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## THE ROLE OF INDEPENDENCE AND EFFECTIVENESS OF INTERNAL AUDIT TO GOOD UNIVERSITY GOVERNANCE

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**ABSTRACT**

**Purpose:** *This study aims at providing an empirical evidence of the effectiveness of the Internal Audit (IA) as a mediating variable in the association of IA independence and Good University Governance (GUG).*

**Methodology/approach:** *A quantitative research using survey methods was carried out by applying Wrap PLS software for the data processing. The primary data were in the form of questionnaires, which were distributed to IA unit members from 58 state Islamic higher education institutions in Indonesia. There are 107 questionnaires that are accepted and processed.*

**Findings:** *The results show that independence does not influence GUG directly. However, the effectiveness of IA proved the capability of mediating the relationship between IA independence and GUG. Internal auditors in higher education institutions are still unable to fully maintain their independence. It happened because, apart from being an auditor, lecturers act as auditees in their capacity as educators.*

**Practical implications:** *For policymakers, the results of this research can be used as an input or a basis for establishing new regulations, especially regarding IA in Higher Education. For State Islamic Higher Education, this study provides recommendations for the need to increase the independence and effectiveness of the IA because it can support the achievement of GUG.*

**Originality/value:** *This study uses IA objects in state Islamic universities throughout Indonesia. This research model is different from previous research by placing IA effectiveness in the relationship between IA independence and GUG.*

**KEYWORDS:** *Effectiveness; Good University Governance; Higher Education; Independence; Internal Audit.*

#### **ABSTRAK**

**Tujuan penelitian:** Penelitian ini bertujuan untuk memberikan bukti empiris efektivitas Internal Audit (IA) sebagai variabel mediasi dalam hubungan independensi IA dengan Good University Governance (GUG).

**Metode/pendekatan:** Penelitian kuantitatif dengan menggunakan metode survei dilakukan dengan menggunakan software Wrap PLS untuk pengolahan datanya. Data primer berupa kuesioner yang dibagikan kepada anggota unit IA dari 58 perguruan tinggi Islam negeri di Indonesia. Ada 107 kuesioner yang diterima dan diproses.

**Hasil:** Hasil menunjukkan bahwa independensi tidak mempengaruhi GUG secara langsung. Namun, efektivitas IA membuktikan kemampuannya memediasi hubungan antara independensi IA dan GUG. Auditor internal di perguruan tinggi masih belum dapat sepenuhnya menjaga independensinya. Hal itu terjadi karena selain sebagai auditor, dosen juga bertindak sebagai auditee dalam kapasitasnya sebagai pendidik.

**Implikasi praktik:** Bagi pembuat kebijakan, hasil penelitian ini dapat digunakan sebagai masukan atau dasar untuk menetapkan peraturan baru khususnya tentang IA di Perguruan Tinggi. Bagi PTAI, kajian ini memberikan rekomendasi perlunya meningkatkan kemandirian dan efektifitas IA karena dapat mendukung pencapaian GUG.

**Orisinalitas/kebaharuan:** Penelitian ini menggunakan objek IA di Perguruan Tinggi Islam Negeri se-Indonesia. Model penelitian ini berbeda dengan penelitian sebelumnya dengan menempatkan efektivitas IA dalam hubungan antara kemandirian IA dengan GUG.

**KATA KUNCI :** Audit Internal; Efektivitas; Independensi; Perguruan Tinggi; Tata Kelola Universitas yang Baik.

## **INTRODUCTION**

Good University Governance is the implementation of Good Corporate Governance in Higher Education to improve the quality of Higher Education (Mukhtiyanto et al., 2020). The principles of governance, such as transparency, accountability, responsibility, efficiency, fairness, and reward-punishment, must be upheld in higher education institutions (Dawuda et al., 2015). The conception of Higher Education in Indonesia, according to the

Government Regulation Number 4 of 2014, provides autonomy in the academic and non-academic fields using the principles of GUG. The concept of GUG is essential to be applied in State Islamic Higher Education Institutions because it is one of the efforts to improve the performance of State Islamic Higher Education, especially in the financial sector (Chakim, 2019).

As of 2020, there are 294 universities under the Ministry of Religious Affairs of the Republic of Indonesia, 58 State Islamic Universities, and 236 Private Islamic Universities, according to [www.kemenag.go.id](http://www.kemenag.go.id). This figure shows the great potential of Islamic higher education institutions for the education market in Indonesia. While research on the topic of internal audit and GUG in Islamic higher education institutions is still lacking.

Internal audit is an independent and objective assurance and consulting activity, with the aim of increasing value and improving company operations, through a systematic approach, by evaluating and improving risk management, control, and corporate governance processes (Nerantzidis et al., 2020). The role of the internal auditor is very necessary in an higher education, because the internal auditor is an independent assessor to review the organization's operations and evaluate the adequacy of controls as well as the efficiency and effectiveness of organizational performance (Sari et al., 2017). In carrying out their duties, internal auditors must be supported by good management integrity. There are several theories underlying the implementation of GUG at higher education institutions.

Agency theory is one of the basic theories in GUG implementation. GUG is used to reduce differences in interests between the principal (community) and the agent (State Islamic Higher Education manager) (Jensen & Meckling, 1976). The amount of agency costs depends on the regulation and human ingenuity in drawing up contracts. Both laws and contracts provide consequences for providing individual incentives to minimize agency costs (Jensen & Meckling, 2019). Internal auditors are tasked with providing assurance that an adequate internal control system and activities are running economically, efficiently and legally in an organization (Yusof et al., 2019). If supervision is carried out properly, State Islamic Higher Education managers (agents) will also carry out their duties properly, thereby reducing agency costs.

A research on the effect of independence on good governance has been previously carried out with inconsistent results. The results of previous studies have shown an effect (Dawuda et al., 2015; Kaboi et al., 2018; Khalid & Sarea, 2021; Alhamdi & Siregar, 2022) and some have no effect (Alam & Miah, 2021). Another variable that affects GUG is the effectiveness of IA. In gauging internal audit effectiveness across multiple dimensions level of independence, reporting level, direct contact, conflict of interest, interference, unrestricted access, appointment can contribute to GUG (Khalid & Sarea, 2021). Based on the previous research, the effectiveness of IA has been shown to have a positive influence in achieving GUG (Ahmad et al., 2017; Chakim, 2019; Muktiyanto et al., 2020). Research conducted in Kenya shows that there is a relationship between independence and IA effectiveness in supporting GUG (Kaboi et al., 2018). Therefore, the effectiveness of IA is used in this study as a mediating variable between the effects of independence on GUG.

This study aims at providing an empirical evidence of the internal auditor's independence, directly or indirectly, through the effectiveness of IA on GUG especially in State Islamic Higher Education which has not been revealed by previous studies. It made practical and theoretical contributions, particularly in the field of public-sector auditing. This study provides an empirical evidence that the effectiveness of IA is needed to support the implementation of independence for achieving GUG. This research reinforces the agency

theory that it is also necessary to have an internal auditor at State Islamic Higher Education Institutions as an agent supervisor (campus manager) who represents the principal, in this case, it is the community. For policymakers, the results of this research can be used as an input or a basis for establishing new regulations, especially regarding IA in Higher Education. For State Islamic Higher Education, this study provides recommendations for the need to increase the independence and effectiveness of the IA because it can support the achievement of GUG.

Agency theory states that there are differences in interests between principals and agents which can be reduced by monitoring costs (Jensen & Meckling, 1976). One of the monitoring costs is the existence of a GCG structure including the existence of an internal auditor (Khalid & Sarea, 2021). In higher education institutions, internal audit will help the community as the principal to oversee campus management. One of the issues discussed in auditing is ensuring the ideal level of independence of internal sharia auditors (Haridan et al., 2018). Independence in auditing creates objectivity in conducting audits with minimal bias related to issuing and evaluating audit reports. Thus, the management can give complete confidence to audit the findings and recommendations (Yusof et al., 2019). Independence in auditing creates objectivity in conducting audits with minimal bias related to issuing and evaluating audit reports. This fact can give the management complete confidence to audit findings and recommendations (Ntim et al., 2017).

The level of independence reflects the organizational status given to the internal audit and affects the internal auditors' objectivity level. The high degree of independence on the part of the Sharia auditors maintains the trust of the users who rely on their reports (Abdallah & Ismail, 2016). The internal Sharia auditor's independence is critical in carrying out their duties effectively in professional practice. The potential conflict of interest, which internal Sharia auditors may face, erodes their independence when carrying out their work. Such tension risks, undermining the effectiveness of internal Sharia audit because of undue influence exerted on them by the management, undermines the objectivity of audit results (Agarwal & Medury, 2014). Without substantial independence, internal auditors assimilated into the management team with the consequential loss of ability to offer new perspectives through objective evaluation (Flesher & Zanzig, 2000). Without it, the auditor's opinion can be suspected. Independence is the foundation of the auditing profession. The literature about internal audit independence indicates three factors that significantly contribute to the level of auditor independence: (1) a clear delineation of the auditor's responsibilities; (2) the position of the internal auditor in terms of the degree of prestige in the organizational hierarchy of the institution; and (3) reporting structure (Uddin et al., 2013). Based on this explanation, the first hypothesis in this study is proposed as follows:

**H1.** *IA independence has a positive effect on GUG*

The effectiveness of internal audit in supporting GUG can be one of the monitoring costs discussed in agency theory (Jensen & Meckling, 2019). The Institute of Internal Auditors defines effectiveness in general as a degree, including quality, to achieve the stated goals (Zakaria et al., 2006). The internal audit shall establish performance metrics and related criteria, which are appropriate to its organization. It is necessary to measure the degree (including quality) of achievement of the objectives for which the internal audit activity is defined. According to AAOIFI, effectiveness is the performance of internal Sharia audit work, such as the ability to plan, implement, and document information, Sharia audit findings, recommendations, number of repeated reports, follow-up, and evaluation of the

extent of Sharia compliance with Islamic Sharia rules and principles, *Fatwas*, guidelines and instructions given by Sharia Supervisory Board (Elgattani & Hussainey, 2020). Internal audit effectiveness can be defined as the extent to which the stated objectives are achieved (Blackman & Kennedy, 2009). Most researchers agree that a program can be seen as effective if its results are aligned with its objectives.

The previous research has examined the effectiveness of internal audits (Ahmad et al., 2017; Koutoupis et al., 2018; Nerantzidis et al., 2020; DeSimone & Rich, 2020). However, audit research using state Islamic universities in Indonesia as the object has not been studied much before. Chapra & Ahmed (2002) isolated the factors that undermine the effectiveness of internal audits in the Malaysian public sector: lack of training and support from management, lack of employees, and management's negative perception of the recommended solutions provided by internal auditors. In addition, the level of training, education, experience, and professional qualifications of the internal auditors affect the effectiveness of the internal audit (Twaijry et al., 2003).

## H2. *IA effectiveness has a positive effect on GUG*

In gauging internal audit effectiveness across multiple dimensions level of independence, reporting level, direct contact, conflict of interest, interference, unrestricted access, appointment can contribute to GUG (Khalid & Sarea, 2021). IA independence as a dimension of IA effectiveness will certainly enhance its role in supervising agents as representatives of principals (Fama & Jensen, 2019). The most severe threats to internal auditor independence are intimidation and familiarity. It suggests that each assembly forms an efficient and high-quality Audit Review Implementation Committee (ARIC) to assist internal and external auditors. Internal Audit Charters should be developed for each meeting (Dawuda et al., 2015). The internal auditor's competence variable has a significant positive effect on due professional care. The independent variable also has a significant positive effect on due professional care. For the professional variables, they have a significant positive effect on the quality of internal audit. The internal auditor's competence has a significant positive effect on the independency (Yazid & Wiyantoro, 2018).

The previous study determined the impact of internal auditor's competence and the impact of independence on internal audit quality and internal control effectiveness. The findings indicate that internal auditors' competence and independence significantly affect the quality of internal audits (Aidi et al., 2022). Role ambiguity and conflict significantly and negatively affect DGT UKI (Directorate General of Taxes Internal Compliance Unit) officers' independence commitment. As a moderating variable, the internal auditor's competence level cannot increase the commitment to independence. Independence commitment is unaffected by the moderating variable of religiosity level (Bandiyono & Ashri, 2022). The internal auditor's independence affects the internal control effectiveness. Then, internal auditor competence affects internal control effectiveness. Internal auditor's independence and competence affect each other. Next, work experience has not been shown to moderate (strengthen or weaken) the independence and competence of internal control effectiveness (Alhamdi & Siregar, 2022).

Malaysia's public sector needs to strengthen its internal audit unit, particularly People Management, to develop a higher level of capability. Internal audit unit independence has a positive and significant impact on the overall level of internal audit capability. In the internal audit unit, a lack of independence leads to a lack of quality, which affects the capability level. The IACM (Internal Audit Capability Model) used in this study could guide the organization

to improve its capabilities (Yusof et al., 2019). Role ambiguity and conflict are strongly related to the commitment to independence. The underlying dimensions are discovered to have the most significant impact on the commitment to independence. Those are: first, ambiguity in both the internal auditor's exercise of authority and the internal auditor's time pressure; and second, the conflict between the internal auditor's values and the expectations and requirements of both management and their profession (Ahmad & Taylor, 2009).

According to the current study's findings, internal audit independence and management support for internal audit have a significant relationship with internal audit effectiveness (Ayboga & Ganji, 2021). From the evidence examined, the audit function needed to be more independent. Internal audit independence was found to be a significant predictor of the effectiveness of the regional government's audit function in the study. According to the study, the regional government should ensure that the regional directorate of internal audit is autonomous and has free access to audit evidence needed in the course of their audit work. The function should refrain the auditors from performing non-audit work, the auditors should be free to choose the audit scope, and they have to always functionally report to the regional audit committee (Kaboi et al., 2018). According to the previous research, the third hypothesis of this study is presented below:

**H3.** *IA independence has a positive effect on LA effectiveness*

IA as a principal's representative in supervising agents, must have independence that can be mediated by IA's effectiveness in achieving GUG as one of the principal's goals (Jensen & Meckling, 2019). Previous studies have shown the role of IA in achieving GUG. This result is consistent with agency theory, in which a more independent of IA can monitor the agent and improves the performances (Sari, 2012). Internal audit (represented by financial management parties) has no influence and cannot improve accountability, then, accountability must be established to achieve GUG (Sari et al., 2017). Research conducted in Kenya shows that there is a relationship between independence and IA effectiveness in supporting GUG (Kaboi et al., 2018).

Furthermore, we note that IA has been studied at all levels of government, with the most emphasis on local government. Even though we identify multiple research themes examined in the literature, the majority of studies use quantitative analysis to emphasize "governance" and "operational effectiveness" without any reference to any theory (Nerantzidis et al., 2020). According to the study's findings, internal auditors should limit their role to ensure a compliance with relevant laws and regulations rather than acting as consultants to improve the content and quality of Corporate Governance Statements information. It also contributes to corporate governance research by demonstrating how internal control effectiveness contributes to good corporate governance practices. As we have seen, internal audit and corporate governance statements are linked. On the other hand, the effective internal auditing improves corporate governance (Koutoupis et al., 2018). So, for the fourth hypothesis, we suggest that:

**H4.** *IA independence has an indirect effect on GUG through LA effectiveness*

## METHOD

Quantitative research using the SEM model was conducted to obtain the empirical evidence of the effect of IA independence and effectiveness on GUG, and mediating effect of IA effectiveness in the relationship of IA independence on GUG. The primary data are the questionnaires distributed to whatsapp group of the internal auditor from 58 State Islamic

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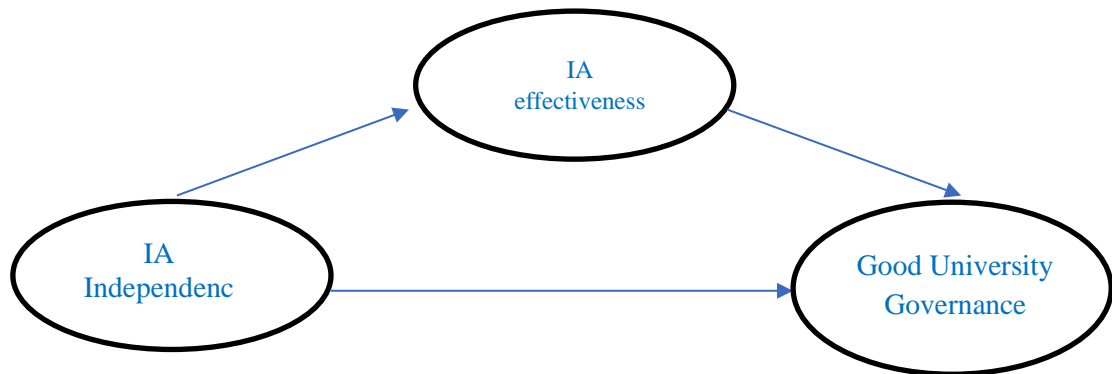
Higher Educations in Indonesia via Google Form. One hundred seven (107) questionnaires were successfully obtained and ready to be processed with the help of Wrap PLS software. The questionnaire was filled out by 20 chairmen, 48 secretaries and 39 members of IA PTKIN units throughout Indonesia which have sertification in internal audit.

Questionnaire testing was distributed to a group of financial staff at one State Islamic Higher Education, and 48 questionnaires were collected. Based on the results of the running data in Minitab, it was found that all questions in the questionnaire were declared valid and reliable. The question indicators of the questionnaire for IA independence and effectiveness variables refer to the previous conceptual studies (Khalid & Sarea, 2021). In comparison, the GUG questionnaire employs the indicators used by previous researchers (Muktiyanto et al., 2020) as shown in Table 1.

| Variable                                                            | Indicator                                          | Source                    |
|---------------------------------------------------------------------|----------------------------------------------------|---------------------------|
| Good university governance                                          | Transparency                                       | (Muktiyanto et al., 2020) |
|                                                                     | Governance structure                               |                           |
|                                                                     | Accountability                                     |                           |
|                                                                     | Responsibility                                     |                           |
|                                                                     | Fairness                                           |                           |
| IA Independence                                                     | Autonomy                                           | (Khalid & Sarea, 2021)    |
|                                                                     | Degre of freedom                                   |                           |
|                                                                     | Reporting level                                    |                           |
|                                                                     | Direct contact                                     |                           |
|                                                                     | No conflict of interest                            |                           |
|                                                                     | No interference                                    |                           |
|                                                                     | Unrestricted access                                |                           |
| IA Effectiveness                                                    | Appointment & removal                              | (Khalid & Sarea, 2021)    |
|                                                                     | Status in the organizational hierarchy             |                           |
|                                                                     | Ability to identify non-Syariah-compliant activity |                           |
|                                                                     | Procedures                                         |                           |
|                                                                     | Policies                                           |                           |
|                                                                     | Contribution                                       |                           |
|                                                                     | Completion of planned shariah audit                |                           |
| Completion of a work plan, recommendation, number of finding report |                                                    |                           |

**Table 1.**  
Questionnaire indicator

Source: (Khalid & Sarea, 2021; Muktiyanto et al., 2020)



**Figure 1.**  
Research Model

This study aims at providing an empirical evidence of the mediating effect of IA effectiveness in relationship of IA independence to GUG. Based on these objectives, the research model can be described in Figure 1.

Figure 1 shows that there is an independent variable, namely the independence of the internal auditors, as measured by 8 questions written in the questionnaire. The dependent variable was GUG as measured by 15 questions written in the questionnaire. Meanwhile, the mediating variable in this study was IA effectiveness as measured by 19 questions written in the questionnaire.

## RESULT AND DISCUSSION

### Descriptive Statistic

Based on the data processing carried out, the following are the results of the validity and reliability tests, as shown in Table 2.

Table 2 shows that the P-value indicates a value of  $< 0.05$  and a Cronbach alpha value  $> 0.7$ , which means that all questionnaire indicators are proven valid and reliable. Meanwhile, basic statistics can be presented in Table 3.

At the same time, the value of basic statistics shows that 52% of the respondents are male, with an average age of almost 38 years with ten years of work experience. The data show that the person assigned to IA already has quite a lot of experience and is mature. These characteristics are needed because IA is an essential part of a higher education institution that oversees and ensures that the organization runs according to the applicable regulations. The results of the questionnaire, with a Likert scale of 1 to 5, for the three variables show a relatively high average value, which is above 4. However, there are still questionnaires with a minimum value of 1 and 2. State Islamic Higher Education Institutions maintain independence and effectiveness, and GUG do well in some State Islamic Higher Education Institutions although there are Still State Islamic Higher Education Institutions that still need to implement it well. Furthermore, data processing is carried out using the Wrap PLS software, which produces the following values:



| Variable | N   | Correlation | P-Value | Cronbach's Alpha |
|----------|-----|-------------|---------|------------------|
| x11      | 107 | 0,431       | 0,007   | 0,9554           |
| x12      | 107 | 0,432       | 0,007   | 0,9547           |
| x13      | 107 | 0,584       | 0,000   | 0,9536           |
| x14      | 107 | 0,510       | 0,001   | 0,9549           |
| x15      | 107 | 0,498       | 0,001   | 0,9526           |
| x16      | 107 | 0,732       | 0,000   | 0,9533           |
| x17      | 107 | 0,558       | 0,000   | 0,9540           |
| x18      | 107 | 0,484       | 0,002   | 0,9551           |
| x21      | 107 | 0,775       | 0,000   | 0,9520           |
| x22      | 107 | 0,693       | 0,000   | 0,9527           |
| x23      | 107 | 0,726       | 0,000   | 0,9522           |
| x24      | 107 | 0,636       | 0,000   | 0,9527           |
| x25      | 107 | 0,663       | 0,000   | 0,9529           |
| x26      | 107 | 0,632       | 0,000   | 0,9534           |
| x27      | 107 | 0,716       | 0,000   | 0,9529           |
| x28      | 107 | 0,583       | 0,000   | 0,9530           |
| x29      | 107 | 0,800       | 0,000   | 0,9521           |
| x210     | 107 | 0,850       | 0,000   | 0,9519           |
| x211     | 107 | 0,796       | 0,000   | 0,9521           |
| x212     | 107 | 0,824       | 0,000   | 0,9523           |
| x213     | 107 | 0,691       | 0,000   | 0,9529           |
| x214     | 107 | 0,766       | 0,000   | 0,9523           |
| x215     | 107 | 0,836       | 0,000   | 0,9517           |
| x216     | 107 | 0,528       | 0,001   | 0,9529           |
| x217     | 107 | 0,775       | 0,000   | 0,9520           |
| x218     | 107 | 0,833       | 0,000   | 0,9518           |
| x219     | 107 | 0,793       | 0,000   | 0,9522           |
| y1       | 107 | 0,611       | 0,000   | 0,9530           |
| y2       | 107 | 0,693       | 0,000   | 0,9527           |
| y3       | 107 | 0,555       | 0,000   | 0,9538           |
| y4       | 107 | 0,754       | 0,000   | 0,9535           |
| y5       | 107 | 0,815       | 0,000   | 0,9519           |
| y6       | 107 | 0,619       | 0,000   | 0,9536           |
| y7       | 107 | 0,550       | 0,000   | 0,9538           |
| y8       | 107 | 0,397       | 0,014   | 0,9538           |
| y9       | 107 | 0,712       | 0,000   | 0,9529           |
| y10      | 107 | 0,841       | 0,000   | 0,9521           |
| y11      | 107 | 0,800       | 0,000   | 0,9527           |
| y12      | 107 | 0,815       | 0,000   | 0,9522           |
| y13      | 107 | 0,784       | 0,000   | 0,9523           |
| y14      | 107 | 0,704       | 0,000   | 0,9530           |
| y15      | 107 | 0,755       | 0,000   | 0,9520           |

**Table 2.**  
Questionnaire  
indicator

Source: Minitab output

| Variable         | N   | Mean   | Minimum | Maximum | scale   |
|------------------|-----|--------|---------|---------|---------|
| Gender           | 107 | 0,5234 | 0,0     | 1       | Nominal |
| Age              | 107 | 37,991 | 23      | 62      | Ratio   |
| Works experience | 107 | 9,825  | 0,75    | 36      | Ratio   |
| x11              | 107 | 4,2430 | 2       | 5       | Ordinal |
| x12              | 107 | 4,6168 | 1       | 5       | Ordinal |
| x13              | 107 | 4,4206 | 2       | 5       | Ordinal |
| x14              | 107 | 4,1215 | 2       | 5       | Ordinal |
| x15              | 107 | 4,4673 | 2       | 5       | Ordinal |
| x16              | 107 | 4,1308 | 2       | 5       | Ordinal |
| x17              | 107 | 3,9720 | 1       | 5       | Ordinal |
| x18              | 107 | 4,1495 | 2       | 5       | Ordinal |
| x21              | 107 | 4,2523 | 2       | 5       | Ordinal |
| x22              | 107 | 4,3645 | 2       | 5       | Ordinal |
| x23              | 107 | 4,4393 | 3       | 5       | Ordinal |
| x24              | 107 | 4,1402 | 1       | 5       | Ordinal |
| x25              | 107 | 4,3178 | 2       | 5       | Ordinal |
| x26              | 107 | 4,2336 | 2       | 5       | Ordinal |
| x27              | 107 | 4,4206 | 3       | 5       | Ordinal |
| x28              | 107 | 4,4393 | 2       | 5       | Ordinal |
| x29              | 107 | 4,4860 | 3       | 5       | Ordinal |
| x210             | 107 | 4,4393 | 2       | 5       | Ordinal |
| x211             | 107 | 4,3551 | 3       | 5       | Ordinal |
| x212             | 107 | 4,2710 | 2       | 5       | Ordinal |
| x213             | 107 | 4,3551 | 2       | 5       | Ordinal |
| x214             | 107 | 4,3645 | 3       | 5       | Ordinal |
| x215             | 107 | 4,3084 | 2       | 5       | Ordinal |
| x216             | 107 | 3,9907 | 2       | 5       | Ordinal |
| x217             | 107 | 4,2710 | 1       | 5       | Ordinal |
| x218             | 107 | 4,2710 | 1       | 5       | Ordinal |
| x219             | 107 | 4,1121 | 2       | 5       | Ordinal |
| y1               | 107 | 4,1402 | 2       | 5       | Ordinal |
| y2               | 107 | 4,0467 | 1       | 5       | Ordinal |
| y3               | 107 | 4,0467 | 1       | 5       | Ordinal |
| y4               | 107 | 4,0561 | 1       | 5       | Ordinal |
| y5               | 107 | 4,0561 | 1       | 5       | Ordinal |
| y6               | 107 | 4,1402 | 1       | 5       | Ordinal |
| y7               | 107 | 4,1121 | 1       | 5       | Ordinal |
| y8               | 107 | 4,1402 | 2       | 5       | Ordinal |
| y9               | 107 | 4,0935 | 2       | 5       | Ordinal |
| y10              | 107 | 4,0280 | 1       | 5       | Ordinal |
| y11              | 107 | 3,9346 | 2       | 5       | Ordinal |
| y12              | 107 | 4,0561 | 2       | 5       | Ordinal |
| y13              | 107 | 3,9813 | 2       | 5       | Ordinal |
| y14              | 107 | 4,1308 | 2       | 5       | Ordinal |
| y15              | 107 | 4,1028 | 2       | 5       | Ordinal |

**Table 3.**  
Descriptive  
Statistic

Source: Minitab output

| Test                                                   | Fit Criteria                                              | Value          |
|--------------------------------------------------------|-----------------------------------------------------------|----------------|
| <b>63</b> Average path coefficient (APC)               | P<0.001                                                   | 0.472 P<0.001  |
| Average R-squared (ARS)                                | P<0.001                                                   | 0.487, P<0.001 |
| Average adjusted R-squared (AARS)                      | P<0.001                                                   | 0.480, P<0.001 |
| Average block VIF (AVIF)                               | acceptable if $\leq 5$ , ideally $\leq 3.3$               | 1.946          |
| Average full collinearity VIF (AFVIF)                  | acceptable if $\leq 5$ , ideally $\leq 3.3$               | 2.217          |
| Tenenhaus GoF (GoF)                                    | small $\geq 0.1$ , medium $\geq 0.25$ , large $\geq 0.36$ | 0.488          |
| Simpson's paradox ratio (SPR)                          | acceptable if $\geq 0.7$ , ideally = 1                    | 1.000          |
| R-squared contribution ratio (RSCR)                    | acceptable if $\geq 0.9$ , ideally = 1                    | 1.000          |
| Statistical suppression ratio (SSR)                    | acceptable if $\geq 0.7$                                  | 1.000          |
| Nonlinear bivariate causality direction ratio (NLBCDR) | acceptable if $\geq 0.7$                                  | 1.000          |

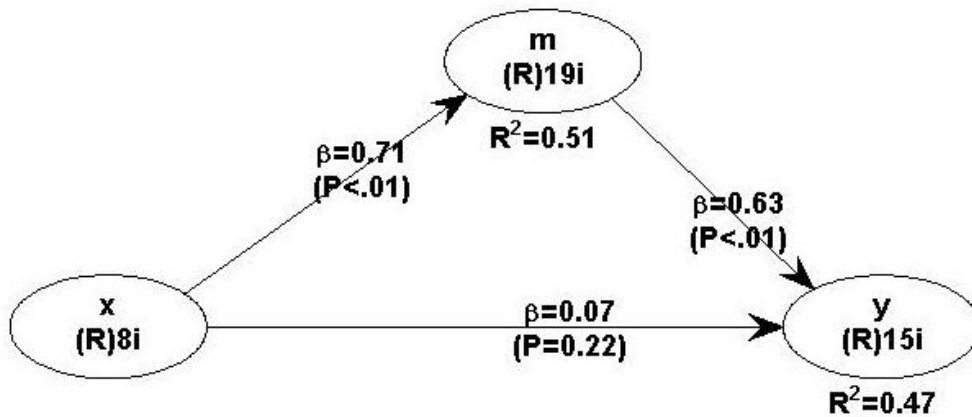
**Table 4.**  
The Goodness of Fit Model

Source: Wrap PLS output

Based on the output value of the PLS Wrap software in Table 3. above, it is indicated that the research model has met the requirements so that they can be used for further testing. Hypothesis testing was carried out next with the following results:

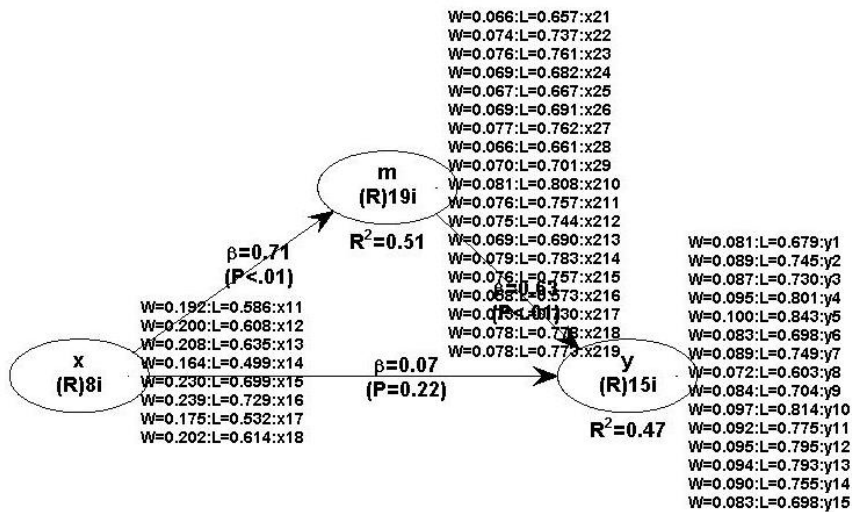
Figure 2. illustrates the positive influence of the independent variable on IA effectiveness. IA effectiveness also has a positive effect on GUG. On the other hand, independence is not proven to directly affect GUG. The R2 value in the abovementioned model is 51%, which means that 51% of IA effectiveness is influenced by independence. Meanwhile, 47% of GUG is influenced by the effectiveness of the IA. The presentation of the value of each questionnaire indicator can be described in Figure 3 below:

Figure 2. Results of research hypothesis testing



Source: Wrap PLS output

Figure 3. Loading factor for each indicator



Source: Wrap PLS output

Table 5. Hypothesis Testing

| Hypothesis | Model                           | Coefisien | P-value | Note         |
|------------|---------------------------------|-----------|---------|--------------|
| H1         | $x \Rightarrow y$               | 0.070     | 0.220   | Not accepted |
| H2         | $m \Rightarrow y$               | 0.630     | 0.000   | Accepted     |
| H3         | $x \Rightarrow m$               | 0.712     | 0.000   | Accepted     |
| H4         | $x \Rightarrow m \Rightarrow y$ | 0.449     | 0.000   | Accepted     |

Source: Wrap PLS output

In Figure 3, it can be seen that question x16 (IA members have unrestricted access to all work units for which they are responsible) is the most critical question in representing the independent variables. The most important question on the IA effectiveness variable lies in the x210 question (IA members always clearly state the goals and objectives of the examination). In the GUG questionnaire, question y5 (Internal control system is carried out effectively in the management of higher education institutions) is an essential question supporting this variable. The loading factor value for all questionnaire items shows a value of  $> 0.5$ , which means that all questions are valid.

The model produces a total effect of 0.523 or 52.3%. The hypothesis test results showed that independence does not directly affect GUG but has a positive effect indirectly through IA effectiveness. Meanwhile, independence has a positive effect on the IA effectiveness, and the effectiveness of the IA also has a positive effect on GUG.

## DISCUSSION

IA carries out internal supervision at Islamic higher education institutions. The study's results provide an empirical evidence that independence is not a factor that influences GUG. However, the effectiveness of the IA can mediate IA independence so that it can positively have an influence in achieving GUG. The result is possible that independence is no longer the crucial thing that is owned by an auditor. Previous research found the importance of soft skills regarding knowledge of performance standards which is seen as more important haven by an auditor ([Setyaningrum et al., 2022](#)). In agency theory, there is a difference in interests between the principal and the agent ([Jensen & Meckling, 1976](#)). Agents also get more complete information than the principal ([Jensen & Meckling, 2019](#)). However, these results are different from other studies which state that the external auditor's ethical behavior has an impact on public trust in them ([Prasetyo et al., 2022](#)).

Internal auditors in higher education are different from external auditors. The IA's appointment, as the agency's internal supervisor, is expected to reduce the real difference in information slack. Independence does not affect GUG achievement because most of IA members are lecturers who are also internal parts of campus management. Lecturers, as the teaching staff under Study Programs and Faculties who are then placed as IA members, will find it easier to maintain independence. Internal auditor at higher education institutions is different from internal auditors in companies where they are not parts of the department to be audited. Therefore, independence becomes less significant in achieving GUG.

The previous studies found that the independence of internal auditors has a positive and significant effect on the implementation of GUG ([Alhamdi & Siregar, 2022](#)). The independence of internal auditors significantly prevents fraud ([Dawuda et al., 2015](#)). However, it supports the research results of [Umar et al. \(2019\)](#), which state that independence has no significant effect on the quality of audit results. This study's results are aligned with the findings of previous studies stating that independence and internal audit have no effect and cannot increase accountability ([Sari et al., 2017](#)). This finding occurred because the internal auditors' independence is still affected by the determination of policies, and there are frequent mutations between work units. Meanwhile, the previous research stated that independence is an absolute requirement that must be possessed by an auditor; thus, it must be inherent in them ([Yazid & Wiyantoro, 2018](#)).

This study also provides an empirical evidence of the positive influence of the independence variable on the effectiveness of IA. The Independence of IA members can support the effective implementation of SPI tasks. Hence, it is a fact that lecturers, who also serve as internal auditors, must still try to maintain their independence. They can carry out various strategies such as: do not audit the faculties, which are their home base, and propose to the leader to add internal auditors coming from staff, not lecturers. This is in line with the results of previous studies, which show that independence affects professionalism. This means that the higher the independence of a auditor, the higher the professional care they show. Furthermore, the independence of internal auditors also has a positive influence on internal audit quality. In carrying out their duties, internal auditors must be able to obtain the information they need while still prioritizing independence ([Yazid & Wiyantoro, 2018](#)).

Meanwhile, the IA effectiveness has a positive influence in achieving GUG at PTKIN. The results of the research above support the empirical evidence of a previous research, which states that the function of the internal control system that is supported by the application of parties who are responsible in the process of financial management in high management, will be able to provide the information needed by users in the form of financial report accountability (Sari et al., 2017). The Internal Audit Unit has a positive effect on the achievement of GUG. Therefore, the technical ministries and higher education management need to pay more attention to institutions governance (Nurunnabi, 2016). The results obtained from this study are in line with the research conducted by Ahmad et al. (2017), which suggests that internal auditors have a significant role in achieving GUG in an educational institution. IA has carried out its duties well at this time, starting from the program to the follow-up process carried out by IA so that it can make a significant contribution or influence in improving managerial performance for the better in the University environment (Chakim, 2019). There is a role for the IA and the Supervisory Board in achieving GUG (Muktiyanto et al., 2020). Other research also confirms that internal control and accountability are important factors in achieving value for money performance for public sector organizations (Jatmiko et al., 2022).

The results of this study showed that after being mediated by the effectiveness of the IA, independence succeeded in positively influencing GUG. This fact illustrates that independence can only influence GUG with the support of good IA effectiveness. Supervision carried out by IA, contained in the results of audits or reviews in which there are recommendations for improvements in State Islamic Higher Education Institution governance, has a positive impact on continuous improvement. It can further improve GUG. Meanwhile, the IA exerts influence and can increase accountability. Then, accountability must be built to create GUG (Sari et al., 2017). The quality of financial reports is supported by a good internal control system. Furthermore, the quality of financial reports supports the achievement of GUG (Afiah & Azwari, 2015). Based on these results, it can be concluded that good internal control is an important factor in achieving GUG. Therefore, the existence of an effective IA is needed in ensuring the implementation of a good internal control system to improve GUG in tertiary institutions. It is not surprising that the effectiveness of the IA can be a mediating variable in the influence of independence and GUG. These results cannot be separated from the important role of IA effectiveness in achieving GUG.

## CONCLUSION

This study provided an empirical evidence of the mediating effect of IA effectiveness in mediating the effect of IA independence on GUG with full mediation results. The results for higher education institutions are different from commercial companies, which provide more evidence of the influence of independence in achieving corporate governance. The governance of public sector organizations, especially in Islamic Higher Education, is different from other organizations. At Islamic higher education institutions, there are moral values, namely the strong pesantren tradition, so that it highly values one's seniority and knowledge. Sometimes, this makes it difficult for internal auditors at State Islamic Higher Education Institution to maintain their independence. This study provides theoretical implications for implementing agency theory in Islamic higher education institutions. When the independence of IA is difficult to achieve, the effectiveness of IA can be used as mediation to support the achievement of GUG. The results of this study also provide important implications for researchers and practitioners emphasizing that, in practice, GUG is different from good corporate governance (GCG). More in-depth research on IA in Islamic higher education institutions using qualitative methods can be carried out further to

find out how they work to support GUG. This study limits the data obtained from state Islamic universities with a limited number of samples.

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