Mapping of Internal Audit Quality on the Public Sector in Indonesia: A Systematic Review

Ranto Partomuan Sihombing*

Universitas Katolik Soegijapranata, Semarang, Indonesia, ranto@unika.ac.id

*Corresponding author

Abstract
This study aims to explore internal audit quality in Indonesia, especially in the public sector. The researcher used a systematic literature review method to synthesize the research results conducted over the past seven years between 2016 and 2022. This study found that most internal audit quality is only output-oriented, primarily influenced by compliance driver variables. The most researched variables are independence and competence. It also adopts attribution theory. However, the kaizen philosophy perspective assesses quality based on the demand-based driver. Finally, this study proposes a conceptual model for developing internal audit quality and future research that should be conducted based on outcomes using a qualitative approach.

Keywords: mapping, systematic review, internal audit, kaizen philosophy, attribution theory

INTRODUCTION
Internal audit quality plays an important role in supporting the sustainability of an organization (Kai et al., 2022). In addition, internal audit quality will influence management decisions in assessing the effectiveness of internal control (Gramling & Vandervelde, 2006). The definition of internal audit quality in the public sector was first presented by the Government Accountability Office (GAO) in 1986. GAO (1986) defined internal audit quality as compliance with professional standards and audit engagement contracts (Lowensohn et al., 2007). In addition, according to the Development Finance Audit Agency (BPKP), as the internal auditor of the Indonesian Government, internal audit...
quality is the likelihood of an auditor finding and reporting in a government agency (Erlina & Muda, 2018).

Meanwhile, as a global professional organization, The Institute of Internal Auditors (IIA) explains that an internal audit is an independent and objective activity designed to add value and improve organizational operations. The internal audit aims to evaluate and improve effectiveness of risk management, internal control, and governance processes (Anderson et al., 2017). IIA (2017) adds that for internal auditors to produce quality audits, they must follow the standards and professional code of ethics for internal auditors (compliance drive). These standards regulate the attributes an internal auditor requires with independence, objectivity, and due professional care to produce audit quality. Given the important role of internal audits in supporting management decisions and organizational sustainability, internal audit quality needs to improved (Polizzi et al., 2022). Hazaea et al. (2021) added that an internal audit allows the organization to achieve its goals by following systems, regulations, and procedures to improve governance and internal control.

Despite the importance of internal audits in supporting organizations, the profession still draws criticism for its failure to meet objectives as defined by the IIA (Hazaea et al., 2021). The same condition occurs in public sector organization in Indonesia. Several corruption cases still occur in Indonesian government agencies (Surya, 2021). This happens because of internal auditors’ weak arrangements and functional characteristics (Hazaea et al., 2021).

A comprehensive study can provide an overview of how research on internal audit quality has not been conducted. It is useful to provide a map for future researchers to develop studies that can contribute to improving internal audit quality. This study aims to map research on internal audit quality, especially for public sector organizations in Indonesia. This study answers two questions. First, what research themes have been conducted on internal audit quality so far? Second, what research can be developed in the future in order to improve internal audit quality, especially in the public sector?

The researcher uses the kaizen philosophy’s perspective to answer this second question. This philosophy has been widely used in assessing quality in various fields, including internal audits (Hawkes & Adams, 1994, 1995; Pitt, 2014). According to Pitt (2014), audit quality is relative and closely related to the perception of value. Furthermore, based on the perspective of the kaizen philosophy, internal audit quality is interpreted not only to comply with the established standards (compliance driver) but how internal auditors can meet stakeholder expectations (demand-based driver) (Pitt, 2014). For this to be achieved, an internal audit is a process of continuous improvement so that it can be achieve the desired level of quality.

This study contributes to public sector internal auditors and future researchers. Internal auditors will get a comprehensive picture of what factors can affect audit quality to add value to the governance of public sector organizations (Nerantzidis et al., 2022). Future researchers can develop research topics that examine not only from the perspective of compliance drivers but also from the side of value creation to stakeholders.
The systematic discussion of this study begins with a background that explains why research on internal audit quality is important and its relationship with the kaizen philosophy. Second, it discusses this study's systematic literature review (SLR) method. Third, it discusses internal audit quality from the perspective of previous research results and the theoretical basis used in examining internal audit quality. Audit quality from a kaizen perspective emphasizes outcomes over outputs. The outcome is the added value that impacts achieving short, medium-and long-term organizational goals. In the results section, this study discusses research opportunities that future researchers can conduct.

**METHOD**

Before discussing the methods used, the researcher will discuss internal audit quality from the perspective of the kaizen philosophy, also known as demand-based drivers. According to this perspective, quality is a process that must be carried out continuously to deliver value to stakeholders. This means that an internal audit is said to be of quality if it has succeeded in meeting the expectations or expectations of stakeholders. There are two things that internal auditors need to pay attention to achieve expectations. First, internal auditors must provide audit quality under what management and auditees expect. Second, internal auditors must know the critical success factors of the organization’s strategy and goals to help it achieve its goals (Pitt, 2014).

In addition, internal audit quality based on the demand-based drivers perspective emphasizes the relationship between inputs, activities, outputs, and outcomes. These relationships are described in the conceptual model in Figure 1.

![Conceptual Model of Internal Audit Quality](Pitt, 2014)
Figure 1 shows a comprehensive conceptual model of internal audit quality. Inputs are the resources needed to achieve the desired results. Inputs consist of four things, namely strategy, budget, staffing, and professional practice. When the internal audit is supported by an adequate budget, a well-prepared internal audit strategy will be a crucial driver of quality and value. In addition, professional internal audit staff also determine the quality of internal audits. However, the team leader can outsource or collaborate with external parties with the required competencies if there are no qualified staff. Furthermore, the team leader is not the only person who determines the internal audit quality but also various stakeholders such as senior management, regulators, and staff. They have a strategic role in ensuring the internal audit function produces optimal outputs and outcomes. Internal auditors must deliver value to stakeholders and help the organization improve productivity and quality. Determining value requires understanding the organization’s goals, priorities, and definition of success. When the internal audit team leader clearly understands the organization’s strategic goals, he or she can better design the internal audit function and contribute to achieving audit objectives.

The internal audit team leader is sometimes motivated to conform audits to established standards. However, the key elements for developing sustainable quality emphasize demand-based drivers over compliance drivers. Compliance drivers are the initial initiation towards quality, but demand drivers are needed to instill the importance of processes. Another source of input that has a significant role in professional practice with methodologies and systems applied in the audit process to obtain quality audit results.

Another component that plays a role in improving internal audit quality is the internal audit activity, which can be divided into assurance and consultation. The team leader determines both activities based on the audit objectives. Output is the product or service produced by the internal audit function. Meanwhile, outcomes are the benefits or impacts of internal audit products or services on the organization and stakeholders, both short and long-term.

The first objective of this study is to provide a comprehensive overview of the internal audit quality research theme. The researcher used the systematic literature review (SLR) method to answer this. Various studies that answer research questions in accounting have used this method (Buchheim et al., 2020; Hazaea et al., 2021; Mu & Wang, 2020). According to Petticrew and Roberts (2006), SLR is a method to map and identify several areas of research that have been done or that have not been done so that they can make one conclusion. Furthermore, Denyer and Tranfield (2009) explained that there are five basic steps in conduction SLR:

1) Research question.
   The first step is to define the research question to be answered, as discussed in the introduction.

2) Collection of materials.
   The second step is to collect the material. This requires the selection of databases and the definition of search criteria. The source of research articles used was gathered from Scopus and Garuda. Scopus was chosen as the database because most Indonesian
researchers use it as a reference for selecting journals to publish their research results. Garuda is a database of Indonesian research journals. Researchers used search criteria based on keywords. The keywords used in Scopus were "internal audit," "quality," and "Indonesia," and the keyword used in Garuda was "internal audit quality."

3) Paper selection and evaluation.

The third step was to evaluate relevant papers based on structural categories that enabled the identification of relevant themes and interpretation of findings. The researcher obtained 21 articles from the Scopus search, while from Garuda search, it totaled 211. Next, the researcher selected the articles based on several criteria. First, the researcher selected articles based on the title and focused on research conducted in the public sector. It is impossible for research on internal audit quality not to use terms related to internal audit quality. The researcher also excluded book reviews, editorial notes, and proceedings articles from the sample. Second, when the journal publishes articles on internal audit quality, the journal is already indexed by Scopus or Sinta. This aims to ensure that the published articles have been reviewed well. Finally, to get articles with good quality ratings, the articles used as samples are published in journals of at least sinta 3. The final results of the articles that passed the criteria were 11 articles consisting of 3 Scopus articles and eight Garuda articles. Furthermore, the researcher searched for relevant articles at the end of 2022. Figure 2 shows the selection and evaluation process of relevant articles.

4) Descriptive analysis and synthesis.

The fourth step is to organize the results of each article into compatible parts and explain how each research article relates to the other.

<table>
<thead>
<tr>
<th>Scopus</th>
<th>Garuda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keywords: &quot;internal audit&quot; and &quot;quality&quot; and Indonesia</td>
<td>Keywords: &quot;internal audit&quot; and &quot;quality.&quot;</td>
</tr>
<tr>
<td>Number of articles that match the keywords: 21 articles</td>
<td>Number of articles that match the keywords: 211 articles</td>
</tr>
<tr>
<td>Several articles that fit the title focus on the public sector and do not include book reviews, editorial notes, and proceedings articles: 3 articles.</td>
<td>Several articles that fit the title focused on the public sector and do not include book reviews, editorial notes, and proceedings articles: 66 articles.</td>
</tr>
<tr>
<td>Number of articles at the time of publication in Scopus-indexed journals: 3 articles</td>
<td>Number of articles at the time of publication in Sinta-indexed journals: 44 articles</td>
</tr>
<tr>
<td>Number of Scopus indexed articles: 3 articles</td>
<td>Number of articles indexed by at least Sinta 3: 8 articles</td>
</tr>
<tr>
<td>Total articles: 11 articles</td>
<td></td>
</tr>
</tbody>
</table>

Figure 2. Article search flow

5) Results.

The final step is a discussion of the findings that describes what is known and not about the research questions to be answered. In addition, this section also discusses areas of
future research needed. In detail, points 4 and 5 are discussed in the results and discussion section.
Before conducting the descriptive analysis and synthesis, the researcher summarized the research themes. Table 1 summarizes the research themes.

**FINDING AND DISCUSSION**

*Descriptive Analysis*

After summarizing the research results, as shown in Table 1, the next step was to classify the research types by reading each article's abstract. There are various lines of research on internal audit quality that show a variety of different research interests:

a) Survey studies using questionnaires on auditors of ministry inspectorates, local inspectorates, and the Supreme Audit Agency (BPKP) and the Supreme Audit Agency (BPK) to determine their perceptions of factors affecting internal audit quality. Almost all studies from 2016-2022 used this method.

b) A meta-analysis study is a study that examines the relationship between several variables that affect internal audit quality. The data analyzed are research results from 2011-2018 using statistical methods. There is only one study that uses this method.

c) Interview studies use a list of questions to complement the analysis results obtained from the survey. There is only one study using this approach.

d) Effect studies using secondary data that examine the effect of competence on internal audit quality and its impact on accountability. There is only one study using this method.

Next, the researcher describes the trend of internal audit quality research conducted in Indonesia, as shown in Figure 3.

![Figure 3. Internal Audit Quality Research Trends (data processed, 2022)](image)

Figure 3 shows the trend of research on internal audit quality conducted in Indonesia over the past seven years. The graph shows a downward trend in research on internal audit quality in the public sector.
Table 1. Summary of research result

<table>
<thead>
<tr>
<th>No</th>
<th>Authors and year</th>
<th>Research issue</th>
<th>Methodology</th>
<th>Finding</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Pratomo (2016)</td>
<td>Knowing the effect of auditor competence, task complexity, and time budget pressure on internal audit quality</td>
<td>Survey of city inspectorate auditors - Surakarta</td>
<td>Auditor competence positively affects internal audit quality; task complexity and time budget pressure do not affect internal audit quality.</td>
</tr>
<tr>
<td>2</td>
<td>Kiswara et al. (2018)</td>
<td>Examine the effect of competence, independence, motivation, work experience, objectivity, integrity, auditor ethics, professionalism, and accountability on internal audit quality.</td>
<td>Meta-analysis study</td>
<td>Competence, independence, motivation, work experience, objectivity, integrity, auditor ethics, professionalism, and accountability significantly relate to audit quality.</td>
</tr>
<tr>
<td>4</td>
<td>Sari dan Tri (2018)</td>
<td>Analyzing whether there is an expectation gap between the perceptions of internal auditors and auditees related to competence, independence, and audit quality.</td>
<td>Survey of Ministry of Agriculture inspectorate auditors and work unit auditees</td>
<td>There is an expectation gap between independence and internal audit quality. Auditees perceive as lower than auditors; there is no expectation gap between competence and internal audit quality. Competence is measured by education and position. Self-efficacy and professional development have a positive effect on internal audit quality. Increasing self-efficacy can be done by motivating while developing professionalism by providing training.</td>
</tr>
<tr>
<td>7</td>
<td>Susanti (2019)</td>
<td>Knowing the effect of competence, independence, objectivity, and integrity on audit quality</td>
<td>Inspectorate survey – Bengkulu</td>
<td>Competence, independence, objectivity, and integrity significantly affect audit quality.</td>
</tr>
<tr>
<td>8</td>
<td>Arigawati (2019)</td>
<td>Analyze the relationship between the attention of the chief inspector, Central BPK Survey</td>
<td>Principal inspector attention, supervision time, supervision activities, documentation, and</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>Authors and year</td>
<td>Research issue</td>
<td>Methodology</td>
<td>Finding</td>
</tr>
<tr>
<td>----</td>
<td>------------------</td>
<td>----------------</td>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td>9</td>
<td>Sukesi (2019)</td>
<td>Supervision time, supervision activities, documentation, supervision intensity, and the quality of internal audit reports.</td>
<td>Survey of TNI inspectorate auditors</td>
<td>Supervision intensity positively affect internal audit quality.</td>
</tr>
<tr>
<td>10</td>
<td>Ibrani et al. (2020)</td>
<td>Testing the effect of competence, independence, and audit experience on audit quality; testing the moderating effect of ethics on the relationship between competence, independence, audit experience, and internal audit quality.</td>
<td>Inspectorate auditor survey - Banten</td>
<td>Competence and audit experience positively affect internal audit quality; independence does not affect internal audit quality; ethics moderates the relationship between audit experience and internal audit quality; ethics does not moderate the relationship between competence, independence, and internal audit quality.</td>
</tr>
<tr>
<td>11</td>
<td>Mahadewi dan Dwirandra (2022)</td>
<td>Examine the effect of professional skepticism, work experience, independence, and work environment on internal audit quality.</td>
<td>BPK-Bali survey</td>
<td>Professional skepticism, work experience, independence, and a conducive work environment positively affect internal audit quality.</td>
</tr>
</tbody>
</table>

Only three articles have been successfully published in Scopus-indexed journals. Erlina and Muda (2018) was published in the International Journal of Civil Engineering and Technology (IJCIET). Nurdiono and Gamayuni (2018) was published in the European Research Studies Journal. Although both journals were discontinued, when the articles were published, both journals were still indexed by Scopus. Finally, Ibrani et al. (2020) published their article in the Quality – Access to Success journal (Scopus Q3).

**Analysis and Synthesis**

This section discusses the independent variables affecting internal audit quality. These variables were grouped into two, namely compliance and noncompliance drivers. As explained earlier, compliance drivers are variables that arise to meet standards. On the other hand, noncompliance drivers are variables other than compliance drivers, such as psychological factors that also affect internal audit quality.

The first variable is competency. Eight studies examine the effect of competence on internal audit quality (Ibrani et al., 2020; Kiswara et al., 2018; Nurdiono & Gamayuni, 2018; Pratomo, 2016; Sari & Tri, 2018; Sukesi, 2019; Susanti, 2019; Taman et al., 2018). They found that competence has a positive effect on internal audit quality. According to IIA (2017), competence is a terminology that indicates the knowledge, skills, and other competencies an internal auditor needs to carry out his duties effectively. This expertise is demonstrated by obtaining professional certification from The Institute Internal Auditor or other professional organizations. Thus, internal auditors who already have professional certification for internal auditors can produce internal quality audits.

The second variable is independence. Five studies find that independence positively affects internal audit quality (Kiswara et al., 2018; Mahadewi & Dwirandra, 2022; Sari & Tri, 2018; Susanti, 2019; Taman et al., 2018). In contrast, Sukesi (2019) found that independence has no positive effect on internal audit quality. This shows that the TNI inspectorate auditors have not been able to be independent (Sukesi, 2019). According to IIA (2017), independence is the internal auditor's sense of freedom that can threaten his ability to carry out his responsibilities impartially. For this reason, internal auditors must have direct and unlimited access to Senior Management and the Board. Thus, the higher the independence of internal auditors, the higher the internal audit quality.

The third variable is objectivity. Two studies examine the effect of objectivity on internal audit quality (Kiswara et al., 2018; Susanti, 2019). They found that objectivity has
a positive effect on internal audit quality. IIA (2017) explains that objectivity is an impartial attitude of internal auditors in carrying out their duties so that they have confidence in the results of their work without compromising quality. From this explanation, it is clear that when internal auditors are objective, it can improve the quality of internal audits.

The fourth variable is professionalism. Four studies examine the effect of professionals on internal audit quality (Erlina & Muda, 2018; Kiswara et al., 2018; Mahadewi & Dwirandra, 2022; Taman et al., 2018). They found that professionals have a positive effect on internal audit quality. According to IIA (2017), internal auditors must use professional care in conducting audits, for example, the breadth of the scope of work, the complexity of the problem, and the adequacy and effectiveness of governance processes. The more careful internal auditors are in carrying out their duties, the higher the quality of the resulting audit.

The fifth variable is supervision. In addition to studies on the four attribute standards already discussed, there is 1 study examines performance standards (Arigawati, 2019). He found that the primary inspector's attention, supervision time, activities, and intensity positively affected internal audit quality. This is emphasized by the standard, which states that each assignment must be appropriately supervised to ensure that goals are achieved, quality is assured, and staff can develop. Thus, it can be concluded that the higher the level of supervision, the higher the internal audit quality.

Next, researcher discusses studies on noncompliance drivers that affect internal audit quality. Several researchers found that there are psychological factors that also affect internal audit quality, namely motivation (Kiswara et al., 2018), integrity (Kiswara et al., 2018; Susanti, 2019), self-efficacy (Erlina & Muda, 2018), ethics (Kiswara et al., 2018; Suksesi, 2019). In particular, Suksesi (2019) found that ethics moderates the relationship between audit experience and internal audit quality.

In addition to psychological factors, several researchers found that work experience and work environment positively affect internal audit quality (Kiswara et al., 2018; Mahadewi & Dwirandra, 2022; Suksesi, 2019). Besides that, Kiswara et al. (2018) found accountability as an antecedent of internal audit quality. In contrast, Nurdiono and Gamayuni (2018) found that accountability is a consequence of internal audit quality. This can be a research opportunity for future researchers to find whether accountability is an antecedent or consequent factor of internal audit quality.

According to Heider (1958), attribution theory explains that internal and external factors influence a person's behavior (focal person). Internal factors, for example, the ability a person has, while external factors, for example, the difficulty of the task and the luck factor. Therefore, it is necessary to make observations or evaluations to determine whether the factors that cause a person to behave come from internal or external factors. Furthermore, Birnberg et al. (2006) added that the focal person would assess external factors that encourage his behavior to do something. In contrast, other people will assess that internal factors cause someone to do something called actor-observer bias. When this theory is related to the context of this study, internal factors (compliance drivers) and external factors (noncompliance drivers) can affect internal audit quality.
In addition to theoretical aspects, researchers use different aspects of internal audit quality measurement. First, the quality aspect of internal audit is measured by looking at the conformity of the examination with audit standards and the quality of the audit report (Arigawati, 2019; Kiswara et al., 2018; Pratomo, 2016). Second, internal audit quality is measured by examining the possibility of an auditor finding violations or weaknesses in internal control (Erlina & Muda, 2018; Nurdiono & Gamayuni, 2018; Taman et al., 2018). Finally, internal audit quality is measured by the process, from planning to reporting audit results (Mahadewi & Dwirandra, 2022; Sari & Tri, 2018; Susanti, 2019).

CONCLUSION
This study found that the factors that influence the quality of public sector internal audits in Indonesia come from compliance drivers. Outcome orientation still dominates internal audit implementation. In addition, this study found that the most widely used theory is the attribution theory. Most previous researchers considered that the focal person owned by internal auditors could affect quality audits.

In contrast to the Kaizen philosophy in assessing internal audit quality. Based on the kaizen philosophy, internal audit quality is a process that is carried out continuously. Compliance drivers are only the beginning of creating internal quality audits. Internal audit quality can be achieved by prioritizing process and outcome aspects and being long-term oriented to provide added value to organizational governance. From the input side, the head and members of the internal audit team can continuously develop strategies and upgrade methods to produce quality audits. From the budget aspect, the government must provide a balanced budget to carry out an effective audit process that produces quality audits.

The problem of corruption in Indonesia is still a severe problem that the government must address. The Association of Certified Fraud Examiners (ACFE) (2020) found that fraud harms government agencies the most. Another finding is that internal audit is the second institution that finds much fraud. Therefore, internal government auditors are one of the vital actors that can help overcome the problem of corruption. Outcome-oriented research on public sector internal audit quality in Indonesia is still minimal. This provides ample opportunities for future research in exploring the factors that affect internal audit quality, especially from the process aspect. Thus, it is hoped that future research results can obtain a complete picture of internal audit quality in terms of both compliance drivers and demand drivers.

This study is limited to quantitatively analyzing articles, which may affect the analysis results. Future studies can be conducted using qualitative methods such as case studies or phenomenology to dig deeper into aspects of internal audit quality.

REFERENCES


