THE EFFECT OF DIGITALIZATION ON ACCOUNTING PROFESSION IN THE ERA OF IR 4.0

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UNIVERSITI TEKNIKAL MALAYSIA
MELAKA

2024

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This report is being submitted to complete a requirement for the degree of Bachelor of Technology Management with Honors (Technology Innovation)

Faculty of Technology Management and Technopreneurship

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2024

DECLARATION

I hereby declare that the work has been done by myself and no portion of the work in this research project proposal has been submitted in support of any application for any other degree or qualification of this or any other university or institute of learning.

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SUPERVISOR'S APPROVAL

I/We, hereby declared that I/WE had read through this thesis and in my/our opinion that this thesis is adequate in terms of scope and quality which fulfil the requirements for the award of Bachelor of Technology Management with Honours

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DEDICATION

I would like to dedicate this research to my beloved parents who have raised me up, siblings, companion in love who always give encouragement and guidance through my journey to complete study. Besides, I would like to thank Dr Nor Azah binti Abdul Aziz who guide me all the way to complete my thesis.

ACKNOWLEDGEMENT

I am grateful and would like to express my sincere gratitude to my supervisor, Dr Nor Azah Binti Abdul Aziz for her invaluable guidance, continuous encouragement and constant support in making this research possible. I truly appreciate her guidance from the early stage to the final level that enabled me to develop an understanding of this thoroughly. Without her advice, assistant and selfless sharing about finance knowledge, it would be much tougher to completion of thesis. I also sincerely thank her for the time spent proofreading and correcting my mistakes. I would like to send my gratitude to beloved family, for all the supports in all sense that act as my motivation to finish this final year project. I would like to express my sincere gratitude to the Faculty of Technology Management and Technopreneurship and to University Technical Malaysia Melaka for providing me with the opportunity to undertake this project and for the resources and facilities that were essential to its success. Lastly, thanks to any person which contributes to my final year project directly or indirectly. I would like to acknowledge their comments and suggestions, which was crucial for the successful completion of this study.

ABSTRACT

In recent years, digitalization has started to change many aspects in daily life, including in daily routines. The changes brought on by the digital age affect all areas of accounting, including corporate and fiduciary accountancy. Businesses and professions across industries experience a turning point thanks to Industry 4.0. Almost every element of the economy and professions is expected to undergo a revolution. The current industrial revolution's technology disruptions are neither immune to or excluded from the accounting profession. By examining the tools utilized and the factors that differentiate some trustees who are more digital than others, this thesis seeks to understand the effects of digitalization on the accounting profession in the era of IR 4.0 trustees. The study is helpful for researchers or small medium enterprise that want to have a knowledge about the outcome of the digitalization towards accounting profession. The data and results from 105 respondents were collected using SPSS Version 29.0. A variety of statistical tools were employed for data analysis, including reliability analysis, linear regression analysis, and Pearson's Correlation Coefficient analysis. The results showed that there is a significant relationship between the independent variables (robotics, blockchain, artificial intelligence, and cloud accounting) and the accounting profession. The study also found that blockchain is the most significant variable influencing the accounting profession in the era of IR 4.0.The research proposes a new framework to aid further understanding of these effects. To thrive in the evolving digital landscape, accounting professionals are encouraged to adapt proactively, develop relevant skills in cloud computing, blockchain, AI, and data analysis, and capitalize on the opportunities presented by IR 4.0. This proactive approach will ensure their continued success and relevance in the transforming accounting industry.

Keywords: *Fourth Industrial Revolution, Digitalization, Accounting, Profession, Robotics, Blockchain, Artificial Intelligence and Cloud Accounting.*

ABSTRAK

Dalam beberapa tahun kebelakangan ini, pendigitalan telah mula mengubah banyak aspek dalam kehidupan seharian, termasuk dalam rutin harian. Perubahan yang dibawa oleh era digital mempengaruhi semua bidang perakaunan, termasuk perakaunan korporat dan fidusiari. Perniagaan dan profesion merentas industri mengalami titik perubahan berkat Industri 4.0. Hampir setiap elemen ekonomi dan profesion dijangka mengalami revolusi. Gangguan teknologi semasa revolusi industri tidak kebal atau dikecualikan daripada profesion perakaunan. Dengan meneliti alat yang digunakan dan faktor-faktor yang membezakan sesetengah pemegang amanah yang lebih digital daripada yang lain, tesis ini cuba memahami kesan pendigitalan terhadap profesion perakaunan dalam era pemegang amanah IR 4.0. Kajian ini berguna untuk penyelidik atau perusahaan kecil sederhana yang ingin mempunyai pengetahuan tentang hasil pendigitalan terhadap profesion perakaunan. Data dan keputusan daripada 105 responden telah dikumpul menggunakan SPSS Versi 29.0. Pelbagai alat statistik digunakan untuk analisis data, termasuk analisis kebolehpercayaan, analisis regresi linear, dan analisis Pekali Korelasi Pearson. Keputusan menunjukkan bahawa terdapat hubungan yang signifikan antara pembolehubah bebas (robotik, blockchain, kecerdasan buatan, dan perakaunan awan) dan profesion perakaunan. Kajian itu juga mendapati bahawa rantaian blok adalah pembolehubah paling ketara yang mempengaruhi profesion perakaunan dalam era IR 4.0. Penyelidikan mencadangkan rangka kerja baharu untuk membantu pemahaman lanjut tentang kesan ini. Untuk berkembang maju dalam landskap digital yang berkembang, profesional perakaunan digalakkan untuk menyesuaikan diri secara proaktif, membangunkan kemahiran yang relevan dalam pengkomputeran awan, rantaian blok, AI dan analisis data, dan memanfaatkan peluang yang dibentangkan oleh IR 4.0. Pendekatan proaktif ini akan memastikan kejayaan dan kerelevanan berterusan mereka dalam industri perakaunan yang mengubah.

***Kata kunci**: Revolusi Perindustrian Keempat, Pendigitalan, Perakaunan, Profesion, Robotik, Blockchain, Kepintaran Buatan dan Perakaunan Awan.*

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CHAPTER 1

INTRODUCTION

1.0 Introduction

Nobody could have predicted that using social networks, exchanging emails, and perusing the Internet a few years ago. All through the use of smartphones, tablets, or even smart watches. It is no secret that digital tools are influencing daily lives more and more, especially in light of the crisis that has been plaguing in for more than a year. These instruments are being employed in numerous occupations as well as for recreational activities. As a result, digital developments have an effect on a variety of occupations, including cashiers through scans, teachers through online courses, and accountants through new programs.

In fact, the accounting field has undergone rapid change in recent years. In just 50 years, tasks that were formerly completed on paper have been converted to digital forms and the transformation continues. Automation, artificial intelligence, cloud accounting, big data, and blockchain are among the new digital technologies that researchers predict will have effect on the accounting profession (Gulin et al., 2019; Janvrin & Watson, 2017; Jylhä & Syynimaa, 2019; Törnqvist & Forss, 2018). Some people are gloomy about the profession's future, such as Frey and Osborne (2017), who claim that accountants would be the 31st most exposed profession to automation with a 98% risk of being automated.

1.1 Background of Study

One sector that has witnessed a rise in digitalization and is anticipated to expand even more is the accounting sector. Accounting is a method for tracking and compiling financial and economic activities. Methods of record keeping, accounting, and accounting instruments have been in use for as long as civilizations have engaged in trade or had formalized systems of government. The accounting sector has undergone a transformation as a result of the discovery of digitization and the resulting necessity for change. The accounting sector is under pressure as a result of these changes to either completely embrace digitization in their environment or to stick with manual systems. The majority of accounting firms are currently gradually learning how to utilize the new technical possibilities that come with digitization.

Public accounting is a process that involves several accountants offering audit, tax, and advisory services to the general public. Typically, one needs to be licensed in order to perform public accounting. The education system needs to change for accounting students to be equipped for the working world, and accounting practitioners must have great technical skills to adapt to this shift.This change has a significant effect on the accounting profession. Accounting professionals must embrace digitalization in order to stay relevant and carry out their assigned responsibilities as best as they can. The accounting profession must adapt to Malaysia's Industrial Revolution 4.0, where digital lifestyles are becoming more common and virtual services are becoming more popular.

Accounting professionals must understand our cutting-edge technology in keeping with Malaysia's Industrial Revolution 4.0, where a digital lifestyle has become the standard and virtual services are becoming more common. The way individuals work can be optimized by new technologies. It can enhance corporate procedures when used carefully. These modifications now constitute progress. Today, an accountant may save a lot of client information, perform complex calculations, and keep track of all transactions on a single tablet. Many automatic transactions and sensitive data are controlled by modern technology, which implies that accountants and their instruments are held in high regard.

While information storage and automated processes provide numerous potential and advantages, they also carry hazards and threats. One key finding is that digitalization directly impacted how the firm should be strategically organized and run. The following conclusions can be made generally. In conclusion, a corporation's entire business strategy and organizational structure will most certainly be impacted by digitization. Digitalization affects all elements of organizations, including accounting. Accountants bear a heavy burden in selecting a trustworthy system that works effectively, complies with legal requirements, and safeguards sensitive data.

The management of the accounting will be the most important duty. The emphasis on controlling is much more important than previously with more automated processes. If the machine makes a mistake, the designated accountant will be held accountable (Qurratu, 2021).

1.2 Problem Statement

The importance of having access to digitally savvy, forward-thinking professional accountants who can give guidance on how the business should approach future challenges and opportunities brought on by the development of digitalization in the era of Fourth Industrial Revolution (Nazariy H., 2021). Although the existence of digitalization will cut down on the amount of time, many current financial positions require employees to work. The nature of this quick technology revolution's adaption will also necessitate changes in accounting reporting, tax compliance, and auditing procedures. The accounting profession are required to able to comprehend and adjust to this digitalization for this reason (Juita, 2019). Digital technologies can automate basic data entry, bookkeeping and reconciliation tasks, potentially displacing accountants. (Gulen et al., 2019). In light of the aforementioned context, it is crucial to do some research on the effect of digitalization towards accounting profession as digitalization effect on accounting profession might be change due to the technological change.

1.3 Research Question

The primary goal of this study is to analyze how digitalization and accounting profession are interacting in the IR 4.0 era. This study specifically aims to investigate how digitalization factors are affecting the field of accounting profession in IR 4.0.

1. What are the factors of digitalization that affect on the accounting profession in the era of IR 4.0?

2. What are the relationships between digitalization and accounting profession in the era of IR 4.0?

3. What is the most significant factor of digitalization on accounting profession in the era of IR 4.0?

1.4 Research Objectives

This study is anticipated to offer a thorough analysis of the state of digitalization factors in the IR 4.0 age and to demonstrate how prepared the accounting profession interchange the issues raised by digitalization. Here are some specific goals for this study that will be accomplished:

1. To examine the factors of digitalization that affect on the accounting profession in the era of IR 4.0
2. To analyze the relationships between digitalization and accounting profession in the era of IR 4.0
3. To investigate the most significant factor of digitalization on accounting profession in the era of IR 4.0

1.5 Scope of studies

Due to the companies that offer financial services via technology, the research's findings may be helpful to SME industries. The insights gained will help everyone better understand how digitalization influence the accounting profession in the era of IR 4.0. With the aid of interconnectedness provided by the Internet of Things (IoT), access to immediate information, and the introduction of cyber-physical systems, Industry 4.0 elevates the current emphasis on digital technology to a completely new level. As there is a lack of data relating to accounting and digitalization, the study's findings should help lecturers, businesspeople, and accountants prepare their studies for the sector. The sample size is 380 when the population is greater than 75,000, according to Krejcie & Morgan (1970). But the difficulties on finding respondent, I will be using 105 respondents based on the Hair et al suggestion on research. 105 individuals are so chosen to complete surveys and serve as a source of data and evaluation.

1.6 Significance of Study

This particular study, which primarily aims to ascertain the effect of digitalization on the accounting profession in the era of IR 4.0, will provide new knowledge to the researcher, government, future practitioners and communities. The findings of this study open up new research directions, chances to create theoretical frameworks, opportunities to do empirical research on the effects of digitization, investigation of ethical issues, and research that is future-focused. Researchers play a critical role in expanding knowledge and comprehension in this quickly changing environment and helping accounting effectively integrate and use digital technologies.This study can help the government make better decisions, improve service delivery to citizens, and run more transparent and effective financial operations. Next, this study offers accountants opportunities for professional development, expanded roles as strategic advisors, increased accuracy and efficiency, and the ability to utilize cutting-edge technologies for data analysis and decision-making. As a result, accountants as practitioners will also benefit from this study. Lastly, this study lead to communities that are inclusive, empowered, and have improved financial capacities and growth possibilities.

1.6.1 Theoretical Significance

From research perspective, this study is expected to be significant in terms of effect of digitalization on accounting profession in the era of IR 4.0 and to encourage more digitalization studies to be conducted in developing countries to determine the similarity of studies conducted. Besides, this study will bring benefits to businesses to act as a reference for accountant and banking managers to have deeper level of understanding about digitalization and accounting profession in Malaysia. The government also can get the benefits.

1.6.2 Practical Significance

Using ANOVA as the practical significance in this study to find the magnitude of the difference which is known as the effect size. We can statistically quantify practical relevance with the aid of effect sizes, or more precisely effect size estimations. Effect sizes have additionally been referred to as a gauge of "meaningfulness."(P. Ellis, 2010). The effect size should, from a purely practical and applied standpoint, be the main result of study enquiry (J. Cohen,1990). No matter what we are measuring, the magnitude of the difference or the degree of correlation between variables is probably what we are most interested in. The validity of our discovery or the degree to which we are sure in the discovery is equally crucial, but it shouldn't be the primary output.

1.7 Operational Definitions

Table 1.7: Operational Definition

Variables	Description	Authors
Digitalization	Digitalization is the transition to a digital business, it is the use of digital technologies to alter a business model and offer new revenue and value-producing options.	Gartner Information Technology Glossary, 2023
Accounting Profession	A professional who carries out accounting tasks like account analysis, auditing, or financial statement analysis is referred to as an accountant. Accountants work for accounting firms or the internal accounting divisions of big businesses. They are free to establish their own, unique practices.	Julia Kagan, 2023
Fourth Industrial	The blending of the physical, digital, and biological worlds is referred to as the fourth industrial revolution. It	McGinnis, 2023

Revolution	combines developments in robots, the Internet of Things (IoT), Web3, blockchain, 3D printing, genetic engineering, quantum computing, and other fields. It is the driving force behind a variety of goods and services that are quickly turning into necessities for modern living.	
Blockchain	Blockchain is a decentralized, immutable database that makes it easier to track assets and record transactions in a corporate network. An asset might be physical (a house, car, money, or piece of land) or intangible (patents, copyrights, branding, and intellectual property). On a blockchain network, practically anything of value may be recorded and traded, lowering risk and increasing efficiency for all parties.	IBM, 2023
Artificial Intelligence	The replication of human intelligence functions by machines, particularly computer systems, is known as artificial intelligence. Expert systems, natural language processing, speech recognition, and machine vision are some examples of specific AI applications.	Burns et al., 2023
Cloud Accounting	A method called cloud accounting enables multi-user access and secure online or remote server storage. Your users transfer all of your data to cloud service providers, where it is processed, securely stored, and then sent back. Business procedures can be streamlined and adjusted to company growth thanks to cloud technology.	Freshbooks, 2023
Robotics	Robotics is the design and use of devices that can carry out physical tasks in a human's place autonomously or partially autonomously. Robots typically carry out jobs that are either overly repetitious or too risky for a human to safely complete.	Margaret Rouse , 2023

1.8 Organization of research

The study is divided into three chapters. Chapter one of the study consists of the general introduction which includes; the background of the study, the statement of the problem, the objective of study, the research questions, significance of the study, the scope of study, operational definition, and the organisation of research. Chapter two is the literature review which evaluates the works of other researchers on the subject, their approaches, and the researcher's criticisms of their stance where necessary. Chapter three focuses on the methodology of the study. There are also supplementary pages that include a sample of the questionnaire used, as well as references that were used in the study.

1.9 Conclusion

By emphasizing a few of the earlier studies, this Chapter has summarized the thesis. The Chapter then provided a brief explanation of how this thesis will contribute to the larger body of literature. The goals and issues that the researcher must deal with in this study endeavor are also discussed in this chapter.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

A literature review is an examination of academic sources on a particular subject. It gives you a broad overview of the state of the field, enabling you to spot pertinent theories, approaches, and gaps in the literature that you may then use to inform your paper, thesis, or dissertation topic.

2.2 Literature Keyword

2.2.1 Digitalization: Definition

In the previous two decades, digitalization has drastically changed practically every element of existence. In practically every country, access to the internet, rising mobile phone use, social media, and other ICT services have altered how people interact, communicate, study, and work (Laura Schelenz 2018; Parviainen, et al. 2017). In essence, digitization is the process of converting analog information into digital information that computers can store, process, and send. Few would disagree with the description provided in Gartner's IT Glossary,"Digitization is the process of changing from analog to digital form." As has been the case for many years, there are several examples of digitization in businesses today. As well as transferring audio from an LP or video from a VHS tape, digitization also includes the conversion of handwritten or typewritten text into digital format. Digitization is crucial in the enterprise environment for dealing with analog information as well as

'paper-based' processes, where 'paper-based' is really a metaphor for analog (Gartner Information Technology Glossary, 2023).

2.2.2 Factors of Digitalization on Accounting Profession

Based on the digitalization definition and analysis of the chosen articles, blockchain, artificial intelligence, cloud accounting and robotics.

2.2.2.1 Blockchain

Blockchain is a technology used in accounting. It is focused on transferring ownership of assets and keeping a record of precise financial data. The measurement, communication, and analysis of financial information fall under the broad purview of the accounting profession. A large portion of the profession is concerned with determining or evaluating rights and obligations regarding property or with strategizing the most efficient use of financial resources. By giving accountants clarity over who owns something and whether there are obligations, blockchain technology has the potential to significantly increase productivity.

By lowering the expense of maintaining and reconciling ledgers and supplying complete clarity on the ownership and history of assets, blockchain has the potential to improve the accounting profession. By allowing resources to be focused on planning and valuation rather than recordkeeping, blockchain could help accountants better understand the resources and obligations of their organizations.

Blockchain will cause an increase in the amount of transactional-level accounting that is performed by people other than accountants, along with other automation trends like machine learning. Instead, those accountants who focus on evaluating the true economic interpretation of blockchain records and connect the record to economic reality and valuation will be successful. For instance, while blockchain may confirm the existence of a debtor, its recoverable value and economic worth are still up for discussion. And while the ownership of an item can

be confirmed using blockchain records, its state, location, and actual value still need to be established. Blockchain could also allow for increases in the scope of accounting by removing reconciliations and supplying assurance over transaction histories. This would allow for the consideration of more areas that are currently thought to be too difficult or unreliable to measure, such as the value of the data that a company holds.

Bookkeeping and reconciling tasks can be replaced by blockchain. This may put those accountants' jobs in jeopardy while strengthening those who are working to offer value in other areas. For instance, distributed consensus regarding important figures in mergers and acquisitions due diligence provides for a quicker procedure overall and more time to be spent on advisory and judgmental tasks (Blockchain and the Future of Accountancy, 2023).

2.2.2.2 Artificial Intelligence

The use of AI makes it possible to examine every accounting transaction in existence, greatly enhancing audit quality and generating more audit evidence on a wider scale. AI eliminates sampling risk by providing audit proof gleaned from looking at 100% of the transactions. By concentrating on odd or suspect transactions, it also enables auditors to conduct audits more effectively. The adoption of AI-enabled technology can extract data that will allow the auditor to dedicate more time to areas needing higher-level judgment because AI is specifically aimed for data collecting. AI, for instance, makes it possible for time-consuming operations like testing payment transactions to be completely automated, including the extraction of any supporting data for more substantive testing. To evaluate transactions that might contain substantial misstatements or deviate from anticipated materiality, the AI program does a thorough population analysis (Webmaster, 2021). For example, companies like ACL and SAS provide AI-powered fraud detection tools.

2.2.2.3 Cloud Accounting

Accounting software is used in cloud accounting and is stored on a secure distant server. Accounting systems, reports, and financial data can be stored and accessed by small business teams from any location with an internet connection as well as the company computer. A method called cloud accounting enables multi-user access and secure online or remote server storage. Your users transfer all of your data to cloud service providers, where it is processed, securely stored, and then sent back. Business procedures can be streamlined and adjusted to company growth thanks to cloud technology. Utilizing safe web-based software, cloud-based accounting streamlines business operations. All essential information is accessible to small business owners and their finance staff from anywhere, facilitating cooperation and streamlining financial reporting.

Through a cloud application service provider, users can access the software applications over the internet or other networks. Because everyone in the firm can access the cloud on their own devices with cloud-based software, there is no need for a corporation to set up individual PCs with software. Remote teams or branches can access the same crucial information and financial records, including accounts receivable and finance teams. Having everyone on the same page always results in time and money savings(FreshBooks, 2023).

2.2.2.4 Robotics

RPA (robotic process automation) in the accounting industry takes the form of robotic on accounting. Robotic submissions are used in new technology to eliminate the need for human labor in manual accounting operations. Although it is far from a human replacement, robotic accounting is frequently seen as such. Consider the technology as a collection of "accounting bots" that can centralize data from many accounting systems with less work. RPA need to be viewed more as a robotic arm that helps accounting departments by streamlining processes. Employee tasks should be improved, and the work should be more interesting. Artificial

intelligence that supports a driven finance department through robotic accounting (Tipalti, 2020). Robotic process automation (RPA) software is available from companies like Automation Anywhere and UiPath, and it can handle activities like processing invoices.

2.2.3 The Implications of Digitalization on the Accounting Profession

Digitalization transform the accounting profession by providing a more effective approach to complete tasks for the accounting profession by four factors which are unprecedented data access, automation is raising the bar, better business decisions come from productivity over reactivity and the competence set of accountants is changing.

2.2.3.1 Unprecedented Data Access

Anyone with access can now view financial information at any time, from any location in the world that with a respectable internet connection. Wherever places that needed to go, there are no problems at all since geographical restrictions on account management and reporting are no longer an issue thanks to cloud accounting (Pandle, 2021).

2.2.3.2 Automation Is Raising The Bar

Another two major forces influencing the accounting sector's current digitalization-inspired development are automation and artificial intelligence. Processes including credit control, forecasting, invoicing, cashflow reporting, and reconciliation have become noticeably less manual and time-consuming as a result of automation, in particular. As a result, firms and their accountants have more time and

resources to put on their strategic hats and adopt a more methodical approach (Pandle, 2021).

2.2.3.3 Better Business Decisions Come From Productivity Over Reactivity

Businesses gain the upper hand with access to real-time data and reporting, more precise projections and cash flow analyses, as well as simplify automation. With all of this in their favor, business owners can take a proactive rather than a reactive approach, budgeting more effectively and planning ahead and putting in place contingencies. Digitalization helps businesses and their accountants see the future much more clearly, resulting in more intelligent financial decisions being made across the board (Pandle, 2021).

2.2.3.4 The Competence Set Of Accountants Is Changing

It can be seen that accountants throughout the world would be terrified by this given how digitalization is assisting business owners in improving their ability to manage their money and bookkeeping. In contrast, it's the complete opposite by view the situation more positively. Digitalization takes much of the tedious administrative work that accountants have historically been tasked with and replaces it with more in-depth strategic thinking, forecasting, and consulting for both those working in practice and industry. Now that they have the time and mental space, accountants can approach their work with more analysis, and some may even develop into consulting roles (Pandle, 2021).

2.2.4 Accounting Profession

By gathering, monitoring, and adjusting the company's financial information, an accountant assists firms in making important financial decisions. They are in

charge of conducting financial audits, comparing bank statements, and guaranteeing the accuracy of financial records all year long (Kourmentza, 2013).

2.3 Summary of Literature Review

Digitalization has significantly transformed the accounting profession by converting analog information into digital information that computers can store, process, and send. Blockchain, artificial intelligence, cloud accounting, and robotics are some of the factors that contribute to digitalization in the accounting profession. Blockchain technology focuses on transferring ownership of assets and keeping accurate financial data, increasing productivity and reducing costs associated with maintaining and reconciling ledgers. It also allows for increased scope of accounting by eliminating reconciliations and providing assurance over transaction histories.

Artificial intelligence (AI) can examine every accounting transaction, improving audit quality and generating more audit evidence. Cloud accounting allows for multi-user access and secure online or remote server storage, streamlining business operations and streamlining financial reporting. Robotic process automation (RPA) in the accounting industry aims to eliminate human labor in manual accounting operations, streamlining processes and improving employee tasks. Digitalization transforms the accounting profession by providing unprecedented data access, raising the bar in automation, and enabling better business decisions based on productivity over reactivity. The competence set of accountants is changing, and the effect of digitalization on the profession is significant.(Kourmentza, 2013)(Tipalti, 2020)(Pandle, 2021)(FreshBooks, 2023)(Webmaster, 2021).

2.4 Theories

The concepts, principles, and processes that serve as the foundation for the digitalization of accounting are covered by accounting engineering theory. It discusses the implications of digitalization on the structure of accounting and on

professional accountants as well as how to mold the accounting profession in light of this development. By concentrating on the transformation brought about by digitization, it examines the changes that accounting procedures have brought about in the accounting profession and its members. It also emphasizes how the accounting industry will be redesigned in light of digitization.

An accounting derivative made up of the representation of systematic principles and methodologies is known as accounting engineering. The theory's purpose is to create accounting procedures within the parameters of digitization and to address any potential accounting issues that may result from digitization. The theory's goal is to create a new model that is based on a set of logical rules that are consistent and serve as a general framework for assessing and developing the effects of digitization on accounting processes. It is impossible to expect the accounting industry to change in response to digitization in the absence of a new paradigm (İsmaİl Tekbaş, 2021).

2.5 Conceptual Framework

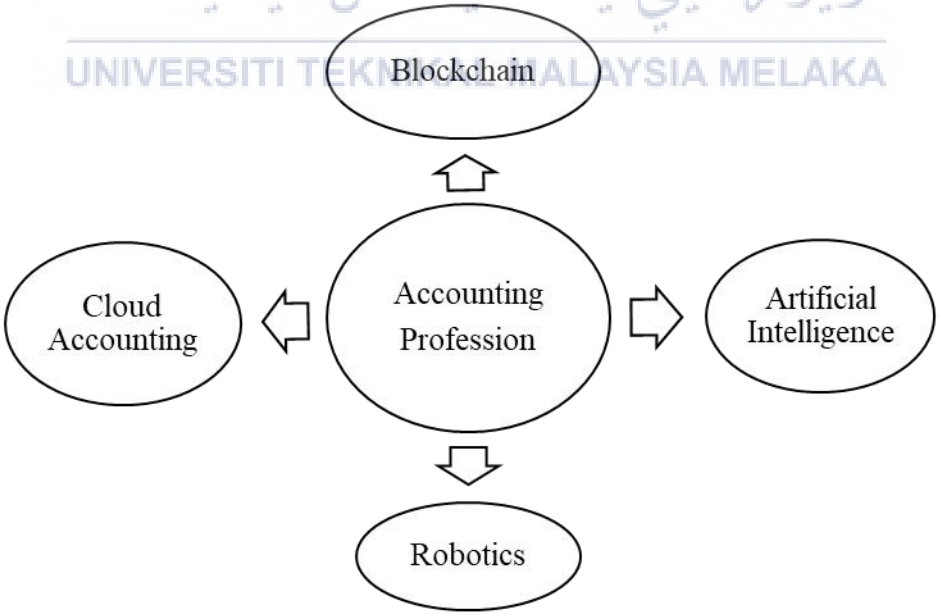

Figure 2.2.3: Conceptual Framework on the effect of digitalization on accounting profession in the era of IR 4.0

2.6 Hypotheses Development

The research's hypotheses, which were generated based on the conceptual framework suggested, are listed below.

Hypothesis 1:

- H0: There is no significant relationship between blockchain and accounting profession in the era of IR 4.0.
- H1: There is significant relationship between blockchain and accounting profession in the era of IR 4.0.

Hypothesis 2:

- H0: There is no significant relationship between artificial intelligence and accounting profession in the era of IR 4.0.
- H2: There is significant relationship between artificial intelligence and accounting profession in the era of IR 4.0.

Hypothesis 3

- H0: There is no significant relationship between cloud accounting and accounting profession in the era of IR 4.0.
- H3: There is significant relationship between cloud accounting and accounting profession in the era of IR 4.0.

Hypothesis 4

- H0: There is no significant relationship between robotics and accounting profession in the era of IR 4.0.
- H4: There is significant relationship between robotics and accounting profession in the era of IR 4.0.

2.7 Conclusion

Accounting engineering theory focuses on the digitalization of accounting, its implications on professional accountants, and the industry's redesigned procedures. It aims to create a consistent framework for assessing and developing the effects of digitization on accounting processes. The research generates hypotheses on the relationship between blockchain, artificial intelligence, cloud accounting, and robotics in the era of IR 4.0.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

Research methodology, according to Kothari (2004), is a methodical and scientific strategy to answer research problems and examine how research is carried out. Research technique can direct researchers in the right direction for answering their research questions. The researcher provides an overview of the research techniques employed in the chapter using research onion model. Additionally, the procedures for gathering information on the crucial factors of digitalization that affecting accounting profession will be described. Additionally covered in this chapter are reliability and pilot tests as they apply to questionnaire design.

3.1.1 Philosophy

A research philosophy is a viewpoint on the methods that should be utilized to collect, analyze, and apply data regarding a topic. In contrast to doxology, which refers to what is thought to be true, the term "epistemology" refers to what is recognized to be true. Numerous research approach philosophies. So, the process of changing what is believed into what is known doxa to episteme is the goal of science. This study uses a positivism research philosophy (Jansen, 2021).

The foundation of positivist research is the idea that knowledge is not limited to the topic under study. Stated differently, research can only be carried out objectively; the inclusion of subjective notions is prohibited. The researcher merely makes observations; they do not interpret. According to positivism, there is simply

merely a single reality and all meanings are the same, regardless of what they are about. According to positivist theory, empirical inquiry based on measurement as well as observation is the only way to gain knowledge. Stated differently, all data is considered afterward, or expertise derived from research as opposed to human thinking. Intelligence will only be accurate; wrong, or meaningless in the positivist's view.

3.1.2 Research Approaches

In the scientific community, many researchers may ascribe various definitions to the collaborative research technique. The term "research approach" in certain publications refers to distinctions between qualitative and quantitative methodologies as well as methods of data gathering and analysis in general. However, in our opinion, a research approach is better understood as a broad strategy and process for carrying out the study. The key distinction between deductive and inductive techniques is the relevance of hypotheses to the study. While the inductive approach aids in the creation of new ideas and generalizations, the deductive approach examines the veracity of the assumptions (or theories/hypotheses) at hand. Contrarily, abductive research begins with "surprising facts" or "puzzles," and the study process is committed to explaining them.

In this research, I use quantitative research that emphasizes numerical data. Quantitative research frequently uses a logical methodology that is typically guided by positivist ideology. The use of deductive reasoning in this situation stems from the fact that quantitative research frequently starts with theory as a foundation and moves forward through hypothesis testing. In other words, like in our example of evolution above, a larger theory is applied to a specific situation, occurrence, or observation to determine whether these fit within the theory (Jansen, 2021).

3.1.3 Research Strategies

In the next section of the research's onion, different studies methods are discussed relying on the investigation's goals. I have chosen to utilize a well-organized questionnaire for the survey that I use in my study.

3.1.4 Methodological Choices

Qualitative research, quantitative research, and mixed approaches are the methodological options available for study. In order to develop a theory to explain occurrences that occurred, qualitative research is utilized to observe and understand real-world situations (Newman & Benz, 1998). Quantitative research is used to construct a theory and examine if the hypothesis can be confirmed or disproven.

In this study, data will be gathered from respondents using a quantitative method. The focus of the quantitative method is on numerical data that has been generalized across a population or used to characterize phenomena (Mujis, 2010). With statistical analysis, the relationship between variables is studied using quantitative approaches.

3.1.5 Time Horizon

Independent of the study methodology chosen, time ranges are required for the research design, claim Saunders et al. (2007). Longitudinal and cross-sectional temporal frames are the two different categories. Studies that last a long time are repeated frequently. Cross-sectional research is constrained by a time period. The cross-sectional time horizon is employed since this research is constrained to a particular period of time.

3.2 Constructs Measurement

The links between several abstract concepts make up theoretical statements. Before the strength of their relationships can be examined, it is necessary to measure these constructs precisely, correctly, and scientifically in order to test theories (i.e., theoretical propositions). Measurement is the core of empirical research and refers to purposeful, meticulous observations of the real world. While some social science study constructs, like a person's age, weight, or company size, may be simple to measure, others, like creativity, bias, or alienation, may be much more challenging (Research Methods for the Social Sciences, 2023).

Table 3.2: Table of Construct Measurements

Constructs	**Original Measurement Items**	**Sources of Measurement**	**Measurement items adopted and adapted on this study**
Blockchain	Bibliometrix R-package	Silvana, 2022	Likert Scale
Artificial intelligence	The Abstraction and Reasoning Corpus (ARC)	Martin von Allesch, 2022	Likert Scale
Cloud Accounting	Cloud ERP	*SAP Insights*, 2017	Likert Scale
Robotics	Circles, Area, And Perimeter	Application of Maths, 2023	Likert Scale

3.3 Data Collection

In order to gain a holistic image of an interesting issue, data collection is a systematic method for gathering and measuring information from primary and secondary sources. To acquire information and collect data for the study, primary and secondary data were employed. According to Hox and Boeije (2005), primary data are those that were collected for a particular research issue in the study using appropriate methods. Primary data can be gathered via surveys, interviews, and observation techniques. Primary data for the study is gathered from a survey by giving questionnaires to Malaysian SME accounting employees. The information is authentic and has not been altered.

Furthermore, secondary data are information that has been obtained from other sources and is easily accessible. Secondary data can be used to define an issue, create a suitable solution, and do additional research for the topic. Secondary data for this study is gathered from books, papers, academic journals, academic articles, and websites that are pertinent to the subject.

3.4 Questionnaires

For the purpose of providing the questionnaire to respondents in this study, a self-administered survey approach is used. The questionnaire is divided into three pieces. Demographic data including gender, age, income level, and education level were to be gathered in Section A. The questions in Section B that follow are concerned with the factors that affect the accounting profession in the era of IR 4.0. Blockchain, artificial intelligence, cloud accounting and robotics all fall under the category of independent variables. Respondents were instructed to react to the questions using a Likert scale, which ranks levels of agreement from 1 to 5. Section C of the questionnaire is about the digitalization on accounting profession in the era of IR 4.0.

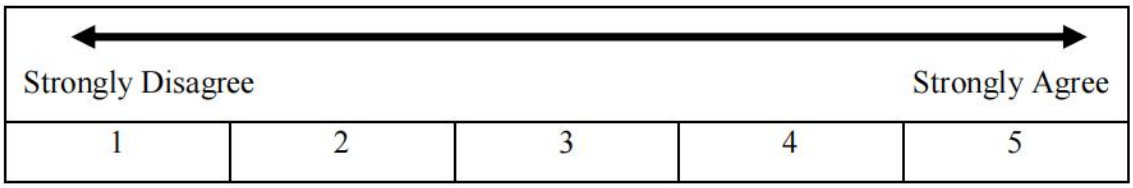

Figure 3.4: Likert Scale

Source: (Saunders, Lewis, & Thornhill, 2016)

3.5 Sampling Technique

Probability sampling and non-probability sampling are the two primary categories of sampling techniques. Each sample has an equal chance of being chosen in a probability sampling procedure (Kumar, 2011). Non-probability sampling refers to the fact that not all samples have an equal chance of being chosen. The purpose of the sampling approach is to choose a population to serve as the survey's sampling units.

In this study, probability sampling is used, and the random sample selection method is simple probability sampling. This method of choosing sample size assumes that each sample has an equal and independent chance of being chosen from the population under study. The survey's intended audience consists of Melaka-based Small and Medium Enterprise (SME) acounting employees. The researcher calculated that there were 37,000 SME accounting employees in Melaka. Krejcie & Morgan (1970) determined that the sample size is 380 when the population is bigger than 30,000. However, due to the challenges I had getting respondents, I decided to use 105 respondents instead, as suggested by Hair et al. As a source of information and for evaluation, 105 people are so picked to participate in surveys.

Table 3.5: Table for Determining Sample Size from a Given Population

(Source: Krejcie & Morgan, 1970)

N	S	N	S	N	S
10	10	220	140	1,200	291
15	14	230	144	1,300	297
20	19	240	148	1,400	302
25	24	250	152	1,500	306
30	28	260	155	1,600	310
35	32	270	159	1,700	313
40	36	280	162	1,800	317
45	40	290	165	1,900	320
50	44	300	169	2,000	322
55	48	320	175	2,200	327
60	52	340	181	2,400	331
65	56	360	186	2,600	335
70	59	380	191	2,800	338
75	63	400	196	3,000	341
80	66	420	201	3,500	346
85	70	440	205	4,000	351
90	73	460	210	4,500	354
95	76	480	214	5,000	357
100	80	500	217	6,000	361
110	86	550	226	7,000	364
120	92	600	234	8,000	367
130	97	650	242	9,000	368
140	103	700	248	10,000	370
150	108	750	254	15,000	375
160	113	800	260	20,000	377
170	118	850	265	30,000	379
180	123	900	269	40,000	380
190	127	950	274	50,000	381
200	132	1,000	278	75,000	382
210	136	1,100	285	1,000,000	384

N= Population
S= Sample

3.6 Location of Research

State of Melaka is where the research is primarily concentrated. The economy of Melaka is expanding quickly, and on October 20, 2010, the Organization for Economic Cooperation and Development designated the state as a developed state (Shah, 2014). Therefore, Melaka is an appropriate state to carry out research on how digitalization is affecting the accounting profession in the IR 4.0 era.

Figure 3.6: Map of Melaka

Source: (Google Image, 2018)

3.7 Data Analysis Method

Data analysis is the methodical process of analyzing data using a logical or statistical approach. Numerous data analysis methods, including the pilot test, Cronbach's alpha, and descriptive statistics for the respondents' demographic data, are employed in this study to show and analyze the data acquired. The data are then analyzed using multiple regression analysis and Pearson's correlation coefficient.

3.7.1 Pilot Study

A pilot test is a preceding study used to guarantee the validity and dependability of the questions the researcher created. The purpose of the pilot test is to ensure that respondents can understand and reply to the questionnaire. Additionally, a pilot test is conducted to determine whether the researcher can get the desired results. The pilot test sample is 24 questionnaires, or 10% of the total sample size of 105, which will be given to potential respondents. Respondents to the pilot test will offer feedback on the questionnaires' applicability or complexity. The results of the pilot study will allow the researcher to correct any inaccuracies or confusing items, enabling study participants to provide insightful answers. As a result, the researcher can become more accurate and increase the significance of the study.

3.7.2 Reliability

The consistency of the measure in the outcomes is referred to as reliability. The internal consistency of the study is assessed in this study using Cronbach's alpha (Tavakol & Dennick, 2011). Cronbach's alpha has a value between 0 and 1. Cronbach's alpha is regarded as a reliable dependability coefficient when it is between 0.7 and 0.9. The reliability will be higher the higher the Cronbach's alpha value. The dependability of each independent and dependent variable will be examined by the researcher.

Table 3.7.2 Cronbach's Alpha Coefficient Range

(Source: Saunders et al, 2016)

Cronbach's Alpha Coefficient Range	Strength of Association
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

3.7.3 Validity

Validity means the extent of accuracy in measuring what it is intended to measure. High validity value specifies high extent of trustworthiness in the research result. In this research, the independent variables include blockchain, artificial intelligence, cloud accounting and robotics and the dependent variable is accounting profession. Exploratory Factor Analysis (EFA) is conducted to test the validity of questionnaire.

3.7.4 Descriptive Statistics

The examination of data to characterize variables in two ways—the measure of tendency (mean, mode, median) and the measure of dispersion (range, standard deviation, variance)—is known as descriptive statistics. In a manageable fashion, descriptive statistics can be used to condense vast volumes of data. In this study, descriptive statistics are used to analyze the demographic information of respondents and the independent variables, which include blockchain, artificial intelligence, cloud accounting and robotics.

3.7.5 Pearson's Correlation Coefficient

In this study, the Pearson correlation coefficient is utilized to gauge how strongly two numerical variables are correlated with one another. Using this coefficient involves making a number of assumptions, including that there is a linear relationship between the variables, that the independent and dependent variables are related, and that the independent causes of the two variables generate a normal distribution. The value of the Pearson correlation coefficient ranges from +1 to -1. If the value is positive, there is a positive correlation between the two variables; if it is negative, there is a negative correlation. The deviation in the data from the best fit line, however, increases as the value of the coefficient approaches 0. If the coefficient is zero, there is no correlation between the two variables.

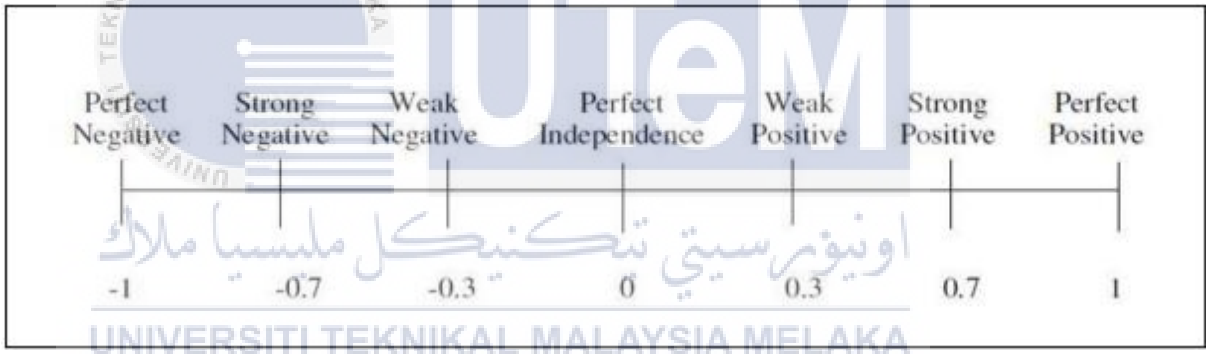

Figure 3.7.5: Pearson's Correlation Coefficient

Source: (Saunders et al, 2016)

3.7.6 Multiple Regression Analysis

ANOVA is a statistical method for predicting the association between a particular dependent variable and a group of independent variables known as multiple regression. An explanation of the strength of the link between one continuous dependent variable and two or more independent variables is provided by multiple regression analysis. Regression analysis on three independent variables,

such as blockchain, artificial intelligence, cloud accounting and robotics was done in this study. The regression equation is created to assess the relative contributions of each of the predictors of total variance and to demonstrate the overall fit of the independent variables. The following equation represents a multiple regression:

Equation: Y= a + bX1 + cX2 + dX3 + eX4

Y: Dependent variable (accounting profession)

a: Constant or other influence

b: Factors of X1 (blockchain)

c: Factors of X2 (artificial intelligence)

d: Factors of X3 (cloud accounting)

e: Factors of X4 (robotics)

3.7.7 Statistical Package for Social Sciences (SPSS)

The data analysis is done with the help of SPSS, which stands for Statistical Package for Social Sciences. Researchers frequently utilize it for sophisticated statistical data analysis. To create tabulated reports, charts, and other complicated statistical analysis, use the SPSS software suite. SPSS is employed because it can successfully execute extremely complex data operations and analysis.

3.8 Conclusion

The researcher discussed the methods for information gathering and data collection in this chapter. The investigation will be carried out using a quantitative manner. The study's data came from both primary and secondary sources. A structured questionnaire is utilized to perform the survey, which is the research strategy chosen. To accomplish the research goal and understand the study's findings, multiple regression analysis, descriptive statistics, Pearson's correlation coefficient, reliability analysis, and SPSS are utilized in data analysis.

CHAPTER 4

DATA ANALYSIS AND RESULTS

4.1 Introduction

In Chapter 4, the results and findings of data analysis which carried out during the research project are given. A total of 105 respondents provided the data. To determine the outcome of the study objectives and assess the validity of the research hypotheses, the data will be analyzed using the Statistical Package for Social Sciences (SPSS). Tables and charts will be used to present the results of the research.

In addition, the results of the pilot test are presented in this chapter along with the findings in the form of descriptive statistics that contain the demographics of the respondents and the responses they gave to the questions. Regression analysis is then used to test the hypothesis and provide a summary of the chapter after Pearson Correlation Coefficient analysis has been used to describe the degree of relationship between independent variables and dependent variable.

4.2 Pilot Test

The aim of the pilot study is to determine whether or not respondents can comprehend the questions and whether the questionnaire is feasible. Out of the 105 respondents, the researcher chooses 75 for this study. Data consistency is measured using Cronbach's alpha, and a value of at least 0.7 indicates that the questionnaire has consistent reliability.

4.2.1 Reliability

Tavakol & Dennick (2011) state that testing internal consistency should come before using a questionnaire for research purposes. The internal consistency measures how closely each test item refers to the same construct, indicating how linked the test items are to one another. Cronbach's Alpha has a value between 0 and 1. Internal consistency is higher when reliability coefficient values are nearer to 1. A Likert scale, with 1 denoting strongly disagree, 2 disagree, 3 neutral, 4 agree, and 5 strongly agree, is used to rate the 24 total question items. The strength of each item's connection to the independent and dependent variables is shown by the Cronbach's Alpha coefficient value.

4.2.1.1 Blockchain

Table 4.2.1.1.1 Case Processing Summary of Blockchain

Source: (Develop from Research)

		N	%
Cases	Valid	75	100.0
	Excluded[a]	0	.0
	Total	75	100.0

Table 4.2.1.1.2 Reliability Statistics of Blockchain

Source: (Develop from Research)

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.713	.715	5

The Cronbach's Alpha for the five blockchain-related questions is shown in Table 4.2.1.1.2. With a value of 0.713, the reliability statistics are higher than 0.7. As a result, the questions for this independent variable are trustworthy and appropriate for use in the survey itself.

4.2.1.2 Artificial Intelligence

Table 4.2.1.2.1 Case Processing Summary of Artificial Intelligence

Source: (Develop from Research)

		N	%
Cases	Valid	75	100.0
	Excluded[a]	0	.0
	Total	75	100.0

Table 4.2.1.2.2 Reliability Statistics of Artificial Intelligence

Source: (Develop from Research)

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.806	.807	5

The Cronbach's Alpha for five artificial intelligence questions is displayed in Table 4.2.1.2.2. The reliability of the statistics resulted in a Cronbach's Alpha score

of 0.806, which is larger than 0.7. The questionnaire itself can make advantage of the reliable independent variable.

4.2.1.3 Cloud Accounting

Table 4.2.1.3.1 Case Processing Summary of Cloud Accounting

Source: (Develop from Research)

		N	%
Cases	Valid	75	100.0
	Excluded[a]	0	.0
	Total	75	100.0

Table 4.2.1.3.2 Reliability Statistics of Cloud Accounting

Source: (Develop from Research)

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.817	.819	5

Table 4.2.1.3.2 presents the Cronbach's Alpha results for five cloud accounting questions. Cronbach's Alpha has a value of 0.817, which is more than 0.7. As a result, the questions themselves can be utilized in the real questionnaire.

4.2.1.4 Robotics

Table 4.2.1.4.1 Case Processing Summary of Robotics

Source: (Develop from Research)

		N	%
Cases	Valid	75	100.0
	Excluded[a]	0	.0
	Total	75	100.0

Table 4.2.1.4.2 Reliability Statistics of Robotics

Source: (Develop from Research)

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.750	.750	4

The results of Cronbach's Alpha for four questions in robotics are shown in Table 4.2.1.4.2. Cronbach's Alpha has a value of 0.750, which is more than 0.7. As a result, the questions themselves can be utilized in the real questionnaire.

4.2.1.5 Accounting Profession

Table 4.2.1.5.1 Case Processing Summary of Accounting Profession

Source: (Develop from Research)

		N	%
Cases	Valid	75	100.0
	Excluded[a]	0	.0
	Total	75	100.0

Table 4.2.1.5.2 Reliability Statistics of Accounting Profession

Source: (Develop from Research)

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.781	.785	5

Table 4.2.1.5.2 shows that the dependent variable, the accounting profession, has a Cronbach's Alpha value of 0.781, which is higher than 0.7.

.

4.2.1.6 Reliability Analysis

Table 4.2.1.6.1 Case Processing Summary

Source: (Develop from Research)

		N	%
Cases	Valid	75	100.0
	Excluded[a]	0	.0
	Total	75	100.0

Table 4.2.1.6.2 Reliability Statistics

Source: (Develop from Research)

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.932	.933	24

The Cronbach's Alpha result for the total number of independent variables and the dependent variable is displayed in Table 4.2.1.6.2. Cronbach's Alpha's overall score is 0.932, which is higher than 0.7 and indicates good reliability.

4.3 Respondents' Profile

4.3.1 Respondents' Gender

Table 4.3.1 Respondents' Gender

Source: (Develop from Research)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	56	53.3	53.3	53.3
Female	49	46.7	46.7	100.0
Total	105	100.0	100.0	

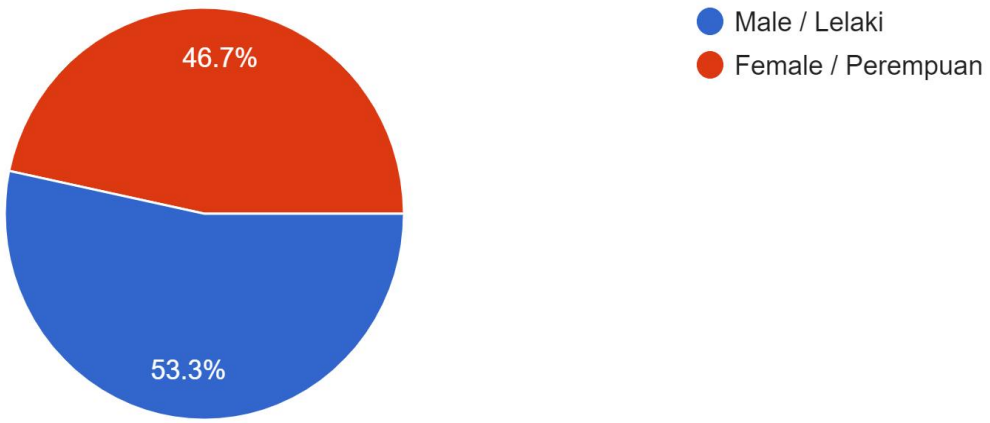

Figure 4.3.1 Respondent's demographic of gender

Source: (Develop from Research)

The frequency as well as the percentage of respondents' gender demographics are displayed in the table. There are 105 respondents in total, of which 56 are male (53.3%) and 49 are female (46.7%), as indicated in the figure.

4.3.2 Respondents' Age Group

Table 4.3.2 Respondents' Age Group

Source: (Develop from Research)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 21 to 30 years old	34	32.4	32.4	32.4
31 to 40 years old	40	38.1	38.1	70.5
41 to 50 years old	19	18.1	18.1	88.6
51 years old and above	12	11.4	11.4	100.0
Total	105	100.0	100.0	

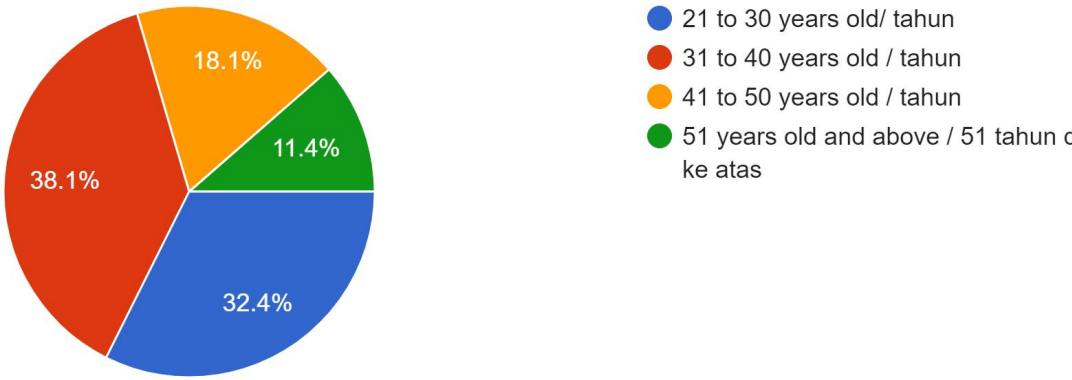

Figure 4.3.2 Respondents' Age Group

Source: (Develop from Research)

The data regarding the age range of the respondents is displayed in Table 4.3.2. 34 responses (32.4%) out of the 105 respondents are in the 21–30 age range. The largest age group of responders, comprising 40 individuals (38.1%), is the age group between 31 and 40 years old. Additionally, 19 respondents (18.1%) are between the ages of 41 and 50 years old. 12 (11.4%) of the respondents were 51 years of age and above. The percentage of respondents' age group is displayed in the figure.

4.3.3 Respondents' Education Level

Table 4.3.3 Respondents' Education Level

Source: (Develop from Research)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma	33	31.4	31.4	31.4
	Bachelor Degree	42	40.0	40.0	71.4
	Bachelor Master	24	22.9	22.9	94.3
	PhD	6	5.7	5.7	100.0
	Total	105	100.0	100.0	

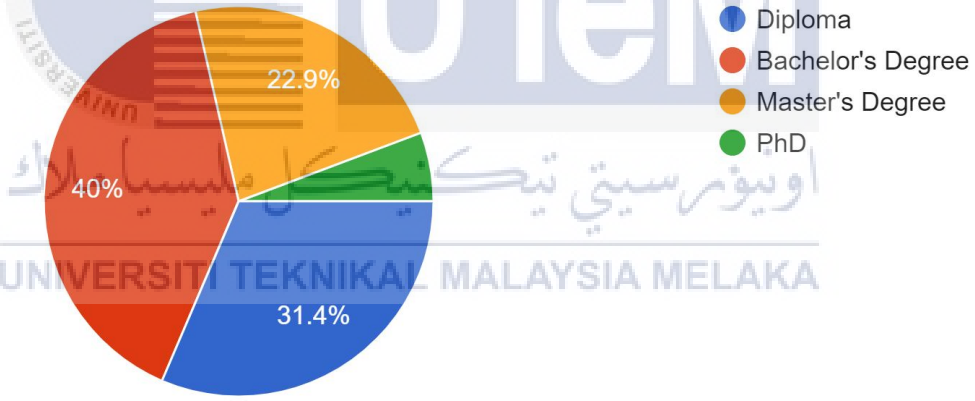

Figure 4.3.3 Respondents' Education Level

Source: (Develop from Research)

The respondents' education level is shown in the table. The largest group of respondents in terms of education level is made up of 42 respondents (40.0%) who have a bachelor's degree and 33 respondents (31.4%) who have a diploma. Six respondents throughout the survey (5.7%) are PhD holders. The percentage of respondents by demographic of education level is shown in the figure.

4.3.4 Respondents' Working Experience

Table 4.3.4 Respondents' Working Experience

Source: (Develop from Research)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3 - 4 years	34	32.4	32.4	32.4
	5 - 10 years	43	41.0	41.0	73.3
	10 years and above	28	26.7	26.7	100.0
	Total	105	100.0	100.0	

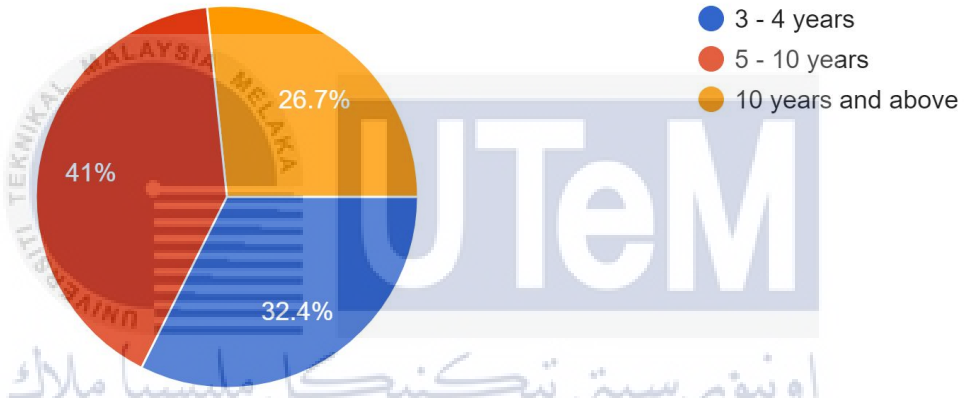

Figure 4.3.4 Respondents' Working Experience

Source: (Develop from Research)

The 105 respondents' total working experience is displayed in Table 4.3.4. There are 34 respondents (32.4%) of 3 to 4 years of working experience. Additionally, 28 respondents (26.7%) have worked for 10 years and above, compared to 43 respondents (41.0%) who have worked for 5 to 10 years. The working experience demographic of the respondents are shown in Figure 4.3.4.

4.3.5 Respondents' accounting task that use digitalization

Table 4.3.5 Respondents' accounting task that use digitalization

Source: (Develop from Research)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Reporting	32	30.5	30.5	30.5
	Payment & Transaction	46	43.8	43.8	74.3
	Recording	27	25.7	25.7	100.0
	Total	105	100.0	100.0	

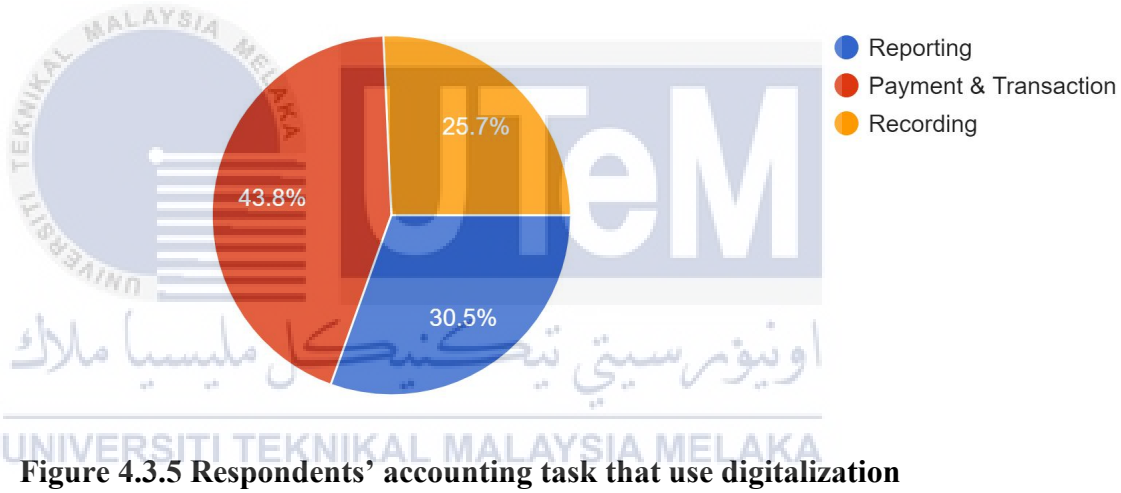

Figure 4.3.5 Respondents' accounting task that use digitalization

Source: (Develop from Research)

The 105 respondents' total of accounting task that use digitalization is displayed in Table 4.3.5. There are 32 respondents (30.5%) that use digitalization for reporting. Additionally, 46 respondents (43.8%) that use digitalization for payment and transaction, compared to 27 respondents (25.7%) that use digitalization for recording. The accounting task that use digitalization by respondents are shown in Figure 4.3.5.

4.4 Descriptive Analysis

4.4.1 Descriptive Analysis for Independent Variable (Blockchain)

Table 4.4.1: Summary of Blockchain

Source: (Develop from Research)

Frequency

Item	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
B1	I believe that it is safe to store the data	21 (20.0%)	28 (26.7%)	34 (32.4%)	13 (12.4%)	9 (8.6%)
B2	I believe that it is easier for my accounting department that wants simple accounting alongside detailed reporting	22 (21.0%)	42 (40.0%)	22 (21.0%)	11 (10.5%)	8 (7.6%)
B3	I believe that it is easy for accounting staff to perform basic accounting tasks	37 (35.2%)	22 (21.0%)	27 (25.7%)	11 (10.5%)	8 (7.6%)
B4	It can manage clients' account by promoting transparency and efficiency	26 (24.8%)	46 (43.8%)	19 (18.1%)	10 (9.5%)	4 (3.8%)
B5	Reducing tiresome efforts that are involved in recording and authenticating data	34 (32.4%)	45 (42.9%)	16 (15.2%)	5 (4.8%)	5 (4.8%)

Table 4.4.1 shows response of 105 respondents on independent variable, blockchain that influence on accounting profession in the era of IR 4.0 based on each statement. The item B1 states that accounting staff believe that it is safe to store the data in blockchain. From the result, there are 20.0% respondents strongly agree on the statement, 26.7% of respondents agree on the statement and 32.4% expressed neutral. However, there are 12.4% of respondents disagree on the statement and 8.6% strongly disagree on the statement.

The item B2 describe that it is easier for their accounting department to use blockchain that wants simple accounting alongside detailed reporting. Based on the result obtained, majority of respondents 21.0% strongly agree on the statement and 40.0% of respondents agree on the statement. There are 21.0% of respondents claims that they are neutral but 10.5% of respondents disagree and 7.6% strongly disagree on the statement.

Next, item B3 explain that it is easy for accounting staff to perform basic accounting tasks by using blockchain. From the table, there are 35.2% strongly agree and 21.0% agree on the statement followed by 25.7% of respondents are neutral on the statement but there are 10.5% respondents disagree and 7.6% respondents strongly disagree on the statement.

Besides, item B4 states that respondents can manage clients' account by promoting transparency and efficiency through blockchain. There are 24.8% of respondents strongly agree and 43.8% of respondents agree on the statement followed by 18.1% of respondents claim that they feel neutral on the statement. On the other side, there are 9.5% of respondents disagree and 3.8% strongly disagree on the statement.

Lastly, item B5 states that blockchain can reduce tiresome efforts that are involved in recording and authenticating data . There are 32.4% of respondents strongly agree and 42.9% of respondents agree followed by 15.2% of respondents are neutral on the statement. On the other side, there are 4.8% of respondent disagree and 4.8% of respondents strongly disagree on the statement.

4.4.2 Descriptive Analysis for Independent Variable (Artificial Intelligence)

Table 4.4.2: Summary of Artificial Intelligence

Source: (Develop from Research)

Frequency

Item	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
AI1	AI will automate many routine accounting tasks, freeing up accounting staff' time for more strategic work	35 (33.3%)	31 (29.5%)	23 (21.9%)	12 (11.4%)	4 (3.8%)
AI2	Automate repetitive tasks like data entry and invoice processing, reducing errors and saving time	36 (34.3%)	27 (25.7%)	27 (25.7%)	7 (6.7%)	8 (7.6%)
AI3	Analyze large amounts of data to identify trends and patterns that humans might miss, providing valuable insights for decision-making	33 (31.4%)	35 (33.3%)	22 (21.0%)	9 (8.6%)	6 (5.7%)
AI4	Detect anomalies and suspicious activity in financial data, helping to prevent fraud and ensure compliance with regulations	28 (26.7%)	35 (33.3%)	23 (21.9%)	11 (10.5%)	8 (7.6%)
AI5	Provide real-time financial insights and predictive analytics, enabling better-informed decisions and risk management practices	35 (33.3%)	27 (25.7%)	21 (20.0%)	13 (12.4%)	9 (8.6%)

Table 4.4.2 shows response of 105 respondents on independent variable, artificial intelligence that influence on accounting profession in the era of IR 4.0 based on each statement. The item AI1 states that artificial intelligence can automate many routine accounting tasks, freeing up accounting staff' time for more strategic work. From the result, there are 33.3% respondents strongly agree on the statement, 29.5% of respondents agree on the statement and 21.9% expressed neutral. However, there are 11.4% of respondents disagree on the statement and 3.8% strongly disagree on the statement.

The item AI2 describe that artificial intelligence can automate repetitive tasks like data entry and invoice processing, reducing errors and saving time. Based on the result obtained, majority of respondents 34.3% strongly agree on the statement and 25.7% of respondents agree on the statement. There are 25.7% of respondents claims that they are neutral but 6.7% of respondents disagree and 7.6% strongly disagree on the statement.

Next, item AI3 explain that artificial intelligence can analyze large amounts of data to identify trends and patterns that humans might miss, providing valuable insights for decision-making. From the table, there are 31.4% strongly agree and 33.3% agree on the statement followed by 21.0% of respondents are neutral on the statement but there are 8.6% respondents disagree and 5.7% respondents strongly disagree on the statement.

Besides, item AI4 states that artificial intelligence can help respondents to detect anomalies and suspicious activity in financial data, helping to prevent fraud and ensure compliance with regulations. There are 26.7% of respondents strongly agree and 33.3% of respondents agree on the statement followed by 21.9% of respondents claim that they feel neutral on the statement. On the other side, there are 10.5% of respondents disagree and 7.6% strongly disagree on the statement.

Lastly, item AI5 states that artificial intelligence can provide real-time financial insights and predictive analytics, enabling respondents to do better-informed decisions and risk management practices. There are 33.3% of respondents strongly agree and 25.7% of respondents agree followed by 20.0% of respondents are neutral on the statement. On the other side, there are 12.4% of respondent disagree and 8.6% of respondents strongly disagree on the statement.

4.4.3 Descriptive Analysis for Independent Variable (Cloud Accounting)

Table 4.4.3: Summary of Cloud Accounting

Source: (Develop from Research)

Frequency

Item	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
C1	Stopping the dissemination of data	33 (31.4%)	34 (32.4%)	17 (16.2%)	10 (9.5%)	11 (10.5%)
C2	Easy to collaborate with other team members on financial data	32 (30.5%)	37 (35.2%)	18 (17.1%)	11 (10.5%)	7 (6.7%)
C3	Can track progress toward financial goals	32 (30.5%)	36 (34.3%)	22 (21.0%)	9 (8.6%)	6 (5.7%)
C4	Can streamline many accounting tasks, such as invoicing, bill pay, and payroll	35 (33.3%)	34 (32.4%)	24 (22.9%)	6 (5.7%)	6 (5.7%)
C5	Provides real-time access to financial data	41 (39.0%)	32 (30.5%)	19 (18.1%)	7 (6.7%)	6 (5.7%)

Table 4.4.3 shows response of 105 respondents on independent variable, cloud accounting that influence on accounting profession in the era of IR 4.0 based on each statement. The item C1 states that cloud accounting can stopping the dissemination of data that is private and confidential. From the result, there are 31.4% respondents strongly agree on the statement, 32.4% of respondents agree on the statement and 16.2% expressed neutral. However, there are 9.5% of respondents disagree on the statement and 10.5% strongly disagree on the statement.

The item C2 describe that it is easy to collaborate with other team members on financial data by using cloud accounting. Based on the result obtained, majority of respondents 30.5% strongly agree on the statement and 35.2% of respondents agree on the statement. There are 17.1% of respondents claims that they are neutral but 10.5% of respondents disagree and 6.7% strongly disagree on the statement.

Next, item C3 explain that cloud accounting can track progress toward financial goals. From the table, there are 30.5% strongly agree and 34.3% agree on the statement followed by 21.0% of respondents are neutral on the statement but there are 8.6% respondents disagree and 5.7% respondents strongly disagree on the statement.

Besides, item C4 states that cloud accounting can streamline many accounting tasks, such as invoicing, bill pay, and payroll that resulted on respondents to reduce workload. There are 33.3% of respondents strongly agree and 32.4% of respondents agree on the statement followed by 22.9% of respondents claim that they feel neutral on the statement. On the other side, there are 5.7% of respondents disagree and 5.7% strongly disagree on the statement.

Lastly, item C5 states that cloud accounting can provide real-time access to financial data, enabling respondents to be accessible from any device with an internet connection. There are 39.0% of respondents strongly agree and 30.5% of respondents agree followed by 18.1% of respondents are neutral on the statement. On the other side, there are 6.7% of respondent disagree and 5.7% of respondents strongly disagree on the statement.

4.4.4 Descriptive Analysis for Independent Variable (Robotics)

Table 4.4.4: Summary of Robotics

Source: (Develop from Research)

Frequency

Item	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
R1	Can automate repetitive tasks like data entry and reconciliation	32 (30.5%)	37 (35.2%)	24 (22.9%)	8 (7.6%)	4 (3.8%)
R2	Can automate compliance tasks like tax filing and regulatory reporting	37 (35.2%)	35 (33.3%)	22 (21.0%)	7 (6.7%)	4 (3.8%)
R3	Enabling continuous processing of tasks and improved responsiveness	38 (36.2%)	34 (32.4%)	22 (21.0%)	5 (4.8%)	6 (5.7%)
R4	Can save businesses money on labor costs and improve overall operational efficiency	22 (21.0%)	46 (43.8%)	23 (21.9%)	9 (8.6%)	5 (4.8%)

Table 4.4.4 shows response of 105 respondents on independent variable, robotics that influence on accounting profession in the era of IR 4.0 based on each statement. The item R1 states that robotics can sautomate repetitive tasks like data entry and reconciliation. From the result, there are 30.5% respondents strongly agree on the statement, 35.2%% of respondents agree on the statement and 22.9% expressed neutral. However, there are 7.6% of respondents disagree on the statement and 3.8% strongly disagree on the statement.

The item R2 describe that robotics can automate compliance tasks like tax filing and regulatory reporting. Based on the result obtained, majority of respondents 35.2% strongly agree on the statement and 33.3% of respondents agree on the statement. There are 21.0% of respondents claims that they are neutral but 6.7% of respondents disagree and 3.8% strongly disagree on the statement.

Next, item R3 explain that robotics enabling continuous processing of tasks and improved responsiveness. From the table, there are 36.2% strongly agree and 32.4% agree on the statement followed by 21.0% of respondents are neutral on the statement but there are 4.8% respondents disagree and 5.7% respondents strongly disagree on the statement.

Lastly, item R4 states that robotics can save businesses money on labor costs and improve overall operational efficiency. There are 21.0% of respondents strongly agree and 43.8% of respondents agree on the statement followed by 21.9% of respondents claim that they feel neutral on the statement. On the other side, there are 8.6% of respondents disagree and 4.8% strongly disagree on the statement.

4.4.5 Descriptive Analysis for Dependent Variable (Accounting Profession)

Table 4.4.5: Summary of Accounting Profession

Source: (Develop from Research)

Frequency

Item	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
AP1	Our reporting is much more quality than before	40 (38.1%)	35 (33.3%)	17 (16.2%)	6 (5.7%)	7 (6.7%)
AP2	Automating routine tasks has freed up our team to focus on higher-value activities	27 (25.7%)	46 (43.8%)	19 (18.1%)	9 (8.6%)	4 (3.8%)
AP3	We are now able to process and analyze data much faster and more effectively than before	34 (32.4%)	35 (33.3%)	25 (23.8%)	6 (5.7%)	5 (4.8%)
AP4	Offering digital services has made our firm more attractive to a wider range of clients	24 (22.9%)	43 (41.0%)	24 (22.9%)	8 (7.6%)	6 (5.7%)
AP5	Digital tools have streamlined our compliance processes and reduced the risk of errors	36 (34.3%)	37 (35.2%)	15 (14.3%)	12 (11.4%)	5 (4.8%)

Table 4.4.5 shows response of 105 respondents on dependent variable, accounting profession in the era of IR 4.0 based on each statement. The item AP1 states that respondents reporting is much more quality than before. From the result, there are 38.1% respondents strongly agree on the statement, 33.3% of respondents agree on the statement and 16.2% expressed neutral. However, there are 5.7% of respondents disagree on the statement and 6.7% strongly disagree on the statement.

The item AP2 describe that automating routine tasks has freed up respondents team to focus on higher-value activities. Based on the result obtained, majority of respondents 25.7% strongly agree on the statement and 43.8% of respondents agree on the statement. There are 18.1% of respondents claims that they are neutral but 8.6% of respondents disagree and 3.8% strongly disagree on the statement.

Next, item AP3 explain that respondents are now able to process and analyze data much faster and more effectively than before. From the table, there are 32.4% strongly agree and 33.3% agree on the statement followed by 23.8% of respondents are neutral on the statement but there are 5.7% respondents disagree and 4.8% respondents strongly disagree on the statement.

Besides, item AP4 states that offering digital services has made respondents firm more attractive to a wider range of clients. There are 22.9% of respondents strongly agree and 41.0% of respondents agree on the statement followed by 22.9% of respondents claim that they feel neutral on the statement. On the other side, there are 7.6% of respondents disagree and 5.7% strongly disagree on the statement.

Lastly, item AP5 states that digital tools have streamlined respondents compliance processes and reduced the risk of errors. There are 34.3% of respondents strongly agree and 35.2% of respondents agree followed by 14.3% of respondents are neutral on the statement. On the other side, there are 11.4% of respondent disagree and 4.8% of respondents strongly disagree on the statement.

4.5 Descriptive Statistics

Table 4.5 Descriptive Statistics for Each Independent Variable

Source: (Develop from Research)

Independent Variable	N	Minimum	Maximum	Mean	Std. Deviation
BlockChain	105	1.40	4.60	3.6571	.79649
Artificial Intelligence	105	1.20	5.00	3.6990	.93031
Cloud Accounting	105	1.40	5.00	3.7695	.90247
Robotics	105	1.50	5.00	3.8167	.83656

Each independent variable's descriptive statistics (robotics, blockchain, artificial intelligence, and cloud accounting) are displayed in the table. The table indicates that the means of all the independent variables are quite close to one another. With a mean of 3.8167, robotics has the highest value, followed by cloud accounting at 3.7695. Next, the mean for artificial intelligence is 3.6990, while the mean for blockchain is the lowest at 3.6571. The generated table makes it evident that most respondents to the questionnaire agreed that independent variables have an influence on the accounting profession in the era of IR 4.0.

The standard deviation, on the other hand, describes how the data vary from the mean. According to the study, cloud accounting has a standard deviation of 0.90247, while artificial intelligence has the highest at 0.93031. Next, robotics has standard deviation at 0.83656 while the lowest standard deviation is blockchain at 0.79649. The data does not differ from the mean, according to the standard deviation value.

4.6 Pearson's Correlation Analysis

Table 4.6 Correlations of Independent Variables and Dependent Variable

Source: (Develop from Research

		B	AI	C	R	AP
B	Pearson Correlation	1	.610**	.710**	.727**	.807**
	Sig. (2-tailed)		<.001	<.001	<.001	<.001
	N	105	105	105	105	105
AI	Pearson Correlation	.610**	1	.658**	.685**	.681**
	Sig. (2-tailed)	<.001		<.001	<.001	<.001
	N	105	105	105	105	105
C	Pearson Correlation	.710**	.658**	1	.627**	.680**
	Sig. (2-tailed)	<.001	<.001		<.001	<.001
	N	105	105	105	105	105
R	Pearson Correlation	.727**	.685**	.627**	1	.749**
	Sig. (2-tailed)	<.001	<.001	<.001		<.001
	N	105	105	105	105	105
AP	Pearson Correlation	.807**	.681**	.680**	.749**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	
	N	105	105	105	105	105

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.6 uses Pearson's Correlation Analysis to show how the accounting profession in the era of Industry 4.0 is related to robotics, blockchain, artificial intelligence, and cloud accounting. The level to which the independent and dependent variables have a linear relationship is determined by Pearson's Correlation Analysis. The range of values for Pearson's Correlation Coefficient is +1 to -1.

Whereas a negative score indicates a negative correlation between the variables, a positive value indicates a positive correlation. A coefficient with a 0 value suggests that the variables are not related. The letter "r" stands for Pearson's Correlation Coefficient value.

Significant correlations between 0.680 and 0.807 are displayed in the table. With a coefficient value of 0.807, blockchain has the highest value among the four independent variables. The value indicates strong positive connection between blockchain and accounting profession. A two-tailed test indicating a statistically significant link is shown by two asterisks when the p-value for each variable is less than the 0.01 significance level.

Robotics, with 0.749, has the second-highest correlation coefficient value. It proves that robotics has strong positive correlation with accounting profession. In addition, the r-value of artificial intelligence is 0.681 which clearly indicates strong moderate beneficial connection between artificial intelligence and accounting profession. Moreover, the r-value of cloud accounting is 0.680 which clearly shows strong moderate positive relationship between cloud accounting and accounting profession.

Consequently, there is a strong correlation between the dependent variable (the accounting profession in the context of Industry 4.0) and the independent variables, which include robotics, blockchain, artificial intelligence, and cloud accounting. Thus, using multiple linear regression analysis, the researcher performs further analysis on the independent variables.

4.7 Simple Linear Regression Analysis

4.7.1 Simple Linear Regression for Blockchain

Table 4.7.1.1: Model Summary of Blockchain

Source: (Develop from Research)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.807[a]	.652	.648	.48366

a. Predictors: (Constant), Blockchain

The researcher made the choice to employ linear regression analysis in order to ascertain the influence of every independent variable on the dependent variable. The hypothesis testing result will be produced by linear regression analysis in order to examine the relationship between independent variables and dependent variables.

The blockchain summary generated by the linear regression model is displayed in table 4.7.1.1. The value of R represents the correlation between blockchain and accounting profession. The table's R-value of 0.807 indicates a strong association between accounting profession and blockchain. The amount of variance in the dependent variable that can be explained by the independent variables is indicated by the R-squared value. With an R-square value of 0.652 in the table, blockchain is able to explain roughly 65.2% of the variation in the accounting profession.

Table 4.7.1.2: ANOVA of Blockchain

Source: (Develop from Research)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	45.062	1	45.062	192.630	<.001[b]
	Residual	24.095	103	.234		
	Total	69.157	104			

a. Dependent Variable: Accounting Profession

b. Predictors: (Constant), Blockchain

Analysis of Variance (ANOVA) is used for hypotheses testing to see whether how well the model fits into the data. The significant of p-value is 0.000 which is lesser than 0.05 indicate that blockchain well explained that influenced on accounting profession. Therefore, alternative hypothesis is accepted at alpha = 0.05.

Table 4.7.1.3: Coefficients of Blockchain

Source: (Develop from Research)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.783	.223		3.516	<.001
	B	.826	.060	.807	13.879	<.001

a. Dependent Variable: Accounting Profession

The dependent variable is predicted from the independent variable using the beta values found in the table. The blockchain's coefficient indicates the strong correlation with the accounting profession. The findings indicate that in the era of IR

4.0, blockchain has an influence on the accounting profession, with a p-value of 0.000 and a β of 0.807. As a result, the null hypothesis (H0) is rejected and the alternative hypothesis (H1) is accepted.

4.7.2 Simple Linear Regression for Artificial Intelligence

Table 4.7.2.1: Model Summary of Artificial Intelligence

Source: (Develop from Research)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.681[a]	.464	.459	.59992

a. Predictors: (Constant), Artificial Intelligence

According to the table, there is a substantial connection between the accounting profession and artificial intelligence, with a value of R equal to 0.681. The R square coefficient of determination is 0.464, meaning that artificial intelligence contributes to 46.4% of the variation in the accounting profession.

Table 4.7.2.2: ANOVA of Artificial Intelligence

Source: (Develop from Research)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32.086	1	32.086	89.150	<.001[b]
	Residual	37.071	103	.360		
	Total	69.157	104			

a. Dependent Variable: Accounting Profession

b. Predictors: (Constant), Artificial Intelligence

In the era IR 4.0, there is a substantial connection between the accounting profession and artificial intelligence, as indicated by the table 4.7.2.2, where the p-value is equivalent to 0.000, which is less than 0.05. As a result, with alpha equal to 0.05, the alternative hypothesis (H2) is accepted.

Table 4.7.2.3: Coefficients of Artificial Intelligence

Source: (Develop from Research)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.597	.241		6.624	<.001
	AI	.597	.063	.681	9.442	<.001

a. Dependent Variable: Accounting Profession

Because the p-value is less than 0.05, table 4.7.2.3 indicates that the independent variable's coefficient has an important correlation with the accounting profession in the era of IR 4.0 toward artificial intelligence. The results indicate that, in the era of IR 4.0, artificial intelligence does have an influence on the accounting profession, with a p-value of 0.000 and a β of 0.681. Thus, the null hypothesis (H0) is rejected and the alternative hypothesis (H2) is accepted.

4.7.3 Simple Linear Regression for Cloud Accounting.

Table 4.7.3.1: Model Summary of Cloud Accounting

Source: (Develop from Research)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.680[a]	.463	.457	.60066

a. Predictors: (Constant), Cloud Accounting

According to the preceding table, the R-value is 0.680, indicating a significant correlation between the accounting profession in the era IR 4.0 and cloud accounting. R square, the coefficient determinant, is 0.463. In the era of Industry 4.0, there are 46.3% variations in Cloud Accounting which affect the accounting profession.

Table 4.7.3.2: ANOVA of Cloud Accounting

Source: (Develop from Research)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.995	1	31.995	88.680	<.001[b]
	Residual	37.161	103	.361		
	Total	69.157	104			

a. Dependent Variable: Accounting Profession

b. Predictors: (Constant), Cloud Accounting

ANOVA in Table 4.7.3.2 demonstrates the significance of Cloud Accounting, with a p-value of 0.000 (less than 0.05). It illustrates the importance of the interaction between cloud accounting and the accounting profession in the era of IR 4.0. Consequently, with alpha equal to 0.05, the alternative hypothesis (H3) is accepted.

Table 4.7.3.3: Coefficients of Cloud Accounting

Source: (Develop from Research)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.489	.253		5.887	<.001
	C	.615	.065	.680	9.417	<.001

a. Dependent Variable: Accounting Profession

Table 4.7.3.3 shows that the p-value is less than 0.05, indicating a significant connection between cloud accounting and accounting profession according to the coefficient of independent variable. The outcome shows that the β value, at 0.680, indicates that cloud accounting has an effect on the accounting profession in the era IR 4.0. As a result, the null hypothesis (H0) has been rejected while alternative hypothesis (H3) is accepted.

4.7.4 Simple Linear Regression for Robotics.

Table 4.7.4.1: Model Summary of Robotics

Source: (Develop from Research)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.749[a]	.561	.557	.54264

a. Predictors: (Constant), Robotics

According to the preceding table, the R-value is 0.749, indicating a strong relationship between robotics and accounting profession in the era IR 4.0. R square, the coefficient determinant, is 0.561. In the era of IR 4.0, 56.1% of variations in robotics influence the accounting profession.

Table 4.7.4.2: ANOVA of Robotics

Source: (Develop from Research)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38.827	1	38.827	131.860	<.001[b]
	Residual	30.329	103	.294		
	Total	69.157	104			

a. Dependent Variable: Accounting Profession

b. Predictors: (Constant), Robotics

Robotics is significant, as indicated by the ANOVA table 4.7.4.2, with a p-value of 0.000 (less than 0.05). It illustrates the importance of the interaction between the accounting profession and robotics in the era of IR 4.0. Consequently, with alpha equal to 0.05, the alternative hypothesis (H4) is accepted.

Table 4.7.4.3: Coefficients of Robotics

Source: (Develop from Research)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.018	.248		4.097	<.001
	R	.730	.064	.749	11.483	<.001

a. Dependent Variable: Accounting Profession

Table 4.7.4.3 shows that, with a p-value of less than 0.05, the coefficient of independent variable shows a significant connection between robotics and accounting profession. The outcome indicates that, in the era of IR 4.0, robotics does

have an influence on the accounting profession, as indicated by the β value of 0.749. As a result, the null hypothesis (H0) has been rejected while alternative hypothesis (H4) is accepted.

4.8 Multiple Linear Regression

Table 4.8.1: Model Summary of Multiple Linear Regression

Source: (Develop from Research)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.856[a]	.732	.722	.43023

a. Predictors: (Constant), Robotics, Cloud_Accounting, Artificial_Intelligence, BlockChain

The model summary following the use of multiple linear regression analysis is displayed in table 4.8.1. The findings show that all four of the independent variables have a significant level of correlation, with a R value of 0.856. The independent variables (robotics, cloud accounting, artificial intelligence, and blockchain) contributed to 73.2% of the total variation in the accounting profession in the era of IR 4.0, according to the coefficient of determination, or R square, which is at 0.732. Because there is less variation towards the accounting profession as the independent variables in the regression model, the R Square value is better than 0.5, which is regarded as a good value. Nonetheless, 26.8% of the variation is still unaccounted for. Therefore, additional important factors affecting the accounting profession in the era of IR 4.0 are not covered in this research.

Table 4.8.2: ANOVA of Multiple Linear Regression

Source: (Develop from Research)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	50.647	4	12.662	68.404	.000[b]
	Residual	18.510	100	.185		
	Total	69.157	104			

a. Dependent Variable: Accounting Profession

b. Predictors: (Constant), Robotics, Cloud_Accounting, Artificial_Intelligence, BlockChain

According to the table, the p-value, or statistical significance value, is 0.000, which is less than the alpha value of 0.05. The significance of the F-value, which is 68.404, lies in the fact that higher F-values indicate that alternative hypotheses are accepted and fit well into the model. The entire model's significance is therefore F (4,100) = 68.404, $p<0.05$. It demonstrates that the multiple regression model as a whole is significant at the 5% significance level.

Table 4.8.3: Coefficients of Multiple Linear Regression

Source: (Develop from Research)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.316	.216		1.462	.147
	BlockChain	.481	.088	.470	5.474	.000
	Artificial_Intelligence	.160	.068	.183	2.352	.021
	Cloud_Accounting	.073	.073	.081	1.007	.316
	Robotics	.226	.082	.232	2.755	.007

a. Dependent Variable: Accounting Profession

The table indicates that every independent variable in the study has an impact on the accounting profession in the IR 4.0 era. The most powerful predictor variable

in the case of $\beta = 0.481$, $t(105) = 5.474$, and $p < 0.05$ is the blockchain. When considering other independent variables, the unstandardized beta, or β, likewise has the maximum value. It is evident that in the era of IR 4.0, blockchain has the greatest positive influence on the accounting profession.

Robotics has a better predictor after that, with $\beta = 0.226$, $t(105) = 2.755$, and $p<0.05$. Out of all the variables, robotics' unstandardized beta, or β, has the second-highest positive value. According to the results, in the era of IR 4.0, robotics is the second most important component influencing the accounting profession. The lower predictor variable is artificial intelligence, with $\beta = 0.160$, $t(105) = 2.352$, and $p<0.05$. Among the variables, the unstandardized beta, or β, of artificial intelligence is the second-lowest positive value. Out of all the independent variables, artificial intelligence has the second-lowest positive value, according to the outcome.

Cloud accounting is found to be the least significant predictive variable, with $\beta = 0.73$, $t(105) = 1.007$, and $p>0.05$. Out of all the variables, cloud accounting's unstandardized beta, or β, has the lowest positive value. According to the results, cloud accounting is the fourth factor influencing the accounting profession in the IR 4.0 era and has the lowest positive value of all the independent variables. According to the findings, every independent variable contributes differently to the dependent variable and offers a meaningful forecast for the accounting profession in the IR 4.0 era. The multiple regression equation can be used to determine the relationship between the dependent and independent variables.

Equation: $Y = a + bX_1 + cX_2 + dX_3$

$$Y = 0.745 + 0.087X_1 + 0.282X_2 + 0.452X_3$$

Table 4.8.4: Equation of Multiple Regression Analysis

Source: (Saunders et al., 2016)

Where;

Y	Dependent variable (Accounting profession in the era of IR 4.0)
a	Constant or other influence
b	Influence of X_1 (Blockchain)
c	Influence of X_2 (Artificial intelligence)
d	Influence of X_3 (Cloud Accounting)
e	Influence of X_4 (Robotics)
X_1, X_2, X_3, X_4	Independent variables

All independent variables and the dependent variable have a positive association, according to the multiple regression equation. The regression equation, which multiplies the score of the independent variables and adds values to the constant, was created to forecast the value of the accounting profession in the era of IR 4.0 for new cases. The researcher expects a value increase in the dependent variable for each unit increase in the independent variable while keeping all other variables constant.

Based on the results, which show that $\beta = 0.481$, $t(105) = 5.474$, and $p < 0.05$, blockchain is the best predictor. Thus, in the era of IR 4.0, blockchain is the most important element affecting the accounting profession.

The accounting profession in the era of IR 4.0 is calculated using the following regression equation, which concludes: 0.316 + 0.470 (Blockchain) + 0.183 (Artificial Intelligence) + 0..081 (Cloud Accounting) + 0.232 (Robotics). As a result, the regression equation is created to demonstrate the relationship between the variables.

4.9 Hypothesis Testing

By looking at samples from the population, hypothesis testing allows researchers to draw conclusions about the population (Applegate et al., 2003). Between the null hypothesis and the alternative hypothesis, one selects the hypothesis.

Where:

H0 is the null hypothesis.

H1 stands for alternative theory.

The alternative hypothesis will be accepted and the null hypothesis will be rejected if the significance value is less than 0.05. In the instance that this is the case, the researcher can determine that the independent and dependent variables are not homogeneous.

4.9.1 Hypothesis Testing 1

- H0: There is no significant relationship between blockchain and accounting profession in the era of IR 4.0.
- H1: There is significant relationship between blockchain and accounting profession in the era of IR 4.0.

From the table 4.7.1.3, the significance value is less than 0.05 which indicate the alternative hypothesis, H1 is accepted and null hypothesis, H0 is rejected. Therefore, there is significant relationship between blockchain and accounting profession in the era of IR 4.0. The findings are consistent with earlier study, which discovered that blockchain has a big impact on the accounting profession in the IR 4.0 era. Blockchain has a lot of potential applications for the accounting profession (Bellucci, Manetti, and Cesa Bianchi, 2022). The studies show blockchain has effect on accounting profession

4.9.2 Hypothesis Testing 2

- H0: There is no significant relationship between artificial intelligence and accounting profession in the era of IR 4.0.
- H2: There is significant relationship between artificial intelligence and accounting profession in the era of IR 4.0.

Table 4.7.2.3 indicates that the null hypothesis, H0, is rejected and the alternative hypothesis, H2, is accepted when the significance value is less than 0.05. Therefore, in the era of IR 4.0, there is a substantial interaction between the accounting profession and artificial intelligence.The outcome is consistent with the earlier research. The accounting sector will undoubtedly see an increase in innovation and positive development as a result of the application of AI (Luo et al.,

2018). Research indicates that in the era of Industry 4.0, artificial intelligence has had an effect on the accounting profession.

4.9.3 Hypothesis Testing 3

- H0: There is no significant relationship between cloud accounting and accounting profession in the era of IR 4.0.
- H3: There is significant relationship between cloud accounting and accounting profession in the era of IR 4.0.

Table 4.8.3. indicates that the null hypothesis, H0, is accepted and the alternative hypothesis, H3, is rejected when the significance value is more than 0.05. Dependence on a single cloud accounting software provider can lead to vendor lock-in, which makes platform switching expensive and complex. To maintain their independence and flexibility, accountants must carefully consider possible software and make sure that data is portable.. That is the reason why hypothesis, H3 is rejected.

4.9.4 Hypothesis Testing 4

- H0: There is no significant relationship between robotics and accounting profession in the era of IR 4.0.
- H4: There is significant relationship between robotics and accounting profession in the era of IR 4.0.

Table 4.7.4.3 shows that when the significance value is less than 0.05, the alternative hypothesis, H4, is accepted and the null hypothesis, H0, is rejected. As a result, there is a close relationship between robotics and the accounting industry in the era of Industry 4.0. Zheng (2019) asserts that the adoption of financial robots will

reduce accountants' workloads because accounting is a traditional, repetitive profession that requires a large volume of data and information. In the IR 4.0 era, robotics affects the accounting profession, according all previous studies.

4.9.5 Hypothesis Testing Result

Table 4.9.4: Hypothesis Testing Result

Source: (Developed for research)

Independent Variables	**P Value**	**Result**
Blockchain	0.000	Accepted H1
Artificial Intelligence	0.000	Accepted H2
Cloud Accounting	0.000	Rejected H3
Robotics	0.000	Accepted H4

The hypothesis result shows that all of the independent factors and the dependent variable have significant connections (table 4.9.4). The outcome demonstrates that, for $p < 0.05$, significant value is below 0.05 which are blockchain, artificial intelligence and robotics. The outcome demonstrates that, for $p < 0.05$, significant value is above 0.05 which is cloud accounting. Thus, each study's null hypothesis (H0) each independent variable's alternative hypothesis are three got accepted and one got rejected while the independent variable itself is rejected.

4.10 Summary

In conclusion, this chapter covered the research's findings and data analysis. The data and results from 105 respondents were collected using SPSS Version 29.0 in order to investigate the effect of digitalization on accounting profession in the era of IR 4.0. For the data analysis, a variety of statistical tools are employed.

Reliability analysis was done in the pilot test using Cronbach's Alpha to assess the questionnaire's internal consistency. The variables and statistics for the respondents' profile are displayed in figures, tabulated in tables, and projected in pie charts. The researcher used linear regression analysis to find that, in the era of IR 4.0, there is a significant relationship between the independent variables (robotics, blockchain, artificial intelligence, and cloud accounting) and the accounting profession, leading to the acceptance of all alternative hypotheses and the rejection of the null hypothesis.

In the meantime, the study's strong positive association between the independent and dependent variables is revealed by Pearson's Correlation Coefficient analysis. Finally, a multiple regression analysis reveals that, in the era of IR 4.0, blockchain is the most significant variable influencing the accounting profession.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

5.1 Introduction

The researcher will go over the general explanation of the study's findings in this chapter. The study objectives form the basis for the summary of research findings, literature review, conclusion, and recommendations. The suggestions come from derived from study results and intended for further investigation. Other researchers may utilize the study's outcomes and conclusions for research on the accounting profession in the future.

5.2 Summary of Findings

In previous chapter, the study had achieved the research objectives which are to examine the factors of digitalization that affect on the accounting profession in the era of IR 4.0, to analyze the relationships between digitalization and accounting profession in the era of IR 4.0 and to investigate the most significant factor of digitalization on accounting profession in the era of IR 4.0.

5.2.1 Research Objective 1

R01: To examine the factors of digitalization that affect on the accounting profession in the era of IR 4.0

The first objective of this study is to examine the factors of digitalization that affect on the accounting profession in the era of IR 4.0. Blockchain, artificial intelligence, cloud accounting, and robotics are the four main factors of digitalization on the accounting profession in the era of IR 4.0 that the researcher proposed in the previous chapter. The first goal was accomplished in Chapter 2's Literature Review. Previous researchers had demonstrated the essential effect. Thus, in the era of IR 4.0, the researcher presents the independent variables influencing the accounting profession: blockchain, AI, cloud accounting, and robotics.

Blockchain technology is used in accounting. Transferring ownership of assets and keeping an accurate ledger of financial data are its two key concerns (Blockchain and the Future of Accountancy, 2023). According to Arnold (2023), artificial intelligence has led to enhanced efficiency and a competitive edge for the accounting profession in the market. The cloud is a platform that facilitates data and software access via the Internet from any device that is linked to the Internet, at any time, anyplace (Efe Efosa & Joseph Oseikhuemhen, 2022). However, integrating robots into human workspaces increases productivity and economy and creates a wide range of industrial opportunities (Cheng et al., 2021).

5.2.2 Research Objective 2

R02: To analyze the relationships between digitalization and accounting profession in the era of IR 4.0

Using the Statistical Package for Social Sciences (SPSS) software, Pearson's Correlation Coefficient Analysis can be used to accomplish the second research objective. The results show that, in the era of IR 4.0, the accounting profession is positively correlated with all of the independent variables like blockchain, artificial intelligence, cloud accounting, and robotics. Furthermore, the analysis's findings demonstrate that, in the era of IR 4.0, every independent variable has a strong association and is favorably associated with the accounting profession. In the era of IR 4.0, the independent variables (blockchain, artificial intelligence, cloud accounting, and robotics) have a moderately strong to strongly favorable relationship with the accounting profession because, according to Table 4.6, their respective values range from 0.807, 0.681, 0.680, and 0.749.

When specific criteria are met, smart contracts allow transactions to be completed automatically (What Is Blockchain Accounting?, 2023). The capacity of artificial intelligence to recognize patterns in massive data sets in a manner that is beyond human comprehension (Dorland, 2023). Accounting companies can increase organizational efficiency, automate the input process, and enhance data accuracy with the use of cloud accounting (Client Hub Team, 2022). For IR 4.0, enabling robots to handle more computational tasks and make autonomous decisions in real time based on environmental data (Journal of Industrial Integration and Management, 2022).

5.2.3 Research Objective 3

R03: To investigate the most significant factor of digitalization on accounting profession in the era of IR 4.0.

Examining the most significant element affecting the accounting profession in the context of IR 4.0 is the third research objective. Using SPSS's Multiple Linear Regression analysis, this goal can be accomplished. Table 4.8.3 indicates that in the era of IR 4.0, blockchain is the element most influencing the accounting profession.

Blockchain can lower expenses, give their clients a competitive edge in the market, and increase the accuracy and transparency of financial reporting (The Impact of Blockchain Technology on the Accounting Industry, 2023).According to the study, blockchain has an impact on the accounting industry in the IR 4.0 era.

5.3 Research Implication

The purpose of this research is to better understand the significant variables influencing the accounting profession in the IR 4.0 era. Although the research only looked at four consequences, the researcher thought that there may be more effects that could have an impact on the accounting profession in the IR 4.0 era. Therefore, the researcher proposed a new framework that other researchers may find useful.

Through a review of the literature, an analysis of Pearson's correlation coefficient, and multiple linear regression, the researcher was able to accomplish the goals of the study and test the hypothesis regarding the relationships between independent variables (robotics, blockchain, artificial intelligence, and cloud accounting) that will affect the accounting profession in the era of IR 4.0.

In conclusion, the accounting profession is influenced by robotics, blockchain, artificial intelligence, and cloud accounting in the era of Industry 4.0. Of these, blockchain is the most important component that can have an impact on the

accounting profession in this period. Accounting professionals may proactively adapt, develop the essential abilities, and grab the opportunities given by IR 4.0 by having a thorough understanding of the critical issues influencing the accounting profession in the era of IR 4.0. This will guarantee their success and future relevance in the changing accounting industry. To succeed in the digital environment, accountants will need to acquire competencies in cloud computing, blockchain, AI, and data analysis (The Future for Accounting, 2021).

5.4 Research Limitation

Throughout the investigation, the researchers have addressed a number of restrictions. The restriction might be strengthened for next research. The first restriction is a time limit, which limits the researcher to choosing just four independent variables: blockchain, artificial intelligence, cloud accounting, and robotics. The researcher is aware that, in the era of IR 4.0, there are additional important elements that can affect the accounting profession. To get a more accurate and better outcome, the accounting profession study can concentrate on more variables in future research.

The responses from customers represent the next constraint. For private reasons, the possible responders could decline to complete the questionnaire. Because of this, the statistics might not be able to show enough how digitization has affected the accounting profession in the IR 4.0 age. Based on the problem statement, the researcher created a questionnaire to collect precise and accurate data for a meaningful study. As a result, the statistics might not be sufficient to accurately represent Melaka's accounting employees.

5.5 Recommendation for Future Research

Since there are only four independent variables in this study which are blockchain, artificial intelligence, cloud accounting, and robotics, the researcher suggested developing a new conceptual framework for future research. In the era of IR 4.0, the researcher thought that there were additional significant effects of digitization that could have an impact on the accounting profession. To have a greater understanding of how digitalization affects the accounting profession, researchers in the future may do qualitative study on accounting profession studies. In order to draw generalizations about the accounting profession in the context of IR 4.0, future researchers can expand the study's sample size.

The technological framework and protocols that permit the concurrent access, validation, and modification of the records that define distributed ledgers are referred to as distributed ledger technology, or DLT (Barney et al., 2023). Consequently, distributed ledger technology may be applied in future accounting profession studies. As seen below, the researcher creates a fresh study framework for further studies.

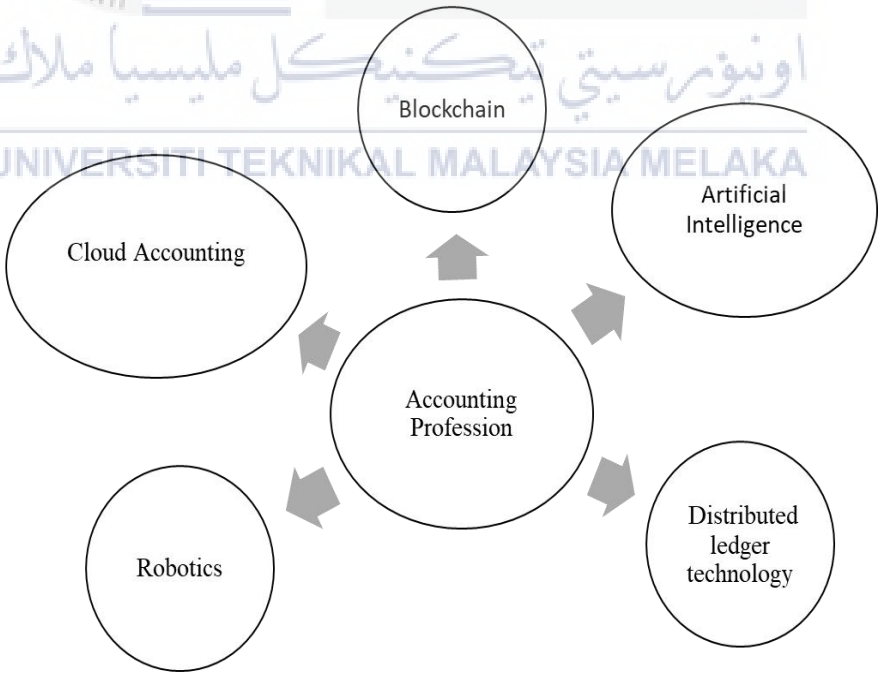

Figure 5.5: New Conceptual Framework

5.6 Contributions of Study

5.6.1 Theoretical Contributions

The purpose of this study is to give Melaka's businesses, accountants, and legislators useful information. It can close the gap between research and practice by converting theoretical knowledge into practical suggestions, which will aid in the successful adoption and integration of digital technologies within the Melaka accounting environment. Businesses and the economy as a whole may benefit from increases in decision-making, efficiency, and transparency as a result.

5.6.2 Practical Contributions

In the past, p-values from statistical tests like ANOVA were frequently used in research to assess significance. Because statistically significant results do not always imply meaningful differences in real-world applications, this method frequently led to misunderstandings. This claim supports giving the effect size which measures the real size of the difference between groups or variables that have priority. Knowing the size of the effects aids in the improvement of subsequent study. In order to corroborate the results, smaller effect sizes may need for greater sample sizes or alternative research designs. On the other hand, significant effects could motivate more research to identify the underlying systems involved. A more robust and iterative research process is encouraged by this emphasis on effect magnitude.

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APPENDICES

APPENDICE 1

THE EFFECT OF DIGITALIZATION ON ACCOUNTING PROFESSION IN THE ERA OF IR 4.0

My name is Nur Fatin Hanisah Binti Mohamed, a final year student that are currently undertaking Bachelor of Technology Management with Honours (Innovation) at Universiti Teknikal Malaysia Melaka (UTeM). Currently, I am conducting a research which entitled "The Effect of Digitalization on Accounting Profession in The Era of IR 4.0". The main purpose of this research is to discover the digitalization that affecting on accounting profession in Fourth Industrial Revolution and the result of using the digitalization.

Completing the following questionnaire will take five to ten minutes. I sincerely appreciate your participation in answering this inquiry. Please be aware that any information gathered for this study will be treated with the utmost confidentiality and used exclusively for scholarly reasons. I appreciate all of your hard work and collaboration. If you have any more questions, feel free to get in touch with me. I really appreciate your cooperation and willingness to take this survey.

Thank you

If you have any questions about this survey, feel free to get in touch with:

Nur Fatin Hanisah Binti Mohamed

UNIVERISITI TEKNIKAL MALAYSIA MELAKA

Email: nfhmum@gmail.com

SECTION A: DEMOGRAPHIC INFORMATION

Instruction: This section seeks for respondents' personal profiling. Please tick (✓) on the space given.

1. Gender

Male ☐ Female ☐

2. Age group

21 to 30 years old ☐
31 to 40 years old ☐
41 to 50 years old ☐
51 years old and above ☐

3. Education level

Diploma ☐ Bachelor's Degree ☐ Master's Degree ☐ PhD ☐

4. Working Experience

3 - 4 years ☐
5 - 10 years ☐
10 years and above ☐

5. What type of accounting task that you use digitalization ?

Reporting ☐
Payment & Recording ☐ Transaction

SECTION B: THE EFFECT OF DIGITALIZATION ON ACCOUNTING PROFESSION IN THE ERA OF IR 4.0

Instructions: This section is seeking respondents' opinion on the effect of digitalization on accounting profession in the era of IR 4.0. In order to what extent your agreement with each of the following statement by using a Likert scale, please tick (√) your answer to scale it as follows:

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Independent Variable

	Blockchain	**1**	**2**	**3**	**4**	**5**
1.	i believe that it is safe to store the data					
2.	I believe that it is easier for my accounting department that wants simple accounting alongside detailed reporting					
3.	I believe that it is easy for accounting staff to perform basic accounting tasks (managing and balancing the books)					
4.	It can manage clients' account by promoting transparency and efficiency					
5.	Reducing tiresome efforts that are involved in recording and authenticating data					

	Artificial Intelligence	**1**	**2**	**3**	**4**	**5**
1.	AI will automate many routine accounting tasks, freeing up accounting staff' time for more strategic work					
2.	Automate repetitive tasks like data entry and invoice processing, reducing errors and saving time					
3.	Analyze large amounts of data to identify trends and patterns that humans might miss, providing valuable insights for decision-making					
4.	Detect anomalies and suspicious activity in financial data, helping to prevent fraud and ensure compliance with regulations					
5.	Provide real-time financial insights and predictive analytics, enabling better-informed decisions and risk management practices					

	Cloud Accounting	**1**	**2**	**3**	**4**	**5**
1.	Stopping the dissemination of data					
2.	Easy to collaborate with other team members on financial data					
3.	Can track progress toward financial goals					
4.	Can streamline many accounting tasks, such as invoicing, bill pay, and payroll					
5.	Provides real-time access to financial data					

	Robotics	**1**	**2**	**3**	**4**	**5**
1.	Can automate repetitive tasks like data entry and reconciliation					
2.	Can automate compliance tasks like tax filing and regulatory reporting					
3.	Enabling continuous processing of tasks and improved responsiveness					
4.	Can save businesses money on labor costs and improve overall operational efficiency					

SECTION C: ACCOUNTING PROFESSION IN THE ERA OF IR 4.0

Instructions: This section intends to understand respondentS on the effect of digitalization on accounting profession in the era of IR 4.0. In order to what extent your agreement with each of the following statement by using a Likert scale, please tick (√) your answer to scale it as follows:

Dependent Variable

	Statements	**1**	**2**	**3**	**4**	**5**
1.	Our reporting is much more quality than before					
2.	Automating routine tasks has freed up our team to focus on higher-value activities					
3.	We are now able to process and analyze data much faster and more effectively than before					
4.	Offering digital services has made our firm more attractive to a wider range of clients					
5.	Digital tools have streamlined our compliance processes and reduced the risk of errors					

SECTION D: OTHER COMMENTS

Instruction: This section is an additional comment or suggestions that you have about the digitalization adoption in the era of IR 4.0 towards accounting profession or firm.

i. What is the challenges that you and your company is facing for this digitalization adoption?

……

ii. What is your suggestion?

……

We sincerely thank you for your valuable time and participation for this survey.

APPENDICE 2

GANTT CHART PSM 1

Year	2023/2024														
Task/Week	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
First meeting with supervisor															
Topic discussion															
Topic confirmation															
Read journals for literature review															
Forming introduction, problem statement, research objectives and questions															
Identifying variables and constructing conceptual framework															
Studying and finding secondary data															
Determining methodology used in the research															
Drafting research proposal															
Submit draft to supervisor															
Submission FYP 1															
Preparing Slide Presentation of FYP															

APPENDICE 3

GANTT CHART PSM 2

Year	2023/2024														
Task/Week	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Constructing of Questionnaire															
Revised for Questionnaire															
Questionnaire Distribution															
Data Collection															
Data Analysis															
Chapter 4- Findings and Discussion															
Revised Chapter 4															
Chapter 5 – Conclusion															
Revised Chapter 5															
Final Edit FYP Report 2															
FYP Presentation 2															
FYP Report Submission 2															

CHAPTER 1-5 & QUESTIONNAIRES TURNITIN

ORIGINALITY REPORT

30%	20%	6%	21%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to National School of Business Management NSBM, Sri Lanka Student Paper	1%
2	Submitted to King's Own Institute Student Paper	1%
3	discol.umk.edu.my Internet Source	1%
4	Submitted to Asia Pacific University College of Technology and Innovation (UCTI) Student Paper	1%
5	Submitted to Manchester Metropolitan University Student Paper	1%
6	eprints.utar.edu.my Internet Source	1%
7	www.researchgate.net Internet Source	1%
8	Submitted to School of Business and Management ITB Student Paper	1%