

Toward a Model of Wisdom Determinants in the Auditing Profession

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Abstract

Auditing is a complex process posing great challenges because auditors often deal with complicated circumstances that they may have not experienced before or for which their knowledge may be irrelevant or inadequate. In auditing, although wisdom is crucial, it has yet to be defined explicitly. This study discusses the concept of wisdom and proposes a theoretical framework to describe three major virtues of wisdom in the auditing profession. The findings from a literature review together with an empirical analysis of a case study reveal that wise decision-making in auditing is an integration of three-E virtues: epistemic (general, technical, and subspecialty knowledge), enabling (exercise of professional judgment), and ethical (moral and professional skepticism). In order to perform a high-quality audit, the paper proposes the 3-E framework that explains how auditors should apply their knowledge, judgmental abilities, and ethical principles to make a wise audit decision.

1. Introduction

Wisdom is one of the least understood aspects of management practice, and yet possibly, it is the most important. Rooney [25] states that “knowledge in the absence of wisdom presents as a danger to the world.” Researchers argue that wisdom helps managers to use sound judgment when making decisions [18] and call for empirical studies on this emerging topic. Although the concept of wisdom has been investigated intensively for centuries [10], [29], [30], [13], [25], [18], very little research in the literature has attempted to examine the concept empirically.

The external audit profession is a unique service that provides opinions on the reliability of financial statements and the effectiveness of internal controls [4]. A free market economy can only exist when there is sharing of reliable, transparent, and unbiased information. A capital market can expand if the public has confidence in the objectivity and accuracy of the opinions provided by auditors. In other words, quality external auditing plays an essential role in

maintaining the sustainability and growth of the economy.

In practice, auditing is a complex process that poses great challenges because auditors often deal with complicated circumstances that they may have not experienced before or for which their knowledge may be irrelevant or inadequate. In these circumstances, they may not be able to make appropriate decisions and take proper actions. For example, the failure of Arthur Andersen in Enron’s audit (2002) is an example of an auditing service lacking judgment in handling complex practices. The falsification that occurred in the Olympus scandal in Japan (2011) is another example of challenges to auditors in real contexts.

Prior research on auditing focused on the auditing process and treated it as a judgment-decision making or information processing process. For example, Vaassen [33] described auditing as a judgment-decision making process because an auditor makes several professional judgments during the course of an audit. Brown and Solomon [9] propose an information-processing framework for decision making in auditing. Recent research has shifted to the knowledge management (KM) perspective to explain theoretical aspects of the auditing process [15], [21], [24], [1], [21]. For example, Nguyen [21] conducts a single case study at an auditing firm in Vietnam and presents a theoretical model in which auditing is treated as a KM process. That piece of research is the first study to investigate the transformation of data into information, information into knowledge, and knowledge into wisdom in the light of a complex context for an auditing service. Although the research emphasizes the important role of wisdom in auditing, it is still far from an in-depth explanation that identifies the determinants of wisdom.

In order to deal with complex, unforeseen, and turbulent situations in auditing, we need to investigate the characteristics of wisdom thoroughly. Therefore, KM needs to shift from focusing on data, information, and knowledge to a future-oriented approach that focuses on wisdom [16], [17]. In the view that data, information, knowledge are past-oriented means, whereas wisdom is a future-oriented

means of dealing with unforeseen and turbulent audit situations, this paper proposes a new approach focusing on wisdom and its determinants in auditing.

The paper consists of five sections. Following a literature review of wisdom management and the working assumptions that underlie this study, a case study is presented and discussed. Then, the proposed concept of wisdom is explained. After that, a conceptual model of the contribution of wisdom determinants to decision-making in auditing is introduced. Finally, the paper concludes with a discussion of the expected contributions of the current study.

2. Literature review

2.1. Wisdom management

2.1.1. Wisdom definition

A starting definition of wisdom, as stated by Webster [35], is “the faculty of making the best use of knowledge, experience, and understanding by exercising good judgment.” To this basic definition, it is stressed that the key components of wisdom include judgment and accumulation of knowledge and experience. First, according to the basic definition, the core of the wisdom concept is that good judgment must be exercised in decision-making and actions. Moreover, prerequisite to wisdom is the accumulation of knowledge, experience, and understanding. Bierly further defines wisdom as “the ability to best use knowledge for establishing and achieving desired goals and learning about wisdom as the process of discerning judgments and action based on knowledge” [6]. In this definition, wisdom is an action-oriented construct that involves making the best decisions and implementing those decisions.

In management, practical wisdom is defined as “phronesis” that stems from the suggestion of the philosopher Aristotle [5]. For example, Nonaka and Toyama [22] state that distributed practical wisdom (or phronesis) emerges from the practice to pursue the common goodness. Specifically, practical wisdom [23] is defined as experiential knowledge that enables people to make ethically sound judgments. These studies assert that knowledge, in a specific and dynamic context, can be created and refined to become wisdom [22].

2.1.2. Wisdom pyramid

The data – information – knowledge – wisdom hierarchy (DIKW), also called the Wisdom Pyramid, is a fundamental and widely recognized model in

knowledge literature. The pyramid is used to contextualize data, information, knowledge, and wisdom, with the purpose of describing the transformation of knowledge-related processes involved in an entity [26] (Figure 1). In the pyramid, it is implicitly assumed that data can be used to create information, information can be used to create knowledge, and knowledge can be used to create wisdom.

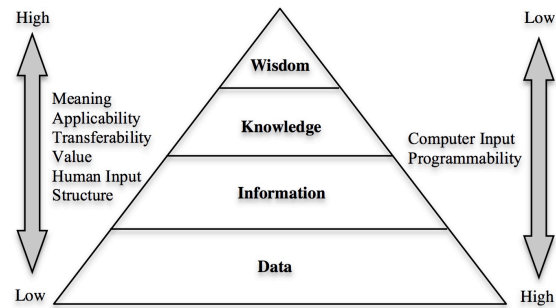


Figure 1: The wisdom hierarchy [26]

The hierarchy suggests that wisdom is attained after processing data, information, and knowledge [26] but it does not provide an explicit distinction between wisdom and knowledge. Moreover, despite that wisdom is positioned at the pinnacle of the hierarchy, most of the KM literature, with the exception of a few descriptive explanations, does not have a specific definition of wisdom. On the other hand, researchers seem to agree with Jashapara [19] that although wisdom has “higher” qualities than those of knowledge, it is still a very *elusive* concept.

2.1.3. Knowledge management in the auditing profession

In auditing research, Nguyen [21] proposed CAS (*Collecting-Analyzing-Synthesizing*) model to explain on how knowledge-related processes are conducted in an audit engagement. In the model, an audit consists of three phases of collecting data, analyzing data thereby turning it into information, and synthesizing information into knowledge. Consequently, the model visualizes the auditing process as a spiral with many iterative CAS processes with various engagements over many years.

In the context of an auditing service, the data consists of structured records of business activities, internal control systems, and transactions collected by separate auditors. Information is the result of analyzing the collected data. Knowledge is the synthesis of the analyzed information; it is a wide range of useful and valuable systems of information that are connected, and it leads to decisions and actions. The three phases of CAS model represent the

transformative processes of data, information, and knowledge under the instruction of wisdom in auditing. A brief summary of the concepts explained by CAS model is presented in Table 1.

Concept	Definitions of CAS model	Examples
Data	Audit materials collected by audit <i>individuals</i> according to standards and professional judgments on empirical contexts.	Structured records of business activities, internal control systems, and transactions
Information	Results of analyzing the data collected by the audit <i>teams</i> , i.e., findings to support formation of audit opinions.	Accounting errors, unrecorded transactions, incorrect calculations, or inconsistent applications of a policy
Knowledge	A wide range of useful and valuable systems of information created from the synthesis of the analyzed information at the <i>organizational</i> level.	The result of an audit is presented in the form of audit reports and a management letter to the client company.
Wisdom	A high level of auditor knowledge & professional judgment attained through extensive experience.	

Table 1: Summary of concepts in CAS model [21]

The CAS model emphasizes that wisdom is crucial because it is the cornerstone upon which to conduct an audit and it helps auditors to perform their tasks appropriately (Figure 2). Wisdom [21] is defined as “a high level of auditing knowledge and the capacity to make professional judgment.” Wisdom has a two-way interaction with the three CAS phases. First, wisdom instructs auditors as to how to conduct a high-quality audit. Second, wisdom is accumulated through the practical implementation of the three phases.

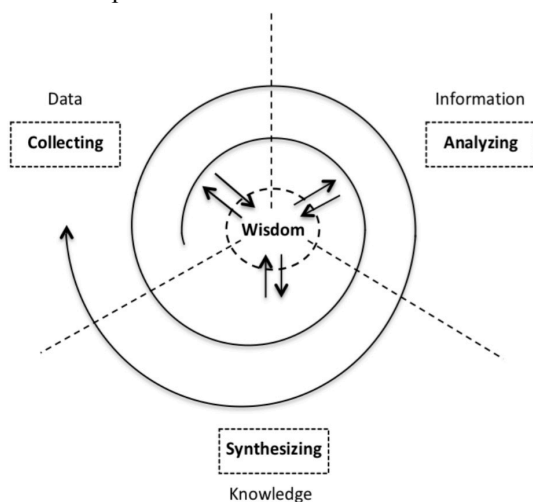


Figure 2: CAS model of the KM process in auditing [21]

We are still far from being able to give a clear definition of wisdom or an in-depth explanation of how to apply it. In order to get a better understanding of wisdom-related phenomena, we need to conduct expressly empirical studies on this emerging topic.

2.1.4. The need for wisdom research in the auditing profession

There is an argument that knowledge may not be sufficient when dealing with emerging and unforeseen situations since knowledge tends to be past-oriented, while emerging situations are future-oriented [16]. In a rapidly changing environment, although organizations focus on improving knowledge in response to changes, our knowledge yesterday could be irrelevant or insufficient tomorrow. Rowley and Gibbs [27] also argue that wisdom is required in the current business world, as it relies on contextual, particular, and subjective aspects rather than on only rational, objective, and known elements.

An auditing service is an unpredictable working environment as mentioned above. It is a complex domain that often puts intense pressure on auditors and their firms. For example, in a turbulent and uncertain business environment, it is a challenging task for auditors to make accurate and reliable judgments of practical situations.

In order to cope with rapid changes in the environment, the viewpoint of auditing research has evolved from information processing [9] and knowledge management [21] to wisdom management (Figure 3).

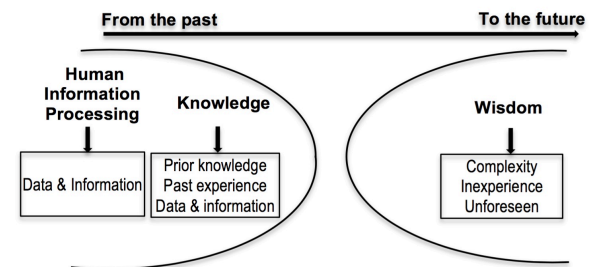


Figure 3: Research perspectives in auditing

However, up to now, there has been little discussion on wisdom-related concepts in auditing. If we could understand more about applying and creating wisdom, it would help auditors as well as audit firms to assure the quality of their audits in complex situations. In addition, a better understanding would assure that society gets the highest reliability of financial information.

Therefore, to deal with complex and unforeseen situations in auditing, we need to investigate the characteristics and determinants of the wisdom of auditors deeply. In other words, knowledge management needs to shift from a past-oriented focus on data, information, and knowledge to a future-oriented approach that focuses on wisdom.

2.2. Working assumptions

2.2.1. The role of knowledge

Being classified as a typical sub-sector of knowledge-intensive business services (KIBS) [20], [32] auditing mostly involves the application of professional knowledge. An auditing service possesses the many of the characteristics of KIBS, including intensive use of knowledge, larger growth rates compared with other sectors, unique market relations, a high degree of expert knowledge and professionalism, self-regulation, special ways of value creation, engagement in innovation, and the creation of knowledge in cooperation with the client organization [14]. Therefore, such firms view knowledge as a key intangible asset to maintain competitive advantage [34] and they build their reputation on the in-depth knowledge and expertise of their employees.

Recognizing the crucial role of knowledge in auditing, most of the recent research has been concerned with how an auditor's knowledge is acquired and what types of experience lead to gaining this knowledge. If we can better understand how an expert auditor's knowledge is acquired, it may be possible to develop training aids for improving the performance of novices.

Bonner and Libby [8] argue that category knowledge - the classification of items that auditors maintain in memory - has important direct effects on audit decision performance. They emphasize that the category knowledge is a precondition to effective learning. Bonner and Lewis [7] discuss three types of knowledge, i.e., *general domain* (knowledge of generally accepted accounting principles and standards), *subspecialty* (knowledge of specific industries), and *general business* (knowledge of management systems in a variety of business situations).

Tan and Libby [31] assert that tacit knowledge plays a key role in the performance evaluations of experienced auditors. They indicate that tacit knowledge can improve the ability of comparatively inexperienced auditors so that they can reach better-justified audit conclusions [28]. Tacit knowledge is a form of procedural knowledge, which is a portfolio of

skills and strategies that enables people to perform or to apply their declarative knowledge, for example, knowledge of facts about the world [3].

2.2.2. Professional judgment in auditing

The professional and academic auditing literature has recognized the importance and pervasiveness of judgments in auditing. The result of an audit is an opinion, because an auditor must make numerous subjective judgments in each part of the audit process. An auditor integrates all of his or her professional judgments into an overall opinion as to the fairness of a financial statement [33].

AICPA [2] states that "judgment is the most important factor in the making of any audit, but in many situations it is practically impossible to write out in specific language how the auditor applies judgment." Indeed, the professional literature frequently emphasizes the importance of professional judgment and focuses on the process of how to carry out an audit judgment. Audit researchers, as well, have concentrated on devising conceptual frameworks for studying and evaluating auditor judgments under uncertainty.

Davenport and Prusak [11] explain the relationship between knowledge and judgment when they describe that knowledge is unlike data and information in that it contains judgment. Knowledge not only can judge new situations and information in light of what is already known, it judges and refines itself in response to new situations and information. Knowledge can be likened to a living system, growing and changing, as it interacts with the environment.

2.2.3. Ethical requirements

Wisdom points the way to the optimal action and takes into account the long-term results of actions in society [10]. Ethical decisions are at the core of sustainable long-term success. It is critical for auditors to ethically account for the interests and values of different stakeholders as well as other parts of society.

Ethical requirements relate to the regulations and legal liabilities of the auditor to maintain the audit quality. When conducting an audit, auditors should be concerned about the risk of fraud. People have many motivations, opportunities, and rationalizations for perpetrating fraud [4]. In practice, if an audit is not conducted with an emphasis on quality, the auditor and audit firm may become the targets of lawsuits. Litigation is expensive for both auditor and audit firm because they result in monetary loss, loss

of valuable time, and hurt reputations. When auditors agree to perform audits, they are supposed to be experts in assuring the fairness of the financial statements on which the public relies. Hence, auditors have to perform their tasks professionally in order to serve the interests of the public [4].

For example, the collapse of Enron is considered to be one of the most significant frauds of the early 2000s. It resulted in thousands of people losing either their jobs or their retirement savings. Enron's dramatic failure brought charges of malfeasance against its longtime auditor, Arthur Andersen, then one of the world's leading international accounting firms. Andersen was sued by the Department of Justice for destroying evidence and found guilty, which led eventually to the dissolution of the firm. This scandal resulted in changes in the regulatory environment surrounding financial reporting and aroused widespread skepticism about the way corporations prepare their financial reports and how auditors attest to the reliability of those reports.

The above example indicates the need for an ethical aspect in audit decision-making. Failure to decide ethically may not only lead to grave consequences for auditors and audit firms but also threaten the stability of society.

3. Case analysis

3.1. Research methodology

To address the research gap, this study aimed to create an explicit definition of wisdom and propose a framework to describe determinants of wisdom in the auditing context. The objectives and the literature review lead us to the major research question: "How has wisdom been defined in auditing services?"

To answer this question, the research strategy is "a qualitative case study" to ascertain an in-depth understanding of wisdom in the auditing context. There are two reasons for adopting this strategy. Firstly, case studies allow investigators to retain the holistic and meaningful characteristics of real-life events such as individual life cycles, small-group behaviors, organizational, and managerial processes [36]. Auditing is a complicated process that involves real-life cycles, teamwork behaviors, and organizational environments. Secondly, a qualitative case study is also appropriate way to answer the "how" questions that are posed within the research questions. Therefore, this method strategy could help to investigate contemporary phenomenon in-depth within a real-life context like an auditing firm.

The case study was conducted in one of the largest public accounting firms in Vietnam. The conducted firm has more than two hundred employees who work in auditing department. This research follows the results of CAS model study [21] by re-visiting the same case with a new set of research questions to deepen understanding of the concept of wisdom and its process. Data were collected through interviews, observations, and documentation of the firm. The interviews included semi-structured face-to-face interviews with audit managers, seniors, and assistants working in an office. Each interview lasted about fifty to sixty minutes. The observations were relevant to interviewee attitudes and office surroundings during the interviews. The documentation included guidance on audit methodology, examples of working papers, auditor reports, and so on.

The data analysis mainly was of the interviews and documentation. Interview transcripts were translated from Vietnamese into English. The transcripts were read as a whole for highlighting impressive words, actions, and processes. Then, the relevant words, actions, and processes were labeled and sorted into categories. Next, the label categories were connected to find the associated concepts or relationships they referred to. Finally, we constructed a theory on the basis of the categorization and connection results.

3.2. Case analysis

3.2.1. Types of auditor knowledge

Bonner and Lewis [7] determined that audit expertise includes knowledge on a general domain, specialized industries, and general business. This research, through empirical analyses, provides an intensive interpretation on the nature of the knowledge of auditors. The case study and literature review show that knowledge plays a crucial role. Most of the interviewees described that auditors became involved in a wide range of diversified and complex industries, and they were required to be knowledgeable about new regulations and standards as well as be experienced enough to deal with new risks and challenges.

The analysis of the empirical study indicates that auditors must attain their knowledge in three different dimensions, i.e., general, technical, and subspecialty.

Firstly, *general knowledge* includes general domain knowledge and general business knowledge. General domain knowledge relates to a general understanding of accounting and auditing, such as generally accepted accounting principles (GAAP),

generally accepted auditing standards (GAAS), and the flow of transactions through an accounting system. Most of this basic information is obtained by auditors as part of their college program. General business knowledge relates to the understanding of management systems in a variety of business situations. This sort of knowledge can be attained through formal instruction and personal experience such as reading. Inexperienced staff, e.g., new employees, can gain this type of knowledge from college programs regardless of the experience they have. However, audit professionals have to improve their general knowledge continuously because business environments change rapidly.

The second aspect of auditor knowledge is technical knowledge that relates to functional areas (use of computer-assisted audit techniques, testing procedures, tax, etc.) and accounting issues (leases, pensions, etc.). For example, an interviewee (Interviewee 3) shared the following observation with us: *“technical knowledge can be conveyed by seeing how an auditor applies their technical ability to their tasks or how s/he deals with accounting and auditing issues”*. Technically, an auditor is required to know how to use audit tools or software, how to follow audit procedures appropriately, how to evaluate an audit test, how to handle an accounting error, how to deal with an auditing issue, and so on. The technical aspects of auditor knowledge are more detailed than what can be learned during a college program. However, an in-depth understanding of these aspects is usually attained from in-house training at the firm, on-the-job training, and in continuing professional education programs. For instance, when a new graduate joins an audit firm, he or she would normally undergo a period of training. This training aims to help new employees to understand the particular audit methodology and working environment of the firm. In addition, a high level of technical knowledge can be attained through continuing professional education systems such as certified public accountant (CPA) programs. In practice, technical knowledge is enhanced through on-job-training and practical experience.

The third aspect of auditor knowledge is subspecialty knowledge that relates to specific industries or clients. Such knowledge is acquired by people who have experience with specific audit clients, with certain industries, and/or in-house training in specialized areas. It is less likely to be acquired through general instruction or experience. In fact it is reasonable to suppose that this type of knowledge is attained exclusively through on-the-job experience by managers, directors, and especially by audit partners. According to Danos and his co-

authors [12] beyond general industry-specific accounting knowledge, an audit engagement requires more industry-specific business knowledge to identify potential problems efficiently and communicate with client personnel. The authors conclude that industry-specific knowledge is useful to the auditor, and audits typically cannot be completed without such specialized knowledge because business trends are frequently unique to a given industry. Audit firms have to attain their industry-specific business knowledge in order to attract and retain clients.

Ideally, an expert auditor has all three of the above aspects. However, rarely is there one individual who possesses all of the specialized accounting and auditing knowledge required for a specific major audit engagement. Thus, in such areas, knowledge transfer across individual auditors is usually required [12]. Partners are thus experts in the three aspects of knowledge. They are key people who keep and present the audit firm's wisdom with time-tested knowledge over a long period.

3.2.2. The Exercise of professional judgment

The findings from the case study also highlight the role of professional judgment in auditing as the emphasis of literature on the necessity of the professional judgment. Auditors exercise their professional judgment in performing their tasks as a natural consequence in auditing. Exercising professional judgment happens through auditors performing CAS phases. This is a process of incorporating aspects of auditing knowledge in decisions made during the audit.

The empirical findings indicate that auditors obtain data based on audit procedures and their personal professional judgment in the collecting phase. For example, an interviewee (Interviewee 5) described that: *“during the interview of their clients, if auditors consider that there are some data and information need to be obtained, they will additionally collect these additional data based on their professional judgment.”* Auditors usually use their general knowledge about audit procedures and business activities to identify types of data to collect. A high level of technical and subspecialty knowledge is not required at this early phase but auditors may have to judge practical contexts to collect additional data, if necessary.

In the analyzing phase, auditors mainly use their technical and subspecialty knowledge to design and execute audit procedures. Because auditors need to use audit techniques and deal with discovered accounting and auditing issues, the analyzing phase

requires a higher level of technical and subspecialty knowledge in comparison with collecting phase. Auditors have to exercise professional judgment when using technical knowledge to execute their tasks. For example, some interviewees (Interviewees 2, 3, and 7) emphasized that: *“When assessing combined risks, we need use our professional judgment on audit contexts in order to apply audit techniques appropriately. Besides that, we must have certain knowledge of the client’s businesses or industry characteristics to make a combined risk assessment and perform an analysis.”* Moreover, usage of professional judgment is obligatory; as an interviewee (Interviewee 15) explained: *“the exercise of professional judgment in assessing the inherent business risk is a compulsory and important part of designing an audit strategy.”*

The synthesizing phase requires a combination of all three aspects of auditor knowledge at a high level in order to review and synthesize all the prior audit procedures. However, the professional judgments of partners and managers are the keystones to creating high-quality audit opinions.

3.2.3. Adoption of ethical requirements

The empirical analyses show that auditors have to consider ethical issues when conducting any audit. Such considerations relate to regulations of auditor liability and guidance on professional standards. An audit senior (Interviewee 8) emphasized that *“during an audit engagement, the audit team members must consider requirements in the code of ethics. For example, they should always keep in mind ethical principles such as integrity, objectivity, due care, confidentiality, and behavior.”*

Some of the interviewees described that enforcement of a “code of professional conduct” primarily guides auditors. Specifically, auditors should always exercise skepticism in making professional judgments. For instance, an audit manager (Interviewee 11) stated that *“professional skepticism is important to auditors because without it auditors could accept weak or inaccurate audit evidence. Auditors are often skeptical when collecting data and information, evaluating the reliability of the audit evidence, and questioning the reasonableness of the practical circumstance.”*

The above analysis highlighted that ethics plays an important role in assuring wise audit decisions. In the case study, ethical requirements are mainly presented in form of code of conduct and professional conduct.

4. Discussion

To investigate the concept of wisdom, it is necessary to define it and figure out how it works to help auditors make decisions. The findings from the literature review and the case analysis provided us with useful suggestions to developing a more comprehensive definition of wisdom in the auditing context. CAS model [21] describes that “wisdom is a high level of auditor knowledge and the capacity to make professional judgment that can be attained from long experience.” This research investigated the nature of auditor knowledge and professional judgment. It highlighted that the two aspects have important impacts on the decision-making processes of auditors. Moreover, the case analysis suggests that ethical aspects should be considered in the audit decision-making process. Hence, the ethical virtue was proposed as another determinant of wisdom.

Therefore, to take an integral approach, a definition of wisdom in the auditing context should include three virtues: auditor knowledge (*the epistemic virtue*), the ability of exercising professional judgment (*the enabling virtue*), and ethics (*the ethical virtue*). These virtues are essential determinants of wise decision-making in an audit. In practice, auditors should understand these determinants as well as their impacts on audit decisions.

Because the three determinants are named 3-E virtues, we call the model to explain their impacts the 3-E model. In the 3-E model, each virtue not only impacts the decision making process separately; they also interact with each other mutually. Figure 4 presents a confluence of epistemic, enabling, and ethical virtues in a wise decision-making process in the auditing context.

4.1. Determinants of wisdom in auditing

4.1.1. Epistemic virtue

The first determinant of wisdom of an auditor relates to the epistemic aspect in the form of general, technical, and industry-subspecialty knowledge. To conclude an audit, auditors need in-depth knowledge of general business activities to evaluate the reasonableness of the financial reports they deal with. They also need to understand audit techniques and issues to ensure that all the audit procedures are executed appropriately and effectively. In particular, a high level of subspecialty knowledge in the audited business or industry is needed in order to recognize potential material accounting and auditing issues and fraud risks.

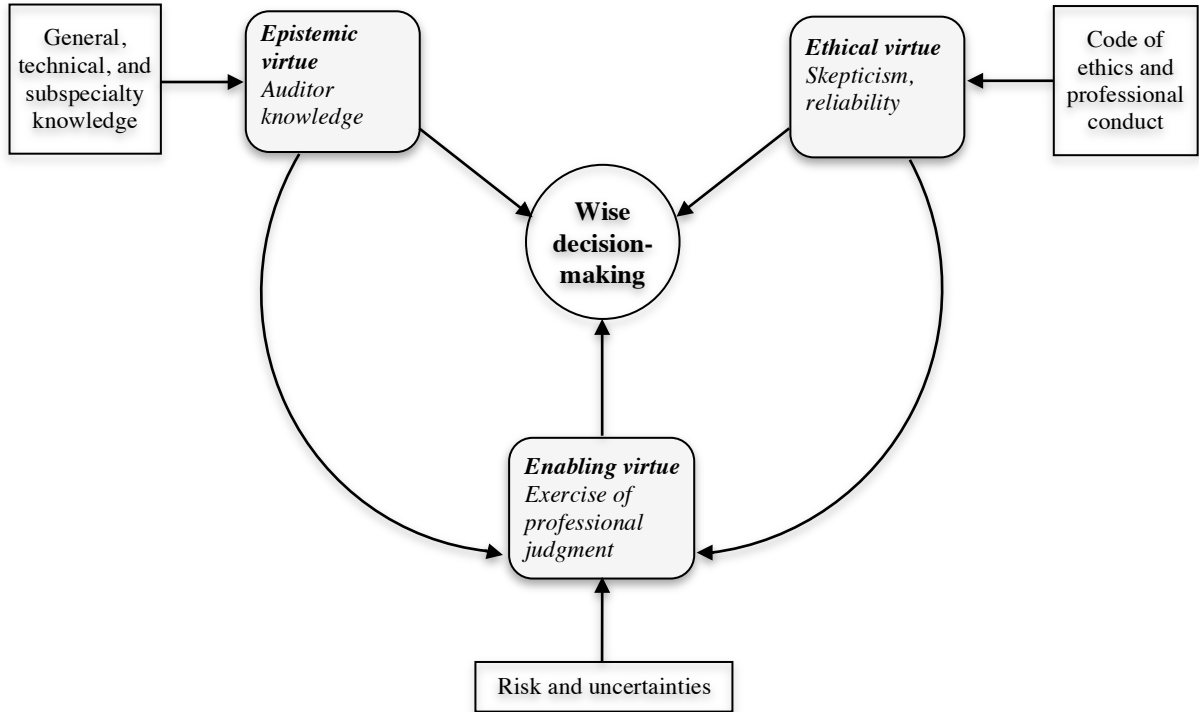


Figure 4: The 3-E model of wisdom determinants in the auditing profession

The empirical study showed that the epistemic determinant, a kind of auditor knowledge, contributes to wisdom throughout the auditing process from collecting data and analyzing information to synthesizing knowledge. Although the degrees of epistemic-virtue possession may be different between the various hierarchical levels (assistant, senior, manager, and partner) and the requirements of general, technical, and industry-subspecialty knowledge may vary according to audit task, they necessarily impact an audit. The epistemic virtue plays an important role in helping auditors assure the quality of their audits.

4.1.2. Enabling virtue

The second determinant is relevant to the ability to exercise professional judgment. This aspect could be viewed as the enabling virtue of the auditor. Because audits are conducted according to a risk-based approach, auditors have to make decisions under potential risks and uncertainties. This means that, in order to reach a conclusion or make a decision, auditors need to judge potential uncertain facts and circumstances in a professional way.

An auditor's professional judgment is relevant to the application of their accumulated knowledge, or

their epistemic virtues. When an auditor makes quality judgments, he or she competently applies their knowledge to make decisions that are appropriate at the time of the judgment. To make a judgment wisely, the epistemic virtue is necessary, but the ability to apply knowledge and judge the situation is also indispensable.

In practice, an auditor needs appropriate knowledge but it is impossible to make appropriate decisions for specific cases without the ability to exercise professional judgment. Therefore, the ability to exercise a quality audit judgment is critical.

4.1.3. Ethical virtue

The third determinant involves the ethical virtue of an auditor in making decisions in an audit. The case study indicates that this moral aspect is reflected in the requirements of code of ethics and professional conduct of an audit. Moreover, in accordance with the empirical case study and literature review, wise decision-making should consider a diversity of values as well as the interests of the community as a whole.

In sum, the empirical findings emphasize that no audit ought to be completed without such aspects of auditor knowledge, the ability to exercise professional judgment, and ethical considerations.

4.2. Inter-relationship between the 3-E factors

To explain on how an auditor is able to make wise decisions, the 3-E model presents a confluence of the epistemic, enabling, and ethical virtues in the auditing context. However, these three virtues not only impact the process of making decisions separately; they also interact with each other mutually. In Figure 4, these interactions are shown by the impacts of the epistemic and ethical virtues on the enablement of professional judgment.

Current auditing knowledge is a basis for exploring new knowledge. However, prior knowledge may be insufficient to deal with emerging phenomena. To have a wise response, it is vital for an auditor to apply knowledge properly and judge the given situation professionally and ethically.

5. Conclusion

Despite the recognition of the importance of wisdom in auditing, prior research has not explained how auditors apply their wisdom in the audit process. Therefore, it is essential to conduct empirical research on wisdom to help auditors carry out high-quality audits. This research provides a coherent review of the literature on major concepts relating to wisdom in the auditing context. Although wisdom and professional judgment are abstract and polyvalent concepts that have many meanings and functions in different domains, this research aims for a comprehensive interpretation that elucidates these concepts in the auditing context.

On the basis of the findings of the empirical case study and literature review, this research explicitly defines and explains the concept of wisdom in the auditing context. In an integral approach, wisdom is shown to be a high level in each of the 3E-virtues, i.e., auditor knowledge, ability to exercise professional judgment, and ethical considerations, in order to help auditors to make wise decisions in auditing.

The significance of this study lies in three main areas: scholarly understanding of the concept of wisdom and its determinants in auditing; helping auditors with their roles; and ensuring better assurance services for society.

Although there have been many studies on the auditing process, they have mainly focused on practical aspects or technical issues. The prior studies view auditing as an information- or knowledge-based process rather than a wisdom-based one. Therefore, defining the theoretical aspects of wisdom and its

determinants would be a significant theoretical contribution to the auditing literature.

By developing a theory of wisdom, this study can help both auditors and auditing firms to develop educational and training schedules. In so doing, people in an auditing firm can understand more about their decision-making process and view it as an integral approach to resolving complicated audit situations.

As a service to society, auditing firms improve and ensure the truthfulness and fairness of the financial information of their client companies. In projects with time limits and the need to analyze very raw data, auditing firms must co-operate with the management of the client company to assure that they release to society financial information of the highest reliability.

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