AI Revolution: How Malaysian Firms are Redefining Accounting Performance

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Abstract: Artificial Intelligence (AI) is the primary force behind the organization's continued sustainability and competitiveness. The rise of AI software, cloud computing-based software and blockchain apps and services, together with the use of accounting information outcomes indicate that computerized accounting has become available to accountants. Even if there are great hopes for the application of AI in the accounting industry, numerous nations with little infrastructure are still lagging in using this type of technology. 88.89% of the 80 questionnaires that were initially issued were returned within a week. As a result, of the 80 questionnaires issued, 75 responses were received in one week, yielding a response return rate of 93.75 percent. Managerial and non-managerial staff members from American Express (Malaysia) Sdn. Bhd, Selangor, Malaysia were chosen as research participants. By employing a sample random sampling approach, a total of 75 legitimate surveys were gathered. The results of the study have shown a positive strong relationship between the level of readiness (AI Software, Cloud technology and Blockchain) and level of adoption (AI Software, Cloud technology and Blockchain) in the accounting industry toward employees' job efficiency. All eight hypotheses (H1 to H8) showed a significant relationship and were all accepted. The outcome of the moderating effect between working tenure and level of readiness presents a direct impact. However, the level of adoption shows an indirect impact on job efficiency whereas job efficiency shows a direct impact.

Keywords: *AI Software, Cloud Technology, Blockchain, Accounting Field, Malaysia*

1. Introduction

The technological age's Industrial Revolution (IR) 4.0 is being sparked by artificial intelligence (AI). It enables computers to carry out activities that resemble those of humans, acquire knowledge from mistakes, and adapt to new data. These innovations enable the processing of massive volumes of data, improving the recognition of similarities within the data (Miller, 2019). Large amounts of data may significantly boost the efficiency of an organization and technological advances allow for the skillful application of statistical analysis. To be durable in this rapidly evolving and highly competitive marketplace, every company entity needs to have a competitive advantage (Frisk and Bannister, 2017). Artificial intelligence (AI) is developing at an astounding rate, and this trend doesn't appear to be going down. According to Stancheva-Todorova (2018), deep machine learning and massive data science are two areas where advancements in AI are being driven.

AI is the primary force behind the organization's continued sustainability and competitiveness (Omar, Hasbolah, & Ulfah, 2017). Since AI is widely recognized for its benefits in terms of decreased costs, time savings, and enhanced productivity (Pavaloiu, 2018). Organizations must integrate AI technology within the way they operate in the fast-paced commercial world of today to remain viable. To further enable them to make better-informed decisions regarding their clients' financial affairs, accountants will also need to be proficient in both technological skills and business knowledge when they examine information collected from emerging sources like email messages, receipts, and social networking posts (ICAEW Volunteers, 2023). AI presents several difficulties in the accounting sector in addition to its possible benefits.

The job efficiency of accounting, accounting technological advances, changes in system administration, and the need for data gathering and analyzing of all these areas have been significantly impacted by this shift to computerized accounting. The rise of AI software, cloud computing-based software and blockchain apps and services, together with the use of accounting information outcomes indicate that computerized accounting has become available to accountants.

The function of computerized accounting shifts from that of traditional accounting to researchers in producing financial data or information for analysis. This allows accounting to establish skill accelerators and comprehend emerging technologies in the context of Society 5.0. For the accounting industry, digital accountant 5.0 has several noteworthy benefits.

The potential loss of jobs because of AI mechanization replacing much of the monotonous work currently done by accountants constitutes one of their primary concerns. According to their analysis, there is a clear developing pattern in the application of AI in accountancy. AI can be applied in a variety of accounting contexts, including taxation, bookkeeping, auditing, financial institutions, and trade in securities. In the traditional sense, all these procedures are laborious and time-consuming. But by giving such tedious jobs to machine learning, accountants may free up their valuable time to work on more complicated issues that need critical thinking. One way to lessen the drawbacks of conventional systems for accounting is to combine artificial intelligence (AI) with accountancy information (Jeneesh, 2017).

The work of handling payables from accounts (AP) and receivables from clients can be significantly simplified and optimized by incorporating based on artificial intelligence accounting applications into managerial responsibilities. An organization's strong connection with vendors will be supported by effective account payables administration. Additionally, it will fortify financial information and enhance corporate processes in preparation for future growth (Nwakaego & Ikechukwu, 2015). In the current age of rapid technological change, receiving APs in the old-fashioned way is not as appropriate. One of the ostensible advantages of shifting from traditional to digital ways is that organizations may do away with the problem of misplaced documentation and improve operational efficiency by conserving resources like paper, energy, and space. Additionally, it is now possible to complete payments to suppliers on schedule, which helps to improve credit scores (Deloitte, 2015).

By understanding how AI impacts accounting performance, it can help organizations to make better-informed decisions about technology investments. Hence, it can lead to a more effective allocation of resources, improved financial forecasting, and enhanced overall business strategy. It can also automate routine accounting tasks, minimize errors, and enhance data accuracy. Organizations can then leverage these insights to improve the financial reports and enhance overall business strategy. By adopting AI solutions that improve accounting functions, organizations can differentiate themselves in the market, offering more accurate and timely financial information to stakeholders. Enhanced AI capabilities can improve the audit trail and reporting processes, making it easier for organizations to provide transparent and verifiable financial information to regulators and auditors. The study can identify the best practices in AI implementation that enhance accounting performance. Malaysian organizations can use these insights to benchmark their processes against industry standards and gain a competitive edge. In short, this study has significant practical implications for Malaysian organizations by providing actionable insights into how AI can be effectively integrated into accounting practices to enhance performance, efficiency, and strategic decision-making.

Nowadays, there is a worldwide fear about the incorporation of intelligent machines (AI). Records indicate that the use of AI in accounting dates back more than 25 years, and its primary applications are in the fields of accounting auditing and reporting (Chukwudi et al., 2018). Malaysia has very little experience with AI adoption. The results of a poll that the Malaysian Institute of Accountants (MIA) carried out around July and September 2017 provide evidence. The results showed that, in comparison to other technologies like Microsoft apps, accounting software, cloud apps, fintech, instruments for data analysis, and so forth, the adoption as well as use percentage for AI was just 13% at this point. While global studies on AI in accounting exist, there is a scarcity of research focusing specifically on

Malaysian organizations. AI technology is evolving quickly, and organizations are continually adapting to these changes. Hence, there is a need to understand how these advancements are being integrated into Malaysian accounting practices and how they affect performance, efficiency and accuracy. Malaysian accounting standards and regulatory requirements differ from those in other regions. Investigating how AI influences compliance and reporting in the Malaysian context can provide valuable insights into managing AI-driven transformations while adhering to local regulations. This study aims to address this disparity by examining the potential effects of artificial intelligence deployment on Malaysia's financial sector. The research objectives are

stipulated as follows:

- To investigate the effect of readiness and adoption level of using AI software applications in the accounting field for job efficiency.
- To investigate the effect of readiness and adoption level of using cloud technology in the accounting field for job efficiency.
- To investigate the effect of readiness and adoption level of using blockchain in the accounting field for job efficiency.

2. Literature Review

Artificial intelligence (AI) has several advantages for businesses, but Malaysia is still in the early stages of using AI (Omar et al., 2017). With 24.6% of its organizations investing in AI technology, Indonesia led among ASEAN nations in the use of AI, according to data released by the International Data Corporation, or IDC, in 2018. Malaysia was substantially behind at 8.1%, in comparison. This demonstrates the limited use of AI by Malaysian enterprises. The Malaysian Institute of Accountants (MIA) performed a poll during July and September 2017 that yielded the following results. The results showed that in comparison with competing innovations like Microsoft apps, accounting programs, cloud apps, financial technologies, and tools for data analytics, the use and acceptance percentage of AI was barely 13% at the time. Nonetheless, it is anticipated that in three years, the use of AI will increase to 15% (MIA, 2019). Given how few applications of AI there are, a lot of Malaysian industries may be unaware of the tool's much greater capability. Given that AI is regarded as one of the forces behind IR 4.0, this issue has caused great anxiety.

The period of Culture 5.0, which has been influenced by different technologies involving big data, data privacy, AI software, computing in the cloud, and blockchain, has made significant changes to the field of accounting. Internet accounting is one of these changes, and it will help professionals in accounting fulfill their mission. The accounting profession needs to adapt to the changing circumstances and be innovative in the context of Society 5.0. To increase job efficiency and productivity, accounting companies must also comprehend technology and utilize it to its fullest potential. In this situation, auditors can provide correct information instantly by utilizing technologies like massive amounts of data, artificial intelligence (AI) software, computing on the cloud, blockchain, and cyber security.

Artificial Intelligence (AI) in accountancy has been the subject of numerous studies. For example, Guo, Shi, and Tu (2016) studied the application of AI to analyze texts to analyze uncontrolled financial and accountancy data. The researchers discovered that when it came to discovering trends in data, neural networks outperformed other forms of data mining. Chukwudi et. al. (2018) determined the AI in accounting procedures in Southeast Nigeria. Efficiency of the procedure for auditing and systems for expertise were found to be positively correlated.

This research concentrated on the reporting of earnings and auditing, even though they offer certain insights regarding the application of AI in accounting. The investigations likewise addressed how AI is affecting finance, but they did so using quantitative data, which carries the danger of bias and obscures the true nature of the issue.

Relationship Between the Readiness Level of AI Software Applications in the Accounting Field.
Throughout the past several decades, there has been a significant evolution in the corporate sector. As technology advances, there will be more instability and shifts in industries in the upcoming decade. Advances in technology coupled with the significance of conducting skills like expert judgment, mental agility, and constitutional and moral actions will present both benefits and challenges for a lot of users, both new and old. Most of the innovations are now goods or means of distributing assets and there is little distinction among them (Blut & Wang, 2020). Latest developments in technology have brought about drastic changes to the consumer and company paradigms that currently prevail. Drones, AI, big data, Blockchain, Fintech, cloud computing, smartphone apps, and cryptocurrency are just a few examples of the technologies that significantly impact company procedures.

According to Parasuraman (2000), readiness for technology is the ability of individuals to accept and utilize new technologies in their professional and private lives as well. It represents a complex interplay between psychological triggers and restraints that influence an individual's propensity for embracing new technologies (Parasuraman & Colby, 2015). Graduated accounting professionals need to be open to integrating emerging technologies to be prepared for future employment in the accounting sector, as improvements in technology are affecting the field. The speed at which a company gets done and its effectiveness have grown dramatically because of the effect that technology has on activities. Thanks to technological improvements, accountants can become more efficient than they have ever been (Zhang, Dai, & Vasarhelyi, 2018).

The predicted shifts brought about by technological improvement in their prospective job are something that graduate accountants are unable to prevent. For student accountants to perform at the highest level, they require greater familiarity with technology (Tan & Veal, 2005). The key motivator for them to stay up to date with the developments is the progress of technology, which is a primary force behind worldwide transformation. Accounting candidates and subsequent accounting professionals who will uphold the legitimacy and applicability of expert assistance in the age of the Internet both find this to be of comparable importance. Research regarding how personality traits affect technological readiness is needed as new technologies progress (Blut & Wang, 2020).

Relationship Between the Readiness Level of Cloud Technology in the Accounting Field.
Cloud computing services are usually categorized into three categories: the software as an offering (where users access software programs supplied by external cloud-based service suppliers) and structures as a service (where users control both infrastructure and applications) (Gangwar et al., 2015; Low et al., 2011). According to Mill and Grance (2011), clouds might be accessible for the publicly traded, community-accessible, restricted to an organization, or an intersection of these. Given the anticipated move away from internal processes, cloud-based computing was previously seen as an innovation in the accounting sector (Hsu and Lin, 2016; Ma et al., 2021). The economic value of cloud computing derives from its versatility, expansion, and ease of obtaining updated data for various individuals at multiple places. It also reduces the necessity for archived information and backups (CPA Australia, 2019; Fawcett, 2015). Cloud computing offers small and medium-sized companies (SMEs) more chances to utilize the latest innovations, enhanced flexibility in building up computer resources, and less expenditures on capital, development costs, and maintenance expenses (Hsu and Lin, 2016; Ma et al., 2021). Whilst some businesses are dubious concerning the safety elements of employing cloud computing, it might improve both interior and exterior partnerships and allow for easy accounting and spread of accounting data for successful business choices (Dimitriu and Matei, 2015, Tarmidi et al., 2014).

Relationship Between the Readiness Level of Blockchain in the Accounting Field.
Determining how accounting professionals are ready to embrace the application of blockchain technology is the motivation behind this investigation. Therefore, the purpose of the research is to assess accounting professionals' readiness according to Parasuraman's (2000) technological readiness rating and the way that readiness affects their decision to use blockchain technology. Based on theory, this study uses TRI to enhance our empirical knowledge of how prepared accounting professionals are for disruptive technologies. In particular, the current study provides statistical evidence for Malaysian accounting professionals' behavioral desire to use blockchain technology.

Pragmatically speaking, the results of the study will assist those who are interested, particularly the Blockchain Malaysia Association, the power source Malaysian Institute of Accountants (MIA), a MIGHT, and other officials or legislators in developing suitable and feasible tactics for motivating and enabling Malaysian organizations in effectively employing blockchain technology for the foreseeable company helps and to provide that blockchain applications will continue to be well-received by Malaysian accounting researchers. A summary of the several issues that need to be resolved before blockchain technology is widely applied, which might have a big influence on global trade, brings this study to a close.

Only the accounting professions' readiness for blockchain technology by 2019 is the primary concern of this study. The term "accounting professionals" describes the specific individuals working in Malaysia in accountancy-related fields. The cross-sectional design may yield outcomes that vary from continuous studies or data undertaken in other nations owing to differences in time, culture, and professional procedures. The

present research is centered on the participants' technological readiness and pre-adoption viewpoint because blockchain technology is nevertheless in its nascent stages. As a result, several inescapable external factors could influence the research's results, and the investigator was unable to restrict the external factors that the study involved.

Therefore, according to Parasuraman (2000), it's important to ascertain customers' readiness to employ technology-based procedures to ascertain their propensity for using new technology. Technology readiness was defined by Parasuraman (2000) as a person's propensity to understand and use new technology to achieve their targets at the job and home. A 5-demonstrate multiple-item rating was developed by Parasuraman (2000) to gauge users' readiness to accept new technologies.

Relationship Between the Adoption Level of AI Software Applications in the Accounting Field.
Additional research regarding the way accounting accepts and utilizes AI has been suggested for the data systems and accounting study fields (Issa et al., 2016; Sutton, Holt, & Arnold, 2016). For a deeper comprehension of the usage of AI in accounting, this research project looks at how accounting companies have implemented, enabled by artificial intelligence inspection technologies. The research investigation looks at how AI functions in the traits of accounting organizations and the outside world (Rogers, 1995; Tornatzky, Fleischer, & Chakrabarti, 1990).

Studies found that the notion of artificial intelligence is always changing and that it is occasionally easy to distinguish AI from other intelligent technologies (Collins, Dennehy, Conboy, & Mikalef, 2021). AI was initially defined as "the technological method of creating intelligent machines" in 1956 (McCarthy, 1960). However, investigators later adopted several AI concepts. According to Collins et al. (2021) and Wolfe (1991), artificial intelligence (AI) can be categorized into two types: rule-based AI, which follows predefined rules, and regulations AI, which does not follow established standards. Borges, Laurindo, Spínola, Gonçalves, and Mattos (2021) conducted a comparative analysis of applications utilizing artificial intelligence that varied in their reliance on human rulemaking and attribute definition to illustrate an issue. Deep learning, visual learning, machine learning, and artificial intelligence are all included in this paradigm.

According to Collins et al. (2021), the areas of machine learning, computer vision, processing of natural language, intelligent systems, and automation are some of the most frequently debated forms of AI technology among academics in the IS fields. This investigation considers the latest developments in the AI spectrum through a wide lens, rather than concentrating on any one of those groups in particular. Sutton et al. (2016) have informed the public that concentrating on certain AI frameworks while ignoring others may result in prejudiced study findings. As a result, the concept of "AI" as it is employed in the present dissertation refers to a broad range of information-based systems like expertise systems and decision-support infrastructure, and also machine learning (both supervised and unsupervised) techniques like artificial neural networks and learning with associations.

Relationship Between the Adoption Level of Cloud Technology in the Accounting Field.
This investigation is mostly motivated by the accounting field's apparent adoption of cloud computing to an extent that has significantly surpassed other industries. Research on the adoption of cloud computing that is now available likewise falls short in this area. Some of the material currently available on cloud computing is

Concentrated on the scientific, supply-side cloud computing concerns (what exactly is the most effective method for creating and disseminating content Computing capabilities that satisfy customers' requirements?), as opposed to the demand-side (why would individuals and companies use cloud computing?). The cloud computing research from the client side additionally differs greatly regarding the contextual elements. These elements, including the nation and industry, typically have a significant impact on how companies run their business activities and attain their objectives.

Furthermore, no specific connection is made between the adoption behavior and the organization's operational circumstances, tactics, or procedures in the adoption research. The purpose of this preliminary research is to investigate the demand-side characteristics of cloud computing. Computational methods inside the accounting sector. A design involving several case studies is employed. Accounting organizations (firm-level) are the basis

of examination, with a focus on minor bookkeeping companies. Discussions with the subjects are organized into phases to collect data. Individuals from six distinct accounting companies. The investigation is centered on the choice creators' perspectives on the emerging cloud issue and the causes for their choice to accept or deny the use of cloud computing.

Small firms may now adopt state-of-the-art computer systems, reap the rewards, and improve them since cloud computing eliminates the need for early expenditure. Sufficiently advanced computer systems to rival their bigger competitors (Marston and others, 2011). According to earlier research on cloud computing adoption, reduced expenses, flexibility, and convenience of access are the main reasons why companies have adopted cloud computing. However, the biggest challenges to using cloud computing are worries about the confidentiality and integrity of cloud computing.

Relationship Between the Adoption Level of Blockchain in the Accounting Field.
Blockchain's approach to operating. Analysts anticipate benefits from the adoption of blockchain in the process, including dedication, convertible status, certainty, and enthusiasm to push the technology forward in the retail sector. As an administrative strategy for the management of Blockchain, the adoption of Blockchain requires an intense commitment (Rusbult and Van Lange, 2003). Engaging in interpersonal engagement elicits a physical reaction and enhances habit formation and sustained engagement (Agnew, Van Lange, Rusbult, and Langston, 1998, for example). Kind ideas are the source of beneficial alterations (Rusbult and Van Lange, 2003). The partners' increasing dedication to each other highlights pro-social behaviors like reconciliation, housing, and helping sufferers (e.g., Finkel, Rusbul, Kumashiro and Hannon, 2002, Rusbult, Verette, Whitney, Slovik, Lipkus 1991, Van Lange Harinck, Steemers, 1997).

As a result, fulfillment plays a crucial role in the method of building relationships. To adhere to this procedure, blockchain adaptation involving blockchain with the accounting sector was specifically included in the present investigation's strategy. According to Rusbult and Van Lange (2003), knowledge of the "demand" or "dependency" of upcoming parties is essential to comprehending the adaptability and engagement that constitute this concept." The interrelationship in satisfaction or discomfort that results from addiction, which decides whether to maintain or leave an affiliation, is connected to Blockchain adaptability. Consumption is also associated with fragility since it exacerbates incompatibility and unilateral dominance. When there are competing goals that are not inverse, the more contentious partner will act for their own greatest good or that of their partner, provided that all partners are aware of each other's ability to respond. Even though relationships can carry through a violent one, it is believed that the companion is trustworthy if he reacts beneficially and does not abuse his enticing situation. This is either a poor substitute or an expensive gamble (Johnson, 1995, Rusbult & Martz, 1995). The beneficial blockchain knowledge, blockchain oversight, and blockchain management plan encourage blockchain's flexibility, zeal, and dedication, which in turn propels its blockchain-based accounting sector.

Mediating variable effect between job efficiency towards the relationship of level of readiness of using technologies in the accounting field.
Employee Development and Learning: Using AI in accounting and auditing calls for a staff equipped with the know-how to handle and operate these tools. Knowing the state of technological readiness makes it easier to create training programs that function and build a workforce that can implement and utilize AI solutions. Cost Efficiency and Resource Optimization: Technology readiness analysis helps determine how much money

And resources will be needed when adopting AI. Finding integration-ready technologies can help with distributing assets and implementation techniques that are less expensive (Duong and Vu 2023; Firoiu et al. 2023a).

Innovation Potential: Researching the connection between the acceptance of artificial intelligence and technological preparedness provides opportunities for novel approaches to accounting and auditing procedures. It offers perceptions of how cutting-edge technology may be used to fundamentally alter the industry and promote an innovative culture. In conclusion, it is critical to investigate the relationship between technological readiness and acceptance of artificial intelligence in the context of Vietnam's accounting and auditing to stay abreast of international developments, maintain regulatory compliance, enhance operational

effectiveness, and capitalize on AI's potential to spur innovation in the financial services industry. In the end, it helps the nation's accounting and auditing industry expand and become more competitive by offering an approach for the tactical application of AI technologies (Firoiu et al., 2023b).

The reduction of future expenses is another important advantage of integrating artificial intelligence (AI) within a business's accounting function. Long-term dependence on computer programs (AI) will decrease the need for human operations while enhancing both the efficiency and accuracy of accounting records from businesses.

Mediating variable effect between job efficiency towards the relationship of level of adoption of using technologies in the accounting field.
By analyzing and deciphering the vast amount of accounting information, the majority of which originates from non-traditional systems of accounting, accounting experts today around the globe offer important assistance to their upper management (Spiegel & Dilsizian, 2013; Haverson, 2014; Davenport & Harris, 2017). Financial and non-financial data is extracted from web server logs, Internet and smartphone clickstream audio Qiles, social networks, and a plethora of machine-generated as well as sensor-detected systems. The resulting data is then analyzed and interpreted to help make essential company choices (Bertolucci, 2023; LöfQler, 2013).

Additionally, as a crucial component of management processes, several governments globally have taken action to enhance third-party accessibility to data obtained from citizens and businesses as well as internal government data, which will expand the opportunities for statistical analysis (Casselman, 2015; Office of Management and Budget, 2015). Additionally, businesses can increase their efficiency and gain insightful data about their clients and employees to create more competitive personnel and customer strategies by utilizing artificial intelligence (AI) technologies, such as artificial intelligence (AI), natural language processing, recognition of words, and machine learning (Ernst & Young, 2020).

Professionals in accounting are becoming increasingly involved in the strategic use of artificial intelligence (AI) technologies. With the introduction of large amounts of data, data statistical analysis, and the use of artificial intelligence (AI), experts in accounting have proven they can provide more value to companies by increasing revenue and optimizing workflows. In the age of artificial intelligence, increasingly complex duties will be delegated to accounting software by traditional accounting staff, significantly enhancing efficiency, lowering the rate of error, and boosting company and industry competitiveness in the marketplace. This will also help to foster the evolution of the accounting sector.

The job responsibilities of accounting personnel typically vary by the company's operational process. However, in the context of artificial intelligence, AI will replace traditional accounting as well as auditing work, greatly increasing job efficiency, and altering the way that traditional accounting and auditor duties are separated. This will assist accounting personnel with enhancing the caliber and ability of their job duties. This will alter the conventional financial and operational working modes in addition to optimizing the structure layout and accounting post settings.

3. Research Methodology

Measures
The questionnaires were divided into five sections, each consisting of closed-ended statements. Section A; the respondents' demographic data, Section B; Level of readiness and adoption of using AI software; Section C: Level of readiness and adoption of using Cloud Technology; Section D: Level of readiness and adoption using Blockchain; Section E: AI usage in the accounting Field and Section F: Job Efficiency. The notion of adapting and adopting was employed from several sources, including Spector (1997), Mohammad et al. (2020), Ahmed (2020), and Kanapathipilla et al. (2020) for this work. Sections A, B, C, D, E and F of the survey were broken down as follows: The initial measurements from Zhang et. al. (2019) have undergone several adjustments to suit the current study's setting. Five-point Likert scale, with one denoting "strongly disagree" and Qive denoting "strongly agree," was used to rate the items.

Google Forms was the tool utilized to submit the survey to the responders. Each participant received a link to

the questionnaires via WhatsApp and email. It made clear the one-week timeframe that was assigned to the responders and guaranteed the privacy of their answers. According to Watt et al. (2018), 32.6% is the proper limit for a reply rate by % for online surveys.

Data Collection
For this study, a straightforward random selection seems to be the most appropriate sample strategy (Salkind, 2019). Eighty of the ninety managerial and non-managerial staff members from American Express, Selangor, Malaysia had their names drawn at random from an assortment using the chance method (Packham, 2015). An arbitrary number ranging from one and 90 was assigned to every one of the 90 employees; the remaining 80 were allocated to them. The members of the biggest group's subgroup were chosen at random, giving every member of the vast population a comparable likelihood of being chosen. Packham (2015) stated that this process resulted in, for the most part, an evenly distributed subset with a large prospective group that was usually devoid of discrimination.

A total of 80 questionnaires were distributed, with consideration paid to the sustainability of responses and the rate of return of respondents. A response return rate of 93.75% was obtained from the 75 questionnaires that were returned with complete responses.

Data Analysis
The Statistical Package for Social Sciences (SPSS), Version 27, is used for processing and interpreting the information contained in a data analysis matrix. Descriptive statistics, as well as inferential statistics, are both (2) categories of statistical techniques used. According to Watt et al. (2018), descriptive statistical techniques are used to characterize the basic choices of how to collect and evaluate data. As an illustration, descriptive statistics examine the study participants' demographic profile, taking note of the rate and percentage of responses.

Inferential statistics addresses the research questions and hypotheses (Said, 2018). Inferential statistics help in identifying and quantifying relationships between the variables of investigation, that is, the relationship between the degree of readiness and adoption of implementing AI software, Cloud technological advances, blockchain, and AI usage in the accounting industry.

Results

This section presents sets of results relating to the profile of respondents' experiences towards effects of AI on Accounting Performance, the characteristics of the total sample, and the comparison of participants regarding their experience based on the demographic characteristics (gender, age, race, working tenure and position).

Respondents' Demographic Profile: Table 1 displays a summary of the characteristics of the total sample of respondents who participated in the study.

Table 1: Respondents' Demographic Profile: n = 75

Variable	Frequency	Percentage
GENDER		
Males	32	42.7%
Females	43	57.3%
Total	**75**	**100%**
AGE		
Below 25	18	24.0%
26 - 34	26	34.7%

35 - 44	22	29.3%
45 - 54	3	4.0%
Above 55	6	8.0%
Total	**75**	**100%**
RACE		
Malay	24	57.3%
Indian	23	32.0%
Chinese	28	37.3%
Others	0	0.0%
Total	**75**	**100%**
WORKING TENURE		
Below 5 Years	18	24.0%
6 - 10	33	44.0%
11 - 15	15	20.0%
Above 15 Years	9	12.0%
Total	**75**	**100%**
POSITION		
Junior Executive	20	26.7%
Executive	20	26.7%
Senior Executive	21	28.0%
Manager	14	18.7%
Total	**75**	**100%**

Descriptive Statistics: Descriptive statistics were conducted, and Table 2 below displays the outcome. These provide the average mean scores of the respondents regarding their opinion on the effects of AI on the level of readiness and level of adoption on accounting performance from the perspective of Malaysian organizations.

Table 2: Descriptive Statistics

Variables	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
LEVEL OF READINESS				
AI SOFTWARE	75	2.8347	0.12044	1.04306
CLOUD TECHNOLOGY	75	2.9627	0.13335	1.15487
BLOCKCHAIN	75	2.9644	0.12676	1.09780
LEVEL OF ADOPTION				
AI SOFTWARE	75	2.8507	0.13158	1.13951
CLOUD TECHNOLOGY	75	2.9947	0.12546	1.08651
BLOCKCHAIN	75	3.0381	0.12573	1.08881
JOB EFFICIENCY	75	2.9280	0.12636	1.09428
AI IN THE ACCOUNTING FIELD	75	3.0133	0.12916	1.11856

The mean scores ranging from 2.8347, 2.9627, and 2.9644 were obtained from the level of readiness (AI Software, Cloud Technology and Blockchain) while 2.8507, 2.9947, 3.0381, 2.9280 and 3.0133 were obtained from the level of adoption (AI Software, Cloud Technology, Blockchain, Job Efficiency and AI in Accounting Field). Every variable's standard deviation was determined to be above 0.70, indicating that all respondents agreed with the claims made for every factor (Pallant, 2016).

Correlation Analysis: The correlation study looks at how strongly the independent variables level of readiness and adoption (AI Software, Cloud Technology and Blockchain) mediate variable job efficiency to the dependent variable of AI in the accounting field. Two variables were compared, and a correlation coefficient was calculated, yielding values between -1 and +1. As per the findings of Ratnasari et al. (2016), Table 3 below illustrates the interpretation of r values: $r < -0.20$ for weak negative correlation, $r < -0.30$ for moderate negative correlation, $r < -0.50$ for strong negative correlation, and $r < -0.90$ for very strong negative correlation. There are four types of positive correlations: weak ($r < 0.20$), moderate ($0.30 < r < 0.50$), strong ($0.60 < r < 0.80$), and extremely strong ($0.90 < r < 1.00$).

Table 3: Correlation Analysis

No	Research Questions	Findings
Q1	Is there a relationship between the readiness and adoption level of Malaysian organizations for using AI software applications in the accounting field?	The finding for the level of readiness and adoption of using AI software indicates which is r= 0.670, p < 0.01 and r= 0.658, p< 0.01. There is a strong relationship between the level of readiness and the adoption of AI software in the accounting field.
Q2	Is there a relationship between the readiness and adoption level of Malaysian organizations for using cloud technology in the accounting field?	The finding for the level of readiness and adoption of using cloud technology indicates which is r= 0.681, p < 0.01 and r= 0.808, p < 0.01. There is a strong relationship between the level of readiness and the adoption of cloud technology in the accounting field.
Q3	Is there a relationship between the readiness and adoption level of Malaysian organizations for using blockchain in the accounting field?	The finding for the level of readiness and adoption of using blockchain indicates which is r= 0.716, p < 0.01 and r= 0.735, p < 0.01. There is a strong relationship between the level of readiness and the adoption of using blockchain in the accounting field.

| Q4 | Is there a significant effect of the mediating variable of job efficiency on the level of readiness in the accounting field? | The finding for the level of readiness and job efficiency indicates which is r= 0.776, p < 0.01. There is a strong relationship between the level of readiness and job efficiency in the accounting field. |
| Q5 | Is there a significant effect of the mediating variable of job efficiency on the level of adoption in the accounting field? | The finding for the level of adoption and job efficiency indicates which is r= 0.776, p < 0.01. There is a strong relationship between the level of adoption and job efficiency in the accounting field. |

Table 4: Regression Analysis of Level of Readiness (AI Software, Cloud Technology and Blockchain), Job Efficiency in the Accounting Field

| | | Unstandardized Coefficients | | Standardized Coefficients | | |
Model		B	Std. Error	Beta	t	Sig.
1	Level of readiness	1.103	1.183		.933	.354
	AI Software	.114	.115	.108	.988	.327
	Cloud Technology	.150	.111	.158	1.348	.182
	Blockchain	.146	.112	.175	1.298	.199
	Job Efficiency	.472	.097	.483	4.882	<.001

a. Dependent Variable: AI in the accounting field

According to Jack (2019), any beta percentage of more than 10 percent indicates a direct influence on the moderating variable. The impact proportion between the variables is shown by a percentage greater than 10 percent (Landry et al., 2015). Table 4 indicates that for AI Software, there is a direct effect of 0.108 in the accounting field (DV) (B=.108, p=.327). This effect is noteworthy since 11 percent is greater than 10 percent. Since 16 percent is greater than 10 percent, cloud technology (B=.158, p=0.182) indicates that there is a direct influence toward DV by 0.158 as if there is a one-unit increase in cloud technology. This is significant. With a one-unit rise, Blockchain (B=.175, p=.199) shows a direct effect toward DV of 0.175 where it is significant since 18 percent is greater than 10 percent. The indirect impact of job efficiency (B=.483, p=<.001) on DV is shown to be 0.483 with a unit increase, although this effect is statistically significant.

Table 5: Regression Analysis of Level of Adoption (AI Software, Cloud Technology and Blockchain), Job Efficiency in the Accounting Field

| | | Unstandardized Coefficients | | Standardized Coefficients | | |
Model		B	Std. Error	Beta	t	Sig.
1	Level of adoption	.350	1.058		.331	.742
	AI Software	-.087	.101	-.091	-.867	.389
	Cloud Technology	.468	.106	.465	4.417	<.001
	Blockchain	.188	.074	.261	2.532	.014
	Job Efficiency	.301	.095	.308	3.163	.002

a. Dependent Variable: AI in the accounting field

Any beta percentage greater than 10 percent, as defined by Jack (2019), suggests a direct impact on the variable that acts as a moderator. More than 10% of the percentage indicates the influence proportion among the variables (Landry et al., 2015). Table 5 shows that the accounting field (DV) has a direct influence of -0.091 for AI Software (B=-.091, p=.389). Since 9 percent is less than 10 percent, this effect is not significant. Cloud technology (B=.465, p=<.001) suggests that there is a direct effect toward DV by 0.465, as if there is a one-unit rise in cloud technology, as 47 percent is bigger than 10 percent. Blockchain (B=.261, p=.014) has a direct influence on DV of 0.261 with a one-unit increment; this effect is significant because 26% is higher than 10%. With one unit increase, the indirect impact of job efficiency (B=.308, p=.002) on DV is shown to be 0.308, while statistically not significant.

Table 6: Summary Findings for Hypotheses

No	Hypotheses of Study	Alternate Hypotheses
H1	The significant relationship between the readiness level of AI software applications in the accounting field.	Accepted
H2	The significant relationship between the readiness level of cloud technology in the accounting field.	Accepted
H3	The significant relationship between the readiness level of blockchain in accounting field.	Accepted
H4	The significant relationship between the adoption level of AI software applications in the accounting field.	Accepted
H5	The significant relationship between the adoption level of cloud technology in the accounting field.	Accepted
H6	The significant relationship between the adoption level of cloud Blockchain in the accounting field.	Accepted
H7	There is a significant mediating variable effect between job efficiency towards the relationship between the level of readiness to use technologies in the accounting field.	Accepted
H8	There is a significant mediating variable effect between job efficiency towards the relationship of level of adoption of using technologies in the accounting field.	Accepted

Discussion
The results of the study have shown a positive strong relationship between the level of readiness (AI Software, Cloud technology and Blockchain) and level of adoption (AI Software, Cloud technology and Blockchain) in the accounting field towards employees' job efficiency. All eight hypotheses (H1 to H8) showed a significant relationship and were all accepted. The outcome of the moderating effect between working tenure and level of readiness presents a direct impact. However, the level of adoption shows an indirect impact on job efficiency whereas job efficiency shows a direct impact.

5. Managerial Implications and Recommendations

Rules and incentives are paramount to the growth and success of the performance of the organization. Regarding the firms, it is advised that they utilize the study's conclusions as a guide to improve employee job efficiency. Giving out rewards is a good way to keep people motivated and loyal. To encourage job happiness at work, maintaining current practices involves staff participation and training. Meanwhile, it is also advisable to expand the research to include Sabah and Sarawak in east Malaysia as well as the Malaysian Peninsula to have a more dynamic and broad scope. These two states are home to a diverse range of ethnic groups, which may provide novel study findings and differing viewpoints. The study's expansion to further states will also produce

a broad understanding of Malaysia's overall development in the deployment of digital and electronic marketing.

Conclusion

The integration of artificial intelligence (AI) into accounting practices has notably transformed the landscape of financial management within Malaysian organizations. This study reveals several critical points regarding the impact of AI on accounting performance such as significantly improving the efficiency of the accounting process, reduction in operational costs and informed decision-making. Companies should prioritize providing more tools, such as AI Software, Cloud technology and Blockchain. To boost workers' job happiness, which will in turn raise their commitment, drive, and propensity for increased productivity inside the company. Greater profit returns will result from this, enabling the company to compete and set an example for other businesses. This will then draw the interest of other firms to enhance operations and a receptive attitude toward others learning about the strategies, which will ultimately benefit workers' and employers' businesses and provide the company with a competitive edge.

In conclusion, AI has profoundly impacted the performance of accounting functions within Malaysian organizations, driving efficiency, accuracy, and strategic decision-making while also presenting challenges that must be managed. The future of accounting will likely continue to evolve with AI advancements, necessitating a proactive approach to embracing technological change and harnessing its full potential. This highlights the main effects of AI on accounting performance while acknowledging both the advantages and challenges associated with its implementation.

References

Ahmed, I. E. (2020). The Qualitative Characteristics of Accounting Information, Earning Quality and Islamic Banking Performance: Evidence from the Gulf Banking Sector. *International Journal of Financial Studies, 8*(2), 30.

Agnew, C. R., Van Lange, P. A., Rusbult, C. E., & Langston, C. A. (1998). Cognitive interdependence: Commitment and the mental representation of close relationships. *Journal of personality and social psychology*, *74*(4), 939.

Bertolucci, M., & Mac Ivor, F. (2023). Artificial intelligence in the public sector: literature review and research agenda. *Gestion et management public*, *2*.

Blut, M., & Wang, C. (2020). Technology readiness: a meta-analysis of conceptualizations of the construct and its impact on technology usage. *Journal of the Academy of Marketing Science*, *48*, 649-669.

Borges, A. F., Laurindo, F. J., Spínola, M. M., Gonçalves, R. F., & Mattos, C. A. (2021). The strategic use of artificial intelligence in the digital era: Systematic literature review and future research directions. *International Journal of Information Management*, *57*, 102225.

Casselman, R. M., Sama, L. M. & Stefanidis, A. (2015). Differential Social Performance of Religiously-Affiliated Microfinance Institutions (MFIs) in Base of Pyramid (BoP) Markets. *Journal of Business Ethics, 132*, 539-552.

Chukwudi, O., Echefu, S., Boniface, U., & Victoria, C. (2018). Effect of artificial intelligence on the performance of accounting operations among accounting firms in southeast Nigeria. *Asian Journal of Economics Business and Accounting, 7*(2), 1–11.

Collins, C., Dennehy, D., Conboy, K., & Mikalef, P. (2021). Artificial intelligence in information systems research: A systematic literature review and research agenda. *International Journal of Information Management*, *60*, 102383.

CPA Australia. (2019). CPA Australia is my firm. My future. CPA Australia.

Davenport, T.H., & Kirby, J. (2016). Just how smart are smart machines? MIT Sloan Management Review, *57*(3), 21-25.

Deloitte. (2015). Strategies for optimizing your accounts payable (Deloitte Working Paper series). Retrieved from https://www2.deloitte.com/content/dam/ Deloitte/ca/Documents/Qinance/ca-en-FA-strategies-for-optimizing-your accounts-payable.pdf

Dimitriu, O. & Matei, M. (2015). Cloud Accounting: A New Business Model in a Challenging Context. *Procedia Economics and Finance, 32*, 665-671.

Duong, T., V. A. (2023). Impact of Accounting Information Systems on Performance of Vietnamese Construction Enterprises. *International Journal of Professional Business Review, 8*(10).

Ernst, C. (2020). Artificial intelligence and autonomy: self-determination in the age of automated systems. *Regulated ArtiKicial Intelligence*, Springer.

Fawcett, T. W., & Frankenhuis, W. E. (2015). Adaptive explanations for sensitive windows in development. *Frontiers in Zoology*, *12*(1), 1-14.

Finkel E. J., Rusbult C. E., Kumashiro M., Hannon P. A. (2002). Dealing with betrayal in close relationships: Does commitment promote forgiveness? *Journal of Personality and Social Psychology*, 82, 956–974.

Firoiu, D., George, H., Ionescu, L., Mariana, C, Luminita, V., Teodor, M. C. and Raducu-Ștefan B. (2023ª). Can Europe Reach Its Environmental Sustainability Targets by 2030? A Critical Mid-Term Assessment of the Implementation of the 2030 Agenda. *Sustainability* 15: 16650.

Firoiu, D., George, H. Ionescu, T., Marian, C, Mariana, N., Mariana, N. C. and Oana, A. C. (2023b). Progress of EU Member States Regarding the Bioeconomy and Biomass Producing and Converting Sectors. *Sustainability* 15, 14128.

Frisk, J. E., & Bannister, F. (2017). Improving the use of analytics and big data by changing the decision-making culture: A design approach. *Management Decision*, *55*(10), 2074-2088.

Gangwar, H., Date, H., & Ramaswamy, R. (2015). Developing a cloud-computing adoption framework. *Global Business Review*, *16*(4), 632-651.

Guo, L., Shi, F., & Tu, J. (2016). Textual analysis and machine learning: Crack unstructured data in Qinance and accounting. *The Journal of Finance and Data Science, 2*(3), 153–170.

Haverson., A. (2014). Why Predictive Analytics Should Be "A CPA Thing". (New York, NY: AICPA).

Hsu, C. L., & Lin, J. C. C. (2016). Effect of perceived value and social influences on mobile app stickiness and in-app purchase intention. *Technological forecasting and social change*, *108*, 42-53.

Ikechukwu, O. I., & Nwakaego, D. A. (2015). The effect of accounts payable ratio on the Financial performance of food and beverages manufacturing companies in Nigeria. *Journal of Research in Business and Management*, *3*(9), 15-21.

Issa, H., Sun, T., & Vasarhelyi, M. A. (2016). Research ideas for artificial intelligence in auditing: The formalization of audit and workforce supplementation. *Journal of Emerging Technologies in Accounting*, *13*(2), 1-20.

Jack, M. (2019). An Analysis of Financial Performance of Private Sector Textile Units in Maharashtra Using Multiple Regression Model. Oman Chapter of *Arabian Journal of Business and Management Review*, *6*(12), pp.58-68.

Jeneesh, T. (2017). Artificial intelligence and expert systems in accounting 101 databases: Survey and extensions. Retrieved from https://imtech614.wordpress.com/2017/02/16/artiQicial-intelligence-and expert-systems-in accounting-databases-survey-and-extensions/

Johnson, T., L. (1995). Future Events: A Conceptual Study of Their Significance for Recognition and Measurement. *The Accounting Review, 70*(3), 527-528.

Kanapathipillai, K., & Azam, S. F. (2020). The impact of employee training programs on job performance and job satisfaction in the telecommunication companies in Malaysia. *European Journal of Human Resource Management Studies*, *4*(3).

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and psychological measurement*, *30*(3), 607-610.

Landry, R., Lowe, S., Boozer, B., Sneed, J. And Sneed, C., (2015). Bankruptcy Reform and Consumer Chapter 11 Filing Rates: An Interrupted Time-Series Regression Analysis. *Journal Of International Finance Studies*, *15*(2), 27-36.

LofQler, G. (2013). Can Rating Agencies Look Through the Cycle? *Review of Quantitative Finance and Accounting, 40*, 623-646.

Low, C., Chen, Y., & Wu, M. (2011). Understanding the determinants of cloud computing adoption. *Industrial management & data systems*, *111*(7), 1006-1023.

Ma, W. & Li, W. (2021). Blockchain adoption and accounting information system: An investigation of challenges and expected value, The 15th China Summer Workshop on Information Management.

Marston, S., Li, Z., Bandyopadhyay, S., Zhang, J., & Ghalsasi, A. (2011). Cloud computing—The business perspective. *Decision support systems*, *51*(1), 176-189.

McCarthy, J. (1960). Recursive functions of symbolic expressions and their computation by machine, part I. *Communications of the ACM*, *3*(4), 184-195.

Mell, P., & Grance, T. (2011). The NIST definition of cloud computing.

MIA. (2019). Digital technology blueprint: Preparing the Malaysian accountancy profession for the digital world. Kuala Lumpur: Author. Retrieved from https://www.mia.org.my/v2/downloads/resources/publications/2018/07/12/MIA_Technology_Blueprint_Spreads_format.pdf

Miller, T. (2019). Explanation in artificial intelligence: Insights from the social sciences. Artificial intelligence, 267, 1-38.

Mohammad, S. J., Hamad, A. K., Borgi, H., Thu, P. A., Sial, M. S., & Alhadidi, A. A. (2020). How artificial intelligence changes the future of the accounting industry. *International Journal of Economics and Business Administration*, *8*(3), 478-488.

Omar, S. A., Hasbolah, F., & Ulfah, M. Z. (2017). The diffusion of artificial intelligence in the governance of publicly listed companies in Malaysia. *International Journal of Business, Economics and Law*, *14*(2), 1-9.

Packham, N. (2015). Combining Latin hypercube sampling with other variance reduction techniques. Wilmott, (76), 60-69.

Pallant. J (2016). SPSS Survival Manual: A step-by-step guide to data analysis using IBM SPSS (6th ed). New York, NY. Routledge.

Parasuraman, A. (2000). Technology Readiness Index (TRI) a multiple-item scale to measure readiness to embrace new technologies. *Journal of Service Research*, *2*(4), 307-320.

Parasuraman, A., & Colby, C. L. (2015). An updated and streamlined technology readiness index: TRI 2.0. *Journal of Service Research*, *18*(1), 59–74.

Pavaloiu, I. B., Petrescu, I., Raducanu, M., & Dragoi, G. (2018). Software Applications for Teaching Digital Design. In INTED2018 Proceedings (7457-7463). IATED.

Rogers, E., M. (1995). Diffusion of Innovations. The Free Press, New York (4th ed.).

Rusbult, C. E., & Martz, J. M. (1995). Remaining in an abusive relationship: An investment model analysis of nonvoluntary dependence. *Personality and Social Psychology Bulletin*, *21*(6), 558-571.

Rusbult, C. E., & Van Lange, P. A. (2003). Interdependence, interaction, and relationships. *Annual review of psychology*, *54*(1), 351-375.

Rusbult, C. E., Verette, J., Whitney, G. A., Slovik, L. F., & Lipkus, I. (1991). Accommodation processes in close relationships: Theory and preliminary empirical evidence. *Journal of Personality and Social Psychology*, *60*(1), 53.

Said, R., M., Abba, M., Abdullah, A., & Liu, GengYuan. (2018). The Relationship Between Environment Operational Performance Environment Disclosure of Nigerian Listed Companies. *Journal of Environmental Accounting and Management, 6*(1), 1-15.

Salkind, N. J., & Frey, B. B. (2019). Statistics for people who (think they) hate statistics. Sage Publications.

Spector, P. E. (1997). Job satisfaction: Application, assessment, causes, and consequences (Vol. 3). Sage.

Spiegel, E., L. & Dilsizian, S. E. (2013). Artificial Intelligence in Medicine and Cardiac Imaging: Harnessing Big Data and Advanced Computing to Provide Personalized Medical Diagnosis and Treatment. *Nuclear Cardiology, 16*(441).

Stancheva-Todorova, E. P. (2018). How artificial intelligence is challenging the accounting profession. *Journal of International Scientific Publications*" Economy & Business, 12, 126-141.

Sutton, S. G., Holt, M., & Arnold, V. (2016). The reports of my death are greatly exaggerated-Artificial intelligence research in accounting. *International Journal of Accounting Information Systems*, *22*, 60–73.

Tan, L. M., & Veal, J. (2005). Tax knowledge for undergraduate accounting majors: conceptual v. technical. *eJTR*, *3*, 28.

Tarmidi, M., Rasid, S. Z. A., Alrazi, B., & Roni, R. A. (2014). Cloud computing awareness and adoption among accounting practitioners in Malaysia. *Procedia-Social and Behavioral Sciences*, *164*, 569-574.

Tornatzky, G., Drazin., R. & Flesicher., M. (1991). The Process of Technological Innovation. *The Journal of Technology Transfer, 16*(1), 45-46.

Van Lange, P. A., Agnew, C. R., Harinck, F., & Steemers, G. E. (1997). From game theory to real life: How social value orientation affects willingness to sacrifice in ongoing close relationships. *Journal of personality and social psychology*, *73*(6), 1330.

Wolfe, J. M. (1994). Visual search in continuous, naturalistic stimuli. *Vision Research*, 34(9), 1187-1195.

Zhang, C. A., Dai, J., & Vasarhelyi, M. A. (2018). The impact of disruptive technologies on accounting and auditing education: how should the profession adapt? *The CPA Journal*, *88*(9), 20-26.

Zhang, H., An, R. & Zhong, Q. (2019) Anti-corruption, government subsidies, and investment efficiency. *China Journal of Accounting Research*, *12*(1), 113–133.