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Internal audit decision making and belief adjustment model

Savira Yunitasari, Luciana Spica Almilia*

Universitas Hayam Wuruk Perbanas, Surabaya, East Java, Indonesia

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ABSTRACT

This research aims to examine the disparities in audit choices between auditors who are exposed to positive news followed by negative news and those who are exposed to negative news followed by positive news. The investigation focuses on the End of Sequence presentation pattern as well as the lengths of information series (short and long). The study employed a mixed-design experimental approach, incorporating both between-subjects and within-subjects elements. The participants in the research comprised 124 undergraduate students from Accounting Hayam Wuruk Perbanas University. The results reveal that there is no distinction in audit decisions between participants who first receive positive news followed by negative news, and those who receive negative news followed by positive news in the End of Sequence presentation pattern. It also demonstrates that the arrangement of evidence (positive news followed by negative news or vice versa) and the length of information series (short or long) do not influence the decision-making of internal auditors in relation to the End of Sequence presentation pattern. Overall, the study findings refute the hypothesis proposed by Hogarth and Einhorn (1992) regarding the belief model revision, as they fail to support the notion that the End of Sequence presentation pattern induces primacy effects.

ABSTRAK

Penelitian ini bertujuan untuk menguji perbedaan keputusan audit antara auditor yang menerima informasi good news follow by bad news dan auditor yang menerima informasi (bad news diikuti good news pada pola penyajian End of Sequence dan informasi seri pendek dan panjang. Metode penelitian yang digunakan dalam penelitian ini adalah metode eksperimen mix design (between and within subject). Partisipan dalam penelitian ini adalah 124 mahasiswa S1 Akuntansi Universitas Hayam Wuruk Perbanas. Temuan penelitian ini menunjukkan bahwa tidak terdapat perbedaan keputusan audit antara partisipan yang memperoleh informasi good news diikuti informasi bad news dibandingkan partisipan yang memperoleh informasi bad news diikuti good news pada pola penyajian End of Sequence. Hasil penelitian ini juga menunjukkan tidak terdapat pengaruh pengambilan keputusan auditor internal pada pola penyajian End of Sequence dengan variabel urutan bukti (good news diikuti bad news dan bad news diikuti good news) dan seri informasi (panjang dan pendek). Secara keseluruhan hasil penelitian ini menunjukkan bahwa Prediksi model revisi keyakinan Hogarth dan Einhorn (1992) yang tidak terdukung dalam penelitian ini adalah penelitian ini tidak berhasil memberikan dukungan bahwa pola penyajian End of Sequence (EoS) akan menimbulkan primacy effect.

* *Corresponding author, email address: lucy@perbanas.ac.id*

1. INTRODUCTION

Internal audit is characterized as an impartial and unbiased evaluation of a company's operations, designed to furnish an appraisal of management practices and an assessment of the efficiency of the company's internal control mechanism. The establishment of an internal audit department is driven by the management's necessities to attain the company's objectives. Consequently, internal audit holds significance as it operates as a collaborative partner with ownership interests, entrusted with the duty of evaluating the implementation of regulations, legalities, standards, or policies by the company's management. This evaluation encompasses the adept utilization of company resources in a resourceful, effective, and economical manner. Furthermore, the internal audit role extends to identifying instances of fraud and risks within the organization.

News in Jawa Post 2016 show that GOJEK has taken action to suspend around 7,000 employees suspected of involvement in fabricated accounts. This decision arose due to the significant number of complaints received regarding counterfeit orders. Following an internal review of the control management system implemented by GOJEK, several issues were identified. These included inadequate security measures, incomplete implementation of IT access control among authorized personnel, underperforming technology development systems, IT resource losses, and an inability to enhance the quality of IT services for customers and improve IT-related human resources within the company's operational framework.

This incident underscores the significance of internal auditing within a company. In this specific scenario, the presence of internal audit proved beneficial for GOJEK as it unveiled vulnerabilities within the company's control system. It highlights that effective performance of internal auditors necessitates a blend of financial and managerial information that is comprehensive, pertinent, substantial, and reliable. The data collected by internal auditors serves as the foundation for analyses, evaluations, suggestions, consultation support, and the provision of insights into the measures that have undergone assessment. This, in turn, enables the company to advance towards achieving its corporate objectives.

Internal auditors require a diverse range of information to effectively conduct audit tasks. This information encompasses the proof collected by the auditor during the audit procedure. The nature of the evidence discovered by the auditor will shape the conclusions drawn. This evidence can either indicate risks or the absence of risks. Evidence that indicates potential risks needs to be further examined for additional assessment procedures. The extent to which the auditor delves into the audit process depends on the quality of evidence uncovered. It is imperative for internal auditors to acquire sufficient information to ensure a seamless audit process. Evidence can originate from both internal and external sources. Particularly in the context of auditing specific sections like the purchasing and cash disbursement division, the company must furnish the internal auditor with requested information. In conducting an audit within this division, the internal auditor must gather evidence from both external and internal sources, as depicted in Table 1.

In Table 1, when conducting an audit of the purchasing and cash disbursement division, the internal auditor will require a combination of information from both internal and external sources. The extensive array of information, whether extensive or concise, needed by the auditor, significantly impacts the decision-making process of internal auditors. Auditors will deliberately select adequate, pertinent, substantial, and proficient information that forms the foundation for their decisions.

The novelty of this study lies in its examination of the application of the Belief Adjustment Model within the decision-making context of an internal auditor. The rationale behind employing the Belief Adjustment Model in the decision-making of internal auditors stems from the substantial evidence landscape that internal auditors navigate – encompassing the sequence and type of evidence requiring analysis. The Belief Adjustment Model can be elucidated by the internal auditor when describing the process of revising an individual's belief due to the sequential presentation of evidence (Ashton and Kennedy, 2002). Internal auditors, while executing audits, lack prescribed guidelines for the sequence of evidence processing, thus possessing the autonomy to determine the order in which evidence information is considered and processed. This autonomy influences the application of the belief adjustment model concerning the sequence of evidence. The manifestation of the belief adjustment model

Table 1
Sources of Information in the Audit Cash Purchase & Expenditure Cycle

EXTERNAL SOURCES	INTERNAL SOURCES
Current Account Statement	Company Ledger Records
Debt Payment Receipts	Physical Calculation of Cash
Invoice	Inventory records
Supplier Invoice	Managerial Reports
Supplier Data	Debit Memo
Tax Invoice	Goods Receipt Report
External Audit Report	Purchase Request Letter
Purchase Receipt	Proof of Debt Payment
Letter of Delivery of Goods	Purchase Order Letter

Source: Ferrando & Dameri (2011)

in the context of End of Sequence presentation occurs when the internal auditor renders judgments subsequent to encountering an assortment of intricate evidence promptly and in succession.

There are several studies that examine several factors that influence audit judgment. Haryanto (2018) show that audit judgment is influenced by framing factors and there is polarization of individual-group decisions in making audit judgments. When the auditor changes audit beliefs, it will be influenced by the order of evidence factor and polarization of individual-group decisions will occur as a result of interactions with the order of evidence factor. Haryanto (2018) support prospect theory and belief adjustment model theory. Unlike the research conducted by Ayuananda & Utami (2015), this study aims to examine the effect of the reviewer on the order, method of presentation, and form of information on audit decision making when information is presented sequentially or simultaneously. Ayuananda &Utami (2015) show that there is a reviewer effect on SPI decisions when information is provided in a sequential pattern, and in audit decision making there is a reviewer effect.

Research on the *Belief Adjustment* Model in decision making has been carried out by many previous researchers. Ashton and Ashton (1988) provided evidence that belief revision is greater for disconfirming negative evidence than for confirming positive evidence when possibility of evaluation that audit controlling can detect material errors (initial anchor) by 50%. When the initial anchor changes to 20%, belief revision is greater for positive evidence than negative evidence. When the initial anchor is changed again to 80%, belief revision is greater for negative evidence than positive evidence. Research Ashton & Ashton (1988) provided support for the contrast effect.

Pinsker (2011) provides a finding that if the sequence of evidence is presented in long information, investors tend to experience a *recency effect*. In the context of auditing, several studies have presented the *recency effect* and *primacy effect* which provide various empirical research results regarding the *recency effect* on audit decisions when the information is presented in the form of *Step by Step* and regarding the *primacy effect* on audit decisions when the information is presented in the form of *End of Sequence*. This study is based on the theory concept of the *Belief Adjustment* Model by Hogarth & Einhorn (1992). This theory provides a prediction when two pieces of information have different contents, namely mixed information (*good news - bad news*) and the presentation pattern is presented sequentially so that someone tends to make a revision of the initial beliefs that have been made.

In this study, the presentation pattern used is *End of Sequence* (EOS). The *End of Sequence* (EOS) pattern is a pattern of presenting information when internal auditors make *judgments* based on complex and overall information that is obtained right away. Internal auditors will receive a variety of complex evidence information and obtained directly and when the internal auditor makes *judgments* after receiving and processing existing evidence information, this is what illustrates the *End of Sequence* presentation pattern. The information series to be tested in this study are short information series and long information series. A short information series is when there are two to 12 pieces of information, while a long information series is when there are more than 17 pieces of information. This study uses six short series of information and 18 long series of information.

The purpose of this study is to examine and determine the differences in audit decisions between auditors who receive *good news* followed by *bad news* and auditors who receive *bad news* followed by *good news* on the *End of Sequence* presentation pattern and short information series and long information series and to test and knowing the effect of the sequence of evidence (*good news* followed by *bad news* and *bad news* followed by *good news*) and short and long information series on internal auditors' decisions on the *End of Sequence* presentation pattern. Participants in this study were students majoring in Accounting at Universitas Hayam Wuruk Perbanas who are currently and/or have taken Management Control Systems, Accounting Information Systems, and Auditing courses.

2. THEORITICAL FRAMEWORK AND HYPOTHESIS

Recency Effect and Primacy Effect

The effect of the order of evidence according to the *Belief Adjustment* Model provides a prediction whether there will be a *primacy effect* or a *recency effect*. The difference in the effect of the *Belief Adjustment is* influenced by the different types of order and time to present the evidence. *Primacy effect* and *recency effect are* interpreted as mixed evidence, namely positive and negative. Hogarth & Einhorn (1992) provide evidence that at certain times a person tends to give weight to current information that is more important than previous information or what is called the *recency effect*. Tubbs, Messier, & Knechel (1990) stated that previous research in auditing used a *belief adjustment* model because it could explain every auditor's considerations.

The *belief adjustment* model states that if information is presented based on the *end-of-sequence primacy effect* presentation pattern, it is likely that it will occur. The pattern of the presentation *end of the sequence* is the overall pattern of information presentation or simultaneously. *Recency effect is* likely to occur when the final evidence received is more considered than the initial evidence. *Primacy effect is* likely to occur when the first evidence is more considered than the final one. The following is an overview of the prediction of sequence effects on the model developed by Hogarth & Einhorn (1992).

Table 2 shows a set of mixed information (order ++ - or - ++) so as to predict the order effects that will occur based on the information series and presentation patterns. This will determine what effect will influence the internal auditors in making decisions.

Internal Audit

Internal auditors fulfill the role of impartial and unbiased assurance and advisory functions aimed at delivering enhanced evaluative insights to enhance a company's operations. Through a methodical and organized approach, internal auditing offers support to the organization to aid in the accomplishment of objectives. This assistance involves systematic evaluation, contributing to the enhancement of the effectiveness of risk management, control, and governance processes within the organization (Andayani, 2008).

At this time the existence of internal audit is an important part of the company. The existence of internal audit continues to grow in line with the development of the global business world. Professionalism is needed in carrying out duties as an internal auditor. The role of auditors in increasing effectiveness and efficiency is very helpful for management in facing business competition.

Table 2
Expectation of Order Effects Based on the Belief Adjustment Model

	Simple		Complex	
	End of Sequence (EoS)	Step by Step (SbS)	End of Sequence (EoS)	Step by Step (SbS)
Mixed Information Set				
Short	Primacy	Recency	Recency	Recency
Long	Primacy	Primacy	Primacy	Primacy
Consistent Information Set				
Short	Primacy	No Effect	No Effect	No Effect
Long	Primacy	Primacy	Primacy	Primacy

Source: Hogarth and Einhorn (1992)

Several studies examine the factors that influence investment decision making. Several studies have used the Belief Adjustment model in making investment decisions. Rofiyah & Almilia (2017) conducted tests on the effect of the confidence adjustment model consisting of presentation patterns (*step by step* and *end of sequence*), sequence of evidence, and information series on investment decision making and this study aims to test the effect of the level of trust excessive on investment decision making. The results show that there is an effect of sequence on the presentation pattern of *Step by Step* for long and short series of information. This is also reflected in *End of Sequence* which shows that no sequence effects occur in a long series, but there are sequence effects that occur in a short series.

Nisa (2017) examined the differences investors' assessments by using a *belief adjustment* model to consider presentation patterns (*step by step* and *end of sequence)*, order of evidence (++ - and - ++) and types of information (accounting and nonaccounting). The results showed that the *recency effect* occurred in the *Step by Step* (SbS) presentation pattern and the types of accounting and non-accounting information. *Recency effect* also occurs in the *End of Sequence* (EoS) presentation pattern and the type of accounting information, whereas there is no difference in the types of non-accounting information.

Hanafi (2017) examined *belief-adjustment models* and *framing effect* on the investment decision of non-professional investors. The results showed that decisions between participants who received information in the order of good news were followed by bad news and bad news followed by good news in a *step-by-step* presentation pattern with *framing effect* conditions according to different information. The decision between participants who received information in the order of good news followed by bad news was different compared to participants who received information in the order of bad news followed by good news on the *step-by-step* tracing pattern and the *framing effect* information was reversed and showed that the *End of Sequence* presentation pattern was in the order, different ++ - (*good news* followed by *bad news*) compared to - ++ (*bad news* followed by *good news*) there is no sense of order, in other words there is no significant difference in the average final *judgment*.

Pravitasari & Almilia (2015) examined whether there are different things in investment decisions between participants who are given good news followed by bad news and participants who are given information about bad news followed by good news in the *end-of-sequence* presentation pattern and short information series. The results showed that there were things that were significantly different in *end-of-sequence* participants who were given information from good news followed by bad news compared to participants who were given bad news *followed by* good news as well as *recency* effects occurred in making investment decisions.

Kusumawardhani and Almilia (2015) examined the differences between investment decisions for participants that inform good news is followed by bad news than participants that inform bad news is followed by good news on the presentation pattern *Step by step* and series information length. The results showed that there was no difference in the decisions of investment participants who were given good news followed by bad news with participants being given good news followed by bad news in a *step by step* presentation.

Almilia et al. (2013) examined the theory of the *Belief Adjustment* model developed by Hogart and Einhorn (1992) by looking at the influence of information presentation patterns, order of evidence (*step by step* and *end of sequence)* , and types of information (accounting or non-accounting information). accounting) in making investment decisions. The results showed that the bias *judgment,* especially the *recency* effect, was greater if the pattern of presenting the information under study was made *step by step,* whereas if it was presented with an *end-of-sequence* information presentation pattern there would be no difference.

Almilia & Supriyadi (2013) examined the effect of the order effect and the *Step by Step End of Sequence* or confidence adjustment model on investment decision making. The results showed that there was an order effect in making investment decisions, namely the effect of the order when the disclosure pattern was *step by step*. It also shows that there is no sequence effect when the disclosure pattern is *end of sequence*.

Several other studies examined visualization factors, task complexity and individual characteristics (overconfidence), except using the belief adjustment model in investment decisions making. Almilia, Dewi

& Wulanditya (2019) examined the influence of visualization factors and task complexity in investment decisions. The results showed that the effect of visualization in decision making had an effect only when the decision maker received an assignment with a low assignment complexity, while the effect of the complexity of the assignment had an effect on good decision making as measured by the level of accuracy, level of confidence and level of calibration.

Almilia, Wulanditya, & Nita (2018) examined the effect of the *Investment Decision Frame* and the *Belief-adjustment Model* on investment decision making. The results showed that there was no different response between participants who received accounting information (*financial decision frame*) and participants who received non-accounting information (*expressive decision frame)* in the *end-of-sequence* presentation pattern. However, when participants are provided in the form of accounting information compared to participants who are provided in the form of non-accounting information in a *step-by-step* presentation pattern*, it* shows a difference in response.

Almilia & Wulanditya (2016) examined the effect of *overconfidence* and experience which can provide an increase or decrease in order effect in making investment decisions. The results showed that there was consistency with the prediction that individuals with high levels of self-confidence would avoid the sequence effect.

Other research also examines the factors that influence decision making in the field of auditing. Haryanto (2018) examined the types of decision making on the *framing* effect and the order effect to make audit judgments by auditors. The research results prove that when the auditor makes an *audit judgment* which is affected by the *framing* factor and there is a polarization of the decisions of the individuals in making *audit judgment*. And when the auditor changes the audit belief it will be influenced by the sequence of evidence factors and there will be a polarization of individual-group decisions due to interactions with the evidence sequence factor. The results of this study support the *prospect theory* and *belief adjustment model theory*.

Ayuananda & Utami (2015) examined the effects of reviews on the order, manner of presentation, and the form of audit information for making decisions on when information is presented sequentially or simultaneously. The results show that there is a recency effect on Internal Auditor decisions when information is provided with a sequential pattern, and in audit decision making, there is a recency effect in the form of a chart.

Basically, decision making requires considerations that are quite difficult in determining decisions related to audit decisions. Auditors need to analyze and evaluate the various kinds of evidence that are obtained to support the decision in the end. The order in which evidence is presented in a complex environment will also affect the final decision making by the auditor. Based on the background and previous studies previously described, the research hypothesis can be formulated as the following:

$H_{1\ a}$: There are differences in audit decisions between auditors who obtain information (evidence) good news followed by bad news compared to auditors who obtain information (evidence) bad news followed by good news on the end-of-sequence presentation pattern and short information series.

H_{1b}: There are differences in audit decisions between auditors who obtain information (evidence) of good news followed by bad news compared to auditors who obtain information (evidence) of bad news followed by good news on the end-of-sequence presentation pattern and long series of information.

H_2: Evidence sequence (good news followed by bad news and bad news followed by good news) and information series (long and short) affect internal auditors' decision making with the End of Sequence presentation pattern.

3. RESEARCH METHOD

Research Subjects

Subjects in this study were accounting undergraduate students at University of Hayam Wuruk Perbanas Surabaya who had criteria or were currently taking Accounting Information Systems, Management Control Systems, and Auditing courses. *The treatment* in this study is based on: (1) Order of evidence (++ - and - ++); and (2) Information series (long and short). The subject of this study uses undergraduate accounting students as a substitute for internal auditors. Researchers ensured that the students involved in this study could represent internal auditors by as follows: (1) the Researchers provided

prerequisites for students participating in this study were the students who had taken courses in Accounting Information Systems, Management Control Systems and Auditing, (2) the Researchers ensuring research subjects have the same characteristics of knowledge by providing general knowledge questions about internal auditing and manipulation checks, (3) The experimental material provided aims to explore understanding and general knowledge related to internal auditing, and not to explore skills regarding internal auditing which of course it takes experience.

There were a total of 124 participants and all of them passed the manipulation checks and general questions. A total of 124 participants can be categorized as follows: 62 participants received information with sequences of evidence (++ - and - ++) and long series of information; 62 participants received information using an evidence sequence (++ - and - ++) and a short information series.

Experimental Design

This research employs experimental methodology, a technique that investigates the cause-and-effect connections between multiple variables by controlling, altering, and treating them under the guidance of researchers, utilizing real-world data to address a specific issue. The study's experimental framework followed a 2x2 design, encompassing variations in evidence sequence (++ - and - ++) and information delivery (long and short), incorporating a mixed design that combines both between-subject and within-subject elements.

Research Procedures

In this study, the researchers used a *Paper Based Experiment,* an experiment carried out with a questionnaire, distributed and filled out by participants manually. Participants filled in one of the four scenarios that had been randomly determined. The task of the participants in this study is to value the internal control system and operational activities of PT SHAL. In the early stages, participants will be given background information on the company, findings in the internal control system, and operational activities as a reference.

Participants were asked to reassess the findings of the audit in accordance with the information system of internal control and information operations and patterns of presentation *End of Sequence* (EOS) with initial findings and provide a scale for the assessment of risk of audit findings using a scale *Likert* VERY RISKY (1) - VERY RISK (7). After understanding and responding to the audit findings, participants respond to *manipulation checks* and statements to provide a measure of ability in the areas of management control systems, accounting information systems, and auditing.

The procedures that participants must perform when carrying out a risk assessment are based on the *End of Sequence* (EoS) presentation pattern, the procedure performed by participants for the *End of Sequence* (EoS) presentation pattern, namely:

a. Understand the company background
b. Receive information regarding preliminary audit findings
c. Receive information on internal control systems and information on operational activities. In scenario I and scenario II, a total of six items were given, while in scenario III and IV were given 18 items.
d. Provide a one-time risk assessment in scenarios I, II, III and IV.
e. Participants are asked to respond to *manipulation check* questions and basic knowledge of accounting questions to measure the participants' basic skills in management control systems, accounting information systems, and auditing.
f. Debriefing Session.

Some related information were given to participants so that they could fill out the questionnaire, such as: PT. SHAL was formerly known as PT. AFA is a company in the consumer goods industry that was founded on December 5, 1933. On January 11, 1982, the internal auditor of PT. SHAL found that the company did not perform data backup and disaster recovery procedures so that the company often experienced data loss as an initial reference. The following is the sequence of evidence (*good news*) in a short information series of three pieces of information, namely:

a. There are restrictions on access to supplier data so that there is no inaccurate or invalid supplier data.
b. The company reconciled Rp250, 000,000 of accounts payable with the general ledger and found no errors in posting the accounts payable.
c. The company made a policy to make payments only from the original copy of the supplier's invoice so that there were no

duplicate payments which resulted in a debt reduction of IDR 350,000,000 for the current year.

The following is the sequence of evidence (*bad news*) in a short information series of three pieces of information, namely:

a. Companies do not perform data *back-up* and disaster recovery procedures so that they often experience data loss.
b. The company did not perform periodic calculation of physical inventory which resulted in a shortage of inventory of Rp500, 000,000.
c. The company did not prohibit the receipt of gifts from suppliers which caused a lot of bribery in the company and there was a fictitious cash outflow of Rp225, 000,000.

This current study uses 18 information from findings in the internal control system and operational activities as references, which are divided into nine *good news* and nine *bad news*. The following is for information (*good news*) in a long information series consisting of nine pieces of information, namely:

a. There are restrictions on access to supplier data so that there is no inaccurate or invalid supplier data.
b. The company reconciled Rp250, 000,000 of accounts payable with the general ledger and found no errors in posting the accounts payable.
c. The company made a policy to make payments only from the original copy of the supplier's invoice so that there were no duplicate payments which resulted in a debt reduction of IDR 350,000,000 for the current year.
d. The purchase of goods for Rp150, 000,000 is in accordance with the company's budget so that there are no purchases of goods that exceed the company's budget.
e. The company reviews and approves purchase requests to reduce purchases of unneeded goods, resulting in a minimum cash usage of Rp150, 000,000.
f. The company conducts tracking and monitoring of product quality with suppliers so that the company does not buy inferior quality goods.
g. Suppliers *supply* goods regularly and periodically so that there is no shortage of inventory in the warehouse.
h. The company always verifies the bill of shipping costs and uses the approved delivery channels so that there are no errors in the supplier's invoice that corresponds to the company's debt to the *supplier of* IDR 250,000,000.
i. Filling in invoice based on the due date and paid on time to get a discount of IDR 10,000,000.

The following is for information (*bad news*) in a long information series consisting of nine pieces of information, namely:

a. Companies do not perform data *back-up* and disaster recovery procedures so that companies often experience data loss.
b. The company did not perform periodic calculation of physical inventory which resulted in a shortage of inventory of Rp500,000,000.
c. The company did not prohibit the receipt of gifts from suppliers which caused a lot of bribery in the company and there was a fictitious cash outflow of Rp225,000,000.
d. The absence of information to the admissions officer regarding the quantity of inventory ordered, resulting in an error in the calculation of the purchase of inventory of Rp300, 000,000.
e. Companies often receive goods that are not ordered because there is no agreement on the existence of the order before accepting each shipment which causes a loss of Rp50,000,000.
f. The company does not collect and monitor supplier delivery performance data resulting in unreliable suppliers.
g. The company does not make managerial reports related to poor division performance that causes poor managerial performance.
h. For goods whose sales turnover was not good, it resulted in an *overstock* which resulted in a loss of Rp200,000,000.
i. The company did not perform physical security on blank checks and check signing machines, resulting in cash theft of Rp80, 000,000.

Research Variables

The dependent variable in this study is the internal audit decision while the independent variables are the sequence of evidence (++ - and - ++) and information series (long and short).

Data Analysis Techniques

Normality test is used as a data analysis technique which provides the objective to test whether the regression model, the dependent variable and the independent variable have a

Table 3
Hypothesis Testing Cells

Information Series	Order of Evidence	Presentation Pattern End of Sequence (EoS) Scenario
Short Information Series	Order of Evidence ++ -	Cell I
	Order of Evidence - ++	Cell II
Long Information Series	Order of Evidence ++ -	Cell III
	Order of Evidence - ++	Cell IV

Source: Processed Data

normal distribution or not. After testing the data using the normality test to determine how the data is distributed, a *parametric sample t-test is* performed. If the data are not normally distributed, the test is carried out using the *non-parametric Mann-Whitney* test. The *t-test was* used to provide a comparison between two groups that were not related to each other. The provisions used for the *independent sample t-test* are: (a) If the level of significance <0.05, the hypothesis is accepted, resulting in *variance*; and (b) If the level of significance is ≥ 0.05, then the hypothesis is rejected so there is no *variance*.

Meanwhile, the *Mann-Whitney* test is used to determine the difference in the median of the two independent groups if the dependent variable data scale is ordinal or interval/ *ratio* but does not have a normal distribution l.

Hypothesis testing in this study was carried out by comparing each cell with other cells in Table 3. Hypothesis testing 1 and 2 can be said to be supported if it is systematically if cell 1> cell 2 and cell 3 <cell 4 are statistically significant. The results of the test will be compared using the *t-test* if the data is normally distributed and will be tested using *Mann-Whitney* if the data is not normally distributed.

The next hypothesis testing uses the *Kruskal-Wallis* H test which is used to test whether two or more *sample means* from the population have the same value. This test is an *alternative to* the ANOVA test and is used if one of the requirements of the ANOVA test is not fulfilled. The provisions used for the *Kruskal-Wallis* H *test* are:
H0: There is no influence.
H1: There is an influence.

Here's how to make decisions through the *Kruskal-Wallis* H *test*: (a) If the probability value is significant ≥ 0.05, then there is no influence between variables; and (b) If the significant probability value <0.05, then there is an influence between variables.

4. DATA ANALYSIS AND DISCUSSION

Table 4 presents information about the distribution of research subjects into four scenarios, including: 31 people in scenario I; 31 people are in scenario II; 31 people are in scenario III; and 31 other people are in scenario IV. In scenario I, the presentation pattern is *End of Sequence,* short information series with a sequence of evidence ++-- (*good news* followed by *bad news*) and in scenario II, the presentation pattern is *End of Sequence,* a short information series with a sequence of evidence --++ (*bad news* followed by *good news*). In scenario III, the *End of Sequence* presentation pattern is a long information series with a sequence of evidence ++ - (*good news* followed by *bad news*) and in scenario IV, the *End of Sequence* presentation pattern is a long series of information with a sequence of evidence --++ (*bad news* followed by *good news)*.

Table 5 presents the results of testing the research hypothesis for the *End of Seuence* (EoS) presentation pattern for 62 participants. The average data for the two groups (table 4.5) above proves that the average final *judgment of* the group of participants who obtained the order of evidence --++ (*bad news* followed by *good news*) was 2.23 higher than the group of participants who obtained the order of evidence ++-- (*good news* followed by *bad news*) of 2.16 for short information series. Based on the *Mann-Whitney* test table on the *End of Sequence* (EoS) presentation pattern for student participants, it shows a Z value of -0.284 and a probability of 0.776 in scenario I and scenario II. This means that there is no significant difference in the mean final *judgment* between participants who received the order of evidence ++-- and participants who received the order of evidence --++ because the probability was 0.776. This study shows that the *End of Sequence* (EoS) presentation pattern has *no order effect* on short information series, so that it does not support the research hypothesis and from

Table 4
Number of Participants Data Based on Experiment Scenarios

Scenario	Presentation Pattern	Order of Evidence	Information Series	Number of Participants	Information
I	End of Sequence	++ --	Short	31	Mixed Design
II		-- ++		31	Mixed Design
III		++ --	Long	31	Mixed Design
IV		-- ++		31	Mixed Design
Total Participants				124	Mixed Design

Source: Processed Data

Table 5
Hypothesis Testing Results 1a

Information Series	Presentation Pattern	Order Information	Number of Participants	Mean	Z	Sig.
Short	End of Sequence	++--	31	2.16	0.284	0.776
		--++	31	2.23		

Source: Processed Data

this test it can be concluded that there is no difference in the final *judgment* of participants in scenarios I and II on internal audit decision making. When participants are given a total of six information presented (simultaneously), participants have more opportunities to conduct an objective *review* without being influenced by a different order of evidence, therefore, there is no difference.

Table 6 presents the results of testing the research hypothesis for the *End of Seuence* (EoS) presentation pattern for 124 participants (*mix design*). The average data of the two groups (Table 6) shows that the average final *judgment of* the group of participants who obtained the order of evidence --++ (*bad news* followed by *good news*) was 2.32 higher than the group of participants who obtained the order of evidence ++-- (*good news* followed by *bad news*) of 2.23 for long information series. Based on the *Mann-Whitney* test table on the *End of Sequence* (EoS) presentation pattern for student participants, it shows a Z value of -0.446 and a probability of 0.656 in scenario III and scenario IV. This means that there is no significant difference in the average final *judgment* between participants who received the order of evidence ++-- and participants who received the order of evidence --++ because the probability was 0.656. This study shows that the *End of Sequence* (EoS) presentation pattern has *no order effect* on a long series of information. Therefore, it does not support the research hypothesis and from this test it can be concluded that there is no difference in the final *judgment* of participants in scenarios III and IV on internal audit decision making. When participants are given as much as 18 information that is presented as a whole (simultaneously), the participants have more opportunities to conduct an objective *review* without being influenced by a different order of evidence, and therefore, there is no difference.

Table 7 presents the results of testing the research hypothesis on the *End of Sequence* presentation pattern for 124 participants and an average of two groups (table 4.4) with the independent variable sequence of evidence proving that the average final *judgment of* the group of participants who obtained the order of evidence --++ (*bad news* followed by *good news*) was 2.27 higher than the group of participants who obtained the order of evidence ++-- (*good news* followed by *bad news*) of 2.13 in the *End of Sequence* presentation pattern. Based on the *Kruskal-Wallis H* effect test table on the *End of Sequence* presentation pattern for student participants, it shows a probability value of 0.882 for the entire scenario. This means that there is no effect on the average final *judgment* between participants receiving the order of evidence ++-- (*good news* followed by *bad news*) and the order of evidence --++ (*bad news* followed by *good news*) because the probability is 0.882. In this study, it shows that the *End of Sequence* presentation pattern with independent variables of the

Table 6
Hypothesis Testing Results H1b

Information Series	Presentation Pattern	Order Information	Number of Participants	Mean	Z	Sig.
Long	End of Sequence	++--	31	2.23	0.446	0.656
		--++	31	2.32		

Source: Processed Data

Table 7
Hypothesis Testing Results H2

Presentation Pattern	Variable	The amount of data	Mean	Sig.
End of Sequence	Order of Evidence ++--	62	2.13	0.882
	Order of Evidence --++	62	2.27	
	Long Information Series	62	2.27	0.100
	Short Information Series	62	2.13	

Source: Processed Data

order of evidence (*good news* followed by *bad news* and *bad news* followed by *good news*) has no effect on investment decision making. So that it does not provide support for the current research hypothesis.

Table 7 also presents the results of testing the research hypothesis on the *End of Sequence* presentation pattern for 124 participants and an average of two groups with the independent variable information series proving that the average final *judgment of* the group of participants who received a long information series was 2.27 is higher than the group of participants who received a short information series of 2.13 on the *End of Sequence* presentation pattern. Based on the *Kruskal-Wallis H* effect test table on the *End of Sequence* presentation pattern for student participants, it shows a probability value of 0.100 for the entire scenario. This means that there is no effect on the average final *judgment* between participants who receive long information series and short information series because the probability is 0.100. In this study, it shows that the *End of Sequence* presentation pattern with a series of information (long and short) has no effect in making investment decisions so that it does not provide support for the current research hypothesis. When participants are given as much as six or 18 information presented simultaneously, participants will tend to give a more objective assessment because participants use all the information provided for decision making. This is because there are limitations to the cognitive capacity of the individual which has an impact on the processing of information received by individuals. So that the sequence of evidence (++-- and --++) and the information series (long and short) does not have an influence on the internal auditor's decision making on the *end-of-sequence* presentation pattern.

Hypothesis ($H1_a$) examines whether there are differences in audit decisions between auditors who obtain information (evidence) *good news* followed by *bad news* (++--) versus auditors who obtain information (evidence) *bad news* followed by *good news* (--++) on the *End of Sequence* presentation pattern and short information series. While the hypothesis ($H1_b$) tests whether there are differences in audit decisions between auditors who obtain information (evidence) *good news* followed by *bad news* (++--) and auditors who obtain information (evidence) *bad news* followed by *good news* (--++) on the *end-of-sequence* presentation pattern and long series of information. Table 8 will explain the test results for the hypothesis ($H1_a$) and hypothesis ($H1_b$) of this study.

The results of hypothesis testing ($H1_a$) based on the sequence of evidence and a short series of information show that there is no difference in the final *judgment* when the order of information ++ - and - ++ in the *End of Sequence* (EoS) presentation pattern and the results of hypothesis testing ($H1_b$) based on the sequence of evidence and the long series of information also shows that there is no difference in the final *judgment* when the order of information ++- and -++ is in the *End of Sequence* (EoS) presentation pattern . The results of this study differ from Hogarth & Einhorn's (1992) *Belief Adjustment* model theory which predicts that the *primacy effect* will occur in the *End of Sequence* (EoS) presentation

Table 8
Testing Results Hypothesis (H_{1a}) and Hypothesis (H_{1b})

Presentation Pattern	Hypothesis	Information Series	The effect that happened
End of Sequence (EoS)	$H1_a$	Short	No Order Effect
	$H1_b$	Long	No Order Effect

Source: Processed Data

Table 9
Hypothesis Testing Results (H2)

Presentation Pattern	Variable	Result
End of Sequence	Order of Evidence ++ - Order of Evidence - ++	No effect
	Long Information Series Short Information Series	No effect

Source: Processed Data

pattern and simple information. *Primacy effect* occurs when evidence received at the beginning is more considered than evidence received at the end, whereas in this study the effect of hypothesis ($H1_a$) and hypothesis ($H1_b$) is the *no order effect*. When participants receive overall information, they tend to give a more objective assessment because participants use all the information provided for decision making.

Yet, the hypothesis (H2) tests whether there is an effect of internal auditors' decision making on the *End of Sequence* presentation pattern with the sequence of evidence variables (*good news* followed by *bad news* and *bad news* followed by *good news*) and information series (long and short). Table 9 explains the test results for the hypothesis (H2) of this study.

The results of hypothesis testing (H2) also show evidence that there is no effect of internal auditors' decision making on the *End of Sequence* presentation pattern with evidence sequence variables (*good news* followed by *bad news* and *bad news* followed by *good news*) and information series (long and short). When participants are given as much as six or 18 information presented simultaneously, participants will tend to give a more objective assessment because participants use all the information provided for decision making. This is because there are limitations to the cognitive capacity of the individual which has an impact on the processing of information received by individuals. Thus, the sequence of evidence (++ - and - ++) and the information series (long and short) does not have an influence on the internal auditor's decision making on the *end-of-sequence* presentation pattern. The results of this study are supported by several previous studies as in table 10.

Table 10 shows the suitability of the current research results with previous research and it can be seen that there were seven previous studies that were in accordance with the results of current research. However, the results of this study contradict previous researchers conducted by Pravitasari & Almilia (2015) who showed that there were things that were significantly different in *end-of-sequence* participants who were given information from good news followed by bad news compared to participants given information ++-- also the *recency* effect occurs in making investment decisions.

5. CONCLUSION, IMPLICATION, SUGGESTION AND LIMITATION

This study aims to test whether there are differences in audit decisions between auditors who get *good news* followed by *bad news* (++ --) information and auditors who get *bad news* followed by *good news* (-- ++) in the *End of Sequence* presentation pattern and to test whether there is an effect of sequence of evidence (*good news* followed by *bad news* and *bad news* followed by *good news*) and short and long series of information on internal auditors' decisions on the *End of Sequence* presentation pattern .

This research is classified as a quantitative research using primary data. This research uses experimental research methods. This study used a 2x2 *mixed design* (*between subject* and *within subject*) experimental *design* by separating the conditions into two, namely participants who received a sequence of ++ -- and -- ++

Table 10
Supported Research Results

Name	Hypothesis	Result
Luciana, Putri, & Riski (2018)	Participants who receive information with the SbS presentation pattern will provide different investment decisions than participants who receive information with the EoS presentation pattern.	There is no difference in decisions in the EoS presentation pattern
Farita & Lucina (2017)	There are differences in investment decisions between participants who receive information (++ -) and participants who receive information (- ++) on the EoS presentation pattern with long information series	There is no difference in decisions in the EoS presentation pattern with long series of information
Aulida & Luciana (2017)	There are differences in investment decisions between participants who receive information (++ -) and participants who receive information (- ++) on the EoS presentation pattern with non-accounting types of information.	There is no difference in decisions in the EoS presentation pattern with the types of non-accounting information
Taufan (2017)	There are differences in investment decisions between participants receiving information (++ -) and participants receiving information (- ++) on the EoS presentation pattern and the *framing effect*	There is no difference in decisions on the EoS presentation pattern and the *framing effect*
Luciana & Putri (2016)	An investor's *overconfidence* level tends not to be affected by the information presented simultaneously	There is no influence on the level of investor *overconfidence* when the information is presented simultaneously
Luciana & Supriyadi (2013)	The EoS presentation pattern does not cause a difference in decisions between investors who receive the information ++ - and investors who receive the information - ++	There is no difference in investment decisions in the EoS presentation pattern
Luciana *et al.* (2013)	Participants who receive the information ++ - will provide the same investment decisions as participants who receive the information - ++ on the EoS presentation pattern	There is no difference in investment decisions in the EoS presentation pattern
Recent Research	H1: There are differences in audit decisions between auditors who obtain information (evidence) ++ - and auditors who obtain information (evidence) - ++ on the EoS presentation pattern and short and long series of information	There is no difference in the internal auditor's decision on the EoS presentation pattern
	H2: The sequence of evidence (++ - and - ++) and information series (short and long) affects the internal auditor's decision making with the EoS presentation pattern.	The sequence of evidence (++ -) and information series (short and long) has no effect on internal audit decision making on the EoS presentation pattern.

Source: Processed Data

evidence in the *End of Sequence* presentation pattern. This experimental research method was chosen because the experimental method has the power to show a causal relationship between research variables. This study uses an instrument as a medium for obtaining data. The sample used in this study were students majoring in S1 Accounting who are currently taking or have taken the Management Control System, Accounting Information System, and Auditing courses. The test equipment used is the normality test using the *Kolmogorov-Smirnov* test, the *Independent Sample T-test,* the *Mann Whitney U Test,* and the *Kruskal-Wallis* H *test*.

The conclusion drawn from the outcomes of this study are as follows: The results suggest that there is no disparity in audit decisions between participants exposed to positive-to-negative news (++--) information and those

exposed to negative-to-positive news (--++) in terms of the End of Sequence presentation pattern. Likewise, the sequence of evidence (positive-to-negative news and negative-to-positive news), along with short and long information series, seems to hold no sway over auditor decisions. In general, the study's findings indicate a contradiction with Hogarth & Einhorn's (1992) revised belief model, as the study does not furnish evidence that the End of Sequence (EoS) presentation pattern triggers a primacy effect.

The implications of the results of this study is that the level of information complexity affects audit decision making. When participants are given as much information as six or 18 information presented simultaneously, they tend to give a more objective assessment because participants use all the information provided for decision making. This is due to the limitations related to the cognitive capacity of the individual that has an impact on the processing of information received by individuals. The order of evidence (++-- and --++) and the information series (long and short) do not have an influence on the internal auditor's decision making on the *end-of-sequence* presentation pattern and there is no difference in the internal auditor's decision. If the information is presented too long, it will impact the auditor who cannot absorb the whole information due to cognitive limitations, but if the information is short, the auditor can easily absorb the overall information.

This study also had several research limitations, namely: (1) When looking for participants, the schedule for carrying out the experimental activities collided with the replacement lecture schedule so that the researcher had to find a substitute for another participant taken from the participant's reserve list; (2) On the D-day, there were several participants who suddenly could not take part in the research so the researchers had to find replacements with other participants, (3) Interaction between participants continued even though the experimenter was always reminded not to interact and there were still who opened the file sheet before and after even though the experimenter had reminded him so that the experimenter would stop the activity first so that the class would become conducive again.

Given the research limitation, the recommendations for future researchers are as follows: (1) Secure alternative participants in advance to simplify the process of replacing any absent or tardy participants; (2) Exercise care in choosing suitable experiment days, particularly due to the involvement of numerous participants; (3) Enhance participant support to cultivate a tranquil and conducive environment that fosters concentration during task execution.

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