audit committee
FOE-17	Communication and information sharing
FOE-18	Availability of the follow-up processes
FOE-19	Accommodating control environment
FOE-20	Cultural dimensions

Table (3): The factors of effectiveness (FOE) in internal auditing

Table (3) demonstrates the factors of effectiveness (FOE) in internal auditing, and these factors have been analysed briefly in the following section.

FOE-1: Competencies of the internal audit sector: The most common examined factor in the existing literature is the expertise of the internal auditing sector, and 18 of the 27 empirical studies examined this factor. According to the IIA (2012), the competencies of the members of the auditing team is the critical aspect of the influence of the internal auditing task.

In reality, this factor is linked to the proficiency and the sponsor of the auditors. In relation to the proficiencies, auditors must have expertise, skills and competencies. A number of selected empirical studies (e.g. Ahmad *et al.*, 2009; Al-Twajjry *et al.*, 2003; Dellai *et al.*, 2016; Mihret *et al.*, 2010) have identified the competencies as the team members' educational levels, experience, and professional qualifications.

FOE-2: The size of the internal audit department: Studies like Alhajri (2017), Bednarek (2018), and Chang *et al.* (2019) revealed that another used metric to consider the effectiveness of internal audit is the size of the internal audit department, as larger department facilitates performing the roles of the auditors in rotation, which leads to more objectivity of the internal auditing. Additionally, larger size of the internal audit department requires higher investments and resources, which ensure higher quality.

FOE-3: Compliance with standards: Both the external and internal auditors must comply with the applicable standards, and this notion has been reflected in Dejnaronk *et al.* (2016) and Feizizadeh (2012). Based on these studies, it has been noted that internal auditors must adhere to the objectivity, professional sponsor and proficiencies of the internal auditing, which is also in line with the argument made by the IIA (2012).

FOE-4: Organisational settings: Studies from Karagiorgos *et al.* (2011), Lenz *et al.* (2017), and Mihret *et al.* (2010) revealed that policies and procedures that are in accordance with the organisational practices are significant to influence the effectiveness of the internal auditing. Therefore, organisational policies and procedures clarify the roles and positions of the organisations along with the profiles, which develop the structure and determine the segregation of the work roles, resulting in effective internal auditing.

FOE-5: The limitation of the auditing scope: The level and boundaries of the audit determine the scope of the audit (ISO, 2018). Studies from Al-Twajjry *et al.* (2003) and Erasmus & Coetzee (2018) noted that audit can examine any feature, process, and system of the organisation, and thus it can detect non-compliance and provide framework for potential improvements by communicating with all the stakeholders. Therefore, a good scope constraint for the internal auditing suggests that there should not be any constraint on the activities of the internal auditing.

FOE-6: Attributes of the auditees: Auditees refer to the individuals in the organisations. The empirical studies revealed a number of characteristics of the auditees, such as proficiencies, attitude, and the extent of cooperation with the auditors, which are critical to assess the influence of the internal auditing (Mihret *et al.*, 2010).

FOE-7: Ground of management training: Studies of Cohen & Sayag (2010) and Dellai et al. (2016) found the ground of training enhances the influence of the internal audit, as the tasks of audit could be used for training to the future managers. By performing the audit tasks, the internal auditors can develop clearer understanding regarding the processes and wider variety of knowledge, including the internal controls.

FOE-8: Independence of the internal auditing: Dejnaronk et al. (2016) defined independence from provisions that reduce the capability of internal audit for carrying the responsibilities of the internal audit in an impartial way. The studies of Al-Twaijry et al. (2003), Alzeban & Gwilliam (2014), and D'Onza et al. (2015) recognised the independence of the internal audit as a main driver to the influence of internal audit. However, to work independently, internal auditors should have safeguarding mechanisms like the reference documents that include the roles of the internal auditing sector, the scope of the internal auditing, records and assets, and the rights of accessing to individuals, which can ensure the independence of the internal auditing.

FOE-9: Objectivity of the internal auditing: In addition to the independence, studies from Al Matarneh (2011) and Alzeban & Gwilliam (2014) considered the objectivity issue as another principal driver to the effectiveness of the internal auditing. Objectivity has been defined by Dejnaronk et al. (2016) state that enables the auditors carry out their engagements along with no compromises are occurred in terms of tasks and quality. Although auditors need high degree of subjectivity to perform their tasks.

FOE-10: Risk assessment: Through developing risk profile, organisations can develop controls for managing their risks, which can enhance the organisational processes in the end. Studies from Arena & Azzone (2009) and Lenz & Hahn (2015) noted that risk-based auditing has become a new perspective in auditing that can facilitate organisations understanding their risks, as these risks can impede the achievement of the organisational objectives.

This suggests that, in addition to the traditional role of focusing on the compliances and monitoring the processes against the regulatory requirements, auditors have new roles that offer consulting services for the improvement of the processes to achieve higher organisational performance.

FOE-11: Outsourcing of internal auditing: The study of Dellai et al. (2016) noted that internal auditing can be performed through in-house, outsourced, or a mixture of these approaches. However, there are both advantages and disadvantages of in-house auditing and outsourcing. For example, in-house auditing helps employees to obtain knowledge and skills, but this approach can be expensive in relation to the recruitment and training of employees. On the other hand, outsourcing increases the degree of objectivity of the auditing, while it fails to understand the organisational culture and the critical knowledge of the business.

FOE-12: The quality of the auditing tasks: Quality of auditing tasks include planning and supervision, fieldworks, recording, analysing and generating outcomes, developing recommendations, and follow-up the tasks (Endaya & Hanefah, 2013). Studies from Al-Twaijry et al. (2003), Badara & Saidin (2014), and Cohen & Sayag (2010) noted that internal auditors must perform their tasks and asses the processes in accordance to the established procedures or standards.

FOE-13: The leadership way of the Chief Audit Executive: The value proposition of the internal auditing depends on how the CAE manages the internal auditing (D'Onza et al., 2015). Studies from Alzeban (2015, Alzeban & Gwilliam (2014), and Baheri et al. (2017) noted that influence of the internal auditing largely consists on the quality of the leadership. Leadership could be transactional, transformational, and laissez-faire. The transactional leadership practices contingent reinforcement of followers and rewards when the followers meet expectations; the transformational leadership inspires and motivates the followers to carry out works for the overall good rather than fulfilling own interest; while the laissez-faire leadership is considered as the absence of leadership (Eagly *et al.*, 2003). However, Nurdiono, & Gamayuni (2018) noted that these three leadership styles may not be appropriate in a regulated environment.

FOE-14: Support from management: Although internal auditors have higher level of autonomy and independence, their tasks might be constrained when they do not receive assistance from management.

Studies from Ahmed et al. (2012), Alzeban & Gwilliam (2014), and Baheri et al. (2017) found that the influence of internal auditing largely depends on the support from top management, particularly in case of the implementations of the recommendations provided by the internal auditors.

FOE-15: Relationships between external and internal audits: Studies from Alzeban & Gwilliam (2014) and Badara & Saidin (2013, 2014) noted that increased and positive interactions work as a key driver in the effectiveness of internal auditing.

FOE-16: Relationships with the audit committee: The internal audit carries out their tasks within the organisation, whereas the audit committee consists the board members for monitoring and assessment purposes, and therefore positive and impact collaboration between the audit committee and auditing is significant for the influence of internal auditing, as demonstrated from the studies of Alshbiel, (2017) and Bednarek (2018).

FOE-17: Communication and information sharing: This factor identifies, understands, and exchanges information in the appropriate time and forms for the fulfilment of the objectives of the internal auditing. Studies from Dejnaronk et al. (2016) and Karagiorgos et al. (2011) found that both verbal and written forms of communication should be in place for the fulfilment of the internal objectives.

FOE-18: Availability of the follow-up processes: Studies from Mihret & Yismaw (2007) and Oussii & Taktak (2018) found that the follow-up process is essential for the influence of the internal auditing for the implementations of the recommendations.

FOE19: Accommodating control environment: it is contains the processes, rules and structures that develop the foundation to perform the internal control across the organisation (COSO, 2013). Studies from Barisic & Tusek (2016) and Karagiorgos et al. (2011) demonstrated that supportive control environment is a key driver for the influence of the internal audit.

FOE-20: Cultural dimensions: placed to Hofstede's cultural framework, the study of Alzeban (2015) examined the influence of three cultural dimensions, such as uncertainty avoidance and the power distance on the internal audit's quality. This study revealed that auditors have positive relationship between uncertainty avoidance, individualism, higher power distance and higher internal audit quality.

Therefore, the outcomes of this study indicated that the influence of the internal audit is mainly impacts by the achievements of the internal auditors that are related to the processes. It should be noted in here that a high-power distance society has clearly established hierarchies within the institutions, while the individualistic society demonstrates loose relationships related to individuals to the immediate families (Hofstede *et al.*, 2010).

## 5. Discussions

This chapter has presented an overview of the effectiveness factors that have been identified in the previous chapter. Based on the findings, this study has developed an integrated effectiveness framework, which has been mapped with the outcomes of the Common Body of Knowledge (CBOK) 2015 Practitioner Survey (IIA, 2015).

### 5.1. Outcomes of the Empirical studies that impact on the factors of the auditors (internal)

Table (4) has listed all the selected studies for this research and provided an identification number for discussion purposes.

Study	Identification Number
Ahmad, Othman, Othaman, & Jusoff (2009)	R1
Al Matarneh (2011)	R2
Alshbiel (2017)	R3
Al-Twaijry, Brierley, & Gwilliam (2003)	R4
Alzeban (2015)	R5
Alzeban & Gwilliam (2014)	R6
Arena & Azzone (2009)	R7
Badara & Saidin (2013)	R8
Badara & Saidin (2014)	R9
Baheri, Sudarmanto, & Wekke (2017)	R10
Barisic & Tusek (2016)	R11
Bednarek (2018)	R12
Bota-Avram, Popa, & Stefanescu (2010)	R13
Chang, Chen, Cheng, & Chi (2019)	R14
Cohen & Sayag (2010)	R15

Cristina & Cristina (2009)	R16
Dejnaronk, Little, Mujtaba, & McClelland (2016)	R17
Dellai, Ali, & Omri (2016)	R18
Dittenhofer (2001)	R19
D'Onza, Selim, Melville, & Allegrini (2015)	R20
Endaya & Hanefah (2013)	R21
Erasmus & Coetzee (2018)	R22
Feizizadeh (2012)	R23
Karagiorgos, Drogalas, & Giovanis (2011)	R24
Lenz & Hahn (2015)	R25
Lenz, Sarens, & Hoos (2017)	R26
Mihret, James, & Mula (2010)	R27
Mihret & Yismaw (2007)	R28
Mizrahi & Ness-Weisman (2007)	R29
Nurdiono, & Gamayuni (2018)	R30
Oussii & Taktak (2018)	R31
Rupsys & Boguslauskas (2007)	R32
Salameh, Al-Weshah, Al-Nsour, & Al-Hiyari (2011)	R33

Table (4): List of the selected studies and their identification number

Table (5) demonstrates the outcomes of the empirical studies on the factors that have been recognised as the influencing factors on the internal audit's effectiveness. Table (5) has used the following legends to identify the factors:

Statistical significance = S

Positive statistical significance = SP

Negative statistical significance = SN

Inconclusive outcomes = IO

No correlation = NC

No statistical check = NS

	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12	F13	F14	F15	F16	F17	F18	F19	F20
R1	NS	NS												NS		NS				
R2	SP							SP												
R3	SP							SP				SP		SP			SP			
R4	NS			NS				NS				NS		NS						
R5																				S
R6	SP	SP						SP						SP	SP					
R7	IO	IO								IO						IO				
R8																				
R9	SP									SP						SP				
R10														NC						
R11																			SP	
R12	SP	NC						SP				IO				IO				
R13												NS								
R14	SP	SP																		
R15						NC		SP				SP		SP						
R16												NS			NS					
R17					SP			IO	IO	SP		SP		IO			IO			
R18	NC					SP		SP	SP		NC			SP						
R19																				
R20					NC			SP	SP									SP		SP
R21	NS								NS			NS								
R22	IO	IO		S				IO		NC		IO			IO					
R23	NS				NS															
R24										NS						NS	NS		NS	NS
R25	NS		NS	NS				NS		NS				NS	NS	NS				
R26	NS		NS											NS						
R27			NS							NS						NS				
R28	NS		NS				NS							NS				NS		
R29																				
R30	SP																			
R31	SP		NC									SP				SP		SP		
R32	NS											NS								
R33			S																	

Table (5): Outcomes of the primary studies that impact on the factors of the auditors

Based on the empirical studies, it is possible to deduce that the degree of influence of some the effectiveness factors rely on the interactions with the stakeholders and other factors. Consequently, the outcomes of some of these studies vary significantly. For instance, the study of Erasmus & Coetzee (2018) reported mixed outcomes on the variables that impact the influence of the internal auditing, for instance the independence of audit department, the objectivity of the internal auditing, and managerial support for the internal auditing, when the study considered the various stakeholder groups in its analysis. Likewise, the study of Badara & Saidin (2014) reported inconsistent outcomes regarding the impact of the management of risk consulting. Although the study of Badara & Saidin (2014) reported a positive relation on outsourcing of the internal auditing, the study of Erasmus & Coetzee (2018) reported a negative relationship on this factor. Similarly, the study of Dejnaronk et al. (2016) assured a positive relationship on this factor, and the study of D’Onza et al. (2012) did not find any relationship.

In relation to the empirical studies, this research has examined the types of organisations on which the studies were based on.

As demonstrated in Figure (4), there is a balanced participation of the types of organisations, such as public, private, and both. However, this study has not found out any primary study that examined the inequality between the private organisations and public organisations in relation to the practices and effectiveness of the factors in the auditing. However, research from Goodwin (2004) and Mihret et al. (2010) noted that there are considerable inequality between the organisations in the private sector and public sector in relation to the practices of internal auditing. Consequently, it can be argued that it is necessary for further examination on the moderating impact of private-public organisational settings in relation to the factors that affect the influence of the internal auditing. Similar to the types of the organisations, the organisational settings (FOE-4) has inconsistent outcomes, as demonstrated in Table 5, despite the fact that the influence of internal auditing is impacts by organisational factors (Lenz *et al.*, 2017).

Several studies, for example Lenz & Hahn (2015) and Mihret et al. (2010) focused on internal auditors' soft-skills, such as determination, negotiation, and capability of speaking up in complex contexts, which are thought to be crucial in the influence of internal auditing. The study of Soh & Martinov-Bennie (2011) also supports this finding. Similarly, the internal audit's effectiveness facilitates achieving organisational goals (D'Onza *et al.*, 2015), and Table 5 demonstrates inconsistent outcomes, and thus it requires further investigation.

Although this study has identified a wide range of indicators and variables that are used for operationalising the internal audit's effectiveness, this study has not found any clear evidence of the convergence of metrics that can be used as a generally accepted set of metrics. However, this study has differentiated between two groups of indicators that were found in the prevailing literature, such as indicators measured through objectively, and indicators measured through perceived effectiveness.

## 5.2. Integrated Model for the Effectiveness of Internal Auditing

It has been noted in the previous section that there is no set of generally admitted metrics which will used to estimate the efficiency of audit and this study has developed an integrated model to estimate the effectiveness of the internal audit through the synthesising of the prevailing literature.

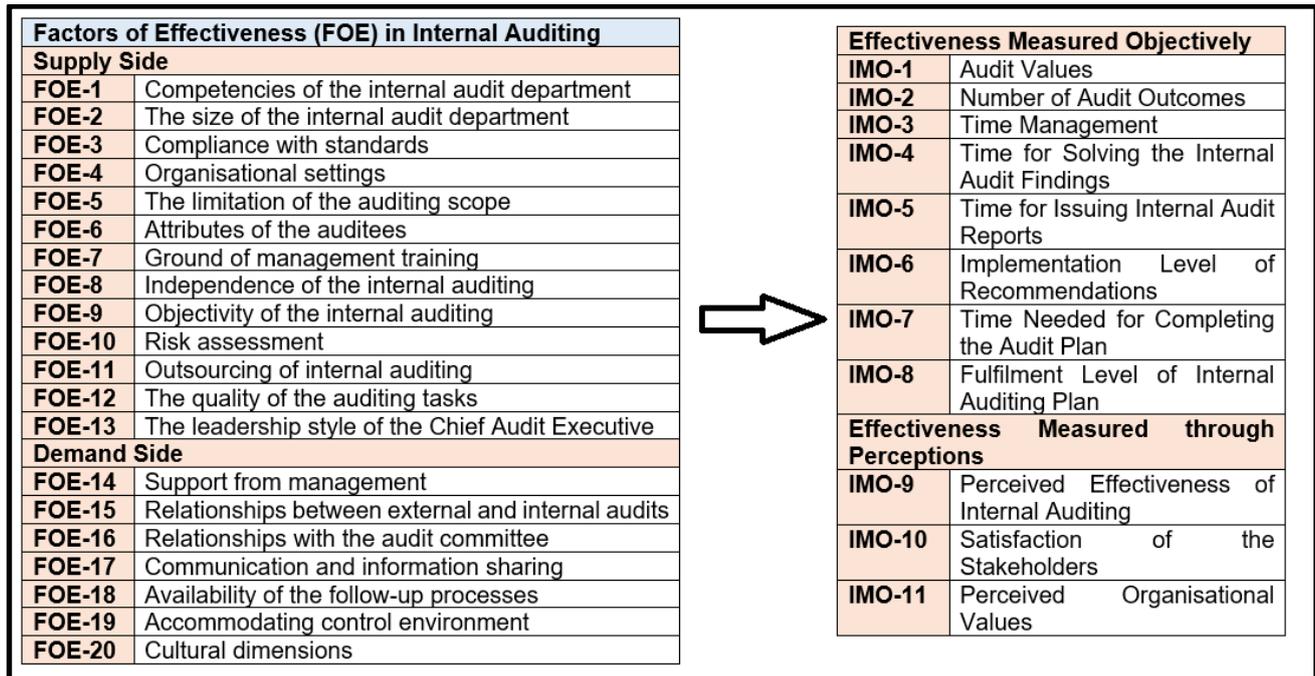


Figure (5): Integrated model for the efficiency of internal auditing

Figure (5) demonstrates the integrated model to gauge the effectiveness of internal auditing. This model has incorporated the metrics employed for gauging the effectiveness of internal auditing. Each selected study has assessed in this literature review examined the effect of as a minimum one of these metrics on at least one of indicators of the influence of internal auditing.

The state of the practices of the internal auditing is presented in the CBOOK (Common Body of Knowledge), which is developed through comprehensive survey by the members of the IIA (2015). The CBOOK 2015 global practitioner survey includes a total of ten measurements that can be used for evaluating the internal audit activity performance by the organisations. Figure 6 demonstrates shows the effectiveness indicators of internal auditing from model (Figure 5) and ten measurements that have been employed in the CBOOK 2015 global practitioner survey.

Integrated Model of the Effectiveness Measured Objectively		Internal Audit Performance (CBOK 2015 Global Practitioner Survey) (Seago, 2015)
IMO-1	Audit Values	
IMO-2	Number of Audit Outcomes	
IMO-3	Time Management	
IMO-4	Time for Solving the Internal Audit Findings	2. Timely completion of the issues related to auditing
IMO-5	Time for Issuing Internal Audit Reports	8. Cycle time to the draft report from the conference initiation 9. Cycle time to the final report from the end of fieldwork
IMO-6	Implementation Level of Recommendations	5. The accomplishment of particular set of expectations that have been agreed with the stakeholders
IMO-7	Time Needed for Completing the Audit Plan	3. Accomplishment of assigned coverage
IMO-8	Fulfilment Level of Internal Auditing Plan	1. Proportion of completed audit plan
IMO-9	Perceived Effectiveness of Internal Auditing	
IMO-10	Satisfaction of the Stakeholders	4. Satisfaction objectives of the clients
IMO-11	Perceived Organisational Values	
		6. Budget to actual audit hours
		7. Performance against the internal audit financial budget
		10. We have not established formal performance measures

Figure (6): Mapping of the integrated model of the effectiveness measured objectively with the internal audit performance measurements in the CBOK 2015 global practitioner survey

Figure (6) shows a significant overlap between the current study's developed integrated model and the measurements of the CBOK 2015 survey. Ignoring number 10 measurement of the CBOK 2015 measurements, Figure 6 demonstrates that two measurements of the CBOK 2015 survey have not been matched with the current study's developed integrated model – number 6 and number 7, and these two measurements are directed to assess the assigned budgeted hours and the assigned financial resources in comparison to the actual hours and resources. However, the current study has not found any evidence of using these measurements in the selected studies. In contrast, there are a total of four measurements in the developed model that have not been incorporated into the CBOK 2015 global practitioner survey. Among these four indicators, IMO-2 and IMO-9 are significant, as these are the two metrics that have been used in most of the selected empirical studies in this research. This finding is in contrast with the CBOK 2015 survey findings, which have been compiled from 14,518 participants from 166 countries (Seago, 2015).

Data from the CBOOK 2015 survey indicates that 73% of the organisations use the proportion of completed audit plan as a measurement of the performance of the internal audit (Seago, 2015). This finding is significantly higher compared to the IMO0-8 measurement that is used by only three studies out of 33 selected studies (or 9%).

## 6. Conclusions

This chapter has concluded the current research, providing the summary findings of the research, implications of the findings, limitations and suggestions for future research.

### 6.1. Summary of the Research

The purpose of this research is to identify the variables that potentially affect the influence of the internal audits. In accordance with the aim, the current study has two objectives: to find out the indicators that are used to operationalise the influence of the internal audit; and to find out the variables of the influence of the internal audit. To fulfil the research objectives, this study has carried out a systematic literature review to examine the metrics that have been applied in the prevailing literature to operationalise or quantify the effectiveness of internal auditing, as well as to identify the variables that are thought to have impact on the effectiveness of the internal auditing. The study used two electronic databases: Scopus and Science Direct databases for the literature search. With predefined exclusion and inclusion criteria, this research has finally selected 33 primary studies that were published between 2000 and 2019. In accordance with the developed research questions, the researcher has analysed the relevant data from the 33 selected studies.

In relation to the first research objective, this study has identified a total of eleven indicators to find the effectiveness of internal auditing. These indicators have further grouped into two categories. The first category has been termed as objectively assessed effectiveness, which contains eight metrics, such as audit values; number of audit outcomes; time management; time for solving the internal audit findings; time for issuing internal audit report; implementation level of recommendations; time needed for completing the audit plan; and fulfilment level of internal auditing plan. The second category has been termed as perceived effectiveness, which contains three metrics, such as perceived effectiveness of internal auditing; satisfaction of the stakeholders; and perceived organisational values.

It has also been noted that the indicators in the perceived group have dominance in the prevailing literature, and therefore this study argues that the indicators used for measuring the effectiveness in objective way generally demonstrates the strides assumed by the internal auditors, and they have not reached at the outcome level.

In relation to the second research objective, this study has identified a total of twenty factors that have been considered as the influencing factors in terms of the effectiveness of internal audit. These twenty factors have been further grouped into two categories. The first category is related from supply side, and this category contains a total of 13 factors, such as competencies of the internal audit department; compliance with standards; organisational settings; the limitation of the auditing scope; attributes of the auditees; ground of management training; independence of the internal auditing; objectivity of the internal auditing; risk assessment; outsourcing of internal auditing and the quality of the auditing tasks. The second category is related to the factors that emerge from demand side, and this category contains a total of 7 factors, such as support from management; relationships with the audit committee; communication and information sharing; availability of the follow-up processes and cultural dimensions.

Based on these two research objectives, this study has developed an integrated model of the effectiveness of internal auditing, and finally it has mapped the integrated model of the effectiveness measured objectively with the internal audit performance measurements in the CBOK 2015 global practitioner survey. It has been noted that there is a significant overlap between the current study's developed integrated model and the measurements of the CBOK 2015 survey. Data from the CBOK 2015 survey indicates that 73% of the organisations use the proportion of completed audit plan as a measurement of the performance of the internal audit, which is significantly higher compared to the current study's findings – only 9% of the selected studies used this measurement.

## 6.2. Implications of the Findings

The result of the current research has practical and academic implications. From the practitioners' perspective, the developed integrated model could be effective for the practitioners who aspire to develop the effectiveness of the internal auditing in their firms.

Both the identified metrics and factors can be applied not only to evaluate and monitor the effectiveness of the auditing tasks, but also to understand and enhance the factors that contribute in the effectiveness of these tasks.

From academic perspective, researchers can use the integrated model as a basis of future research within the auditing field. The outcomes of this study suggest that there is limited understanding on the factors that contribute in the effectiveness of internal auditing, and therefore researchers can examine the operationalisation of the effectiveness of auditing in relation to the outcome-related and objectively-evaluated metrics based on the developed integrated model in this study.

### 6.3. Limitations of the Study

The current study has used the systematic literature review as the research method, which has a number of limitations on its own as a research method. For example, the current study has used only the empirical studies, and the predefined exclusion and inclusion criteria have constrained the current study with only specific types of publications. The current study has excluded the non-academic magazine articles, books, industry reports, white papers, non-English papers, unpublished papers, and studies that did not any bibliographic data. Therefore, the inclusion of these publications could have provided more insights on the subject of effectiveness of internal auditing. Additionally, the current study has investigated the influencing factors of the effectiveness of internal auditing, which have been published as a scientific study and used the effectiveness of internal auditing as a dependent variable. However, the effectiveness of internal auditing can be measured through other diverse sets of functions, for example the influence of the factors on the influence of internal auditing and the financial reporting quality.

### 6.4. Suggestions for Future Research

The limitations of this study can be used as suggestions for future research. For example, as previously noted in the limitation section that the current study did not consider the studies that reviewed the effect of internal audit effectiveness on a number of key aspects like financial reporting quality or the earnings management. In future studies, researchers can focus on the empirical studies that incorporated the effectiveness of the internal audit not only as a dependent variable but also as the independent variable.

Consequently, researchers can incorporate a wider set of metrics and functions in the developed model in this research to operationalise the effectiveness of the internal auditing. Additionally, future studies can be extended into the scope of review by incorporating the grey literature like technical reports or industry reports, which can provide a more thorough understanding on the effectiveness, influencing factors, and operationalising factors of the internal auditing.

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