WSEAS TRANSACTIONS on BUSINESS and ECONOMICS DOI: 10.37394/23207.2024.21.3

# Human Resources Perspective: Audit Fee, Internal Control, and Audit Materiality Affect Auditor Switching

AMAD BADAWI SALUY<sup>1</sup>, NOVAWIGUNA KEMALSARI<sup>1</sup>, UNANG TOTO HANDIMAN<sup>1</sup>, PEBY ARWIYA<sup>1</sup>, AHMAD FARIDI<sup>2</sup>, BUSTANUL ARIFIN CAYA<sup>1</sup>, HALIANSYAH MACHMUD<sup>1</sup>

<sup>1</sup>Faculty of Economics and Business,

Mercu Buana University

Jl. Raya, RT.4/RW.1, Kel. Meruya Selatan., Kec. Kembangan, Jakarta Selatan,

Daerah Khusus Ibu Kota Jakarta 11650,

<sup>2</sup>Faculty of Health Sciences, Muhamadiyah Prof.Dr. Hamka University, Jl. Limau II No.2 Kramat Pela Jakarta Selatan, INDONESIA

INDONESIA

Abstract: - Auditor switching is a topic that has garnered significant attention from researchers in the field of accounting and auditing. Auditor Switching has important implications for audit quality and auditor independence. Auditor switching is often considered a strategy or approach used by companies to promote transparency, independence, and accountability in financial reports. Hence, this study aims to analyze factors that influence auditor switching such as audit fees, internal controls, and audit materiality. 175 in-person surveys were conducted with public accounting firm auditors from Jakarta Region, Indonesia. The study revealed that auditors related to auditor switching and indicated that audit fees, internal control, and audit materiality have a significant influence on auditors switching. Auditor switching seen from the perspective of human resources has a significant impact on the human resources of public accounting firms. The ability of public accounting firms to recruit and retain talented professionals, and public accounting firms need to attract and retain skilled auditors to provide quality services to their clients. Public accounting firms invest significant resources in training and developing their auditors to ensure they possess the necessary knowledge and skills.

Key-Words: - Audit fee, internal control, and audit materiality, auditor switching

Received: March 30, 2023. Revised: August 6, 2023. Accepted: September 4, 2023. Available online: October 24, 2023.

#### 1 Introduction

Auditor switching has emerged as a prominent subject of interest among scholars in the fields of accounting and auditing, [1], [2], [3]. This phenomenon holds significant implications for audit quality, auditor independence, financial report reliability, and corporate credibility, [4], [5]. Moreover, auditor switching can influence the dynamics between companies and auditors, providing market signals and insights into a company's financial condition and management practices, [6], [7], [8]. Consequently, auditor switching continues to be a focal point for researchers in the domain of accounting and auditing.

The concept of auditor switching pertains to the practice of companies changing their external audit firm, usually by appointing a new firm to replace the

previous one in conducting audits. Research investigating auditor switching has been carried out across diverse contexts and in various countries, including Indonesia. Several studies have explored the factors influencing decisions related to auditor switching, encompassing aspects such as the quality of previous audits, company size, management quality, operational complexity, and the size of public accounting firms, [9], [10]. Furthermore, studies have delved into the impact of auditor switching on audit quality, the credibility of financial reports, as well as its consequences on firm value and market reactions, [11], [12], [13]. Additionally, regulatory policies concerning auditor switching, such as auditor rotation independence policies, have been subject to scholarly discussion, [14]. Exploring these diverse contexts allows researchers to gain deeper insights into the specific dynamics and factors associated with auditor switching, thus contributing valuable knowledge to the auditing, accounting, and corporate governance literature.

William Kinney and Robert Libby pioneered the study of auditor switching in 1985 with their research titled "Determinants of the Auditor Switch Decision." Their findings indicated that companies tend to change auditors in response to previous instances of low-quality audits or when there is a change in company management. Moreover, company size and operational complexity were also identified as influential factors guiding the decision to switch auditors, [15].

Many researchers have researched switching auditors. According to [16], who states that the factors that influence a company's decision to switch auditors are changes in management or company companies experiencing difficulties, auditors who have just been placed in a company, and auditors who experience losses tend to switch auditors. Under, [17], who assert that switching auditors significantly affects the market's assessment of firm audit quality, switching auditors also has a significant effect on a firm's financial performance, and switching auditors have a greater effect on small firms. In accord with, [18], who indicated that there is a significant negative relationship between auditor switching and earnings quality. The study, [19], found that auditor switching was not significant to the cost of equity capital or the cost of debt. Accordingly, it is important to note that these factors are not mutually exclusive, and multiple factors can simultaneously influence a company's decision to switch auditors. Companies evaluate a combination of these factors in light of their unique circumstances and objectives to determine the most appropriate course of action.

Furthermore, according to, [20], who examine the factors that influence a company's decision to change auditors in the Australian financial market. Then, [21], and [22], analyze the effect of changing auditors on firm value in the Hong Kong financial market. Under, [23], examine the factors that influence a company's decision to change auditors in the Indonesian financial market.

Hence, the topic of the influence of audit fees, internal control, and audit risk materiality is a topic that has long been studied by researchers in the fields of accounting and auditing. Over time, the amount of research on this topic has increased as the interest of researchers and demand from practitioners has increased. So, it can be assumed that the topic of the influence of audit fees, internal

control, and audit risk materiality is still a topic that is widely researched by those in the accounting and auditing fields. However, this research will discuss it from the perspective of human resources.

Several researchers have conducted research related to the relationship between audit fees and switching auditors. According to, [24], who state low or substandard audit fees can be a factor causing switching auditors. The auditor effect of audit fees on companies' decisions to switch auditors was studied by, [25]. Different opinions, [26], [27], [28], express that audit fees affect a company's decision to change auditors in the financial market. Therefore, fee is an important factor that can influence auditor switching decisions, although its relative importance may vary depending on the specific circumstances and priorities of the company. Audit fees are an important consideration in auditor switching decisions, companies must strike a balance between cost considerations and the perceived value and quality of audit services.

Likewise, many researchers conducted research related to the relationship between internal control and auditor switching. The study, [29], stated that weak internal control systems impact switching auditors, [30], and declared that the internal control system and the risk of switching auditors have a relationship. The effect of the internal control system on switching auditors in the French financial market has been examined by, [31]. Then, the relationship between the internal control system and the risk of switching auditors in the Indian financial has been et has analyzed, [32]. Also, [33], examined the effect of internal control system weaknesses on the risk of auditing auditors in the Chinese financial market. Hence, the effectiveness of internal controls is an important factor that can influence auditor switching decisions. Internal controls play a significant role in auditor switching decisions, they are just one aspect of the broader evaluation process. Companies consider multiple factors, quality, including audit industry expertise, reputation, and the decision to switch auditors.

The following are some researchers who have researched the relationship between report materiality and switching auditors. Auditors to, [34], who investigates the association between audit effort and audit materiality thresholds, auditor benchmark choices, and auditors' use of benchmarks computed based on non-Generally Accepted Accounting Principles (non-GAAP). This The study also measures the materiality switch of auditor. Auditors analyzed the relationship between

the materiality of financial statements and the risk of switching auditors. This study also measures materiality impact of materiality-switching auditors. Then, [35], auditors, analyzed the relationship between the materiality of financial statements and the risk of switching auditors. Also, [36], examined the effect of financial report materiality on the risk of switching auditors. Also, [37], analyzed the relationship between the materiality of financial reports and switching auditors in the Indonesian financial market. Likewise, [38], examined the effect of financial report materiality on switching auditors. Audit materiality is a critical factor in the audit process, its direct impact on auditor switching decisions may be relatively limited. Materiality can indirectly influence auditor switching decisions, it is just one element among several that companies consider when evaluating the need for a change in auditors.

A public accounting firm is a company that plays an important role in auditing or examining the financial statements of a government or company. The public accounting firm must provide independent and objective audit services to the financial statements presented by the party being audited, to provide confidence to those who need the information.

Auditors, as integral employees of public accounting firms, are entrusted with the critical task of examining the financial statements of governmental bodies or companies. The auditor's role involves ensuring compliance with relevant accounting standards and objective accounting principles to present accurate and unbiased financial information. Independence and objectivity are paramount attributes that enable auditors to provide trustworthy audit results to stakeholders. To achieve this, auditors must comprehensively understand applicable audit standards and procedures and employ effective techniques to gather sufficient and relevant audit evidence.

Moreover, auditors must acknowledge and mitigate risks associated with audited parties, including fraud and materiality risks. Subsequently, they furnish their audit findings in the form of an opinion on the audited financial statements, instilling confidence in the financial information among users.

However, auditors often face challenges in maintaining independence when confronted with offers of compensation from clients. Remuneration poses a critical concern for the auditor profession, as it can compromise objectivity during the examination process. Violations of ethical codes or

a failure to uphold independence can lead to severe consequences, affecting an auditor's professional reputation and the reputation of their public accounting firm, potentially resulting in auditor switching.

This paper highlights the intersection of auditor switching with human resource management, where attracting and retaining skilled auditors is essential for audit firms to offer quality services and sustain their competitive advantage. Investment in training and development is pivotal in equipping auditors with the necessary knowledge and skills. Audit firms' organizational culture and values significantly influence auditor retention, with firms fostering positive work environments, teamwork, and ethical conduct enjoying long-term relationships with auditors and clients. Effective leadership and communication within audit firms are critical in motivating the workforce and promoting cohesion.

A high level of professionalism and adherence to ethical standards are prerequisites for auditors when conducting audits, [39]. Ethical lapses can lead to legal consequences and tarnish the reputation of both the auditor and the audit firm. Moreover, compromised ethical conduct can jeopardize audit results' quality and integrity, impacting the wider business community. Failure to meet auditing standards and professional ethics may result in client dissatisfaction, leading to undesirable auditor changes. Conversely, upholding professionalism enables auditors to avoid issues that could precipitate auditor switching, [40].

Related to the independence of the auditors in conducting audits, questions arise that need to be tested in this study. These questions will be the formulation of the problem in this study:

- RQ1: Does audit fees affect auditor switching?
- RQ2: Does internal control affect auditor switching?
- RQ3: Does audit materiality affect auditor switching?

#### 2 Literature Review

### 2.1 Switching Auditor

Auditor switching is an act of a company or organization to replace their auditor with a different auditor within a certain period. This is done to avoid conflicts of interest and maintain the independence of the auditors in carrying out their duties. Auditor switching is considered a way to improve audit quality and minimize the risk of accounting fraud.

Some researchers have succeeded in defining auditor switching. Auditor switching occurs when the company does not retain the current auditor and replaces it with a new auditor, [41]. Auditor switching is a change in the identity of the auditor who is responsible for auditing the company's financial statements, [42]. Auditor switching is when a company chooses to cut ties with the current auditor and replace it with a new auditor within a certain period, [43]. Auditor switching is a change in auditor identity that is carried out voluntarily by the company and not as a result of regulatory action or external pressure, [44].

Auditor switching must be done for several reasons, including: Increasing auditor independence, improving audit quality, and maintaining the company's reputation. Several factors can encourage companies to conduct auditor switching, including Audit regulations and requirements, changes in ownership and management, audit quality issues, accounting scandals, audit fees, and quality, and public interest.

#### 2.2 Audit Fee

An audit fee is a fee or honorarium given by the client or company being audited to the auditor to conduct an audit of the company's financial statements. Audit fees usually consist of costs for auditor time and services, overhead costs, and other costs related to conducting audits. The amount of the audit fee may vary depending on the complexity of the company being audited, the scope of the audit performed, as well as the reputation and experience of the appointed auditor, [45].

DeAngelo defines an audit fee as a fee paid by the company to the external auditor to audit the company's financial statements, [43]. According to the definition, [46], state that an audit fee is a fee paid by the client to the auditor for audit services and other services related to the audit. A similar definition stated by, [47], is that an audit fee is a fee paid by the company to the auditor for services auditing the company's financial statements, including additional services required during the audit.

Audit fees paid by the company to the auditor can influence the company's decision to change the auditor, [48]. If the company feels that the audit fees incurred are too high and not worth the benefits derived from the audit, the company may look for a new auditor who offers lower fees, [49]. Audit fees can also affect the auditor's perception of audit risk, [50]. If the auditor feels that the audit fee received is too low, the auditor may perceive a higher audit

risk. Conversely, if the audit fee received is high enough, the auditor may perceive a lower audit risk.

Several researchers have found a significant relationship and influence between audit fees and switching auditors. In his research, [43], found a relationship between audit fees and switching auditors in companies that were in poor financial condition. Then, [47], found that the size of the audit fee has a significant influence on the company's decision to change auditors. As well, [51], found that there was a significant effect between audit fees and switching auditors, with the finding that the greater the audit fee, the lower the probability of a company changing auditors. Even, [42], found that a higher audit fee reduces the probability of changing auditors in large companies that are listed on the stock exchange.

However, there is also research that finds that audit fees have no significant effect on switching auditors. The findings indicate that auditors who provide better audit quality will be more effective in reducing management's tendency to manipulate financial reports through discretionary accruals. This shows the importance of audit quality in maintaining the integrity of the company's financial statements, [52].

To better understand auditor switching phenomena, this study examines audit fees as one of the factors that influence auditor switching. We address the guiding research hypothesis:

H1: There is a significant effect between audit fees on switching auditors.

#### 2.3 Internal Control

Internal control in auditing constitutes a system or set of procedures devised by an organization's management to ensure the effective and efficient achievement of organizational goals, [53]. Its primary function is to mitigate the risks associated with fraud, errors, and legal violations arising from operational activities. Encompassing various aspects of organizational functioning, internal control encompasses policies and procedures governing human, financial, and material resources and information and technology systems. Within the audit context, internal control aims to guarantee the accuracy and reliability of the organization's financial reports while optimizing the utilization of organizational resources, [54].

The American Institute of Certified Public Accountants (AICPA) further defines internal control as a managerial process that provides adequate assurance regarding the effectiveness and efficiency of operations, the reliability of financial

reports, and compliance with pertinent laws and regulations.

The correlation between the internal control system and the risk of auditor switching is premised on the notion that a robust and efficient internal control system reduces the likelihood of errors or financial inaccuracies in statements, Consequently, an effective internal control system corresponds to lower risks of auditor switching. A well-implemented internal control system aids in the prevention of financial reporting errors and inaccuracies, thereby mitigating materiality risk and audit risk. Conversely, an inadequate or ineffective internal control system raises the likelihood of errors or inaccuracies in financial statements, leading to increased materiality risk and audit risk, which can precipitate the decision to change auditors, [41].

Some researchers have found that there is a significant effect between internal control and auditor switching, [41], [52], [56]. However, several studies state that there is a positive relationship between internal control and auditor turnover, where the weaker the internal control of a company, the more likely the company is to experience a change of auditor. Several studies have found that the internal control system has no significant effect on auditor switching, [57], [58].

To better understand auditor switching phenomena, this study examines internal control as one of the factors that influence auditor switching. We address the guiding research hypothesis:

H2: There is a significant effect between internal control on switching auditors.

#### 2.4 Audit Materiality

Audit risk pertains to the likelihood of a material error in a company's financial statements that may go undetected during the audit process. Auditors must carefully consider and assess this audit risk during planning and execution to minimize the potential for material errors in the financial statements, [50].

Materiality, on the other hand, is a concept linked to the significance of an error or discrepancy in financial statements. An error is deemed material if it can influence the decisions of users relying on the financial statements. When orchestrating and executing audits, auditors deliberate upon materiality, directing their efforts toward the revelation of substantial aberrations or incongruities within the financial statements, [59].

The consideration of materiality holds potential ramifications for transitions in auditors, particularly

in instances where the company falls below the materiality threshold, and the issue remains unresolved under the auspices of the incumbent auditor. Under such circumstances, the auditor is necessitated to apply an escalated level of scrutiny and embark upon a more comprehensive examination of the pertinent domain. If the company cannot resolve the material error or discrepancy or fails to provide adequate information for resolution, the auditor may encounter challenges in issuing an appropriate audit opinion, [60].

Moreover, in situations where uncertainties or discomfort arise due to a material error or inconsistency, the auditor might choose to refrain from providing an audit opinion or may opt to issue an unfavorable one, [61]. This situation can lead to company dissatisfaction, potentially prompting them to seek a different auditor who can better comprehend the matter and offer a more favorable audit opinion, [62]. The company's decision to change auditors may stem from the expectation that a new auditor will approach the audit with a fresh perspective and provide a more positive assessment of the financial statement The auditor cannot better understand auditor switching phenomena, this study examines audit materiality as one of the factors that influence auditor switching. We address the guiding research hypothesis:

H3: There is a significant effect between audit materiality on switching auditors.

### 2.5 Research Model

Based on the framework of the influence of audit fees on auditor switching, which then becomes the first hypothesis. The next frame of mind is the effect of internal control on auditor switching which then becomes the second hypothesis. The last frame of mind is the effect of audit materiality on auditor switching. For each hypothesis can be described in a research model (Figure 1).

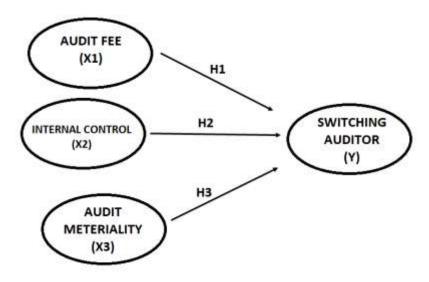


Fig. 1: Research Model Source: author's work

## 3 Research Methodology

This study was conducted in Jakarta Region, Indonesia which serves as a public accounting firm that provides auditing services. Jakarta Region promotes the location of the audit services industry from large (global) public accounting firms partnering with local public accounting firms, and small and medium public accounting firms owned by local accountants. The company provides financial statement audit services from large (global) companies, local, BUMN to small companies operating in Indonesia.

Public accounting firms are faced with the phenomenon of auditor turnover with consideration of audit fees, internal controls, and audit materiality. An audit fee is a fee or honorarium given by the client or company being audited to the auditor to conduct an audit of the company's financial statements. Internal control is used to minimize the risk of fraud, errors, and legal violations that can occur in the organization's operational activities.

Some public accounting firms are economically distressed as a result of the switching auditor's decision. For example, the public accounting firms annually got an assignment to examine companies that have been listed on the stock exchange, because audit fees continued to increase, making the company decide to switch auditors to another public accounting firm with a lower audit fee.

Participants in this study were selected based on their involvement in audit services businesses, especially public accounting firms that have experience with auditor switching. Respondents from this study were selected auditors who had been involved in conducting audits for at least three years.

A preliminary assessment of the study to collect information regarding factors that greatly influence auditor switching. Data were collected through distributing questionnaires to thirty auditors. Based on the data collected, it can be concluded that the factors that influence auditor switching are audit fees, internal controls, and audit materiality.

Hence, the auditor switching variable can act as the dependent variable, while audit fee, internal control, and audit materiality variables can act as independent variables. The auditor switching variable is supported by four indicator items; the audit fee variable is supported by nine indicator items; internal control variables are supported by nine indicator items; and audit materiality is supported by thirteen indicator items. Each indicator is measured using a Likert scale of one to five. Number one indicates the auditor's opinion strongly disagrees and five indicates the auditor's opinion strongly agrees.

Data were collected from the auditor of a public accounting firm. They were asked to fill out a closed statement questionnaire for each indicator for each variable. Auditors' opinions through survey answers became primary data. Questionnaires were distributed to each public accounting firm after obtaining permission from the human resource manager.

The primary data from the respondents was sorted whether all respondents had filled out each questionnaire correctly. Grateful all respondents answered correctly. The tabulation process uses the Excel application. Once complete, the data is processed using the SMART PLS 3.2.8 application.

Quantitative measurements are used to measure the effect of audit fees, internal controls, and audit materiality on auditor switching. The Partial Least Square (Smart-PLS) application version 3.2.8 PLS was conducted to evaluate the outer model or measurement model and assess the inner model or structural model. The outer model is to measure the validity and reliability and the inner model is to measure the hypothesis.

The final step is to discuss the research findings, whether they are "accepted" or "rejected". Based on these findings, it is followed by drawing conclusions and theoretical and practical implications.

#### 4 Results and Discussion

#### 4.1 Results

Based on questionnaires distributed to auditors in public accounting firms, data that could be collected reached 175 respondents from 185 questionnaires distributed to public accounting firms. After checking, all auditors answered correctly. Based on the auditor's answers, the auditor's demographic data can be explained that the majority of respondents were 103 women and the rest were 72 men. Then, there are 50% of auditors aged under 25 years, 30% of auditors with an age range of 25-35 years, 15% of auditors with an age range of 36-45 years, and 5% of auditors with an age more than 45 years old. Moreover, the data also show that 5% of respondents have a level education of Diploma were 5%. Followed by auditors who have level education of bachelor's degree were 90%, and 10% of respondents have level education of bachelor master. In addition, the respondent's data also shows that 66% of the auditors have worked for 3-5 years. Then followed by auditors who have worked for more than five years as much as 16%. The rest, auditors who have worked for under 3 years as much as 16%.

Based on The measurement model with reflective indicators, it shows that all data are normally distributed. The normality test shows that all indicators have a Skewness value of more than  $\pm 2.00$  and a kurtosis value of more than 7.00. This value indicates that all data can be used in subsequent tests. The measurement model test

refers to the measurement of validity and reliability tests. The validity test aims to determine whether the tested data has validity to measure structural tests. The reliability test aims to determine whether the data tested has consistency for the next test.

Validity test refers to convergent validity testing, discriminant validity testing, and average variance extracted (AVE) testing. Convergent Validity refers to the results of examining the loading factor values of the indicators being tested. The minimum limit for the loading factor value that can be accepted in the validity test is 0.5, this value is still acceptable, [63]. In this study, each indicator has a loading factor value above 0.5, such as the loading factor value of audit fee 3 is 0.784, and audit fee 7 is 0,601. Furthermore, the loading factor value of internal control 2 is 0.546, internal control 3 is 0.859, internal control 6 is 0.742, and internal control 7 is 0.744. Moreover, all loading factor values for each latent construct of the audit materiality and auditor switching are above 0.5. It indicates that a good correlation between each indicator and construct or shows that the indicator works well in the measurement model (Table 1).

Discriminant validity aims to test how far the latent construct differs from other constructs. A high value of discriminant validity indicates that a construct is capable of explaining the phenomenon being measured. If the loading value of each indicator on the construct is greater than the crossloading value. Average Variance Extracted (AVE) used to determine the achievement of discriminant validity requirements. The minimum value to state that reliability has been achieved is 0.5. In this study, each construct has an AVE value above 0.5, such as AVE for the audit fee is 0.523, internal control is 0.535, audit materiality is 0.562, dan auditors switching is 0.741. It indicates that the construct is capable of explaining the phenomenon being measured (Table 1).

For reliability, Cronbach's Alpha value can be used. This value reflects the reliability of all indicators in the model. The minimum value is 0.7 although a value of 0.60 is still acceptable, [63]. In this study, the Cronbach's Alpha value of the audit fee construct was 0.623, internal control was 0.724, audit materiality was 0.626, and auditor switching was 0.825. This indicates that internally each construct has good reliability or has good consistency in estimating.

Table 1. Measurement Model Test Results

	Outer	Audit Fee			_	Cronbach's	rho_A	-	_
	Loading		Materiality	Control	Audit	Alpha		Reliability	Variance Extracted
Audit Fee (X1)						0,623	0,656	0,734	0,523
Audit Fee 3	0,784	0,784	0,752	0,578	0,587				
Audit Fee 7	0,601	0,601	0,571	0,582	0,558				
Audit Materiality						0,626	0,684	0,791	0,562
Audit Materiality 1	0,838	0,429	0,838	0,264	0,646				
Audit Materiality 5	0,777	0,351	0,777	0,464	0,484				
Audit Materiality 9	0,614	0,264	0,614	0,434	0,303				
Internal Control						0,724	0,766	0,818	0,535
Internal Control 2	0,546	0,199	0,067	0,646	0,173				
Internal Control 3	0,859	0,079	0,375	0,859	0,626				
Internal Control 6	0,742	0,412	0,434	0,742	0,589				
Internal Control 7	0,744	0,001	0,374	0,744	0,43				
Switching Auditor						0,825	0,839	0,895	0,741
Switching Auditor 1	0,829	0,463	0,601	0,379	0,829				
Switching Auditor 2	0,865	0,355	0,452	0,691	0,865				
Switching Auditor 4	0,887	0,304	0,682	0,668	0,887				

Source: author's work

Table 2. Hypothesis Test Result

	T Statistics ( O/STDEV )	P-Value	Result
H-1: There is a significant effect between audit fees on switching auditors.	2,152	0.026	Accepted
H-2: There is a significant effect between internal control on switching auditors.	2,677	0.008	Accepted
H-3: There is a significant effect between materiality audit on switching auditors.	2,410	0.016	Accepted

Source: author's work

Moreover, Composite reliability can be used for reliability measurement. Composite reliability is considered better in estimating the internal consistency of a construct. This value reflects the reliability of all indicators in the model. The minimum value is 0.7. In this study, the Composite reliability value of the audit fee construct is 0.734, internal control is 0.818, audit materiality is 0.791, and auditor switching is 0.894. It indicates that internally each construct has good reliability or has good consistency in estimating.

A good measurement model is a model that can support the structural model, [64]. The results of the measurement model can support the hypothesis put forward by the theory. In this study, the adjusted R<sup>2</sup> value for the auditor switching variable is 0.646. It indicates that this study has a moderate model, [65]. It indicates that the auditor switching variable can be explained by the variable audit fee, internal control, and audit materiality of 64%.

While the remaining 36% is explained by other independent variables that are not in the research model. The coefficient of determination criterion (R²) must lie between zero and one (0 < R² < 1). R² close to 0 indicates low influence; R² close to 1 indicates a strong influence. The research determinant coefficient value of 0.646 indicates a strong influence on the auditor switching variable by the audit fee, internal control, and audit materiality variables.

The structural model refers to the T Statistic test and P-value. An acceptable T Statistic value must be above 1.96 with a 95% confidence level, then the T-table value is 1.96. The acceptable P value or significance value must be below 0.05. The results of hypothesis testing can be seen in Table 2.

The results of testing the hypotheses in Table 2 explain that all the hypotheses proposed are acceptable. Researchers receive H-1, H-2, and H-3. The H-1 test reveals the following values: The T

statistic is 2.152, and the P is 0.026 (Table 2). It explains that audit fees significantly affect auditor switching. This result is in line with previous research from, [43], who state there is a relationship between audit fees and switching auditors in companies that were in poor financial condition. Then, another finding from, [47], claims that the size of the audit fee has a significant influence on the company's decision to change auditors.

Then, the H-2 test reveals the results of the statistical T value is 2.677, and P is 0.008 (Table 2). It explains that internal control significantly affects auditor switching. This result is in line with previous research from, [41], [52], [56], who claim there is a significant effect between internal control and auditor switching.

Finally, the H-3 test reveals the results of the statistical T value is 2.410, and P is 0.016 (Table 2). It explains that audit materiality significantly affects auditor switching. This result is in line with previous research from, [61], who state if companies feel that the audit opinion is unsatisfactory, they may decide to change auditors and seek an auditor who is better able to understand the matter and provide a more positive audit opinion.

#### 4.2 Discussion

When a company switches auditors, it may signal that the previous auditor was not meeting the company's expectations or was not providing the level of assurance that the company requires, [21].

The outcomes of the structural model examination within this research unveil a notable correlation between audit fees and the act of changing auditors. The findings propose that a majority of auditors hold the belief that elevated audit fees are linked with an amplified probability of businesses switching their auditors. quantum of audit fees might fluctuate contingent on factors like the intricacy of the audited enterprise, the scope of the audit conducted, and the reputation and expertise of the designated auditor. As corporations contemplate the audit fees disbursed to auditors, it could impact their choice to shift auditors. Moreover, the magnitude of audit fees can function as an indicator for corporations to evaluate the caliber of services furnished by auditors. If corporations perceive the audit fees as exorbitant and not proportional to the advantages gained from the audit, they could explore alternative auditors who propose more competitive fees.

These findings align with prior research by several scholars, demonstrating the relationship and influence between audit fees and auditor switching. For instance, [43], found a connection between audit fees and auditor switching in companies experiencing financial difficulties. Similarly, [47], discovered that the magnitude of the audit fee significantly influences a company's decision to change auditors. Furthermore, [51], observed a significant effect of audit fees on auditor switching, revealing that higher audit fees are associated with a reduced probability of companies changing auditors. Finally, [42], reported that higher audit fees decrease the likelihood of auditor switching in large companies listed on the stock exchange.

The consistent findings from various researchers corroborate the importance of audit fees in the decision-making process of companies regarding auditor retention or change. As companies carefully consider the cost-benefit relationship of audit fees, audit firms may need to provide transparent and compelling justifications for the fees charged to enhance client satisfaction and mitigate the risk of auditor switching. These insights contribute to a better understanding of the dynamics influencing auditor-client relationships and the factors affecting auditor retention in the market.

Switching auditors involves the auditor's evaluation and disclosure of the risks of material misstatement and the effectiveness of the company's internal controls. The level of litigation risk faced by a company can influence the effort required by auditors during the audit process, thus impacting the audit fees charged. Higher litigation risk may necessitate more extensive audit procedures and resources to mitigate potential legal actions, leading to an increase in audit fees. Conversely, lower litigation risk may result in lower audit fees due to reduced effort required by auditors, [56].

Furthermore, the study's findings indicate that internal control and materiality significantly influence auditor switching. Auditors consider the level of internal control and materiality in forming their opinions, which subsequently impacts their audit effort. The disclosure of risks of material misstatement is a requirement mandated by auditing standards, aiming to inform financial statement users about potential impacts on the statements' accuracy. Changes in audit efforts may influence the auditors' perception of the materiality of risks and the likelihood of misstatement, affecting the nature and extent of disclosures in the auditors' report, [26].

These findings align with prior research demonstrating a relationship between internal control and auditor switching. An effective internal control system is associated with a lower risk of errors or inaccuracies in financial statements, thereby reducing materiality and audit risks. Conversely, inadequate internal controls increase the risk of errors or inaccuracies, leading to higher materiality and audit risk, which may prompt auditor switching, [41].

The findings underscore the importance of considering litigation risk, internal control, and materiality in the audit process. Auditors must balance addressing these risks effectively and setting appropriate audit fees. A robust internal control system is pivotal in reducing material misstatement risks and supporting auditors' conclusions, fostering confidence in financial statements. These insights contribute to a deeper understanding of the factors influencing auditor switching and offer valuable implications for audit practice and decision-making.

The research findings align with previous studies that highlight the relationship and influence between materiality and auditor switching. When companies change auditors, the new auditor may need to invest additional effort in setting materiality thresholds and understanding the company's accounting policies and practices. Conducting more tests may be necessary to gain confidence in the fairness of the financial statements, especially if concerns were identified in previous audits. The level of audit effort required during auditor switching is also impacted by the materiality level set by the new auditor. A higher materiality threshold may necessitate less audit effort due to the lower risk of material misstatement. Conversely, a lower materiality threshold may demand more audit effort to detect potential material misstatements, [36].

Auditor switching can significantly affect the human resources of public accounting firms. Companies may need to allocate time and resources to find and recruit suitable new auditors, which can be resource-intensive. Additionally, the working relationship between the company and the previous auditors may be disrupted, requiring the development of a new relationship with the new auditors. This transition may entail explaining company policies and procedures to the new auditors, consuming additional time and effort. Moreover, switching auditors can influence the company's internal accounting staff. New auditors may have different requirements and expectations,

impacting the work and responsibilities of the internal accounting staff, who may need to adjust to new auditors and invest more time and resources in fulfilling new assignments. Considering the costs, time, and effort associated with the change, companies must carefully assess the reasons and business needs before deciding to switch auditors.

The intersection of auditor switching with human resource management in public accounting firms involves attracting and retaining skilled auditors to provide high-quality services to clients. Investing in the training and development of auditors is crucial for maintaining competitiveness. A positive work environment, teamwork emphasis, and ethical conduct are essential for retaining auditors and fostering long-term relationships. Effective leadership that provides clear direction communicates expectations, and supports professional growth can contribute to higher job satisfaction and lower turnover rates among auditors. Strengthening these aspects of human resource management enhances the firm's ability to attract and retain talented professionals, ensuring continued excellence in audit services.

These insights underscore the significance of human resource management in the context of auditor switching, and they offer valuable implications for audit firms in maintaining a competent and satisfied workforce.

#### 5 Conclusion and Recommendation

This study explored the effects of audit fees, internal control, and audit materiality on the decision to switch auditors. The study's results are consistent with prior research, indicating that these factors indeed have a significant impact on choices related to changing auditors.

From a human resources viewpoint, the act of switching auditors carries substantial implications for public accounting firms. The process of identifying and recruiting suitable new auditors to meet a company's requirements can demand considerable time and resources, leading to both time and financial expenses. Furthermore, the transition to a new auditor can influence the dynamic between the company and its former auditors. The individual responsible maintaining the relationship with the previous auditor must establish a new connection with the newly appointed one, entailing additional time and effort to communicate and align on company policies and procedures.

Moreover, considering human resources, the act of changing auditors can have diverse consequences, impacting employee growth, performance enhancement, regulatory adherence, cost efficiency, and job role separation. Overall, the switch auditors decision to significantly reverberates within human resources and corporate management strategies. Therefore, it is essential for companies to thoughtfully weigh their objectives when selecting a new auditor and evaluate how this decision will impact their workforce and overall performance.

It is crucial to acknowledge that the choice to switch auditors is a complex one shaped by numerous factors. The interrelation between auditor switching and human resource management underscores the vital significance of effective talent management, fostering job contentment, nurturing professional advancement, and cultivating a positive organizational culture within the audit profession. Audit firms that adeptly handle their human resources are more likely to retain skilled auditors and uphold enduring client relationships, thereby lessening the necessity for frequent changes in auditors.

In light of the study's findings, it is recommended to offer incoming auditors opportunities to benefit from the knowledge and experience of their predecessors. This approach can amplify employee growth, equip them with new competencies, and enhance overall performance. Furthermore, the shift in auditors can serve as renewed motivation for employees to strive toward their objectives and elevate the quality of audits.

Additionally, public accounting firms are strongly advised to prioritize the attraction and retention of proficient auditors to deliver exceptional client services. This can be accomplished through substantial investments in auditor training and professional development, ensuring their competence and capabilities align with the demands of their roles.

In conclusion, this study sheds light on the determinants of auditor switching and underscores the pivotal role of human resource management in shaping the audit profession. By implementing effective talent management practices and fostering a supportive work culture, audit firms can retain talented auditors and provide exceptional services to their clients, ultimately reducing the need for frequent auditor switching.

#### Acknowledgement:

We express our gratitude for the support received from the Public Accounting Firm as an institution that has allowed us to examine its auditors. Thank you also to the accountants who were willing to be respondents.

#### References:

- [1] C. Deegan, "Introduction: The legitimizing effect of social and environmental disclosures—a theoretical foundation," *Accounting, Audit. Account. J.*, vol. 15, no. 3, pp. 282–311, 2002.
- [2] R. Khalifa, N. Sharma, C. Humphrey, and K. Robson, "Discourse and audit change: Transformations in methodology in the professional audit field," *Accounting, Audit. Account. J.*, vol. 20, no. 6, pp. 825–854, 2007.
- [3] H. K. Qawqzeh, W. A. Endut, N. Rashid, R. J. Johari, N. A. Hamid, and Z. A. Rasit, "Auditor Tenure, Audit Firm Rotation and Audit Quality: A," *Int. J. Acad. Res. Bus. Soc. Sci.*, vol. 8, no. 12, 2018.
- [4] M. A. Farouk and S. U. Hassan, "Impact of audit quality and financial performance of quoted cement firms in Nigeria," *Int. J. Account. Tax.*, vol. 2, no. 2, pp. 1–22, 2014.
- [5] A. Aghaei Chadegani, Z. Muhammaddun Mohamed, and A. Jari, "The determinant factors of auditor switch among companies listed on Tehran Stock Exchange," *Int. Res. J. Financ. Econ. ISSN*, pp. 1450–2887, 2011
- [6] S. Nazatul Faiza Syed Mustapha Nazri, M. Smith, and Z. Ismail, "Factors influencing auditor change: evidence from Malaysia," *Asian Rev. Account.*, vol. 20, no. 3, pp. 222–240, 2012.
- [7] Y. K. Susanto, "Auditor switching: management turnover, qualified opinion, audit delay, financial distress," *Int. J. Business, Econ. Law*, vol. 15, no. 5, pp. 125–132, 2018.
- [8] M. Zaman, M. Hudaib, and R. Haniffa, "Corporate governance quality, audit fees, and non-audit services fees," *J. Bus. Financ. Account.*, vol. 38, no. 1-2, pp. 165–197, 2011.
- [9] T. B. O'Keefe, D. A. Simunic, and M. T. Stein, "The production of audit services: Evidence from a major public accounting firm," *J. Account. Res.*, vol. 32, no. 2, pp.

- 241-261, 1994.
- [10] M. S. Beasley and K. R. Petroni, "Board independence and audit-firm type," *Audit. A J. Pract. theory*, vol. 20, no. 1, pp. 97–114, 2001.
- [11] Z. J. Lin, M. Liu, and Z. Wang, "Market implications of the audit quality and auditor switches: Evidence from China," *J. Int. Financ. Manag. Account.*, vol. 20, no. 1, pp. 35–78, 2009.
- [12] W. R. Knechel, V. Naiker, and G. Pacheco, "Does auditor industry specialization matter? Evidence from market reaction to auditor switches," *Audit. A J. Pract. Theory*, vol. 26, no. 1, pp. 19–45, 2007.
- [13] H. Chang, C. S. A. Cheng, and K. J. Reichelt, "Market reaction to auditor switching from Big 4 to third-tier small accounting firms," *Audit. A J. Pract. Theory*, vol. 29, no. 2, pp. 83–114, 2010.
- [14] S. Fearnley and V. Beattie, "The reform of the UK's auditor independence framework after the Enron collapse: An example of evidence-based policymaking," *Int. J. Audit.*, vol. 8, no. 2, pp. 117–138, 2004.
- [15] W. Kinney and R. Libby, "Research on credible financial reporting 1961-99: The contributions of Professor Nicholas Dopuch," *J. Account. Res.*, vol. 37, pp. 1–15, 1999.
- [16] H. A. Khasharmeh, "Determinants of auditor switching in Bahraini's listed companies-an empirical study," *Eur. J. Accounting, Audit. Financ. Res.*, vol. 3, no. 11, pp. 73–99, 2015.
- [17] J. V Carcello, T. L. Neal, Z. Palmrose, and S. Scholz, "CEO involvement in selecting board members, audit committee effectiveness, and restatements," *Contemp. Account. Res.*, vol. 28, no. 2, pp. 396–430, 2011.
- [18] J. N. Myers, L. A. Myers, and T. C. Omer, "Exploring the term of the auditor-client relationship and the quality of earnings: A case for mandatory auditor rotation?," Account. Rev., vol. 78, no. 3, pp. 779–799, 2003
- [19] J. Karjalainen, "Audit quality and cost of debt capital for private firms: Evidence from Finland," *Int. J. Audit.*, vol. 15, no. 1, pp. 88–108, 2011.
- [20] T. A. Lee, F. Clarke, and G. Dean, "The dominant senior manager and the reasonably careful, skillful, and cautious

- auditor," *Crit. Perspect. Account.*, vol. 19, no. 5, pp. 677–711, 2008.
- [21] S. H. Teoh, "Auditor switches as signals of firm value: theory and empirical evidence." The University of Chicago, 1988.
- [22] H. I. Abba and A. A. Sadah, "Audit quality and firm value of listed deposit money banks in Nigeria," *Int. J. Econ. Financ. Issues*, vol. 1, no. 4, pp. 269–282, 2020.
- [23] I. Khasanah and J. Nahumury, "The factors affecting auditor switching in manufacturing companies listed in Indonesia Stock Exchange (BEI)," *Indones. Account. Rev.*, vol. 3, no. 2, pp. 203–212, 2013.
- [24] A. Gregory and P. Collier, "Audit fees and auditor change; an investigation of the persistence of fee reduction by type of change," *J. Bus. Financ. Account.*, vol. 23, no. 1, pp. 13–28, 1996.
- [25] H. Chen, S. Hua, Z. Liu, and M. Zhang, "Audit fees, perceived audit risk, and the financial crisis of 2008," *Asian Rev. Account.*, vol. 27, no. 1, pp. 97–111, 2019.
- [26] P. F. Zhang and G. Shailer, "Changes in audit effort and changes in auditors' disclosures of risks of material misstatement," *Br. Account. Rev.*, vol. 53, no. 3, p. 100970, 2021.
- [27] K. A. Kamarudin, A. Islam, A. Habib, and W. A. Wan Ismail, "Auditor switching, lowballing, and conditional conservatism: evidence from selected Asian countries," *Manag. Audit. J.*, vol. 37, no. 2, pp. 224–254, 2022.
- [28] P. T. Hai and N. L. D. Quy, "Effect of audit rotation, audit fee and auditor competence to motivation auditor and audit quality: Empirical evidence in Vietnam," *Acad. Account. Financ. Stud. J.*, vol. 23, no. 2, pp. 1–14, 2019.
- [29] J. Oradi, K. Asiaei, and Z. Rezaee, "CEO financial background and internal control weaknesses," *Corp. Gov. An Int. Rev.*, vol. 28, no. 2, pp. 119–140, 2020.
- [30] Y. Yao and S. Xue, "Comment letters and internal control opinion shopping," *China J. Account. Stud.*, vol. 7, no. 2, pp. 214–244, 2019.
- [31] (text in French) P. Amans, A. Mazars-Chapelon, and F. Villesèque-Dubus, "Le portefeuille d'outils de gestion porteur de compromis dans les organisations à la croisée des mondes: le cas des Scènes

- nationales," *Comptabilité-Contrôle-Audit*, vol. 26, no. 1, pp. 21–77, 2020.
- [32] R. Kumar and V. Sharma, *Auditing: Principles and practice*. PHI Learning Pvt. Ltd., 2015.
- [33] T. Chen, "Common Auditors and Internal Control Similarity: Evidence from China," *Br. Account. Rev.*, p. 101173, 2022.
- [34] K.-A. M. Dwyer, N. M. Brennan, and C. E. Kirwan, "Audit Materiality and Audit Effort: Evidence From Materiality Benchmarks," *Accounting, Finance. Gov. Rev.*, vol. 29, 2022.
- [35] R. J. Elder, S. Lowensohn, and J. L. Reck, "Audit firm rotation, auditor specialization, and audit quality in the municipal audit context," *J. Gov. Nonprofit Account.*, vol. 4, no. 1, pp. 73–100, 2015.
- [36] R. David and I. Abeysekera, "Auditor judgments after withdrawal of the materiality accounting standard in Australia," *J. Risk Finance. Manag.*, vol. 14, no. 6, p. 268, 2021.
- [37] F. Widharma and E. Susilowati, "Auditor Switching, Financial Distress, and Financial Statement Fraud Practices with Audit Report Lag as Intervening Variable," *J. Account. Strategy. Finance.*, vol. 3, no. 2, pp. 243–257, 2020.
- [38] S. C. Rice and D. P. Weber, "How effective is internal control reporting under SOX 404? Determinants of the (non-) disclosure of existing material weaknesses," *J. Account. Res.*, vol. 50, no. 3, pp. 811–843, 2012.
- [39] A. Kusumawati and S. Syamsuddin, "The effect of auditor quality to professional skepticism and its relationship to audit quality," *Int. J. Law Manag.*, vol. 60, no. 4, pp. 998–1008, 2018.
- [40] A. Zarefar and A. Zarefar, "The Influence of Ethics, Experience, and Competency toward the quality of auditing with professional auditor skepticism as a Moderating Variable," *Procedia-Social Behav. Sci.*, vol. 219, pp. 828–832, 2016.
- [41] G. V Krishnan and G. Visvanathan, "Was Arthur Andersen different? Further evidence on earnings management by clients of Arthur Andersen," *Int. J. Discl. Gov.*, vol. 5, pp. 36–47, 2008.
- [42] H. Ashbaugh, R. LaFond, and B. W. Mayhew, "Do non-audit services compromise auditor independence? Further

- evidence," *Account. Rev.*, vol. 78, no. 3, pp. 611–639, 2003.
- [43] L. E. DeAngelo, "Auditor size and audit quality," *J. Account. Econ.*, vol. 3, no. 3, pp. 183–199, 1981.
- [44] L. J. Abbott, S. Parker, G. F. Peters, and K. Raghunandan, "The association between audit committee characteristics and audit fees," *Audit. A J. Pract. theory*, vol. 22, no. 2, pp. 17–32, 2003.
- [45] E. Makarim and A. F. Mita, "Ifrs Convergence And Audit Fees: An Asian Cross-Country Study," in *English*, Nova Publisher, 2020.
- [46] D. A. Simunic, "The pricing of audit services: Theory and evidence," *J. Account. Res.*, pp. 161–190, 1980.
- [47] Z.-V. Palmrose, "Audit litigation research: Do the merits matter? An assessment and directions for future research," *J. Account. Public Policy*, vol. 16, no. 4, pp. 355–378, 1997.
- [48] K. B. Schwartz and K. Menon, "Auditor switches by failing firms," *Account. Rev.*, pp. 248–261, 1985.
- [49] B. Arrunada and C. Paz-Ares, "Mandatory rotation of company auditors: A critical examination," *Int. Rev. Law Econ.*, vol. 17, no. 1, pp. 31–61, 1997.
- [50] C. E. Hogan and M. S. Wilkins, "Evidence on the audit risk model: Do auditors increase audit fees in the presence of internal control deficiencies?," *Contemp. Account. Res.*, vol. 25, no. 1, pp. 219–242, 2008.
- [51] J. Krishnan and J. Krishnan, "The role of economic trade-offs in the audit opinion decision: An empirical analysis," *J. Accounting, Audit. Finance.*, vol. 11, no. 4, pp. 565–586, 1996.
- [52] G. V Krishnan, "Audit quality and the pricing of discretionary accruals," *Audit. A J. Pract. theory*, vol. 22, no. 1, pp. 109–126, 2003.
- [53] B. Mahadeen, R. H. Al-Dmour, B. Y. Obeidat, and A. Tarhini, "Examining the effect of the Organization's Internal Control System on Organizational Effectiveness: A Jordanian empirical study," *Int. J. Bus. Adm.*, vol. 7, no. 6, pp. 22–41, 2016.
- [54] M. Baltaci and S. Yilmaz, "Keeping an eye on Subnational Governments: Internal control and audit at local levels," *World Bank Institute, Washington, DC*, 2006.

- [55] S. T. Tunji, "Effective internal controls system as an antidote for distress in the banking industry in Nigeria," *J. Econ. Int. Bus. Res.*, vol. 1, no. 5, pp. 106–121, 2013.
- [56] A. Seetharaman, F. A. Gul, and S. G. Lynn, "Litigation risk and audit fees: Evidence from UK firms cross-listed on US markets," *J. Account. Econ.*, vol. 33, no. 1, pp. 91–115, 2002.
- [57] L. Koonce, N. R. Walker, and W. F. Wright, "A cognitive characterization of audit analytical review; Discussion," *Auditing*, vol. 12, p. 57, 1993.
- [58] M. A. Geiger and K. Raghunandan, "Auditor tenure and audit reporting failures," *Audit. A J. Pract. theory*, vol. 21, no. 1, pp. 67–78, 2002.
- [59] R. Libby and T. Brown, "Financial statement disaggregation decisions and auditors' tolerance for misstatement," *Account. Rev.*, vol. 88, no. 2, pp. 641–665, 2013.
- [60] L.-P. Sirois, J. Bédard, and P. Bera, "The informational value of key audit matters in the auditor's report: Evidence from an eyetracking study," *Account. Horizons*, vol. 32, no. 2, pp. 141–162, 2018.
- [61] G. L. Gray, J. L. Turner, P. J. Coram, and T. J. Mock, "Perceptions and misperceptions regarding the unqualified auditor's report by financial statement preparers, users, and auditors," *Account. Horizons*, vol. 25, no. 4, pp. 659–684, 2011.
- [62] E. Ruiz-Barbadillo, N. Gómez-Aguilar, C. De Fuentes-Barberá, and M. A. García-Benau, "Audit quality and the going-concern decision-making process: Spanish evidence," *Eur. Account. Rev.*, vol. 13, no. 4, pp. 597–620, 2004.
- [63] J. F. Hair Jr, L. M. Matthews, R. L. Matthews, and M. Sarstedt, "PLS-SEM or CB-SEM: updated guidelines on which method to use," *Int. J. Multivar. Data Anal.*, vol. 1, no. 2, pp. 107–123, 2017.
- [64] N. K. Avkiran and C. M. Ringle, *Partial least squares structural equation modeling: Recent advances in banking and finance*, vol. 239. Springer, 2018.
- [65] M. Sarstedt, C. M. Ringle, and J. F. Hair, "Partial least squares structural equation modeling," in *Handbook of market research*, Springer, 2021, pp. 587–632.

# Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)

- Ahmad Badawi Saluy and Novawiguna Kemalasari carried out the conceptualization and the optimization.
- Unang Toto Handyman focused on methodology and implemented the software SMARTPIs.
- Peby Arwiya has organized and executed the experiments.
- Ahmad Faridi was responsible for formal analysis and data curation.
- Bustanul Arifin Caya was responsible for writing—the original draft preparation.
- Haliansyah was responsible for writing—reviewing and editing.

All authors have read and agreed to the published version of the manuscript.

# Alternatively, in case of no funding, the following text will be published:

No funding was received for conducting this study.

#### Alternatively, in case of no conflicts of interest, the following text will be published:

The authors have no conflicts of interest to declare that are relevant to the content of this article.

# Creative Commons Attribution License 4.0 (Attribution 4.0 International, CC BY 4.0)

This article is published under the terms of the Creative Commons Attribution License 4.0 <a href="https://creativecommons.org/licenses/by/4.0/deed.e">https://creativecommons.org/licenses/by/4.0/deed.e</a> n US