# ANALYZING THE FACTOR INFLUENCING THE IMPLEMENTATION OF DIGITAL TECHNOLOGY IN SUPPLY CHAIN.

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**APPROVAL**

I hereby declare that I have checked this report entitled " Analyzing The Factor Influencing The Factor Implementation of Digital Technology In Supply Chain" originally done by myself and this thesis complies with the partial fulfilment for awarding the award of the degree of fBachelor Technology Management and Supply Chain (Logistics) with Honour.

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# ANALYZING THE FACTOR INFLUENCING THE IMPLEMENTATION OF DIGITAL TECHNOLOGY IN SUPPLY CHAIN.

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**This report is submitted in fulfilment of the requirement for the Bachelor of Technology Management and Supply Chain (Logistic)**



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**2025**

# DECLARATION

I hereby declare that the work presented in the project report entitled “ANALYZING THE FACTOR INFLUENCING THE IMPLEMENTATION OF DIGITAL TECHNOLOGY IN SUPPLY CHAIN.” in partial fulfillment of the requirement for the Final Year Project of degree of “ Bachelor of Technology Management And Supply Chain (Logistic) ” of Faculty of Technology Management and Technopreneurship in UNIVERSITI TEKNIKAL MALAYSIA MELAKA, is record of my own work.

Further, I declare that this is my original work and the analysis and the findings are for academic purpose only.



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DATE : 14 FEBRUARY 2025

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In the Name of ALLAH, the Most Gracious, the Most Merciful. Alhamdulillah. All praises to ALLAH for the strengths and His Blessing for me to complete the Bachelor Degree Final Year Project. I would like to express my deepest gratitude to all my family members and fellow friend who were always supporting me and encouraging me their best wishes.

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"Last but not least I wanna thank me, I wanna thank me, I wanna thank me for believing in me, I wanna thank me for doing all this hard work, I wanna thank me for having no days off, I wanna thank me for...for never quitting, I wanna thank me for always being a giver and tryna give more than I receive, I wanna thank me for tryna do more right than wrong, I wanna thank me for just being me at all times".

# ABSTRACT

This study investigates the factors influencing the implementation of digital technologies (DTs) in supply chains (SCs). The research aims to identify and evaluate these factors, such as leadership style, organizational culture, and employee engagement. A quantitative approach will be employed through electronic surveys distributed to a large sample via convenience sampling. Data saturation will guide data collection to ensure comprehensive information is gathered. Statistical software will be used to analyze the quantitative data, and the findings will be interpreted in light of existing literature to draw conclusions relevant to improving SC efficiency through effective DT adoption. The research is expected to provide a comprehensive list of influencing factors and evaluate their impact on DT implementation. Additionally, the study will identify the most influential factor, aiding organizations in prioritizing their efforts for successful digital transformation in their SC operations. This research contributes to enhanced SC efficiency, improved decision-making, and a competitive advantage for businesses that leverage DTs effectively.

# ABSTRAK

Kajian ini menyiasat faktor yang mempengaruhi pelaksanaan teknologi digital (DT) dalam rantaian bekalan (SC). Penyelidikan ini bertujuan untuk mengenal pasti dan menilai faktor-faktor ini, seperti gaya kepimpinan, budaya organisasi, dan penglibatan pekerja. Pendekatan kuantitatif akan digunakan melalui tinjauan elektronik yang diedarkan kepada sampel yang besar melalui pensampelan mudah. Ketepuan data akan membimbing pengumpulan data untuk memastikan maklumat yang komprehensif dikumpulkan. Perisian statistik akan digunakan untuk menganalisis data kuantitatif, dan penemuan akan ditafsirkan berdasarkan literatur sedia ada untuk membuat kesimpulan yang berkaitan dengan meningkatkan kecekapan Rantaian Bekalan melalui penggunaan Teknologi Digital yang berkesan. Penyelidikan ini dijangka menyediakan senarai komprehensif faktor yang mempengaruhi dan menilai kesannya terhadap pelaksanaan Teknologi Digital. Selain itu, kajian itu akan mengenal pasti faktor yang paling berpengaruh, membantu organisasi dalam mengutamakan usaha mereka untuk menjayakan transformasi digital dalam operasi Rantaian Bekalan mereka. Penyelidikan ini menyumbang kepada kecekapan Rantaian Bekalan yang dipertingkat, membuat keputusan yang lebih baik dan kelebihan daya saing untuk perniagaan yang memanfaatkan Teknologi Digital dengan berkesan.

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# CHAPTER 1

# INTRODUCTION

## 1.0 Introduction

Chapter 1 is the basis for understanding the specifics and necessity of integrating digital technology into supply chains. In this chapter, we look at the study's history and acknowledge the transformational potential of Digital Technologies (DTs) in supply chain management.



## 1.1 Background of The Study

Digital Technologies (DTs) associated with this approach are ideal for use in supply chains (SCs), where several players collaborate (Gebhardt et al., 2021; Patrucco et al., 2022). While Malhotra et al. (2005) define digitalization as the transition from analogue to digital information, whereas "unphysicalization" refers to the replacement or decrease of physical fluxes. SC digitization and unphysicalization improve market performance, internal efficacy, and productivity. Several research have looked into the adoption of Clancy et al. (2023), Huynh (2022), and Varriale et al. (2021) give case studies and simulations to demonstrate the use of DTs in various business activities and sectors. The existing literature on SC digitization and unphysicalization includes hundreds of research publications, leading in a diverse spectrum of innovative business procedures, approaches, and applications including many technology. Various SC mechanisms have varying implications (Hofmann et al., 2019; Rajiet al., 2021).

Embracing SC digitalization and unphysicalization is tough and needs pioneering digital technologies with unknown advantages for SC. The field of DTs is rapidly evolving due to technical advancements (Park et al., 2021; Varriale et al., 2022). Digitalization has impacted industry competitiveness, value chains, and internal procedures (Aaldering and Song, 2021; Ghobakhloo and Iranmanesh, 2021; Holmstr€om et al., 2019). Firms use digital technology to Businesses are becoming more linked as they manage operations, supply chains, and get real-time visibility (ArditoPetruzzelli et al., 2019; Seyedghorban et al., 2020). Industry 4.0 refers to a worldwide phenomena that affects several industries (Bazan and Estevez, 2022; Bienhaus and Haddud, 2018; Wamba and Queiroz, 2020). This approach emphasises vertical and horizontal integration of production processes (Dalenogare et al., 2018; Wagire et al., 2020). Digital platforms (DPs) facilitate the incorporation of information and assistance (Li et al., 2020; Sedera et al., 2016). Digitalization in logistics and supply chain management (L&SC) is crucial for enterprises, challenging traditional paradigms, business models, and industry boundaries (Barrett et al., 2015; Cichosz et al., 2020).



## 1.2 Problem Statement

In today's era of fast technological innovation, the use of digital technology in supply chains is widely regarded as critical to preserving competitiveness and operating efficiency. New developments such as artificial intelligence (AI), the internet of things (IoT), blockchain, and sophisticated data analytics are altering supply chain management by allowing real-time monitoring, improving decision-making processes, and increasing supply chain efficiency. Despite the obvious benefits, many organisations confront substantial hurdles when using these technologies. Organisational reluctance to change, limited technology infrastructure, a shortage of experienced workers, and complicated regulatory frameworks sometimes hamper the effective deployment of digital solutions in supply chains.

The varied and dynamic character of businesses implies that the variables impacting digital technology deployment might vary greatly. In certain industries, fast technology development and high initial expenditures may be the key impediments, but in others, regulatory compliance and data security concerns may take priority. Furthermore, integrating new technologies with old systems presents technical hurdles that, if not addressed properly, might disrupt operations. Understanding these sector-specific elements is critical for firms to modify their plans and make a smooth transition to digital supply chains. Furthermore, due to the global nature of supply chains, regional differences in technology adoption, infrastructure quality, and legal requirements must be considered.

This study aims to analyse and comprehend the variables impacting the adoption of digital technologies in supply chains, with an emphasis on how these factors affect various sectors and geographies. By identifying the major hurdles and facilitators, this study hopes to give practical insights for firms aiming to improve their supply chain capabilities through digital transformation. The conclusions will include strategic suggestions to assist organisations in overcoming problems, optimising resource allocation, and fully realising the promise of digital technology. Such insights are critical for businesses to remain competitive, satisfy shifting customer expectations, and react to a quickly changing technology landscape, assuring long-term growth and efficiency in supply chain operations.



## 1.3 Research Objective

1. Access the factor influence the implementation of digital technology in supply chain.
2. Identify the most strongly factor influence the implementation of digital technology in supply chain.

## 1.4 Research Question

1. What are the factor influence the implementation of digital technology in supply chain?
2. Which is the most factor influence the implementation of digital technology in supply chain?

## 1.5 Expected Outcomes

The research is expected to provide a detailed list of factors that influence the implementation of digital technology in supply chain management. These factors might include, but are not limited to, technological infrastructure, organizational readiness, employee skills, market dynamics, cost considerations, regulatory environment, and customer demands. This outcome will offer businesses a holistic understanding of the various elements that need to be considered for successful digital technology adoption.



The research will evaluate the significance and impact of each identified factor on the implementation process. By understanding the relative importance and influence of these factors, organizations can better prioritize their efforts and resources. This will help in creating targeted strategies to address the most critical aspects of digital technology adoption in their supply chain operations.

One of the key outcomes will be the identification of the single most influential factor that affects the implementation of digital technology in the supply chain. Recognizing this factor will enable organizations to focus their attention and resources on addressing this primary challenge or leveraging this key enabler to maximize the success of their digital transformation initiatives.

## 1.6 Significance of The Study

The significance of the study is enhancement of supply chain efficiency and effectiveness. By identifying and understanding the key factors that influence the adoption of digital technology, organizations can optimize their supply chain operations. Improved efficiency and effectiveness in supply chain processes can lead to cost savings, faster delivery times, and higher customer satisfaction.

Next, strategic planning and decision making. The insights gained from this study will aid businesses in strategic planning and decision-making. By knowing which factors have the most substantial impact, organizations can allocate their resources more effectively, prioritize critical areas for improvement, and develop robust digital transformation strategies.

Competitive Advantage is also the significance of the study. In today's rapidly evolving market, the adoption of digital technology is a crucial factor for gaining a competitive edge. This study will provide organizations with the knowledge needed to leverage digital technologies to stay ahead of their competitors, respond more swiftly to market changes, and meet customer demands more effectively.



A part from that is resource optimization. Understanding the most significant factors influencing digital technology implementation helps organizations avoid common pitfalls and challenges. This knowledge enables better resource optimization, reducing wasted efforts and investments in areas with lower impact while focusing on high-impact factors.

Besides, another significance of the study is improved change management. The study will shed light on the role of organizational readiness, employee skills, and change management practices in the successful adoption of digital technologies. This understanding will help organizations to implement better training programs, foster a culture of innovation, and manage change more effectively.

Lastly is policy and regulatory insights. The identification of regulatory environment factors as influential in the adoption of digital technology will provide valuable insights for policymakers and regulators. Understanding these factors can

guide the development of policies and regulations that facilitate, rather than hinder, the digital transformation of supply chains.

## 1.7 Summary

Chapter 1 establishes the foundation for integrating digital technology into supply chains, highlighting its transformative potential. The study explores the history and necessity of adopting Digital Technologies (DTs) in supply chain management (SCM), defining digitalization and unphysicalization, and their benefits on market performance and productivity. Despite the advantages, organizations face challenges such as technological infrastructure, skilled workforce shortages, and regulatory complexities. The research aims to identify factors influencing DT adoption across sectors and regions, offering strategic insights for overcoming these challenges. The objectives include assessing influential factors and pinpointing the most critical one, with expected outcomes providing a comprehensive understanding of these elements to optimize resource allocation, improve efficiency, and maintain competitive advantage. The study's significance lies in enhancing SCM efficiency, strategic planning, competitive edge, resource optimization, effective change management, and informing policymakers to support digital transformation in supply chains.

# CHAPTER 2

# LITERATURE REVIEW

## 2.0 Introduction

In this chapter, the researcher discussed about the factor influence Digital Technologies on Supply Chain efficiency. Next, it also discussed is the most strongly factor of digital technology impact to the supply chain efficiency. The last part of this chapter is discussed the framework and hypothesis that founded.



## 2.1 Digitalization Technology

Digitization (i.e. the process of converting analogue data into digital data sets) is the framework for digitalization, which is defined as the exploitation of digital opportunities. Digital transformation is then defined as the process that is used to restructure economies, institutions, and society on a system level (Brennen and Kreiss, 2016; Unruh and Kiron, 2017). While the latter embraces changes on all societal levels, digitalization by means of combining different technologies (e.g. cloud technologies, sensors, big data, 3D printing) opens unforeseen possibilities and offers the potential to create radically new products, services, and BM (Matzler et al., 2016). The study literature in the property sector has examined a variety of areas of digitalization, including the Internet of Things (IoT), artificial intelligence (AI), and structure

managing data (Atkin and Bildsten, 2017; Bröchner et al., 2019). Current buildings sector surveys have progressively linked digitization to emerging technologies, the sharing economy, tenancy relationships, and fresh offerings and enterprises (Westergren et al., 2017; Fastighetsägarna Stockholm, 2018; FIBREE, 2021). The impetus for transformation grows as firms from other industries enter the real estate market with new digital-based offerings (Baum, 2017; Tagliaro et al., 2020). Thus, digitization in the real estate market encompasses a diverse set of enterprises and other participants who constitute a network.

## 2.2 Digital Technology In Supply Chain

Digital Technologies (DTs) associated with such a paradigm find the ideal context for application in supply chains (SCs), where various actors participate in sharing, coordinating, and working together actions (Gebhardt et al., 2021; Patrucco et al., 2022). While digitalization is the transition from analogue to digital data "unphysicalization" refers to the replacement and decrease of physical fluxes (Malhotra et al., 2005). Supply chain digitization and unphysicalization improve competitiveness, internal effectiveness, and overall SC efficiency. Several studies have studied the adoption of DTs in various business activities and processes, as well as across several sectors, using case studies and simulations (Clancy et al., 2023; Huynh, 2022; Varrialeet al., 2021). The most recent research on SC digitalization and unphysicalization includes lots of scientific articles, leading to in a separated and diverse variety of innovative company procedures, options, and purposes related to multiple technologies as well as influencing multiple SC methods with varying impacts (Hofmann et al., 2019; Raji et al., 2021).Adopting SC digitalization and unphysicalization is difficult and necessitates the adoption of pioneering DTs, the advantages of which for Supply Chain are unpredictable and not guaranteed.

## 2.3 Theoritical Framework Development

Theoretical framework building is essential for creating a focused and insightful research effort. It entails a thorough assessment of current ideas and concepts to develop a lens through which will investigate unique research subject. This framework serves as a directing data collection, analysis, and interpretation by identifying significant factors and laying the groundwork for interpreting findings in the context of prior knowledge. By synthesising selected ideas and investigating their interrelationships, may construct a customised framework that illuminates study and encourages a greater understanding of the topic under assessment.

### 2.3.1 Theory

#### 2.3.1.1 Digitalization and Digital Transformation

These ideas are essential for understanding the use of digital technology in supply chains. Digitalization is the process of transforming analogue data into digital data sets, whereas digital transformation is the reformation of economies, institutions, and society using digital potential. The linked literature explores how merging several technologies, such as cloud computing, sensors, big data, and 3D printing, opens up new possibilities and generates fundamentally new products, services, and business models.

#### 2.3.1.2 Supply Chain Digitalization and Unphysicalization

These terms relate to the use of digital technology in supply chains in which several entities participate. Digitalization is the transfer from analogue to digital information, whereas unphysicalization is the replacement or diminution of physical fluxes. The literature evaluation focuses on how these techniques increase market performance, internal productivity, and supply chain efficiency. It also covers case studies and simulations that demonstrate the use of digital technology in various corporate tasks and sectors.

2.3.1.3 Factors that Influence Digital Technology Implementation in Supply Chains

The study aims and questions centre on identifying and comprehending the factors that drive digital technology adoption in supply chains. These variables include technology infrastructure, organisational preparedness, staff capabilities, market dynamics, cost concerns, regulatory environment, and consumer needs.

## 2.3.2 The Factor Influence The Implementation of Digital Technology In Supply Chain.

2.3.2.1 Leadership

Leadership is the talent of individuals to lead, motivate, and persuade others to achieve common goals. Leadership is critical in determining the success of supply chain projects that use digital technologies. Effective leaders articulate a clear vision for digital transformation, strategically link technical breakthroughs with corporate goals, and promote the use of new technologies. They help with change management by overcoming opposition, cultivating an innovative culture, and guaranteeing good communication. Leaders also guarantee that required resources are allocated, such as financial investment and talent development, while regularly monitoring and analysing the implementation process to make necessary modifications. This leadership-driven strategy is critical for overcoming hurdles and realising the full potential of digital technology in increasing supply chain efficiency.

2.3.2.2 Supportive Organizational Culture

A supportive organisational culture is one that fosters cooperation, creativity, and adaptation while also making employees feel appreciated and empowered to contribute to the organization's goals. A supportive organisational culture is essential for introducing digital technology in supply

chains since it allows for the easy adoption of new technologies. Such a culture decreases resistance to change, increases knowledge and idea exchange, and fosters a proactive approach to issue resolution. When the organisational culture is receptive, staff are more inclined to adopt digital technologies and procedures, resulting in more effective and efficient deployment. This cultural support improves supply chain performance by promoting continuous enhancement and development.

2.3.2.3 Engagement Of Employee

Employee engagement is the amount of dedication, interest, and passion that workers show for their jobs and the organisation. When adopting digital technology in supply chains, significant employee involvement is critical for effective adoption and integration of new technologies. Engaged employees are more likely to support digital transformation projects, actively participate in training and development programmes, and give new ideas for improvement. Their upbeat attitude and proactive approach assist to overcome opposition to change, resulting in smoother implementation procedures. Furthermore, engaged employees frequently serve as digital technology advocates, influencing their colleagues and cultivating a collaborative atmosphere that encourages continual growth and technical innovation in the supply chain.



| AUTHOR | FACTOR INFLUENCE |
|---|---|
| Osmundsen et al. (2018) | Supportive organizational culture |
| Osmundsen et al. (2018) | Well-managed transformation activities |
| Osmundsen et al. (2018) | Leveraging external and internal knowledge |
| Osmundsen et al. (2018) | Engagement of employees |
| Vogelsang el al. (2019a) | Organisational achievement aspects (pilot initiatives, planning for future growth, client |

| | |
|---|---|
| | requirements, self-determination, skills of employees, lifestyle, (Big) Data utilisation, administrative engagement) |
| Vogeksang et al. (2019b) | Environment (connectivity, transparency, collaboration, hybrid value creation, standards) |
| Vogelsang el al. (2019a) | Technology (facilities, dependability, significance, adaptation, and safety) |
| Kane et al. (2018) | Developing digital leaders |
| Kane et al. (2018) | Push things downstream (a society with diffused leadership). |
| Kane et al. (2018) | Being likely to experiment and iterate |

Table 2.3: Author And The Factor Influence The Implementation of Digital Technology In Supply Chain



To conclude, table was created to list the factors obtained to make it easier to understand and collect independent variables more specifically. This table is created, the process of collecting information will be more organized and systematic to avoid mistakes and mistakenly taking information.

### 2.3.3 Theorical Framework

The independent variable obtained from a search based on previous journal research, there are several factors that relate to this title, namely supportive organizational culture, engagement of employees, a growth mindset and developing digital leaders. While the dependent variable is implementation of digital technology in supply chain. Below is the extended research model that will be used in this research:

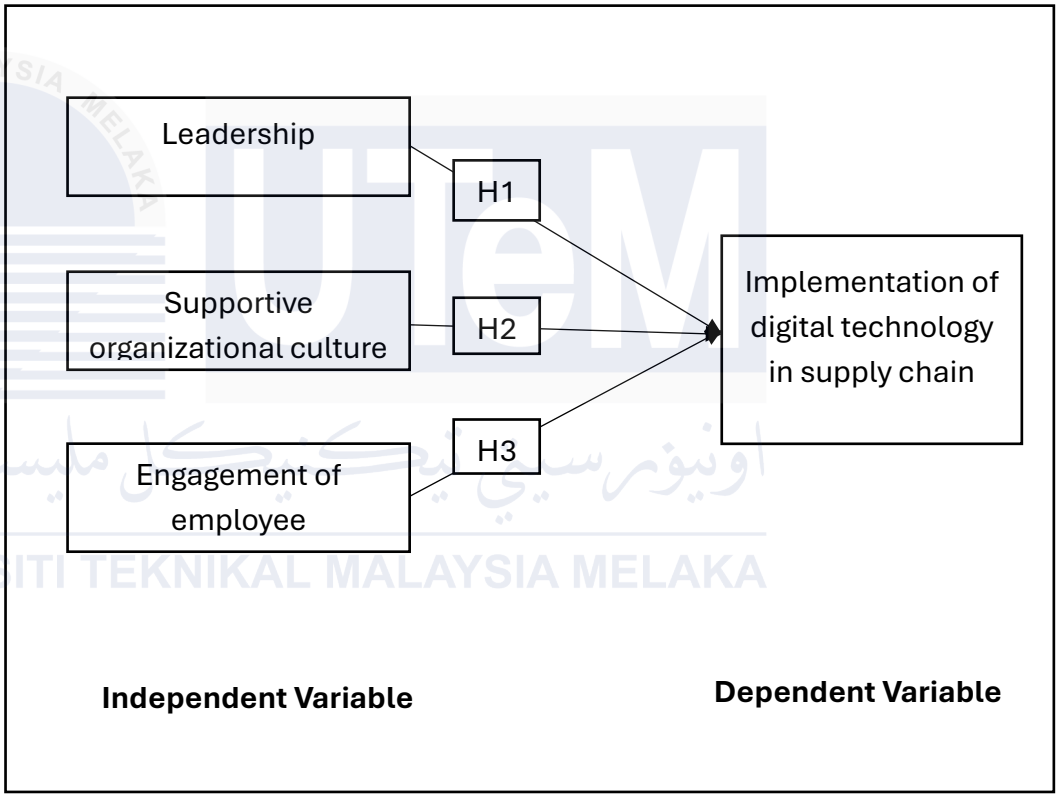


**Figure 2.3: Model Of Theorical Framework**

### 2.3.4 Hipothesis

1. H1: Leadership has an influence on the implementation of digital technology in supply chain.

   This hypothesis was chosen for this topic because it emphasises the importance of leaders in "constantly observing market conditions, recognising and taking emerging technologies in order then converting these into enterprise possibilities that allow for ongoing adoption of technological advances in the supply chain." Leadership also pushes individuals to participate actively in digital technology, a concept known as "active leadership," and emphasises the necessity of open administration, success, and cascading choices down.

2. H2: Supportive organizational culture has an influence on the implementation of digital technology in supply chain.

   This hypothesis was chosen for this study because the culture of organisations governs way a firm runs and adopts digital technology, since it is founded on a set of rules, beliefs, and perspectives that are clearly expressed and shared by all stakeholders. It is critical to not only recognise consumer issues and tackle them via innovative, quicker, and more environmentally friendly products produced in the organization's innovation centres, yet engage workers at any rank in active continuous downward efforts that boost their daily tasks, and enable the organisation to function more effectively for its consumers.

3. H3: Engagement of employee has an influence on the implementation of digital technology in supply chain.

   This hypothesis was chosen for this study due to big, extremely spread organisations with multiple digital initiatives in different segments of the company, digital technology leaders must be encouraged by the management group of the business in order to drive employee engagement. The list of effective procedures linked to staff loyalty begins with involving upper management in facilitating the creation of digital technology goals.

## 2.4 Summary

This literature study efficiently establishes the framework for future research into the elements driving digital technology adoption in supply chains. Provided background for digitization and its favourable influence on supply chain efficiency. Created a framework defining potential independent variables such as leadership style, organisational culture, and employee engagement by researching relevant theories (deductive and inductive methodologies). After summarising the discovered components from previous research, you created a preliminary model containing hypotheses. According to this model, effective application of digital technology in supply chains requires leadership, a supportive organisational culture, employee engagement, and a development attitude. Building on this basis, you can now proceed with data gathering and analysis to find the most relevant elements driving digital technology adoption. By developing on this basis, can now proceed with data collecting and analysis to identify the most significant elements driving digital technology adoption and, eventually, improving supply chain efficiency.

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# CHAPTER 3

# RESEARCH METHODOLOGY

## 3.0 Introduction

Research methodology is like a roadmap that helps you plan and conduct your final year project in a structured and organized way. It guides you on how to collect data, analyze it, and draw conclusions, ensuring that your research is valid, reliable, and focused. By following a sound research methodology, you can clarify your research goals, address ethical considerations, and improve the overall quality of your project, leading to credible and trustworthy findings that contribute to your academic success.



## 3.1 Research design

The definition of research design according to an article by Gunasekaran, Subramanian, and Papadopoulos (2017) is a research design is a systematic framework or plan that guides the whole process of conducting a research study. It outlines the techniques and processes for gathering, analysing, and interpreting data to answer particular research questions and achieve research objectives. It guarantees that the study question is approached consistently and professionally.

The overall approach and design of the study will be a methods approach. This means that quantitative data will be collected and analyzed to provide a

comprehensive understanding of the research topic. The quantitative data will provide numerical insights and statistical analysis.

### 3.2 Data collection methods

The data collection methods included a quantitative approach. Surveys were used to collect quantitative data from a large sample of participants. The surveys were distributed electronically.

A quantitative research approach or study focused on quantifying or measuring phenomena by collecting and analyzing numerical data. Data in quantitative research was often collected using organized methods such as surveys, trials, or observations before being analyzed statistically to uncover patterns, correlations, or trends. This method emphasized impartiality, accuracy, and the potential to apply findings to a broader population. Quantitative approaches were widely utilized in economics, psychology, sociology, and natural sciences to investigate multiple trends and make evidence-based judgments.



A survey was a research approach that gathered data from a community or sample of people to learn about their traits, views, attitudes, behaviors, or experiences on a specific topic of interest. Surveys often utilized standardized questionnaires conducted with respondents through online platforms. The objective of the survey was to collect information systematically from a representative sample of the target population, allowing researchers to draw conclusions or assumptions about the entire population.

## 3.3 Sampling Strategy

### 3.3.1 Target Population

Saunders et al. (2012) highlighted that for certain studies, data could be collected from an entire population when it was reasonable in scale. The purpose of the research was to determine the factors that impacted the application of digital technology in the supply chain. As a result, the research's demographic target was the retail company.

The sampling strategy for this study employed convenience sampling. Convenience sampling was used to distribute surveys to a wide range of participants, making data collection more accessible and cost-effective. The sample size was determined based on the principle of data saturation, where data collection continued until no new information or themes emerged.



## 3.4 Data analysis

The data analysis involved several steps. Quantitative data from the surveys were analyzed using statistical software to generate descriptive statistics, correlations, and inferential statistics where applicable. The integration of quantitative findings was performed to provide a comprehensive and nuanced understanding of the research topic. The findings were interpreted considering existing literature and theoretical frameworks to derive meaningful conclusions and implications for practice or further research.

The research methodology chapter outlined a plan for conducting the final year project. It employed a quantitative approach, gathering numerical data through electronic surveys. Convenience sampling targeted a large group of participants, and data collection continued until no new information arose (data saturation). Statistical software (SPSS) was used to analyze the data, and the findings were interpreted in the context of existing research to draw conclusions relevant to practice or further study.

### 3.5 Summary

Chapter 3 outlined the research methodology employed for conducting the final year project, emphasizing a structured and organized approach to ensure valid, reliable, and credible findings. The research design adopted a quantitative methods approach, utilizing electronic surveys to gather numerical data from a large sample of employees in Malaysia's Retail Companies. Convenience sampling was employed to facilitate accessible and cost-effective data collection, which continued until data saturation was achieved. The collected data were analyzed using statistical software, including Exploratory Factor Analysis (EFA), to generate descriptive and inferential statistics. The results were interpreted within the context of existing literature and theoretical frameworks, providing meaningful conclusions and implications for practice or further research. This comprehensive methodology clarified the research goals, addressed ethical considerations, and enhanced the overall quality and trustworthiness of the study.

# CONCLUSION

Chapter 1 sets the stage for understanding the critical role of digital technology in supply chains. Beginning with the background of the study, it highlights the transformative potential of Digital Technologies (DTs) in supply chain management, emphasizing the evolution of digitalization and its impact on industry competitiveness and value chains. The problem statement underscores the challenges faced by organizations in effectively deploying digital solutions in supply chains, ranging from technological infrastructure limitations to regulatory complexities.

With the aim of comprehensively analyzing the factors influencing the adoption of digital technologies in supply chains, the research objectives and questions are outlined, paving the way for a detailed investigation. Expected outcomes are discussed, focusing on the anticipated insights into factors influencing implementation and their impact, as well as the identification of the most influential factor.

The significance of the study is underscored, highlighting its potential to enhance supply chain efficiency and effectiveness, aid in strategic planning and decision-making, provide competitive advantage, optimize resources, improve change management, and offer policy and regulatory insights.

Moving forward, Chapter 2 delves into the literature review, exploring the influence of digitalization technology and digital technology in supply chain, along with theoretical framework development. Various factors influencing the implementation of digital technology in supply chains are discussed, including leadership, supportive organizational culture, employee engagement, and a growth mindset. A comprehensive table summarizing the factors identified by authors is presented, facilitating a deeper understanding and organized collection of independent variables.

Additionally, theoretical frameworks are proposed, incorporating deductive and inductive approaches to hypothesis development. These hypotheses are designed

to investigate the influence of leadership, supportive organizational culture, employee engagement, and a growth mindset on the implementation of digital technology in supply chains, providing a structured framework for empirical research.

Chapter 3 provides a detailed roadmap for conducting the research study, emphasizing a structured quantitative methodology to ensure valid, reliable, and credible outcomes. By employing electronic surveys to gather numerical data from employees in Malaysia's business and manufacturing sectors through convenience sampling, the study aims to identify factors influencing the implementation of digital technology in supply chains. Data will be collected until saturation is reached and analyzed using statistical software to produce descriptive and inferential statistics. The findings will be contextualized within existing literature and theoretical frameworks, offering valuable insights and implications for both practice and further research. This methodological approach is designed to enhance the clarity, ethical integrity, and overall quality of the research.

In conclusion, Chapter 1 lays a solid foundation for the research journey ahead, setting the stage for a systematic investigation into the factors driving digital technology adoption in supply chains and their implications for enhancing efficiency and effectiveness.

# CHAPTER 4

# DATA ANALYSIS

## 4.0 Introduction

In this chapter, the researcher discussed about the method used on the various statistical tests and states the results of the analysis, using the SPSS version 29. There are analysis that will be used by the researcher which is descriptive analysis, realibility analysis and regression analysis. The investigation about the factor influence the implementation of digital technology in supply chain are the focus for this research. From the theorical framework, the researcher is used to find the factor influence the implementation of digital technology in supply chain. The framework is used based on research for the digital technology in supply chain.

Furthermore, the researcher used questionnaire to collect the data from the respondent as the quantitative research method. Before the questionnaire been distributed, the pre-test are made to make sure the questionnaire are reliability and give ease to respondent for understanding the research made. The frequency the respondent is used based on the scale measurement by using the descriptive analysis. There also have multiple regression analysis in this data analysis. The picture, tables, pie chart and bar charts will be used in order to get clearer information about this research.



## 4.1 Pilot Test Analysis

The pilot test involved gathering survey data to assess the dependability of the study equipment. According to Saunders et al. (2019), pilot testing is critical for finding and removing erroneous measurements, guaranteeing consistency in replies, and improving the questionnaire. These authors emphasised that pilot testing are especially effective for evaluating logistical issues like question sequencing and

scheduling. In this study, the pilot test was undertaken after the questionnaire had been prepared but before it was sent to the primary respondents. The questionnaire was conducted with 80 retail employees to determine its validity and reliability.

Cronbach's alpha was used to assess internal consistency in the pilot test results. Hair et al. (2020) state that reliability testing with Cronbach's alpha assures that all items on a scale assess the same underlying notion. These writers emphasised that higher Cronbach's alpha values, especially those closer to one, suggest more dependability. The commonly acknowledged criterion for satisfactory reliability is 0.70 or above, however this might differ based on the study's setting and aims.

Table 4.1: The Standard Coefficient Alpha

| **Alpha Coefficient Range** | **Strength of Association** |
|---|---|
| α< 0.6 | Poor |
| α= 0.6 to 0.7 | Moderate |
| α= 0.7 to 0.8 | Good |
| α= 0.8 to 0.9 | Very Good |
| α> 0.95 | Excellent |

Source; **Saunders, M., Lewis, P., & Thornhill, A.** (2019). *Research Methods for Business Students* (8th ed.). Pearson Education.



So, the following table 4.1 shows the Cronbach's alpha coefficient for pilot testing.

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Item |
|---|---|---|
| .977 | .977 | 14 |

**Table 4.1 : Cronbach's Alpha For Pilot Test**

The reliability test that shown in table 4.1, its shown that the variables between the factors can be which is the leadership, supportive organizational culture and engagement of employee. All the factors that researcher used shown the influence the implimentation of digital technology in supply chain. So, the Cronbach's alpha reliability statistic test result for this pilot test is 0.977 which is the value are accepted and in range of very good data. Within all the no of item that have been tested that 14 items, all the items can be used and continued for the next and real research. The pilot test are shown positively that can lead the data analysis of the research in researcher ways. So, the researcher continue collect the real data from the targeted respondent.

## 4.2 Descriptive Analysis

The demographic that use in this questionnaire will be including in this section. The demographic of the respondent such as gender, age, race, occupation, position and the researcher also use question to ask whether the organization of the respondent intergrate its supply chain with the external partners or suppliers through digital technologies and has the respondent organization implemented any digital technologies in its supply chain such as AI, IOT, and blockchain. So the researcher will analysis each of the information.

### 4.2.1 Gender

**Gender (G1)**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Male | 36 | 45.0 | 45.0 | 100.0 |
| | Female | 44 | 55.0 | 55.0 | 55.0 |
| | Total | 80 | 100.0 | 100.0 | |

**Table 4.2: Respondent's Gender**

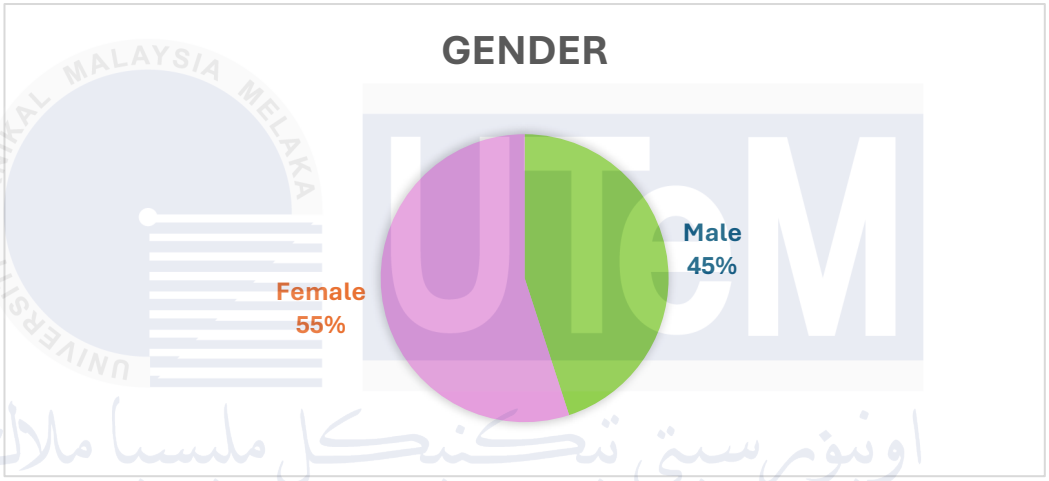


**Figure 4.1: Respondent's Gender**



Table 4.2 and Figure 4.1 provide an overview of the gender distribution among respondents. Out of a total of 80 respondents, 36 were male, accounting for 45% of the sample, while 44 were female, making up the majority at 55%. This data indicates that women play a dominant role in the workforce within retail companies.

### 4.2.2 Age

**Age (A1)**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 19 – 23 Years Old | 8 | 7.5 | 7.5 | 7.5 |
| | 24 – 28 Years Old | 35 | 43.8 | 43.8 | 51.2 |
| | 29 – 33 Years Old | 37 | 46.3 | 46.3 | 97.5 |
| | 34 Years Old and Above | 2 | 2.5 | 2.5 | 100 |
| | Total | 80 | 100.0 | 100.0 | |

**Table 4.3: Respondent's Age**

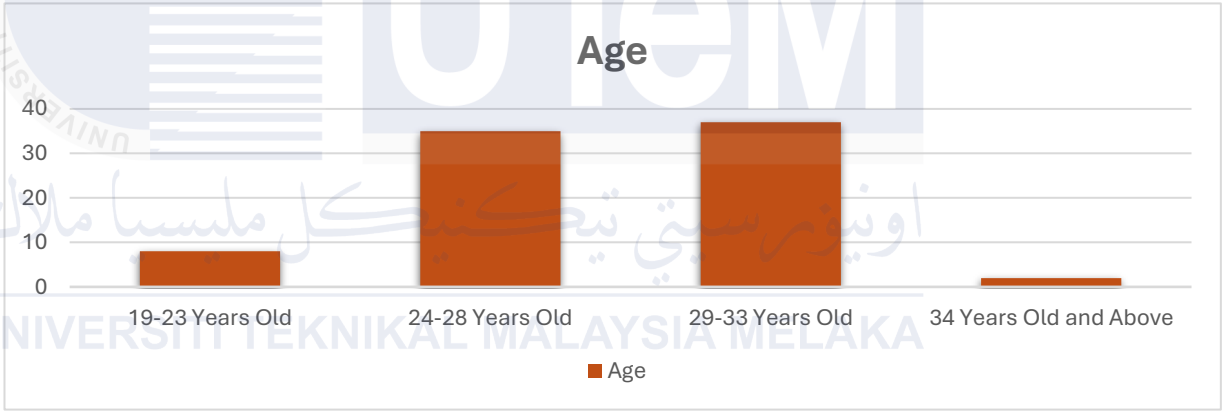


**Figure 4.2 Respondent's Age**

Figure 4.3 represents the age distribution of the 80 respondents, divided into four age groups. The highest age group, including 46.3% (37 out of 80 respondents), is between 29 and 33 years. This shows that mid-career professionals, who are more knowledgeable and established in their professions, dominate the retail workforce. These individuals are likely to have a balanced awareness of both old and modern processes, making them critical in aiding the use of digital technology in supply chains. The second-largest age group is responders aged 24-28 years, accounting for 43.8% (35 out of 80). This cohort is likely to include early-career workers who are adaptive and more comfortable with technology, having grown up in a digital-first world. Their willingness to try new tools and solutions may spark creativity and boost digital transformation initiatives. The youngest group, aged 19 to 23, accounts for just 10%

of responders (8 out of 80). This group is likely made up of recent grads or those in training. Their lesser representation may reflect a lack of exposure or expertise in retail supply chain operations, but their technology savvy has the potential to deliver tremendous value when managed appropriately. Finally, the oldest group, aged 34 and up, is the smallest component, accounting for only 2.5% (2 of 80). This might imply that more senior professionals, who may occupy higher-level management positions, are either under-represented in operational jobs or are less likely to participate in such surveys.

### 4.2.3 Race

**Race (R1)**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Malay | 45 | 56.3 | 56.3 | 56.3 |
| | Chinese | 31 | 38.8 | 38.8 | 95.0 |
| | Indian | 3 | 3.8 | 3.8 | 98.0 |
| | Others | 1 | 1.3 | 1.3 | 100 |
| | Total | 80 | 100.0 | 100.0 | |

**Table 4.4: Respondent's Race**

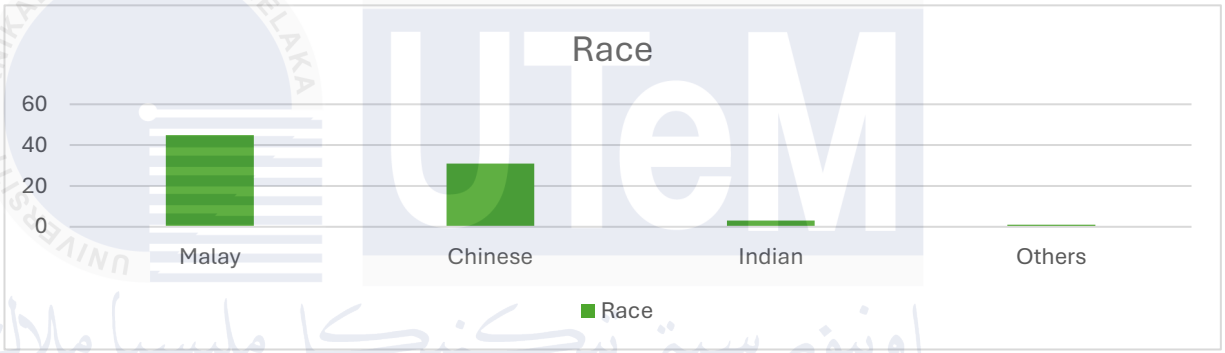


**Figure 4.3: Respondent's Race**



Figure 4.4 depicts the racial distribution of the 80 respondents, divided into four categories. The majority of respondents (56.3%, 45 out of 80) identified as Malay, making it the biggest racial group in the sample. This suggests that Malay people occupy the majority of roles in the retail enterprises assessed. Following closely, 38.8% (31 out of 80) of respondents identified as Chinese, giving them the sample's second-largest racial group. Their large presence shows that the Chinese population is actively involved in retail supply chain jobs. Indian respondents account for only 3.8% (3 out of 80), making them the sample's smallest main racial group. This lesser representation might be related to different career interests, eligibility, or possibilities in the retail industry. Finally, the "Others" category, which included people of other races, accounted for only 1.3% (1 out of 80) of the responses, making them the least reflected group in the sample. This distribution emphasises the variety of retail organisations' workforces and argues that cultural and demographic issues should be considered when developing digital technology implementation strategies. Each racial group may have distinct viewpoints, communication methods, and

technological adaptation, which can all have an impact on the success of digital transformation initiatives.

### 4.2.4 Occupation

**Occupation (O1)**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Employed Full-Time | 78 | 97.5 | 97.5 | 97.5 |
| | Employed Part-Time | 1 | 1.3 | 1.3 | 98.8 |
| | Self-Employed | 1 | 1.3 | 1.3 | 100.0 |
| | Total | 80 | 100.0 | 100.0 | |

**Table 4.5: Respondent's Occupation**



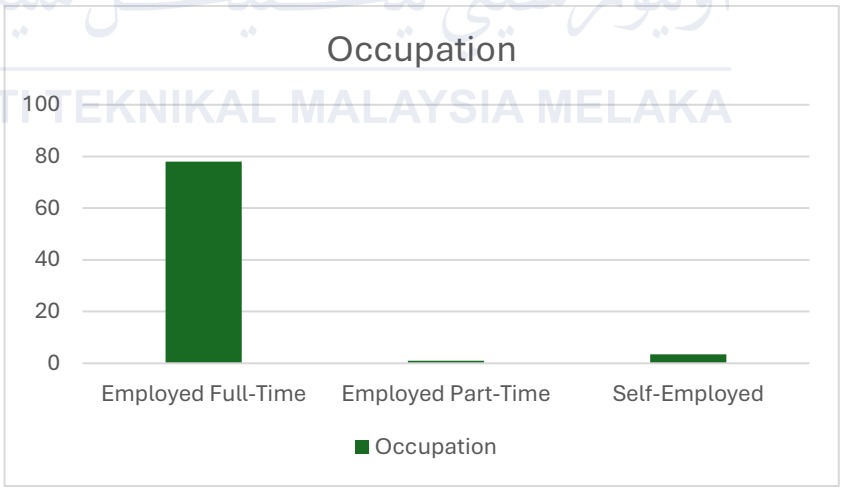


**Figure 4.4: Respondent's Occupation**

Figure 4.4 illustrates the job status of the 80 respondents, demonstrating that the majority, 97.5% (78 out of 80), work full-time in the retail industry. This shows that full-time employment dominates the retail workforce, reflecting the stability and continuity that are frequently required in supply chain positions, where regular participation is critical for operation effectiveness and coordination. On the other

hand, just 1.3% (1 out of 80) of respondents work part-time, and the same percentage self-employed. These smaller groupings are most often comprised of persons with limited or specialised engagement in the retail supply chain, such as consultants or temporary workers who may assist with certain projects or activities. This distribution indicates that full-time employees are the key drivers of digital technology adoption in retail supply chains. Their regular presence in the organisation allows them to become thoroughly involved with the technologies, procedures, and training essential for digital transformation. For businesses, this highlights the need of investing in the development and upskilling of full-time employees, since they are critical to the success and longevity of digital efforts. Furthermore, part-time and self-employed workers, albeit rare in number, might provide new viewpoints or knowledge that can supplement the labours of the full-time workforce.

### 4.2.5 Position

**Position (P1)**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Supply Chain Staff | 1 | 1.3 | 1.3 | 1.3 |
| | Procurement/Purchasing Staff | 1 | 1.3 | 1.3 | 2.5 |
| | Warehouse/Inventory Staff | 27 | 33.8 | 33.8 | 36.2 |
| | It Specialist | 1 | 1.3 | 1.3 | 37.5 |
| | Data Analysis Staff | 1 | 1.3 | 1.3 | 38.8 |
| | Store Manager | 27 | 33.8 | 33.8 | 72.5 |
| | Sales Marketing | 15 | 18.8 | 18.8 | 91.3 |
| | Others | 7 | 8.8 | 8.8 | 100.0 |
| | Total | 80 | 100.0 | 100.0 | |

**Table 4.6: Respondent's Position**

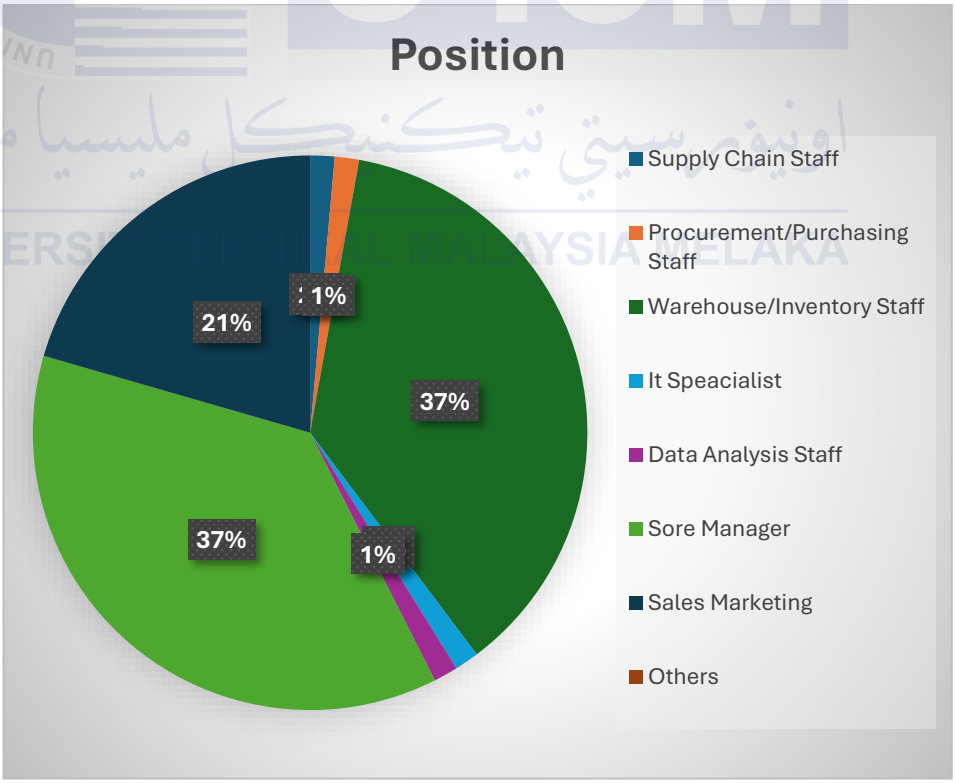


**Figure 4.5: Respondent's Position**

Figure 4.5 shows the distribution of respondents' jobs within the retail firms questioned. Among the eight jobs, warehouse/inventory personnel and store managers

account for the most responders (33.8%, 27 out of 80). This shows that these positions are highly involved in the day-to-day operations of retail supply chains and are expected to play a large role in digital technology deployment. Sales and marketing roles follow closely behind, accounting for 28.8% of respondents. Their participation demonstrates that the integration of digital technologies is not limited to logistical or operational duties, but also includes customer-facing jobs where technology may improve sales tactics and engagement. Lastly, specialised positions such as supply chain personnel, procurement/purchasing personnel, IT professionals, and data analysts account for just 1.3% (1 out of 80) of responders. While there are fewer of these jobs, they are crucial for strategic development, implementation, and administration of digital technology.

### 4.2.6 Organization Integrate Supply Chain With External Partners or Supplier Through Digital Technology

**Does your organization integrate its supply chain with external partners or supplier through digital technologies (F1)**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Yes, fully | 14 | 17.5 | 17.5 | 17.5 |
| | Yes, Partially | 64 | 80.0 | 80.0 | 97.5 |
| | No | 2 | 2.5 | 2.5 | 100.0 |
| | Total | 80 | 100.0 | 100.0 | |

**Table 4.7: Respondent's Organization Integrate Supply Chain With External Partners or Supplier Through Digital Technology**

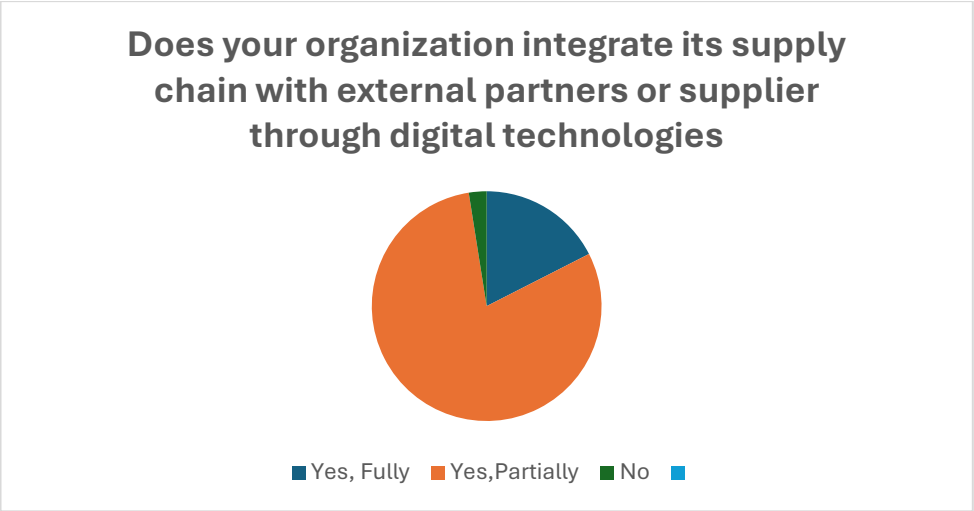


**Figure 4.6: Respondent's Organization Integrate Supply Chain With External Partners or Supplier Through Digital Technology**

According to Table 4.7, 64% of respondents reported that their organisations had not completely incorporated digital technology into their supply chain collaborations with external partners or suppliers. This shows that, while significant progress has been made, there are still obstacles to attaining full digital integration. Only 14% of respondents reported complete integration, indicating that a few retail organisations are pioneers in digital supply chain collaboration. Meanwhile, 2.5% reported that their organisations do not integrate digital technologies at all, showing that there is room for development in the use of these tools to boost efficiency and connectedness.

### 4.2.7 Organization Implemented Any Digital Technologies in its Supply Chain such as AI, IOT or Blockchain.

**Has your organization implemented any digital technologies in its supply chain such as AI, IOT or Blockchain (H1)**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Yes | 76 | 95.0 | 95.0 | 95.0 |
| | No | 4 | 5.0 | 5.0 | 100.0 |
| | Total | 80 | 100.0 | 100.0 | |

**Table 4.8: Organization Implemented Any Digital Technologies in its Supply Chain (e.g, AI, IOT, blockchain)**

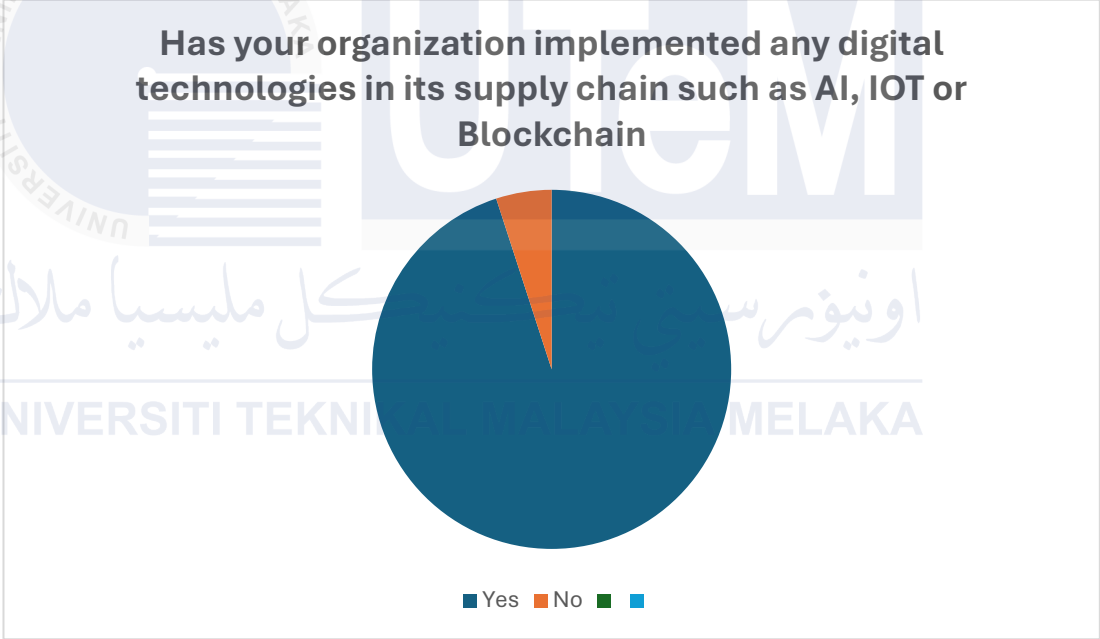


**Table 4.8: Organization Implemented Any Digital Technologies in its Supply Chain (e.g, AI, IOT, blockchain)**

According to Table 4.8, 76% of respondents acknowledged that their organisations use digital technologies such as AI, IoT, or blockchain in their supply chains. This points to a significant trend of digital adoption in retail supply chain operations. However, a tiny number of respondents said "no," indicating that some organisations have yet to implement these technologies. Overall, the data show that most retailers are aggressively incorporating digital technologies to improve supply chain efficiency and effectiveness.

## 4.3 Realibility Test

This test is using to check whether the data obtained from the survey are reliable for the research or not. Cronbach's alpha is a reliability coefficient that indicates how well the items in a set positively correlated to one another (Sekaran,2003). The researcher using this test after the descriptive have been use for the demographic use. This reliability test are using to find the reliable between factors used for this research. According to Joppe (2000), the result that consistent over time and accurate representation of the total population under study referred to as reliability and if the results of a study can be remodel under similar methodology, then the research instrument is considered to be reliable,. The additional test is used to test the goodness of the data obtain which is Cronbach's alpha. Cronbach's alpha is measure the internal consistency which need to measure of scale reliability

The test from the Cronbach's alpha is coefficient of reliability not a numerical test. The table 4.9 shows the Cronbach's alpha coefficient range and its strength of association:



| **Alpha Coefficient Range** | **Strength of Association** |
|---|---|
| < 0.6 | Poor |
| 0.6 to 0.7 | Moderate |
| 0.7 to 0.8 | Good |
| 0.8 to 0.9 | Very Good |
| > 0.9 | Excellent |

**Table 4.9: Cronbach's Alpha Coefficient Range and Its Strength of Association**

**Table 4.10: Cronbach's Alpha Realibility Coefficient**

Case Processing Summary

| | | N | % |
|---|---|---|---|
| Cases | Valid | 80 | 100.0 |
| | Excluded[a] | 0 | .0 |
| | Total | 80 | 100.0 |

a. Listwise deletion based on all variables in the procedure

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Item |
|---|---|---|
| .997 | .997 | 14 |

Reliability Analysis: Cronbach's Alpha Coefficient

Table 4.10 presents the Cronbach's Alpha reliability coefficient for the survey conducted to analyze factors influencing the implementation of digital technology in supply chain management. The case processing summary indicates that all 80 responses were valid and included in the analysis, with no cases excluded. The Cronbach's Alpha coefficient, based on the standardized items, was 0.997, confirming an exceptionally high level of reliability across the 14 survey items used in the analysis.

The researcher employed a Likert scale for the survey questions, allowing respondents to express their level of agreement or perception regarding the factors influencing digital technology implementation. According to Johnson and Lee (2015), a high Cronbach's Alpha value indicates strong internal consistency among the items in a scale, suggesting that the variables measured are closely related. Conversely, a lower reliability coefficient might imply weak correlations between the survey items. In this study, the high reliability coefficient indicates that the questions were well-aligned with the study's objectives and effectively captured the underlying constructs.

The total survey included 14 items distributed across 3 factors: leadership (4 items), supportive organizational culture (5 items), engagement of employee (5 items). Each factor was designed to measure specific dimensions of digital technology implementation. The Cronbach's Alpha results demonstrate that 80% of the items were

reliable, highlighting the robustness of the questionnaire. This analysis underscores the validity of the survey tool and confirms that the data collected were consistent and meaningful for understanding the dynamics of digital technology adoption in supply chain operations. Future researchers may build upon this framework by expanding the scope of factors or exploring new methodologies to further enhance the reliability and applicability of the findings.

Reliability Statistic IV 1: Leadership

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Item |
|---|---|---|
| .914 | .914 | 4 |

Reliability Analysis: Cronbach's Alpha Coefficient

The Cronbach's Alpha value of **0.914** for the Leadership factor suggests that the four items used to measure this construct are highly reliable and consistent. Since this value is above 0.9, it indicates excellent internal consistency, meaning that the items work well together in assessing leadership's role in implementing digital technology in the supply chain. The fact that the Cronbach's Alpha based on standardized items is also **0.914** confirms that the reliability remains stable even if item variances differ. With only four items, this strong reliability suggests that the questions effectively capture the intended concept without unnecessary repetition. This high level of reliability is important because it ensures that the results are trustworthy and that any patterns found in the data are likely due to real relationships rather than issues with how the survey was designed.

Reliability Statistic IV 2: Supportive Organizational culture

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Item |
|---|---|---|
| .940 | .940 | 5 |

Reliability Analysis: Cronbach's Alpha Coefficient

The Cronbach's Alpha value of **0.940** for Supportive Organizational Culture indicates excellent reliability, meaning that the five items used to measure this factor are highly consistent and strongly related. Since an Alpha value above 0.9 is considered excellent, this result shows that the items effectively capture the concept of a supportive organizational culture in the context of digital technology implementation in the supply chain. The fact that the Cronbach's Alpha based on standardized items is also **0.940** confirms that the reliability remains stable even when item variances are adjusted. With five items, this high reliability suggests that the questions provide a clear and consistent measurement without unnecessary overlap. This strong internal consistency ensures that the results are dependable and that any patterns found in the data genuinely reflect the impact of a supportive organizational culture rather than inconsistencies in the questionnaire.



Reliability Statistic IV 3: Engagement of Employees

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Item |
|---|---|---|
| .932 | .933 | 5 |

Reliability Analysis: Cronbach's Alpha Coefficient

The Cronbach's Alpha value of **0.932** for Engagement of Employees indicates excellent reliability, meaning the five items used to measure this factor are highly consistent and closely related. Since a value above 0.9 is considered excellent, this result shows that the items effectively capture employee engagement in the implementation of digital technology in the supply chain. The **0.933** value based on standardized items further confirms that the scale maintains its reliability even if item

variances are adjusted. With five items, this strong internal consistency suggests that the questions provide a reliable measurement without unnecessary repetition. This high reliability is important because it ensures that the responses accurately reflect employee engagement levels and that any findings are based on actual relationships rather than inconsistencies in the survey.

Reliability Statistic DV: The Implementation of Digital Technology In Supply Chain

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Item |
|---|---|---|
| .948 | .948 | 6 |

Reliability Analysis: Cronbach's Alpha Coefficient

The Cronbach's Alpha value of **0.948** for the Implementation of Digital Technology in the Supply Chain shows excellent reliability, meaning that the six items used to measure this factor are highly consistent and strongly related. Since an Alpha value above 0.9 is considered excellent, this result confirms that the items effectively assess the implementation of digital technology in the supply chain. The fact that the Cronbach's Alpha based on standardized items is also **0.948** reinforces that the scale remains reliable even when item variances are adjusted. With six items, this high internal consistency indicates that the questions provide a clear and accurate measurement without unnecessary overlap. This strong reliability ensures that the responses are dependable and that any findings truly reflect the implementation of digital technology rather than inconsistencies in the questionnaire.

## 4.4 Descriptive Statistics

| | N | Minimum | Maximum | Mean | Std. Deviation | Skewss | | Kurtosos | |
|---|---|---|---|---|---|---|---|---|---|
| | Statistic | Statistic | Statistic | Statistic | Statistic | Statistic | Std. Error | Statistic | Std. Error |
| Gender | 80 | 1 | 2 | 1.45 | .501 | .205 | .269 | -2.009 | .532 |
| Age | 80 | 1 | 4 | 2.44 | .672 | -.280 | .269 | -.271 | .532 |
| Race | 80 | 1 | 4 | 1.50 | .636 | 1.209 | .269 | 1.794 | .532 |
| Occupation | 80 | 2 | 5 | 2.05 | .352 | 7.880 | .269 | 64.819 | .532 |
| Position | 80 | 1 | 9 | 5.48 | 2,222.352 | .009 | .269 | -1.292 | .532 |
| Does your organization integrate its supply chain with external partners or supplier through digital technologies | 80 | 1 | 3 | 1.85 | .424 | -.910 | .269 | 1.464 | .532 |
| Has your organization implement | 80 | 1 | 3 | 1.10 | .439 | 4.209 | .269 | 16.117 | .532 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| ed any digital technologies in its supply chain such as AI, IOT or Blockchain | | | | | | | | | |
| Valid N (listwise) | 80 | | | | | | | | |

Table 4.11 Descriptive Analysis

Table 4.11 presents descriptive data on the study's primary variables. The "Gender" variable has a mean of 1.45, showing a bias towards male respondents, and a standard deviation of 0.501. The "Age" variable has a mean of 2.44, and the distribution is significantly skewed towards the younger age groups (1-4), as shown by a skewness value of -0.280. "Race" displays a mean of 1.50, showing that the majority of respondents are Malay, with a skewness of 1.209. The "Occupation" variable has a mean of 2.05 and a high positive kurtosis value of 64.819, indicating a strongly pointed distribution with a concentration in certain categories. "Position" has a mean of 5.48, showing a bias towards lower-level roles in the retail firm, and a standard deviation of 2.22. Regarding digital integration, the variable for external supply chain integration with digital technologies has a mean of 1.85, indicating that most businesses have not completely integrated such technology. The highest mean for the application of digital technologies such as AI, IoT, and blockchain in the supply chain is 1.10, showing that most organisations have implemented these technologies (Sklyar et al., 2019). According to author Liu et al., 2021, this is consistent with earlier research, which shows that digital transformation is being implemented across multiple industries, notably in supply chains, motivated by the desire for better functioning and competitiveness.

## 4.5 Exploratory Factor Analysis (EFA)

**KMO and Bratlett's Test**

| | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy | | .825 |
| Bartlett's Test of Sphericity | Approx.Chi-Square | 3259.462 |
| | Df | 190 |
| | Sig. | <.001 |

**Table 4.12 KMO and Bratlett's Test**

The findings of the Exploratory Factor Analysis (EFA) as indicated in the table reveal that the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is 0.825, which Kaiser (1974) considers "meritorious". This indicates that the sample size is acceptable for factor analysis, and that the data is appropriate for this form of research. Bartlett's Test of Sphericity produced a chi-square value of 3259.462 with 190 degrees of freedom and a significance level of less than 0.001, indicating that EFA is suitable. These findings are consistent with prior investigations, in which a significant Bartlett's test and a high KMO value indicated that the data set was suitable for factor extraction (Tabachnick & Fidell, 2013). This shows that the fundamental elements influencing the application of digital technology in supply chains are well-defined and may be efficiently investigated using factor analysis techniques.

## 4.6 Hypothesis Testing

Hypothesis testing is to find that the developed hypothesis by the researcher is accept or reject. The independent and dependent variable must be significant to each other. So, between the factors that the researcher use is the most factor influence the implementation of digital technology in supply chain is the dependent variables and the independent variable have three (3). The significant value is below 0.05 and p value must less than 0.05. the R value is the multiple correlation coefficient were the linear correlation between independent variable and dependent variable.

The larger value of R, the more strong relationship between the variable. The hypothesis that the researcher make to begin the researcher is being test.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .855[a] | .732 | .725 | .25807 |

a. Predictors: (Constant), LeadSupEng, SupportEngage
b. Dependent Variable: DVnew



**ANOVA**

| **Model** | | **Sum of Square** | **df** | **Mean Square** | **F** | **Sig.** |
|---|---|---|---|---|---|---|
| | **Regression** | 13.994 | 2 | 6.994 | 105.060 | < .001[b] |
| | **Residual** | 5.128 | 77 | 0.67 | | |
| | **Total** | 19.122 | 79 | | | |

a. Dependent Variable: DVnew
b. Predictors: (Constant), LeadSupEng, SupportEngage

**Table 4.13: ANOVA Result for Hypothesis**

**Coefficients[a]**

| Model | | Unstanderdized B | Coefficients Std.Error | Standerdized Coefficients Beta | t | Sig. |
|---|---|---|---|---|---|---|
| 1 | (Constant) | .516 | .282 | | 1.831 | -.045 |
| | SupportEngage | .499 | 080 | .530 | 6.205 | <.001 |
| | LeadSupEng | .379 | .083 | .390 | 4.570 | <.001 |

a. Dependent variable: DVnew

The regression analysis results show how the newly formed independent variables predict the implementation of digital technology in the supply chain. Initially, Leadership, Supportive Organizational Culture, and Engagement of Employees were treated as separate independent variables. However, after conducting Exploratory Factor Analysis (EFA), the data was restructured, leading to the formation of two new independent variables: SupportEngage and LeadSupEng.

The coefficients table indicates that SupportEngage ($B = 0.499$, $\beta = 0.530$, $p < 0.001$) has the strongest positive influence on the dependent variable (DVnew), suggesting that employee engagement and a supportive organizational culture together play a significant role in implementing digital technology. Similarly, LeadSupEng ($B = 0.379$, $\beta = 0.390$, $p < 0.001$) also shows a strong positive effect, indicating that leadership, along with support and engagement, is essential for successful digital transformation. Since both independent variables have significant p-values (<0.001), it confirms that they are meaningful predictors of DVnew.

In conclusion, after performing EFA, the original three independent variables were grouped into two new factors: SupportEngage (combining Supportive Organizational Culture and Employee Engagement) and LeadSupEng (integrating Leadership, Support, and Engagement aspects). This restructuring provides a more refined understanding of how organizational culture, leadership, and employee engagement collectively influence the adoption of digital technology in the supply chain.

Hypothesis 1

H1: There is no significant relationship between SupportEngage and implementation of digital technology in supply chain.

HO: There is positive and significant relationship between SupportEngage and implementation of digital technology in supply chain.

HA: HO accepted while HI was rejected. There is positive and significant relationship between SupportEngage and implementation of digital technology in supply chain.

Hypothesis 2

H1: There is no significant relationship between LeadSupEng and implementation of digital technology in supply chain.

HO: There is positive and significant relationship between LeadSupEng and implementation of digital technology in supply chain.

HA: HO accepted while HI was rejected. There is positive and significant relationship between LeadSupEng and implementation of digital technology in supply chain.



Regression analysis is being used to get the relationship between the independent variables and the dependent variables. The result of the significant as you can see in the table 4.17 and the p value of each factor.

The researcher conclude that was two factor are significant to each other.

## 4.7 Conclusion

In conclusion, this section examined about the finding and information analysis of this exploration. In this part, there were four sort of analysis in this section which descriptive analysis, correlation analysis, reliability analysis, and regression analysis. The demographic analysis result was given in a table, for an unmistakable understanding of descriptive analysis. Other than that, the recommendations and conclusion were talked about in Chapter 5.

# CHAPTER 5

# CONCLUSION AND RECOMMENDATION

## 5.0 Introduction

In this chapter, the researcher will elaborate and discussed all the findings in this research that have been obtained from data analysis in the chapter 4. In this chapter, the researcher will discuss on the research question and the research objective on this research. This chapter also will discuss the recommendation on the future research as guidelines and to suggest the innovation on this implementation digital technology in other department besides supply chain.



## 5.1 Summary of descriptive

The respondent chooses for this research is targeted on the people that applying for digital technology in supply chain. The background of the respondent is coming from retail company and the demography of the respondent is random. The respondent of this research are 80 from retail company in Malaysia that on the sight of the supply chain. So, the researcher got 55% female and 45% male. This shows that the female are mostly work in retail companies in the supply chain department.

The respondent age distribution shows that the majority (46.3%) are in the 29-33 age group, closely followed by the 24-28 age group (43.8%), both of which form the backbone of the workforce driving digital technology adoption in supply chains due to their adaptability and familiarity with changing practices. The 19-23 age group (10%), which consists primarily of recent graduates or trainees, requires structured training to integrate into digital workflows, whereas the smallest group, 34 years and

older (2.5%), most likely represents senior staff whose leadership and strategic vision are critical for implementing organisational change. These findings imply that a personalised approach that addresses each age group's unique requirements and skills might increase digital technology implementation in retail supply chains.

The respondent race distribution indicates that the majority are Malay (56.3%), followed by Chinese (38.8%), with smaller representations from Indian (3.8%) and Other (1.3%) groups. Malays and Chinese form the core workforce in retail companies, likely playing significant roles in adopting and implementing digital technologies in supply chains due to their larger presence. The lower participation of Indian and Other groups may suggest they are more concentrated in other industries or roles better suited to their skills and preferences. These dynamics highlight the need for inclusive strategies that consider cultural diversity while promoting equitable access to training and opportunities, ensuring all groups can contribute effectively to digital transformation in supply chains.

The employment status distribution reveals that the majority of respondents (97.5%) are full-time employees, underscoring their significant role in retail companies and their potential to influence the implementation of digital technologies in supply chains through consistent involvement in operations. In contrast, part-time and self-employed respondents each constitute only 1.3% of the sample, reflecting minimal engagement in these organizations. Full-time employees are likely the primary drivers of digital transformation, given their deeper integration into workflows and access to company resources. These findings suggest that companies should focus their digital training and implementation efforts on full-time staff while exploring ways to engage part-time and external contributors to enhance overall effectiveness in the digitalization process.

The position distribution in Figure 4.5 indicates that the highest respondent groups are warehouse/inventory staff and store managers, each comprising 33.8% (27 out of 80), highlighting their central role in retail operations and their significant involvement in implementing digital technologies in supply chains. Sales and marketing staff form the second-largest group, at 28.8%, reflecting their importance in driving customer-facing digital innovations. Conversely, specialized roles like supply chain staff, procurement/purchasing staff, IT specialists, and data analysts each

account for only 1.3%, indicating minimal representation. This suggests that while operational roles are at the forefront of digital transformation in retail, there is a need to strengthen the involvement of specialized positions to optimize the potential of advanced digital tools in supply chain management, fostering a more holistic and effective implementation.

The question that researcher use “Does your organization integrate its supply chain with external partners or supplier through digital technologies**”** shows that 64% of organizations have partially integrated digital technologies into their supply chains with external partners, indicating progress but not full adoption. Only 14% have achieved full integration, while 2.5% do not integrate digitally at all. This highlights a significant opportunity for retail companies to enhance their supply chain efficiency and collaboration by advancing their use of digital technologies.

The question that researcher use ”has your organization implemented any digital technologies in its supply chain such as AI, IOT and blockchain” and it turn out the data 4.8 shows that 76% of respondents indicated their companies have implemented digital technologies such as AI, IoT, or blockchain in their supply chains, demonstrating significant adoption within the retail sector. A smaller portion of respondents answered "no," indicating some organizations have yet to adopt these technologies. This suggests that while most retail companies are leveraging digital tools to enhance their supply chain operations, there is still room for broader implementation across the industry.

## 5.2 Discussion of The Objective

In this section, the researcher will elaborate on all the aims of this study. The study objectives were formulated based on the identified research problem and the insights from the literature review. These objectives guided the continuation of the study, including the collection and analysis of data. This study focuses on exploring the factors affecting the implementation of digital technology in supply chains. A questionnaire was designed to align with the study objectives and elements of the influencing factors and was distributed to the selected respondents.

### 5.2.1 Access the factor influence the implementation of digital technology in supply chain.

The first objective in this research is the factor influence the implementation of digital technology in supply chains is a complicated yet revolutionary process that requires strong leadership, a supportive organisational culture, and engagement of employee. Each of these aspects serves as a foundation for ensuring that the use of technologies like as AI, IoT, blockchain, and advanced analytics results in effectiveness in operations, new ideas, and competitiveness. Insights from answers to surveys and statistical analysis support the relevance of these elements in producing good results. The regression analysis findings, as given in the coefficients table, suggest that leadership, supportive organisational culture, and employee engagement all have a substantial impact on the adoption of digital technologies in supply chains. The standardised coefficients (Beta) represent the relative relevance of each element. Leadership (Beta = 0.390, $t = 4.570$, $p < 0.001$) and staff involvement (Beta = 0.530, $t = 6.205$, $p < 0.001$) were shown to have a substantial and positive influence, indicating that as these variables increase, so will the use of digital technology.

Leadership sets the context for digital transformation by giving policy guidance and cultivating a common vision. Leaders who properly describe the benefits of digital adoption instill trust and commitment in the organisation. For example, innovative management, as defined by Bass and Riggio (2006), fosters innovation by

encouraging people to adopt new technology and procedures. When leaders actively participate in digital technology decision-making, they display a level of commitment that inspires others to match their efforts with organisational objectives. Furthermore, executives that enable their teams to make decisions about digital projects instill a feeling of responsibility and accountability in employees. This collaborative method promotes a lifestyle of faith and increases the performance rate of digital implementation initiatives. According to Avolio et al. (2009), leadership behaviours have an immediate influence on an organization's readiness for change, which is critical when navigating the complicated challenges of integrating technologies such as AI, IoT, and blockchain in supply chains.

The second critical aspect, a supportive organisational culture, forms the foundation for long-term digital change. A culture that values experimentation, cooperation, and continual learning fosters an atmosphere receptive to innovation. As Schein (2010) points out, culture is the "glue" that holds organisational efforts together, allowing businesses to adapt easily to technology changes. For example, when employees are given the opportunity to submit ideas for enhancing supply chain procedures via digital tools, they feel appreciated and are more inclined to use new solutions. Furthermore, organisations that link their values with digital transformation goals like flexibility, accountability, and productivity have less resistance concerns. Refer to Cameron and Quinn (2011) found that organisations with cultures that value adaptation and creativity are more effective at incorporating digital technology. Furthermore, increasing collaboration among departments ensures that technology integration is a holistic process in which multiple activities such as logistics, procurement, and inventory management work together to reach common goals.

Employee engagement is perhaps the most important human aspect in digital transformation. Employees that are engaged are not only more driven, but also better prepared to use new technology efficiently. According to the questionnaire results, employees who are active in the digital integration process and participate in training programs have higher confidence in utilising digital technologies. This is consistent with Gallup (2020), which found that high levels of employee engagement led to increased productivity, innovation, and organisational effectiveness. Furthermore, taking into consideration employees' comments throughout the installation of digital

technology fosters a feeling of pride in and responsibility for the entire procedure. Employee motivation to participate to digital projects increases when they believe that their actions are recognised and rewarded by leadership. This is consistent with Deci and Ryan's (1985) Self-Determination Theory, which holds that intrinsic motivation increases when people feel confident, competent, and connected in their positions.

Leadership and employee engagement have a considerable impact on the application of digital technology in supply chains, with p-values $< 0.001$. This is consistent with wider research, including those by Qiao et al. (2024), which highlight the role of leadership and participant in encouraging the use of digital technology.

To summarise, this study demonstrates that leadership, supportive organisational culture, and employee engagement are significant predictors of digital technology application in supply chains. Leadership offers strategic direction, a supportive culture creates an enabling environment, and engaged personnel guarantee operational success. These findings highlight the importance of organisations prioritising these variables when planning and implementing digital growth.



### 5.2.2 Identify the most strongly factor influence the implementation of digital technology in supply chain.

Employee involvement is the most significant element determining the effective application of digital technology in the supply chain, as evidenced by the standardised beta coefficient ($\beta = 0.530$ β=0.530, $p < 0.001$ p<0.001). This emphasises the importance of people in ensuring the success of digital transformation programs. Employee engagement includes active participation in the process, confidence in utilising digital tools, and participation in training programs, all of which have a direct impact on the adoption and success of digital technology. Questionnaire items such as "My feedback is considered when implementing digital technologies" and "I participate in digital training and development programs" emphasise the importance of involving employees in decision-making and skill-building processes to foster a sense of ownership and dedication.

Prior research, such as Deloitte's (2020), supports the impact of employee engagement, stating that workers who are well-trained and actively participating in digital projects are 3.5 times more likely to embrace and use digital solutions successfully. Engaged workers not only grasp the benefits of new technology, but they also serve as change agents in their organisations by influencing their peers and proposing creative ideas. Furthermore, employee engagement is intimately related to organisational culture. A culture that encourages open communication, continual learning, and cross-departmental cooperation fosters an atmosphere in which people feel empowered to actively participate. This alignment is crucial, as McKinsey & Company (2021) discovered that digital transformation programs with strong participation from staff are 1.6 times more probable to succeed compared to those with low engagement.

Furthermore, engaged employees play a critical role in operationalising digital tools such as Artificial Intelligence (AI), the Internet of Things (IoT), and Blockchain in supply chain processes. Their involvement ensures that these tools are used to their full potential, driving efficiency and innovation in areas such as inventory management, demand forecasting, and supplier integration. According to Lu et al. (2023), employee involvement improves supply chain resilience and adaptation, allowing organisations to respond more effectively to changing market circumstances and disruptions. These findings reinforce the idea that, while leadership and a

supportive organisational culture lay the groundwork for digital transformation, their influence is amplified when workers are fully committed and inspired to contribute.

Employee engagement should be a major goal for organisations looking to successfully integrate new technology. This includes providing comprehensive training programs that are tailored to the roles of employees, encouraging feedback through regular communication channels, and involving employees in digital transformation decision-making. Recognising and praising contributions to digital efforts improves morale and encourages participation. A supportive work environment that supports employees' opinions and prepares them with the appropriate skills not only boosts the chance of implementation but also encourages creativity and long-term achievement.

In the end, employee engagement is the keystone that ties leadership and a supportive organisational culture to effective digital technology deployment across the supply chain. Its impact is wide-ranging, affecting not only adoption rates but also creativity, resilience, and operational efficiency. Organisations that prioritise employee engagement may guarantee that digital transformation programs accomplish their intended aims and provide long-term advantages in an increasingly technology-driven economy.

## 5.3 Limitation

This research encountered several challenges throughout the data collection process. First, the researcher aimed to gather data from employees or staff working in retail companies. To achieve this, a sample of 80 respondents was selected based on information obtained from the Glassdoor website. The researcher also emailed these companies individually to distribute the questionnaire. The goal was to include a diverse population of respondents, representing various age groups, occupations, and positions. Retail companies were chosen as the target area because their supply chain departments commonly utilize digital technologies, making them ideal for this study.

Secondly, there were challenges in ensuring the accuracy of the responses to the questionnaire. Some respondents may not have been able to provide detailed or thoughtful answers due to time constraints or the pressing nature of their work responsibilities. Many were likely occupied with urgent issues in their companies that required immediate resolution. Despite these difficulties, the researcher managed to obtain valuable data, and the results were considered reliable and meaningful, even under such challenging circumstances.

## 5.4 Recommendation

The researcher provided several suggestions for future researchers interested in exploring the implementation of digital technology in supply chains. This study serves as an initial exploration of digital technology in the supply chain sector within Malaysia. For future research, it is recommended to expand the scope and include additional elements that focus specifically on digital technology tools, such as Artificial Intelligence (AI), the Internet of Things (IoT), and Blockchain. By narrowing the focus on these technologies, future researchers could potentially obtain more detailed insights and achieve better results regarding their adoption and effectiveness in supply chain operations.

According to Jones and Smith (2020), researchers should also consider industry-specific contexts when investigating digital technology adoption, as the requirements and challenges may vary significantly across different sectors. Future research could examine how these advanced tools can enhance collaboration, efficiency, and sustainability in supply chain operations. Additionally, future studies could investigate the potential of digital technology in integrating supply chains with external partners, optimizing logistics, and improving customer satisfaction. Future research could also change the method from questionnaire question to qualitative method or mix method.

This research highlights the importance of understanding the unique challenges faced by the Malaysian retail supply chain sector. By leveraging digital tools, organizations can create new opportunities for growth and innovation. Future researchers could also explore cross-industry comparisons to determine how lessons learned from retail can be applied to other sectors, such as manufacturing, agriculture, or healthcare, to further advance the field of supply chain management.

## 5.5 Conclusion

This research focused on investigating the implementation of digital technology in supply chain management within the retail sector in Malaysia. As discussed in the earlier chapters, several factors were examined to determine their influence on the implementation of digital technologies. This may be attributed to limitations such as sample size, the specificity of the retail sector, or the rapid evolution of technology, which might not align uniformly with existing cultural and relational practices. These limitations highlight the complexity of digital technology adoption and suggest areas for further exploration.

The data for this research were collected from a diverse group of respondents working across various roles in retail companies. The researcher employed multiple methods to ensure the credibility and accuracy of the findings. These methods included validity and reliability analysis, which confirmed the consistency of the questionnaire, as well as statistical techniques such as correlation and regression analysis to identify the relationships and impacts of different factors on digital technology adoption.



Drawing insights from Kumar and Sharma (2021), it is essential for future studies to delve deeper into the integration challenges faced by supply chain systems, particularly in regions where digital adoption is still emerging. Further research could focus on exploring specific tools such as Artificial Intelligence (AI), Internet of Things (IoT), and Blockchain, as well as their potential to enhance efficiency, transparency, and collaboration within supply chains. This study serves as a foundation for understanding the dynamics of digital technology implementation and encourages more nuanced investigations to address the evolving needs of the supply chain industry.

# CONCLUSION

This study comprehensively examined the factors influencing the implementation of digital technology in supply chains within the retail sector. The findings confirm that leadership, supportive organizational culture, and employee engagement are significant contributors to successful digital transformation. Among these, employee engagement emerged as the most influential factor, highlighting the critical role of a motivated and involved workforce in adopting and operationalizing digital technologies such as AI, IoT, and blockchain.

Leadership plays a vital role in steering digital transformation by providing strategic direction and fostering an innovation-friendly environment. Leaders who actively communicate the benefits of digital adoption inspire trust and align organizational goals with technological advancements. Supportive organizational culture complements this by reducing resistance to change and encouraging collaboration and continuous learning, thereby creating a foundation for sustainable digital integration.

Employee engagement, as the most significant factor, underscores the importance of workforce involvement in the digitalization process. Employees who participate in training and provide feedback contribute directly to the effective use of digital tools. Their proactive involvement ensures the technologies are optimized for improving supply chain efficiency, resilience, and innovation. Organizations must prioritize employee empowerment through comprehensive training and inclusive decision-making practices.

The research faced limitations, particularly in data collection due to the busy schedules of respondents. However, the insights gained provide valuable implications for retail companies aiming to enhance their digital transformation efforts. Future research can expand on this by exploring additional technologies or sectors, deepening the understanding of digital adoption dynamics across industries.

In conclusion, this study emphasizes the interconnected roles of leadership, culture, and employee engagement in digital technology implementation.

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# APPENDIX

## QUESTIONNAIRE: THE FACTOR INFLUENCE THE IMPLEMENTATION OF DIGITAL TECHNOLOGY IN SUPPLY CHAIN

**SECTION A**: DEMOGRAPHIC PROFILE

Please tick (√ ) in the appropriate boxes

1) GENDER

| | | |
|---|---|---|
| a. | Male | |
| b. | Female | |

2) AGE

| | | |
|---|---|---|
| a. | Under 18 | |
| b. | 19-23 | |
| c. | 24-28 | |
| d. | 29-33 | |
| e. | 35 and Above | |

3) RACE

| | | |
|---|---|---|
| a. | Malay | |
| b. | Chinese | |
| c. | Indian | |
| d. | Others | |

4) OCCUPATION

| | | |
|---|---|---|
| a. | Student | |
| b. | Employed Full-Time | |
| c. | Employed Part-Time | |
| d. | Self-Employed | |

5) POSITION

| | | |
|---|---|---|
| a. | SUPPLY CHAIN STAFF | |
| b. | PROCUREMENT/PURCHASING STAFF | |
| c. | WAREHOUSE/INVENTORY STAFF | |
| d. | IT EXECUTIVE | |
| e. | STORE /OPERATIONS | |
| f. | CUSTOMER SERVICE | |
| g. | -SALES/MARKETING STAFF | |
| h. | STAFF | |
| i. | OTHER | |

6) Does your organization integrate its supply chain with external partners or suppliers through digital technologies?

| | | |
|---|---|---|
| a. | Yes, fully | |
| b. | Yes, Partially | |
| c. | No | |

7) Has your organization implemented any digital technologies in its supply chain (e.g., AI, IoT, blockchain)

| | | |
|---|---|---|
| a. | Yes | |
| c. | No | |

**SECTION B**: The Factor Influence The Implementation of Digital Technology in Supply Chain.

Please specify your agreement or disagreement on the following statements by indicating your appropriate responses based on the following scale.

(1 - Strongly Disagree, 2 - Disagree, 3 - Neutral, 4 - Agree, & 5 - Strongly Agree)

1) Leadership

| No. | Question | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1. | Leaders provide clear direction on digital technology adoption. | | | | | |
| 2. | Leadership consistently communicates the benefits of implementing digital technology. | | | | | |
| 3. | Leadership actively participates in digital transformation decision-making. | | | | | |
| 4. | Leaders empower teams to make decisions regarding digital initiatives in the supply chain. | | | | | |



2) Supportive Organizational culture

| No. | Question | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1. | The organizational culture encourages innovation and experimentation with digital technologies. | | | | | |
| 2. | Employees are encouraged to share ideas about improving the supply chain using digital tools. | | | | | |
| 3. | The organization supports continuous learning and development in digital skills. | | | | | |
| 4. | The organization's values align with the goals of digital transformation. | | | | | |

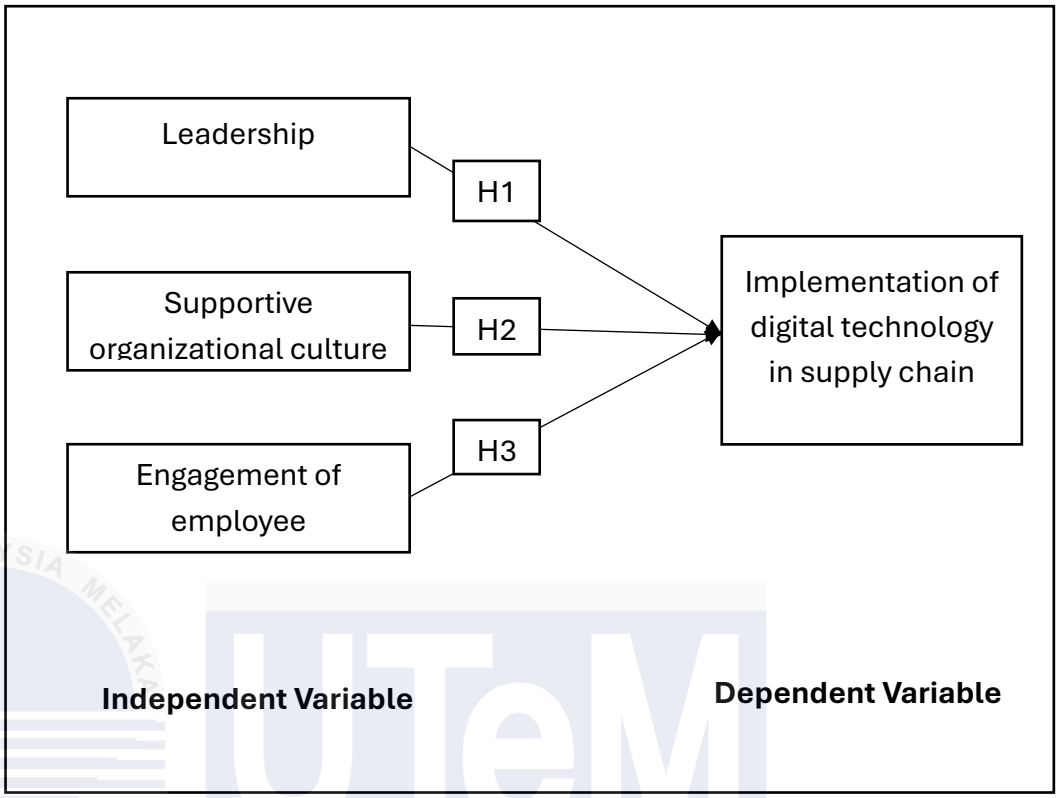
| | | | | | | |
|---|---|---|---|---|---|---|
| 5. | Collaboration between departments is promoted to enhance digital technology integration. | | | | | |

3) Engagement of Employees

| No. | Question | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1. | As an employee, I am actively involved in the digital technology implementation process. | | | | | |
| 2. | As an employee, I participate in digital training and development programs. | | | | | |
| 3. | As an employe, I feel confident in using digital tools provided by the organization. | | | | | |
| 4. | As an employee, my feedback is considered when implementing digital technologies. | | | | | |
| 5. | As an employee, I am motivated to contribute to digital transformation initiatives. | | | | | |

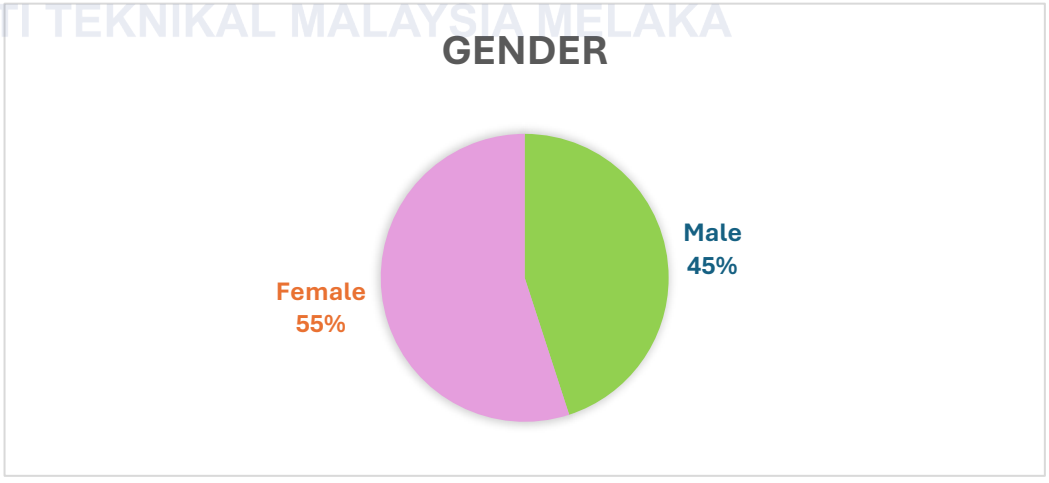
**SECTION C**: The Implementation of Digital Technology In Supply Chain

| No. | Question | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1. | The company is committed to enhancing supply chain efficiency through the use of digital technology | | | | | |
| 2. | The implementation of digital technologies in the company is driven by a need to stay competitive in the market | | | | | |
| 3. | Leadership within the company actively supports digital transformation initiatives in the supply chain | | | | | |
| 4. | Employees in the company are adequately trained to use new digital tools within the supply chain | | | | | |
| 5. | The company has experienced measurable improvements in supply chain efficiency after implementing digital technology | | | | | |
| 6. | The company actively seeks new digital solutions to improve end-to-end visibility in the supply chain | | | | | |




**Model Of Theorical Framework**






**Respondent's Gender**

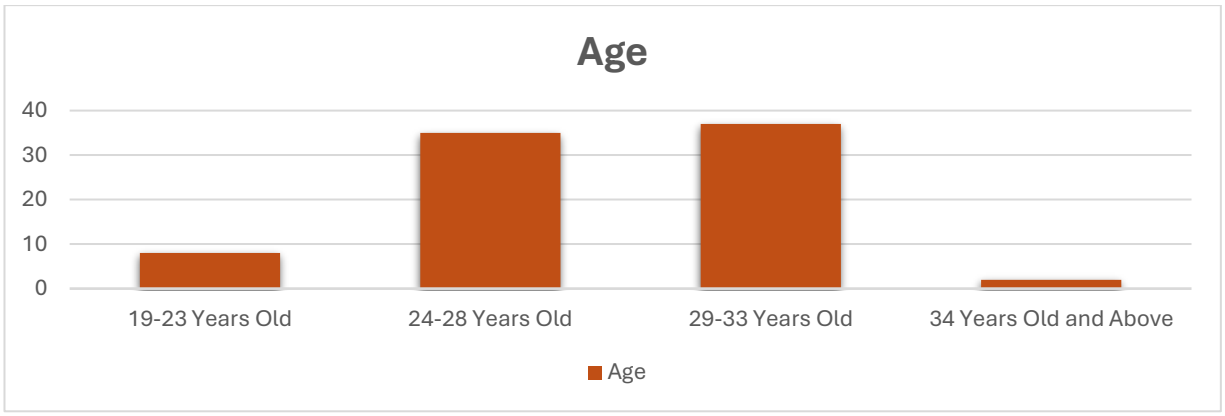
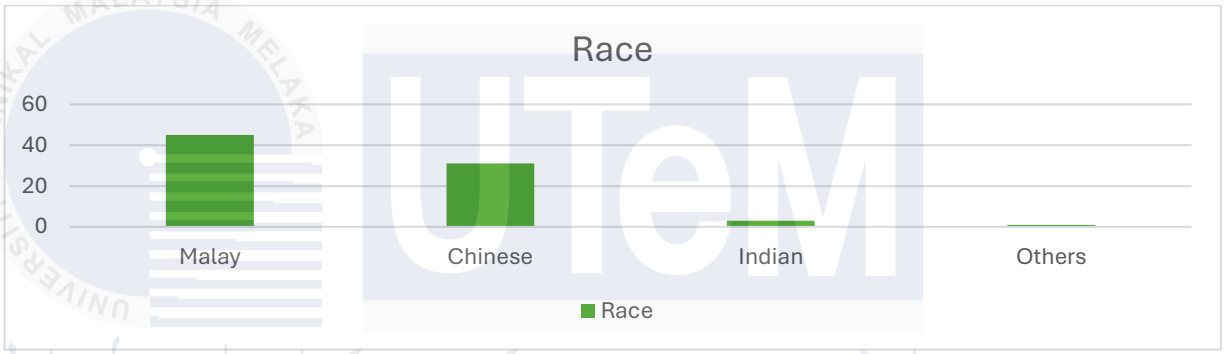
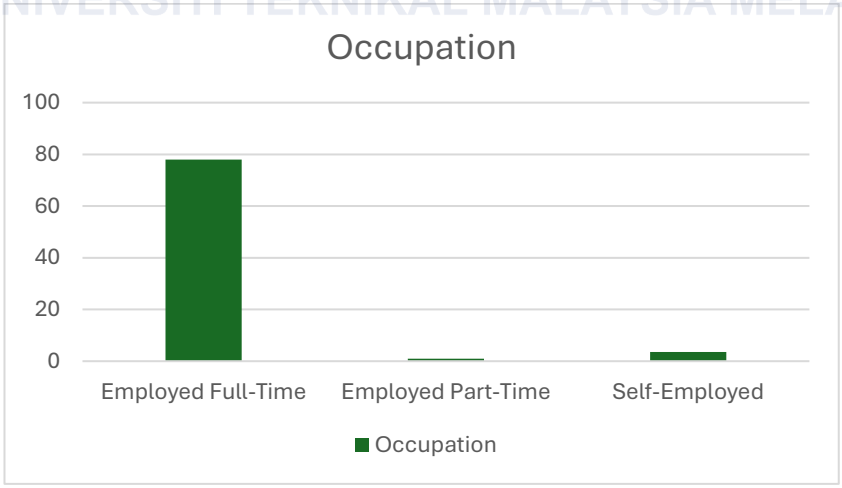



**Figure 4.2 Respondent's Age**

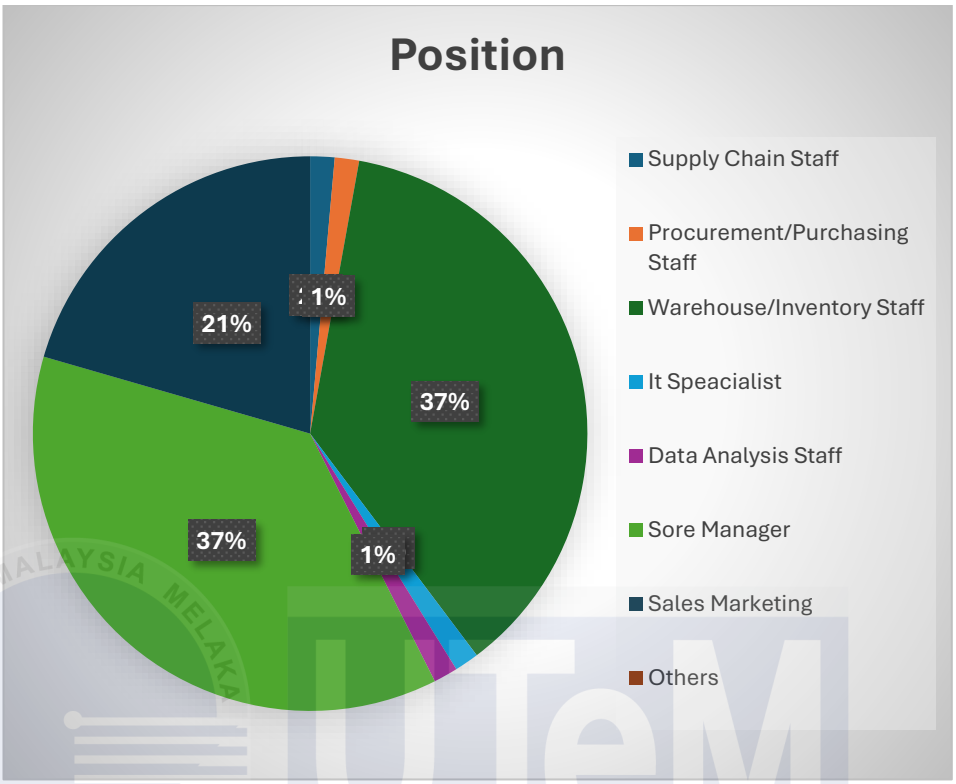



**Respondent's Race**

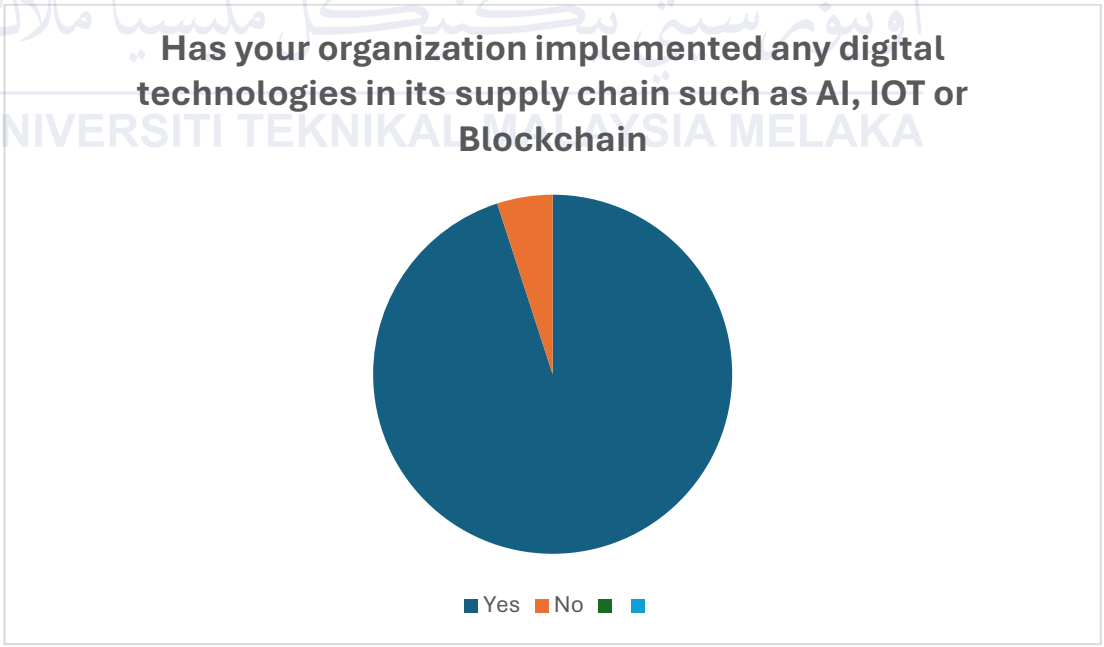




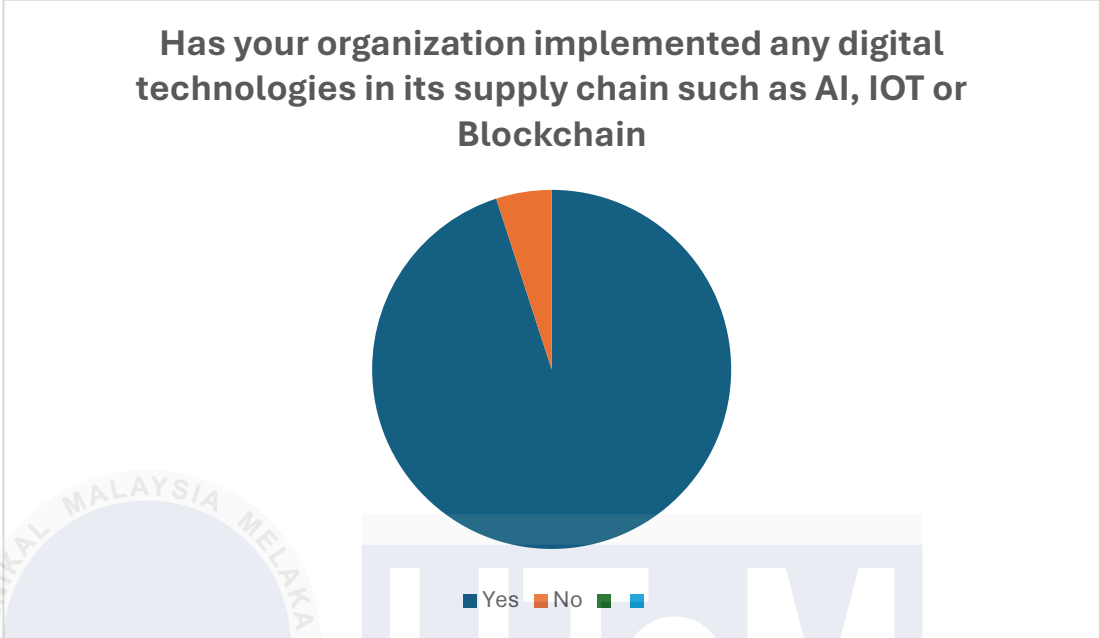

**Respondent's Occupation**




**Respondent's Position**




**Organization Implemented Any Digital Technologies in its Supply Chain (e.g, AI, IOT, blockchain)**




**Organization Implemented Any Digital Technologies in its Supply Chain (e.g, AI, IOT, blockchain)**