

**Impact of Digitalization on the Performance of the Workforce
in Malaysian Organizations**

By

Parvin Raj Nagalinggam



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for the Degree of Master of Business Administration**

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DECLARATION

The author hereby declares that this project paper is the original study undertaken by his unless stated otherwise due to acknowledgment has been given to references quoted in the bibliography. The views and analyses in this study are that of author's based on the reference made; and this does not constitute an individual to use this study as technical tool for investment.



Signature :

Name :

Date :

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TABLE OF CONTENTS

DECLARATION	ii
ACKNOWLEDGEMENT	iii
LIST OF TABLES	vii
LIST OF FIGURES	viii
CHAPTER 1: INTRODUCTION	1
1.1 Background of the Study	1
1.2 Problem Statement	2
1.3 Research Objectives	3
1.4 Research Questions	3
1.5 Significance of the Study	4
1.6 Scope and Limitations of the Study	4
1.7 The organization of the Study	5
CHAPTER 2: LITERATURE REVIEW	6
2.1 Introduction	6
2.2 Theoretical foundation	6
2.3 Empirical research	7
2.4 Conceptual framework	9
2.4.1 Digitalization	10
2.4.2 Workforce performance	10
2.4.3 Skills and education	10
2.4.4 Access to digital technologies	10
2.4.5 Organizational support	10
2.5 Hypothesis development	12
2.6 Summary of the chapter	13
CHAPTER 3: RESEARCH METHODOLOGY	14
3.1 Introduction	14
3.2 Research Design	14
3.3 Study population and Sampling procedure	14
3.4 Data Collection Methods	14

3.5 Operationalization and Measurement	15
3.5.1 Independent Variables	15
3.5.1.1 Digitalization.....	15
3.5.1.2 Access to digital technologies.....	16
3.5.1.3 Skills and education	17
3.5.2 Mediating Variable	18
3.5.2.1 Organizational support.....	18
3.5.3 Dependent Variable	19
3.5.3.1 Workforce performance	19
3.7 Data Analysis Methods.....	20
3.8 Ethical Considerations	20
3.9 Summary of chapter.....	21
4.1 Introduction.....	22
4.2 Reliability analysis.....	22
4.3 Pilot test	23
4.4 Coded variables in SPSS.....	24
4.5 Demographic profile	25
4.5.1 Descriptive statistics	25
4.6 Charts	27
4.6.1 Pie charts.....	27
4.6.1.1 Age of respondents	28
4.6.1.2 Gender of respondents	29
4.6.1.3 Marital status of respondents	30
4.6.1.4 Race of respondents	31
4.6.1.5 Graph of the highest level of education of respondents.....	32
4.7 R-square test.....	33
4.8 F-test	33
4.9 Correlation	34
4.10 Summary	35
5.1 Introduction.....	36
5.2 Summary of descriptive analysis	36

5.3 Discussion	37
5.4 Implication of the study	38
5.5 Future research	39
5.6 Recommendations	39
5.7 Conclusion	41
REFERENCES	42
APPENDIX A	46



LIST OF TABLES

Table 4.1: Reliability Statistics	22
Table 4.2: Coding Variables	24
Table 4.3: Demographic Profile.....	26
Table 4.4: R-square test table.....	33
Table 4.5: F-test table	33
Table 4.6: Correlation table	34



LIST OF FIGURES

Figure 2.1: Conceptual framework	11
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Abstract of the research project paper submitted to the Senate of University Tun Abdul Razak in partial fulfilment of the requirements for the Master of Business Administration.

**Impact of Digitalization on the Performance of the Workforce
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This research investigates the Impact of Digitalization on the Performance of the Workforce in Malaysian Organizations. In an era where digital technologies are reshaping industries, understanding their effects on the workforce is crucial. The study analyses how the adoption of digital tools, ranging from automation to collaborative platforms, influences the Malaysian workforce. The research design used is descriptive, involving quantitative data collection, which allows exploration of both subjective and objective aspects of digitalization. The study population consists of employees from various organizations. Purposive sampling technique were used for data collection emphasizing those with direct digitalization experience. Statistical Package for Social Science (SPSS) version 28 was used to provide comprehensive insights for data analysis. Descriptive statistics, inferential statistics and regression analysis were used to analyse the data's that were collected. The study underscores that digitalization significantly boosts productivity in Malaysian organizations through automation, streamlined workflows, and efficient data access. To maximize these benefits, organizations should invest in digital tool training and foster a culture of continuous learning. Digitalization also enhances communication, collaboration, and work-life balance, particularly through remote work and flexible schedules. Flexible work policies and clear guidelines are vital for success. Continuous skills development is crucial in the digital era, and collaboration with educational institutions helps ensure employees stay current. Digital skills equip the workforce for adaptability and competence. Moreover, embracing data analytics and business intelligence driven by digitalization provides a competitive edge. To harness the power of data, investing in data analytics capabilities, employee training, and robust data governance is essential. In summary, this highlights the significance of digitalization, skills, technology access, and organizational support for workforce performance in Malaysian organizations, urging them to address these factors to maintain competitiveness in today's business landscape.

CHAPTER 1: INTRODUCTION

1.1 Background of the Study

In recent years, the digitalization transformation has had a profound impact on various industries worldwide, including Malaysia. The rapid pace of technological advancements and the increasing use of digital technologies in the workplace have brought about significant changes to the way organizations operate and the roles of their workforce. The widespread adoption of digital technologies has revolutionized the way companies interact with customers, manage their operations, and gather and analyze data.

However, digitalization has also created new challenges for organizations and their employees. For example, some workers may find themselves out of a job as their tasks are automated, while others may need to learn new skills to keep up with the changing demands of their job (Veres, 2019). Moreover, the increased use of technology in the workplace has also led to concerns about job security, privacy, and the potential for increased stress and burnout.

Since digitalization alters traditional work roles and necessitates the acquisition of new competencies to complete these roles, it may be necessary to retrain the present workforce or recruit new employees who already possess these competencies. There will be new opportunities for people to find work as a result of digitalization, but some older ones may disappear. It's hardly a whole new dynamic, though. Historically, innovations like steam engines and electricity have disrupted industries and workplaces. There was a period of declining employment as a result of technological advancements before such advancements began producing net new jobs. If this revolution is to have comparable results, that much is certain. Multiple studies have attempted to quantify the impact of digitalization on employment in time-honored sectors and organizations. The methods used and the nations analyzed greatly affect the variety of outcomes. Even while estimates often include the possible number of regular and non-routine occupations that can be automated, this does not guarantee that automation will occur. Job growth due to technological innovation and other consequences, such as productivity improvements, are seldom considered. Based on these projections, it seems that digitalization will exacerbate existing divisions in the labor market. It is widely believed that tasks requiring low to moderate levels of expertise may be automated. Future job markets will place a premium on those with digital abilities, as well as those with an entrepreneurial spirit and a knack for innovation.

Businesses, jobs, and the whole definition of production, distribution, and consumption are all being transformed by the advent of digital technologies. The industrial and service industries are undergoing radical change as a result of technological advancements brought about by the widespread use of artificial intelligence and automated technologies (online platforms, robotics, machine learning, big data, etc.).

Worker productivity is boosted by digitalization as well. More support from online communications and information-sharing, as well as mechanical support for information processing, has been one of the most significant effects of digitalization on the workplace in recent decades. This has reduced the number of people required to complete a given task, but it has also altered the skillsets that employers may seek in their employees. Moreover, digitalization gives rise to novel types of work. For instance, the introduction of cutting-edge methods like big data analytics, additive printing, automation, virtual reality, and the Internet of Things has allowed for the creation of new, more complicated, and sophisticated goods and services (BDA, 2019). Creating and maintaining these products/services as new occupations generally requires higher levels of education and training, while other new service-oriented low-skilled professions may be generated via the use of these technologies. In turn, digital solutions like e-learning help ease the shift to a more digital labour market. The traditional methods of assigning tasks and structuring businesses have survived digitalization virtually unchanged. Because of this, most individuals still want to work for established companies, and interpersonal communication is crucial when assigning tasks. As the continuous digital revolution continues, platforms are slowly but surely altering this sector of the workforce by mediating work between individuals online without the involvement of any third parties. The offline job market and the create/demolish drive seem to be mostly unaffected by the on-demand economy so far.

Given the importance of this topic, it is crucial to understand the impact of digitalization in the performance of the workforce in Malaysian organizations. This research proposal aims to examine the impact of digitalization on employees in the Malaysian workplace, with a focus on job roles and responsibilities, job security and privacy, training and development opportunities, and challenges in adapting to digitalization.

1.2 Problem Statement

The widespread adoption of digital technologies has had a profound impact on the workforce in organizations in Malaysia. While digitalization has many benefits, it has also created new challenges for employees and organizations. For example, workers may need to adapt to new technologies and learn new skills, which can be time-consuming and challenging. Additionally, digitalization has raised concerns about job security and privacy, as well as the potential for increased stress and burnout. Digitalization has thus major implications for the labour market. In particular, digitalization will change both the quantity and quality of labour demanded. Indeed, an ever-increasing part of work can be performed automatically, with limited or no human intervention (Veres, 2019). This phenomenon is not new: during industrialization, primarily simple, repetitive tasks were automated. What differs now is that less frequently performed and more complex tasks are also increasingly subject to automation, e.g. administration. This reduces the

demand for low-skilled but in particular medium-skilled and even the lower levels of high-skilled white collar workers that currently perform these tasks. In turn, the remaining workers require different, often higher, more creative and technical skills to design, maintain and work with the new applications.

Despite these challenges, there has been limited research on the effects of digitalization on the workforce in organizations in Malaysia. Given the importance of this topic, it is crucial to understand the impact of digitalization on employees in the Malaysian workplace.

1.3 Research Objectives

The main objective of this research proposal is to understand the impact of digitalization in the performance of the workforce in Malaysian organizations. Specifically, the following research objectives have been identified:

- To assess the impact of digitalization on job roles and responsibilities in organizations in Malaysia.
- To examine the effects of digitalization on job security and privacy in the workplace.
- To investigate the training and development opportunities available for employees in the digital era.
- To identify the challenges faced by employees in adapting to digitalization in the workplace.
-

1.4 Research Questions

The following research questions will guide the investigation of the impact of digitalization in the performance of the workforce in Malaysian organizations:

1. How has digitalization affected job roles and responsibilities in organizations in Malaysia?
2. What is the impact of digitalization on job security and privacy in the workplace?
3. What training and development opportunities are available for employees in the digital era?
4. What challenges do employees face in adapting to digitalization in the workplace?

1.5 Significance of the Study

This research is significant as it will provide valuable insights into the impact of digitalization on the performance of the workforce in organizations in Malaysia. The findings of this study will inform organizations on the best practices for supporting their employees in the digitalization process. This research will also inform policymakers and educators as they seek to address the challenges posed by digitalization in the workplace. The significance of studying the impact of digitalization transformation on the workforce performance in organizations in Malaysia lies in several key areas. Firstly, it provides an understanding of the impact of digitalization on the workforce, including job roles, responsibilities, security, privacy, and training and development opportunities. This understanding is crucial for organizations as they strive to remain competitive in the digital age (Souza, 2020).

Secondly, the findings of this study will inform policymakers and educators in their efforts to address the challenges posed by digitalization in the workplace. It will provide them with insights into the best practices for supporting workers in the digitalization process, which will help to ensure that the workforce is well equipped to meet the demands of the digital age.

Thirdly, this research will contribute to the broader body of knowledge on the impact of digitalization on the workforce, which will inform future research in this area. It will provide a deeper understanding of the challenges faced by workers in adapting to digitalization, which will inform the development of effective strategies for addressing these challenges.

Finally, this research is significant because it will provide organizations in Malaysia with valuable insights into the needs and concerns of their employees in the digital era. This will help organizations to create a supportive and inclusive work environment that fosters productivity, creativity, and employee satisfaction.

1.6 Scope and Limitations of the Study

The scope of this study will be limited to organizations in Malaysia and their employees. The research will focus on the effects of digitalization on the workforce, including job roles and responsibilities, job security and privacy, training and development opportunities, and challenges in adapting to digitalization. The study will not cover the impact of digitalization on the broader economy and society.

The scope of studying the impact of digitalization on the performance of the workforce in Malaysian organizations is focused on exploring the impact of digital technologies on the workers in these organizations. This includes examining the following aspects:

- **Job roles and responsibilities:** The study will assess the changes in job roles and responsibilities that have occurred as a result of digitalization in organizations in Malaysia.
- **Job security and privacy:** The study will examine the impact of digitalization on job security and privacy, including the potential for job loss and the protection of sensitive information in the digital era.
- **Training and development opportunities:** The study will investigate the training and development opportunities available for employees in organizations in Malaysia, as they adapt to digitalization.
- **Challenges in adapting to digitalization:** The study will identify the challenges faced by employees in adapting to digitalization, such as the need to acquire new skills and the potential for increased stress and burnout.
- **Organizational support:** The study will determine the strategies used by organizations in Malaysia to support their employees in the digitalization process, including training and development programs and workplace policies.

The study will be limited to organizations in Malaysia and will not cover the broader impact of digitalization on the economy and society. Additionally, the focus of the study will be on the workforce in organizations, and not on the impact of digitalization on consumers or customers.

1.7 The organization of the Study

This research proposal will be structured as follows: Chapter 1 will introduce the background of the study, the problem statement, research objectives, research questions, significance of the study, scope and limitations, and outline of the study. Chapter 2 will provide a review of the literature on digitalization and its impact on the workforce in organizations. Chapter 3 will outline the methodology for the study, including the research design, sample selection, data collection methods, and data analysis techniques. Chapter 4 will present the results of the study, while Chapter 5 will provide a discussion of the findings in light of the literature reviewed. Finally, Chapter 6 will provide conclusions, implications, and recommendations.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Digitalization is the use of digital technologies to change a business model and provide new revenue and value-producing opportunities; it is the process of moving to a digital business. New possibilities for value addition and structural transformation are emerging as a direct result of technology advancements, and this is what is meant by the term “digital economy”. Meanwhile, according to Bukht and Heeks (2017), it is “a portion of economic production obtained completely or mostly from electronic technology with a business model centered on digital products or services (Commission, 2020).” Knickrehm et al. (2016) defined simplicity as the percentage of GDP attributable to “technological inputs” as “computer abilities, computer equipment (hardware, software, and communications equipment), and intermediate digital products and services.” These kinds of massive projects are the bedrock of the information economy (Autor, 2019).

The spread of digital technologies might help economies flourish all around the globe. Better manufacturing efficiency brought about by digital transformation is also predicted to enhance productivity while decreasing input costs. By increasing aggregate demand, jobs, and maybe even pay, this would compensate for the disruption. Workforces need to have a broad variety of competence, including self-direction, critical thinking, communication skills, and web administration, as an increasing number of companies and organizations employ cutting-edge digital technology to remodel action plans and associations.

Certain facets of the market have witnessed dramatic shifts with the onset of digitization. Bound jobs vanished as a result of shifts in the need for skills and labour. Companies’ standing shifted as a result of this in a variety of ways, including development, market capitalization, and many more. The most efficient methods of this creative age are either still under development or unknown at this time.

2.2 Theoretical foundation

The digitalization transformation is a rapidly evolving phenomenon that has transformed the way organizations in Malaysia and around the world operate. The integration of digital technologies and processes into all areas of organizational life has led to significant changes in the nature of work and the roles and responsibilities of workers.

One of the key impacts of digitalization on the workforce has been the creation of new job opportunities in areas such as data analysis, digital marketing, and cybersecurity. Due to the increasing use of digital technologies, organizations in Malaysia are seeking workers with specialized skills in these areas to support their digital transformation initiatives.

At the same time, digitalization has also led to the automation of certain tasks and the displacement of workers who previously performed those tasks. This has had significant consequences for the workforce, particularly for workers who lack the skills and education necessary to adapt to the digital age (Souza, 2020). Organizations in Malaysia and around the world must offer workers training and support so they can develop the skills necessary to thrive in the digital age in order to lessen the negative effects of job displacement.

In addition to job displacement, digitalization can also exacerbate existing inequalities in the workforce. For example, workers who lack access to digital technologies or who are not equipped with the necessary digital skills are at a disadvantage compared to those who are. This can lead to a widening of the digital divide and exacerbate social and economic inequalities.

Organizations in Malaysia need to prioritize employee development and well-being as well as digital transformation in order to meet these challenges. This includes providing access to training and development opportunities, promoting a supportive work environment, and investing in the tools and technologies that workers need to succeed in the digital age.

In conclusion, the digitalization transformation is having a profound impact on the performance of the workforce in Malaysian organizations, leading to both opportunities for growth and new challenges for workers and organizations alike. To navigate these changes successfully, organizations must be proactive in providing support and resources to their workers and adapting their work processes and cultures to the digital age.

2.3 Empirical research

Empirical research on the impact of digitalization on the performance of the workforce in Malaysian organizations has shown a mix of both positive and negative impacts.

Studies have found that digitalization has led to an increase in job satisfaction and productivity for workers in Malaysia. For example, a study by the Asia Foundation found that the implementation of digital technologies in Malaysian organizations was associated with higher levels of job satisfaction, as workers reported improved efficiency and effectiveness in their work processes.

On the other hand, research has also shown that digitalization has led to job displacement and increased competition for jobs in Malaysia. A study by the Malaysian Digital Association found that automation and the increased use of digital technologies has led to a reduction in the demand for certain jobs, particularly in sectors such as manufacturing and finance (Marel, 2019).

Furthermore, studies have also shown that digitalization has exacerbated existing inequalities in the workforce, particularly in terms of access to digital technologies and skills. A study by the World Economic Forum found that workers in Malaysia who lack digital skills are at a disadvantage compared to those who

are equipped with these skills, leading to a widening of the digital divide and exacerbating social and economic inequalities (Souza, 2020).

The long-term impacts of digitalization on employment remain unclear, according to a 2016 OECD assessment, despite the fact that mechanical manipulation should become more unnecessary. Meanwhile, it is widely held that improvements in digital literacy have not led to the widespread introduction of high-tech occupations. Another analysis from the OECD in 2016 confirms that automation and digitalization will not eliminate many jobs in the foreseeable future (OECD, 2016).

Kvochko (2013) and Katz and Koutroumpis (2016) looked at how the rise of technology has affected the job sector. The research shows that by 2020, digital transformation will be directly responsible for producing 22 percent of all new jobs (760,000) in the United States and 25,000 new, creative jobs every year in Australia (BDA, 2019). Furthermore, Katz and Koutroumpis (2016) found that a 1% rise in digitalization of the consumption index would result in a 0.07% decrease in unemployment globally between 2004 and 2015. This finding accords with research from Kunming (2019) that indicated an increase of one point on the Digital China Index resulted in the creation of almost 660,000 new jobs (Degryse, 2020).

Su et al. analysed how new technologies have affected the labour market (2022). Between 2013 and 2021, there was a link established between patents and new employment opportunities. Technological progress has a salutary effect on the job market. In addition to having a potential negative influence on employment, technological progress often has a bigger substitution effect than a creation effect in Chinese society.

Ping and Ying's (2018) research demonstrates that in order to mitigate the negative effects of digitalization on the labour market, businesses, their leadership, and the way they make decisions will need to make substantial adjustments (Baker, 2019). Therefore, a company's labour income would rise as its manufacturing expenses fell. Therefore, a rise in income would boost people's standard of living aspirations, raise the efficiency of their work, and speed up the economic development of events and collective growth.

Aly (2020) examined how the rise of technology has affected job prospects in 25 developing nations in 2017. There has been a successful translation of the digital revolution into a wider variety of employment prospects in Malaysia, Chile, and China. However, not enough openings were made in Turkey, South Africa, and even Jordan (Berg, 2020).

Meanwhile, Autor et al. (1998) found that the strong demand for computers and trained workers contributes to segregation in the USA. Acemoglu and Autor (2011), Goos et al. (2014), Michaels et al. (2014), and Ju (2014) all found that the demand for "middle-skilled" labour drops as technology improves, while the demand for "high-skilled" and "low-skilled" labour increases. In addition, Sachs and Kotlikoff (2019) argue that young insolence in the form of inventions goes hand in hand with a lack of talent in the

workplace, leading to lower wages for the incompetent and a reduction in the motivation to improve one's skill set (Baker, 2019). On the other hand, digitization and the need for skilled workers have a beneficial effect, since neither digitalization nor the exchange have yet induced polarization of the labour market across low- and middle-income nations. However, Banga and Velde's (2018) research of the effects of digitization on the job market in 12 African countries finds no significant changes (Autor, 2019). Additionally, Arntz et al. (2016) discovered that although groundbreaking digital breakthroughs have a limited influence on absolute business rates, they do lead to tremendous advances in labour across vocations and firms (Arntz, 2019).

Although this was the case, the effects of the industrial revolution on employment varied considerably by industry. The likelihood of job automation in the agriculture, service, and industrial sectors was analysed in recent research by Chinorack et al. (2019) that looked at data from OECD nations (BDA, 2019). The findings highlighted potential job automation threats in various industries. Jobs in the agricultural and industrial sectors are more likely to be automated than service sector jobs (Veres, 2019). Therefore, nations with a large population and a large work force in agriculture and industry are at a greater risk of being negatively impacted by job automation.

The literature demonstrates that the digitalization of the economy benefits economic growth by focusing on the skilled labour force while harming the low- and middle-skilled labour force. Multiple investigations have been carried out in advanced nations. The effects vary from one nation to the next. Still, the Middle East and other emerging nations suffer from an underabundance of written works. In Malaysia, there is no data to illustrate how the digital revolution affects the number of available jobs. It's unclear and up to debate at this point (Vogel, 2019).

In conclusion, empirical research on the impact of digitalization on the performance of the workforce in Malaysian organizations highlights the need for organizations to take a proactive approach to digital transformation, prioritizing the well-being and development of their workers. This includes providing access to training and development opportunities, promoting a supportive work environment, and investing in the tools and technologies that workers need to succeed in the digital age.

2.4 Conceptual framework

A proposed conceptual framework for the impact of digitalization on the performance of the workforce in Malaysian organizations can be a useful tool for understanding the complex interplay between different factors that contribute to the impact of digitalization on workers. The framework can include the following components:

2.4.1 Digitalization

This component refers to the integration of digital technologies and processes into all areas of organizational life. It encompasses the adoption of digital tools, platforms, and systems to support work processes, communication, and decision-making. Digitalization is a driving force behind the transformation of the workforce in organizations in Malaysia and around the world, and it is important to consider its role in shaping the experiences of workers.

2.4.2 Workforce performance

This component refers to the changes in the roles, responsibilities, and experiences of workers as a result of digitalization. It includes both positive impacts, such as increased job satisfaction and productivity, as well as negative impacts, such as job displacement and increased competition for jobs. Understanding the impacts of digitalization on the workforce is crucial for organizations to be able to respond proactively to the changing needs of workers.

2.4.3 Skills and education

This component refers to the skills and knowledge that workers need to succeed in the digital age. It encompasses both technical skills, such as proficiency in specific digital technologies, and broader skills, such as problem-solving and critical thinking. Workers who possess the right skills and education are more likely to be successful in the digital age, and organizations must consider this component when planning their digital transformation initiatives.

2.4.4 Access to digital technologies

This component refers to the availability and use of digital technologies by workers. It encompasses both the availability of digital tools and platforms in the workplace, as well as workers' ability to access and use these technologies effectively. Access to digital technologies is a critical component for workers to be able to participate in the digital age, and organizations must consider this when developing their digital transformation strategies.

2.4.5 Organizational support

This component refers to the resources and support provided by organizations to help workers succeed in the digital age. It includes access to training and development opportunities, a supportive work environment, and investment in digital technologies and tools. Organizations that provide strong support for their workers are more likely to be successful in the digital age, and workers are more likely to thrive in these organizations.

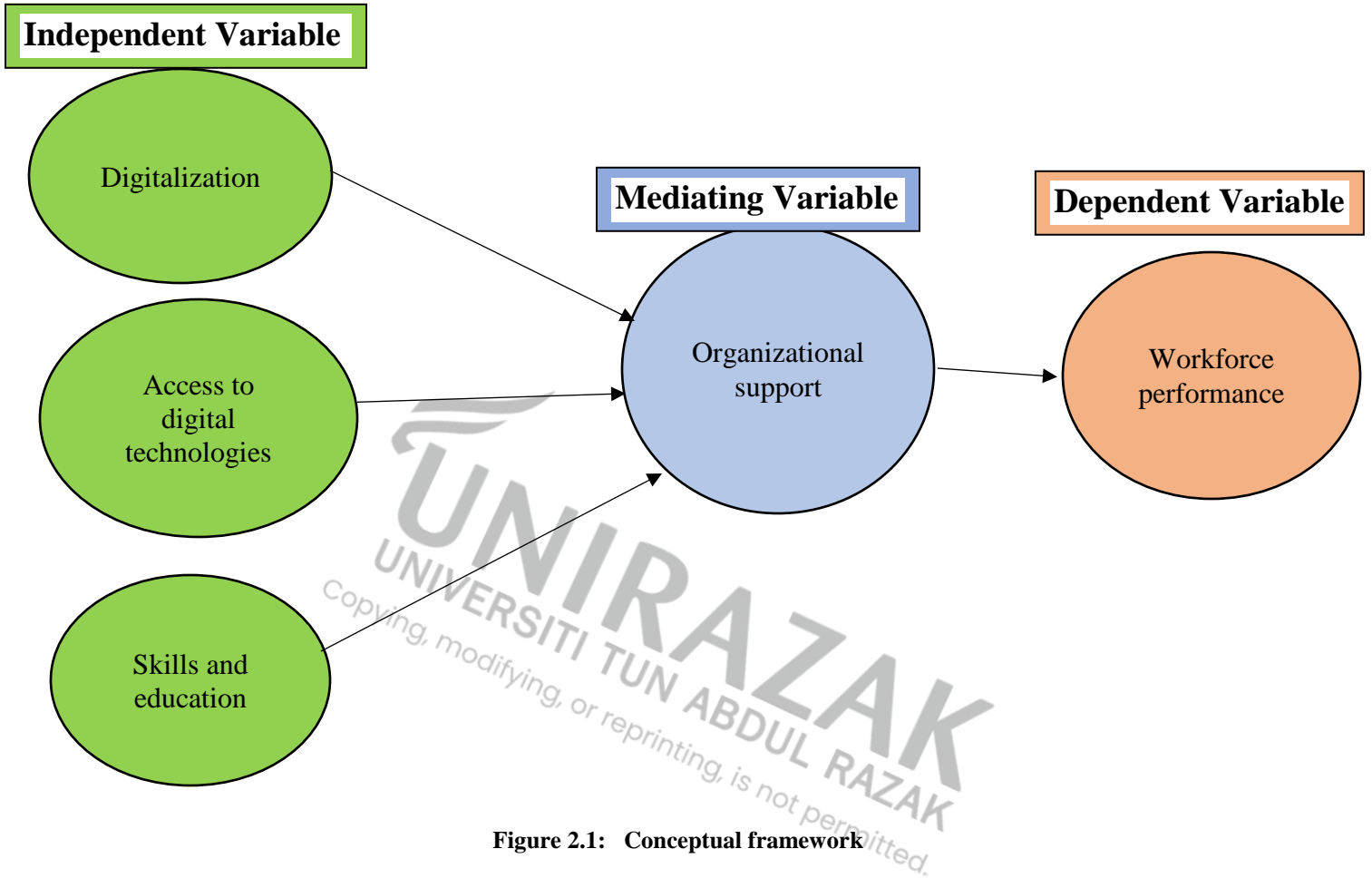


Figure 2.1: Conceptual framework

The proposed conceptual framework provides a comprehensive overview of the key components that contribute to the impact of digitalization in the performance of the workforce in Malaysian organizations. By considering each of these components, organizations can better understand the challenges and opportunities presented by digitalization, and take a proactive approach to supporting their workers and adapting to the digital age. The framework can be used to guide research, inform policy, and support organizations in their digital transformation initiatives.

2.5 Hypothesis development

The following are some potential hypotheses that can be developed to explore the impact of digitalization in the performance of the workforce in Malaysian organizations:

H1; Digitalization will result in increased job satisfaction and productivity for workers in organizations in Malaysia.

H2; Workers who possess digital skills and education will be more likely to succeed in the digital age, as compared to those who lack these skills.

H3; Access to digital technologies will be a critical factor in determining workers' ability to participate in the digital age and succeed in their jobs.

H4; Organizations that provide strong support for their workforce, including access to training and development opportunities, will be more successful in the digital age.

These hypotheses can provide a starting point for exploring the impact of digitalization in the performance of the workforce in Malaysian organizations. Further research can test these hypotheses and explore other factors that may impact workers in the digital age, such as organizational culture, workplace flexibility, and worker preferences. By developing and testing these hypotheses, organizations and policymakers can gain a deeper understanding of the effects of digitalization transformation on the workforce and take informed action to support workers in the digital age.

2.6 Summary of the chapter

This chapter starts with the introduction of digitalization and little bit about the digital technology and then literature about the digitalization is discussed and the theoretical and conceptual framework is discussed. At the end hypothesis are developed; keeping in view many aspects. Then these hypotheses will be tested and results obtained will be discussed accordingly.



CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology adopted for the study on the impact of digitalization in the performance of the workforce in Malaysian organizations. The methodology is designed to provide a comprehensive understanding of the impacts of digitalization on the workforce and to answer the research questions posed in Chapter 1. This chapter covers the research design, data collection methods, sample selection, data analysis methods, and ethical considerations in detail.

3.2 Research Design

The research design adopted for this study is a descriptive methods design, which involves collecting quantitative data. The descriptive methods design is suitable for this study as it allows for the exploration of both subjective and objective aspects of the impacts of digitalization on the workforce. The descriptive approach will be used to gather rich, in-depth data on the perceptions and experiences of workers in organizations in Malaysia with respect to digitalization, while the quantitative approach will be used to provide a more objective and generalizable understanding of the impacts of digitalization on the workforce. For data analysis the software SPSS version 28 will be used in this study.

3.3 Study population and Sampling procedure

The sample for this study will consist of workers and managers in organizations in Malaysia, representing a range of different industries and sizes. The sample size for the survey questionnaire will be around 70 – 150 participants. The participants will be selected using purposive sampling, with an emphasis on including participants who have direct experience with digitalization in the workplace. This will help ensure that the participants are able to provide meaningful and relevant insights into the impacts of digitalization on the workforce in organizations in Malaysia.

3.4 Data Collection Methods

The data collection methods adopted for this study include a survey questionnaire. The survey questionnaire will be conducted with workers and managers in organizations in Malaysia to gather detailed information on their experiences and perceptions of digitalization. The interview questions will be based on the conceptual framework presented in Chapter 2, and will focus on the impacts of digitalization on the workforce, workers' skills and education, access to digital technologies, and organizational support. The reviews will be conducted in person or over the phone, and will last approximately 10 – 30 minutes.

The survey questionnaire will be distributed to a larger sample of workers in organizations in Malaysia, using an online platform. The questionnaire will include a mix of closed-ended and open-ended questions, and will cover the same topics as the semi-structured interviews. The closed-ended questions will include multiple-choice and rating scale questions, while the open-ended questions will allow participants to provide detailed and qualitative responses. The survey questionnaire will allow for a more systematic and generalizable understanding of the impacts of digitalization on the workforce in organizations in Malaysia.

3.5 Operationalization and Measurement

3.5.1 Independent Variables

Digitalization, access to digital technologies, and skills and education are the independent variables.

3.5.1.1 Digitalization

The digitalization transformation in Malaysia is having a significant impact on the workforce and the way organizations operate. In this section, we will examine the key ways in which digitalization is transforming the workforce in Malaysia in greater detail.

Automation of jobs: With advancements in technology, many manual and routine tasks are now being automated. This has resulted in a reduced demand for low-skilled workers and has led to job losses in certain sectors. However, it has also created new job opportunities in areas such as data analysis, software development, and cybersecurity. These new jobs require workers to have technical skills and be comfortable with technology, which has led to a shift in the skills required of workers.

Skill requirements: The rapid pace of technological change means that workers must continuously upgrade their skills and adapt to changing demands. Traditional job roles now require workers to have digital skills and be familiar with technology, while new job roles have emerged that are solely focused on digital technologies. This has resulted in a need for workers to continuously upgrade their skills and be proactive about developing new ones.

Remote work: Digitalization has enabled remote work and virtual collaboration, allowing workers to be more flexible in terms of where they work and when. This has had a significant impact on the way work is done and has enabled organizations to access a wider pool of talent, regardless of location (Airbnb, 2019). Remote work has also increased the importance of digital skills, as workers must be able to communicate and collaborate effectively online.

Job creation: The rise of e-commerce, online services, and digital marketing has created new job opportunities in areas such as web development, digital marketing, and data analysis. This has helped to diversify the Malaysian economy and create new sources of employment.

Employment security: While automation has reduced the demand for low-skilled workers and led to job losses in certain sectors, it has also created new job opportunities in areas such as data analysis, software development, and cybersecurity (Drahokoupil, 2019). It is important for workers to be proactive about developing new skills and continuously upgrading their knowledge in order to remain employable in the changing job market.

In conclusion, digitalization is transforming the workforce in Malaysia and has resulted in a number of changes to the way work is done, the skills required of employees, and the nature of employment itself. While there are challenges, such as a shift in skill requirements and concerns about job security, there are also many opportunities for workers and organizations to embrace the digital transformation and thrive in the digital age. It is important for both workers and organizations in Malaysia to be proactive about developing the digital skills and knowledge needed to succeed in the digital age

3.5.1.2 Access to digital technologies

Access to digital technologies in Malaysia has a significant impact on the workforce and the way organizations operate. In this section, we will examine the key ways in which access to digital technologies is impacting the workforce in Malaysia in greater detail.

Digital Divide: Despite rapid advances in technology, there remains a digital divide in Malaysia, with many workers lacking access to digital technologies and the internet. This divide is particularly pronounced in rural areas and among low-skilled workers. This has a significant impact on their ability to participate in the digital economy and compete for jobs, as many employers now require digital skills and access to digital technologies.

Upskilling: Access to digital technologies is essential for workers to upgrade their skills and stay competitive in the changing job market. This includes access to online learning platforms, digital tools and resources, and training programs. Without access to these resources, workers risk being left behind in the digital age (Degryse, 2020).

Remote work: Access to digital technologies is crucial for remote work, which has become increasingly common in Malaysia (Dagnino, 2019). Workers who lack access to digital technologies and the internet are at a disadvantage and risk being excluded from remote work opportunities. This has a significant impact on their employability and their ability to participate in the digital economy.

Entrepreneurship: Digital technologies provide new opportunities for entrepreneurship and innovation, and access to these technologies is essential for individuals to start their own businesses and create new job opportunities (Commission, 2020). In Malaysia, access to digital technologies is crucial for startups and small businesses to be competitive and succeed in the digital age.

Bridging the gap: Governments and organizations in Malaysia are taking steps to bridge the digital divide and increase access to digital technologies for all workers. This includes programs to provide digital devices and internet access to low-skilled workers and initiatives to increase access to digital skills training and upskilling programs (Commission, 2018).

In conclusion, access to digital technologies is essential for workers and organizations in Malaysia to succeed in the digital age. The digital divide in Malaysia continues to impact many workers, particularly low-skilled workers, and it is important for governments and organizations to take steps to increase access to digital technologies and bridge the divide. Access to digital technologies is crucial for workers to upgrade their skills, participate in remote work, start their own businesses, and compete for jobs in the digital age.

3.5.1.3 Skills and education

The impact of digitalization on the workforce in Malaysia is closely tied to the skills and education of workers. In this section, we will examine the key ways in which skills and education are impacting the workforce in Malaysia in greater detail.

Upskilling: The rapid pace of technological change is driving a need for workers to upgrade their skills and stay competitive in the changing job market. This includes digital skills, as well as soft skills such as critical thinking, problem solving, and communication (Bayart, 2019). In Malaysia, there is a growing recognition of the importance of upskilling and reskilling, and there are a number of initiatives underway to increase access to digital skills training and upskilling programs.

Education: The education system in Malaysia is adapting to the digital age and incorporating digital technologies and digital skills into the curriculum (CEO, 2019). This is crucial to ensure that students are prepared for the digital economy and have the skills they need to compete for jobs in the future.

Workforce development: The government and private sector in Malaysia are investing in workforce development programs to improve the skills and employability of workers. This includes digital skills training, as well as programs to improve soft skills and increase access to upskilling and reskilling opportunities.

Career advancement: Workers in Malaysia who possess digital skills and a good education are better positioned for career advancement and higher-paying jobs in the digital economy (Berg, 2020). This has a significant impact on their earning potential and their ability to participate in the digital economy.

Bridging the gap: There is a growing recognition of the importance of bridging the skills gap in Malaysia and ensuring that all workers have the skills they need to succeed in the digital age. This includes initiatives to increase access to digital skills training, upskilling programs, and education opportunities.

In conclusion, skills and education play a critical role in the impact of digitalization on the workforce in Malaysia. Workers who possess digital skills and a good education are better positioned for

career advancement and higher-paying jobs in the digital economy (Autor, 2019). The government and private sector in Malaysia are investing in initiatives to increase access to digital skills training, upskilling programs, and education opportunities, to ensure that all workers have the skills they need to succeed in the digital age.

3.5.2 Mediating Variable

3.5.2.1 Organizational support

Organizational support is essential for ensuring a positive impact on the workforce performance. In Malaysia, there are various ways in which organizations provide support to their employees. These include:

Employee Benefits: Organizations in Malaysia are required by law to provide certain benefits to their employees, such as annual leave, medical leave, and maternity leave. In addition, many organizations offer additional benefits, such as insurance, housing, and transportation allowances.

Training and Development: Companies in Malaysia are committed to providing their employees with the necessary training and development opportunities to enhance their skills and knowledge. This includes in-house training, on-the-job training, and professional development programs (BCG, 2015).

Work-Life Balance: Organizations in Malaysia are increasingly recognizing the importance of work-life balance for their employees. As such, they are offering flexible work arrangements, such as flexible working hours, telecommuting, and job sharing, to help employees achieve a better balance between work and personal life (Beblavý, 2021).

Health and Wellness: Organizations in Malaysia are also focusing on promoting health and wellness among their employees. This includes providing access to health and wellness programs, such as regular health screenings, gym memberships, and health education programs (Beblavý, 2021).

Employee Engagement: Organizations in Malaysia are investing in employee engagement initiatives to ensure that their employees feel valued, motivated, and connected to the company. This includes regular employee surveys, focus groups, and feedback mechanisms to gather employee insights and suggestions (Allen, 2017).

Overall, organizations in Malaysia are taking proactive steps to support their employees and ensure a positive impact on the workforce. These efforts help to create a supportive and inclusive workplace culture, which can lead to increased employee satisfaction, engagement, and productivity. Additionally, organizational support can also influence the level of employee skills and job design, which in turn can impact workforce performance. For instance, if an organization provides its employees with training and development opportunities, it can lead to an improvement in their digital skills and job design, resulting in better workforce performance.

Therefore, organizational support acts as a mediating variable in this context, as it helps to explain the relationship between digitalization and workforce performance by influencing other intermediate variables such as employee skills and job design.

3.5.3 Dependent Variable

3.5.3.1 Workforce performance

According to research compiled by the Malaysian branch of a human resource consulting organization, almost nine out of ten Malaysian workers (89%) are optimistic about the new chances that digital technology brings to them, as stated in a recent news item. Earlier in the month of February 2019, OpenGov Asia provided cursory coverage of this study. This report, on the other hand, will give further information on the study and explain how it relates to the Industry Policy of Malaysia. This information was gleaned from a poll of over 400 workers and those looking for work in Malaysia that was included in the quarterly report that the company issues called Workmonitor (Bayart, 2019).

According to the findings of the survey, workers and people looking for work in Malaysia are well aware of the necessity to improve their professional qualifications in order to take advantage of the possibilities presented by technology breakthroughs and new inventions. Almost nine in ten respondents (89%) answered that they would need to learn new skills if they wish to work in an atmosphere that is driven by digital technology. 93% of those surveyed are prepared to take the initiative to improve their employability by acquiring these skills on their own (Baker, 2019).

The poll also revealed that 69 percent of respondents claimed that their firm is investing in new technologies within the area of AI such as machine learning, robots, and automation (BDA, 2019). This finding was also discovered. More over eight in ten respondents agreed, putting the percentage at 81%, that these developing technologies will have a beneficial influence on their employment during the next five to ten years. Despite the fact that 82% of workers believe their employers should offer them with enough training to gain new digital skills and boost productivity, just 63% of workers say that this is really happening at their places of employment (Airbnb, 2019).

Seventy-six percent of people are taking things into their own hands by claiming that they are investing in themselves to learn about artificial intelligence (AI) (Arntz, 2019). Eighty percent of those who responded to the poll in Malaysia said that kids in the country are being taught and exposed to the appropriate digital skills that would assist them in preparing for the future workforce. The study provides

evidence that Malaysia is well on its way to achieving the objectives it has set for its industry, and that an understanding of the need for digital skills is occurring on both the Individual and the governmental scale (Autor, 2019).

The design process, the manufacturing process, how things are utilized and operated, as well as how they are maintained and serviced are all impacted by industry. The introduction of new enabling technologies gives the industrial environment a new dimension, which ultimately results in a significant boost in industrial productivity. Upskilling and reskilling the present labour pool as well as the future labour pool are essential components of Malaysia's transition, and the Malaysian government is working to assist both current workers and those looking for work.

3.7 Data Analysis Methods

The data collected through the survey questionnaire will be analyzed using quantitative methods. The quantitative data collected from the survey questionnaire will be analyzed using descriptive and inferential statistics, including measures of central tendency, variability, and correlation. Additionally, regression analysis will be used to examine the relationships between different variables, such as workers' skills and education, access to digital technologies, and organizational support, and the impacts of digitalization on the workforce in organizations in Malaysia. The results of the quantitative analysis will provide an objective and generalizable understanding of the impacts of digitalization on the workforce in organizations in Malaysia.

3.8 Ethical Considerations

The study will be conducted in accordance with the ethical principles of confidentiality, informed consent, and protection of participants' rights. All participants will be informed of the purpose of the study, the methods of data collection, and the use of their data, and will be given the option to opt out at any time. The participants' confidentiality will be maintained by using anonymous codes for their data and by not including any personally identifiable information in the study's findings.

3.9 Summary of chapter

This chapter presented the research methodology adopted for the study on the impact of digitalization in the performance of the workforce in Malaysian organizations. The methodology is designed to provide a comprehensive understanding of the impacts of digitalization on the workforce, by combining both qualitative and quantitative methods. The study will be conducted in accordance with ethical principles and will provide valuable insights into the effects of digitalization on the workforce in organizations in Malaysia



CHAPTER 4: RESULTS AND ANALYSIS

4.1 Introduction

In this chapter, we present the results and analysis of the effects of digitalization transformation on the workforce in organizations in Malaysia. We will discuss various statistical tests and analyses conducted to examine the relationships and patterns observed in the data. We will explore the reliability, demographic profile, and statistical analyses to understand the implications of digitalization on the Malaysian workforce. All the data collected is analyzed by IBM SPSS software version 26.

4.2 Reliability analysis

Before proceeding with the main analysis, we conducted a reliability analysis to assess the internal consistency and reliability of the survey instruments used in this study. This analysis helps ensure that the collected data is dependable and consistent. To ensure the validity of our findings, we will conduct a reliability analysis of the collected data. If the Alpha (α) is higher than 0.70, a construct is dependable. Using Cronbach's Alpha, the reliability of the constructs was evaluated.

Sr. No	Reliability statistics	No. of questions	Sample size	Cronbach's Alpha Standard	Cronbach's Alpha	Findings
1	Overall	35	159	0.7	0.858	Reliable
2	Demographics	05	159	0.7	0.737	Reliable
3	Digitalization	05	159	0.7	0.764	Reliable
4	Skills and Education	05	159	0.7	0.865	Reliable
5	Access to digital technologies	05	159	0.7	0.952	Reliable

6	Organization Support	04	159	0.7	0.790	Reliable
7	Workforce performance	06	159	0.7	0.866	Reliable

Table 4.1: Reliability Statistics

The table 4.1 shows that our data's overall reliability statistics is 0.858, which is good for our analysis. The questionnaire has a total of 35 questions and these all questions further divided into other sections. one of our questionnaire sections, demographics, has 5 questions and a Cronbach's Alpha score of 0.737. Now for the next section is our dependent variable, which contains 6 questions is Workforce performance. The value of the Cronbach's alpha of Workforce performance is 0.866 which is reliable. For the next sections, there are three independent variables and one mediating variable. The first independent variable which is digitalization has Cronbach's alpha 0.764, which is reliable. The second independent variable which is Skills and Education has Cronbach's alpha 0.865, which is reliable. The third independent variable which is Access to digital technologies has Cronbach's alpha 0.952, which is reliable. The one mediated variable is Organization Support has Cronbach's alpha 0.866 which is also reliable.

4.3 Pilot test

Before performing a larger study, a pilot test is a small-scale preliminary study used in statistics to determine whether a research design or methodology can be carried out and is effective. A pilot test's major goals are to identify possible problems or problems that might come into the larger study and to improve the research methods to make sure the larger study is successful. Reliability analysis: If the Cronbach's alpha coefficient is high (i.e., > 0.7), it suggests that the research instrument is reliable and consistent. If the coefficient is low, it may indicate issues with the items in the instrument, and they may need to be revised. Correlations: Correlation analysis findings can be used to find links between different variables. While negative correlations show that the variables move in opposition to one another, positive correlations imply that the variables move together in the same direction. The usage of correlations can be used to test hypotheses and to identify any confounding variables that must be taken into consideration in subsequent analyses. Overall, the pilot test is an important step in the research process, as it helps to identify and address any potential issues before conducting the full-scale analysis.

4.4 Coded variables in SPSS

The coding of the variables that I used in the SPSS is shown in the table below.

Variables	Category	Coded
Age	20-35years	1
	36-45years	2
	46- 55 years	3
	50 or above	4
Gender	Male	1
	Female	2
Race	Malay	1
	Chinese	2
	Indian	3
	Others	4
Education	Undergraduate	1
	Graduate	2
	Diploma	3
	Degree	4
Marital status	Married	1
	Single	2

Table 4.2: Coding variables

4.5 Demographic profile

In this section, we provide a demographic profile of the participants in the study. We present information such as age, gender, educational background, Race, and marital status. Understanding the demographic characteristics of the sample is crucial for interpreting the results and drawing conclusions.

4.5.1 Descriptive statistics

Descriptive statistics are concise summaries of data that provide information about a specific dataset, whether it represents a sample or the entire population. These statistics include measures of central tendency, which describe the average or typical value of the data, and measures of variability, which indicate the spread or dispersion of the data points. Descriptive statistics are essential in data analysis as they help to effectively describe, illustrate, and summarize data, allowing patterns to emerge and meeting the data's requirements. One of the primary purposes of descriptive statistics is to provide fundamental information about the variables within a dataset. This includes describing the size of the sample, indicating the number of observations or data points included. Understanding the sample size is crucial as it influences the reliability and generalizability of the findings. Additionally, descriptive statistics help in determining the center of the data, which refers to the measure that represents the average or typical value. Common measures of central tendency include the mean, which calculates the arithmetic average, the median, which identifies the middle value, and the mode, which represents the most frequent value. These measures provide insight into the central or representative value of the dataset. Furthermore, descriptive statistics allow us to assess the spread of the data, which measures the variability or dispersion of the values. Measures of spread, such as the range, standard deviation, and variance, provide information on how much the data points deviate from the central value. Understanding the spread helps in determining the diversity or consistency of the data. In addition to center and spread, descriptive statistics help to evaluate the shape and distribution of the data. By examining the distribution, one can identify if the data follows a specific pattern or is skewed in a particular direction. Common distributions include the normal distribution, skewed distributions, and bimodal distributions. Assessing the shape of the data aids in understanding its characteristics and potential outliers. Lastly, descriptive statistics enable the comparison of data from different groups. By calculating and comparing the descriptive measures for different subsets or categories within the data, researchers can identify similarities, differences, and potential relationships between variables. This comparative analysis helps in drawing meaningful conclusions and understanding the interplay between variables. In summary, descriptive statistics provide valuable insights into a dataset by describing the sample size, central tendency, spread, shape, and distribution of the data. They are essential in organizing, simplifying, and summarizing data, allowing researchers to gain a comprehensive understanding of the data's characteristics and relationships between variables. Descriptive statistics is a

branch of statistics that focuses on summarizing and describing the main features of a dataset. It provides methods and techniques to organize, present, and analyze data in a meaningful way, enabling researchers to gain insights and draw conclusions about the data.

Characteristics	Categories	Frequency	Percent
Gender	Male	96	60.4
	Female	61	38.4
Age	20-35 years	87	54.7
	36-45 years	48	30.2
	46- 55 years	19	11.9
	50 years and above	3	1.9
Marital status	Married	75	47.2
	Single	82	51.6
Race	Malay	102	64.2
	Chinese	12	7.5
	Indian	37	23.3
	Others	5	3.1
Education	Undergraduate	10	6.3
	Graduate	22	13.8
	Diploma	34	21.4
	Degree	91	57.2

Table 4.3: Demographic Profile

According to table 4.3, Males make up 60.4% of the population, while females make up 38.4%. 54.7 percent are in the 20 to 35 age range, 30.2% are in the age range of 36 to 45 age range, 11.9% are in the 46 to 55 of age range, and 1.9% are over the age of 50. Compared to 47.2% of persons who are married, 51.6% of people are single. Malaysians make up 64.2% of the population, followed by Indians (23.2%), Chinese (7.5%), and others (3.1%). Among the respondents, a undergraduate by 6.3%, a professional degree by 57.2%, a Diploma by 21.4%, a graduate holder by 13.8%.

4.6 Charts

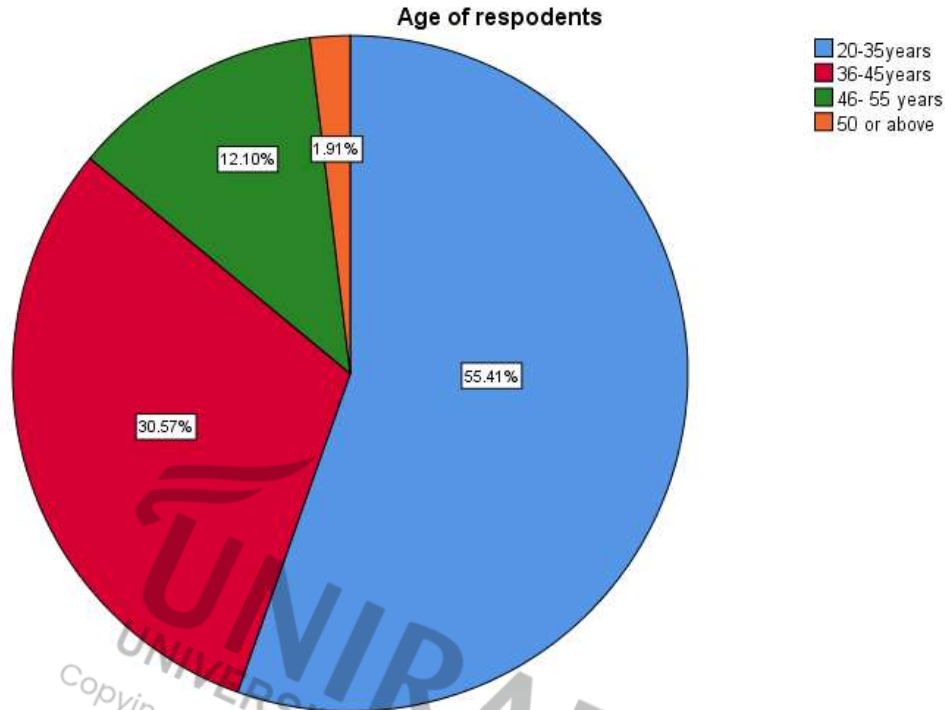
To enhance the presentation of the findings, we utilize charts and visual representations of the data. These visual aids help to illustrate trends, patterns, and comparisons, providing a clearer understanding of the impact of digitalization transformation on the workforce in Malaysian organizations.

4.6.1 Pie charts

In this section, we can view the pie charts for various types of information regarding the respondents.

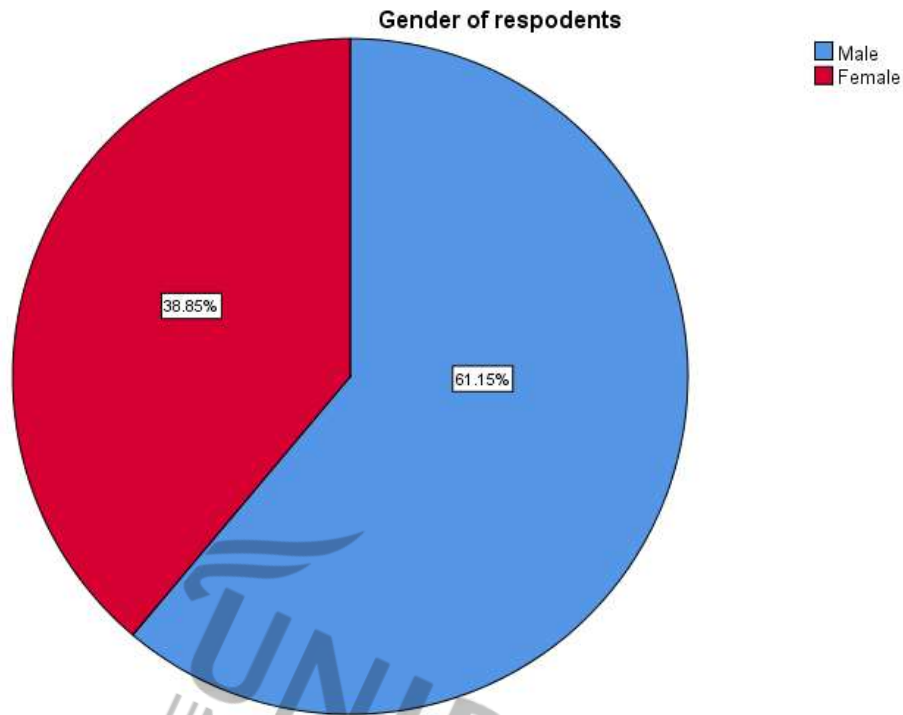
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4.6.1.1 Age of respondents



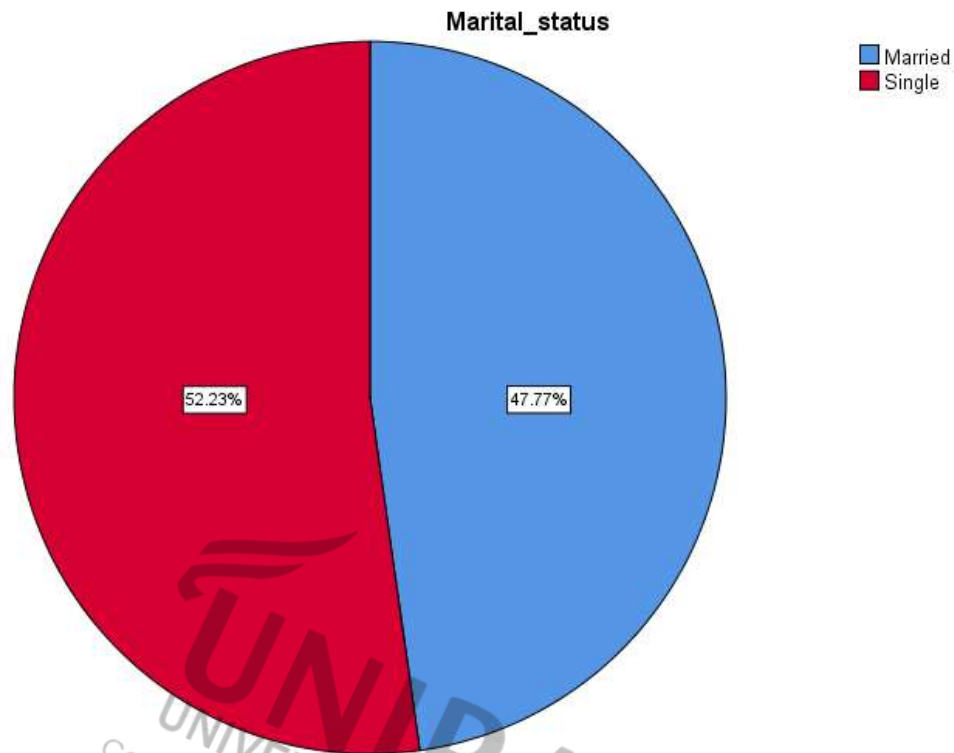
The presented pie chart serves as a visual representation of the age distribution among respondents in the research study. The chart is divided into distinct segments, each denoting a specific age range. The blue segment, the most substantial portion of the chart, represents individuals between the ages of 20 to 35, constituting 55.41% of the respondents. The red segment signifies participants aged between 36 to 45 years, accounting for 30.57% of the total respondents. The green segment denotes individuals aged from 46 to 55 years, making up 12.10% of the respondents. Lastly, the smallest segment, colored orange, represents respondents who are 50 years old or above, comprising a mere 1.91% of the surveyed population. This pie chart vividly illustrates the age demographics of the participants, indicating a significant presence of the younger workforce, particularly those in the 20 to 35 age group, within the context of the impact of digitalization on Malaysian organizations.

4.6.1.2 Gender of respondents



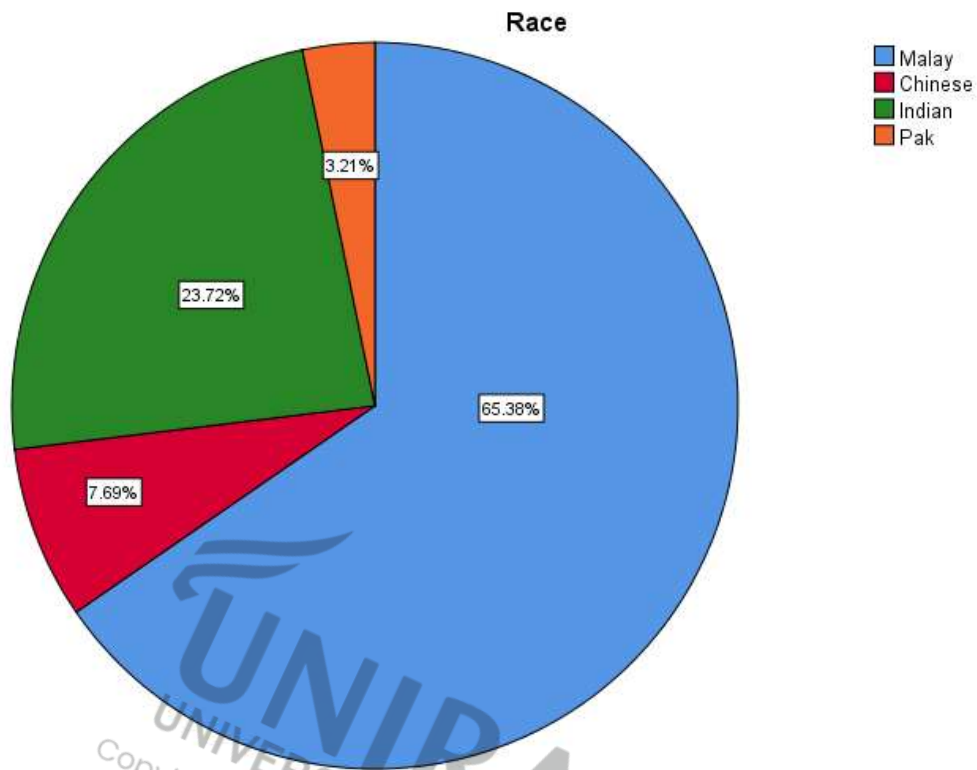
The presented pie chart provides a visual representation of the gender distribution among respondents in the research study. The chart comprises two distinct segments: a red segment representing female respondents, constituting 38.85% of the total, and a larger blue segment indicating male respondents, making up 61.15% of the surveyed population. This pie chart clearly illustrates the gender demographics of the participants, revealing a notable majority of male respondents compared to their female counterparts within the context of the impact of digitalization on the Malaysian workforce. The chart's contrasting colours emphasize the disparity in gender representation, providing valuable insights into the gender dynamics within the organizational context being studied.

4.6.1.3 Marital status of respondents



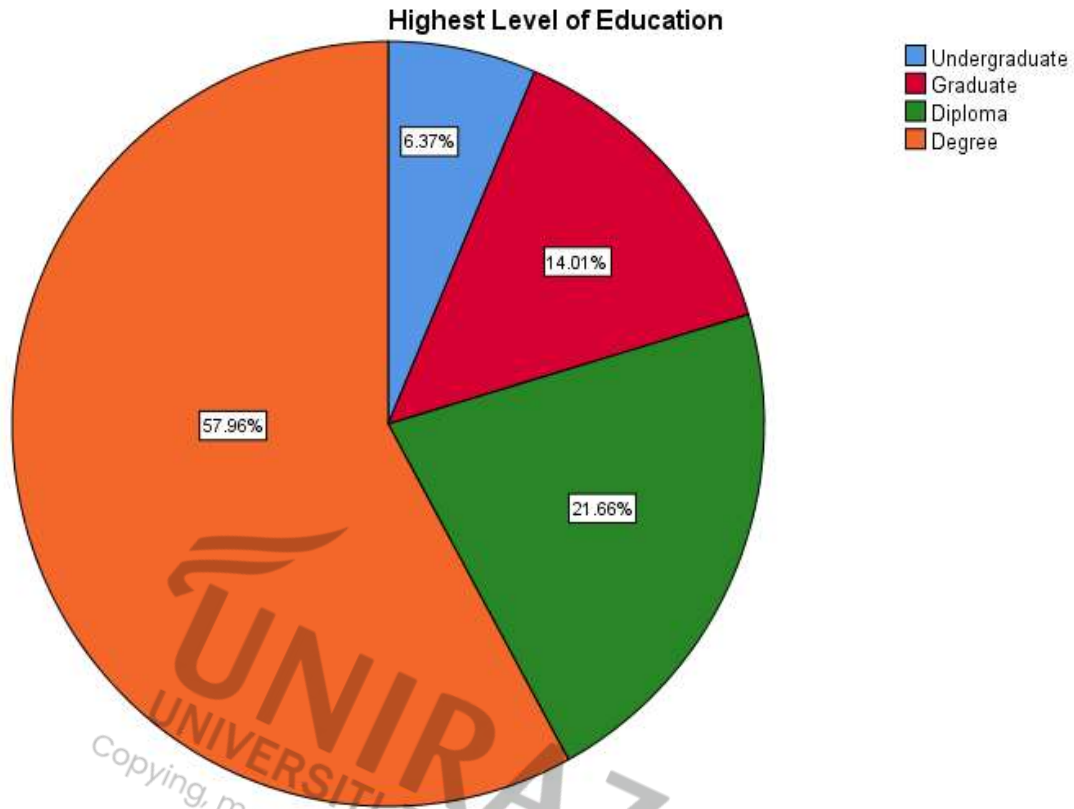
The presented pie chart visually represents the marital status distribution among the respondents in the research study. The chart is divided into two distinct segments: a blue segment representing married respondents, comprising 47.77% of the total, and a larger red segment indicating single respondents, making up 52.23% of the surveyed population. This pie chart clearly illustrates the marital status demographics of the participants, showing that a slight majority of respondents are single, while a significant portion is married. The contrasting colors emphasize the difference in marital status, providing valuable insights into the marital composition of the workforce within the context of the research.

4.6.1.4 Race of respondents



The presented pie chart visually illustrates the racial composition of respondents in the research study. The chart comprises four distinct segments: a green segment representing Indian respondents, constituting 23.72% of the total, a red segment indicating Chinese respondents, making up 7.69% of the surveyed population, a blue segment denoting Malay respondent, comprising the majority at 65.38%, and a smaller orange segment representing respondents from other ethnic backgrounds, accounting for 3.21%. This pie chart vividly portrays the diversity within the respondent pool, showcasing the significant presence of the Malay community, followed by Indian respondents. The varying colors emphasize the diversity of the workforce in terms of race, providing valuable insights into the multicultural composition of the participants within the context of the research.

4.6.1.5 Graph of the highest level of education of respondents



The presented pie chart provides a comprehensive overview of the educational attainment levels among the respondents in the research study. Four distinct segments are visible: the blue segment representing individuals with an undergraduate qualification, accounting for 6.37% of the total respondents; the red segment indicating respondents with a graduate degree, comprising 14.01% of the surveyed population; the green segment denoting those with a diploma, making up 21.66%; and the dominant orange segment representing individuals with a degree, constituting 57.96%. This visualization illustrates the educational diversity within the respondent pool, indicating that a substantial majority possess a degree, followed by respondents with a diploma. The varying colors serve to emphasize the diversity in educational backgrounds, offering a clear snapshot of the qualifications of the workforce under examination. This data is vital for understanding the educational landscape of the participants and is integral to the overarching analysis in the research study focused on the impact of digitalization on the Malaysian workforce.

4.7 R-square test

The R-square test is performed to assess the goodness of fit of the regression model. It measures the proportion of the variance in the dependent variable (workforce outcomes) that can be explained by the independent variables (digitalization transformation factors). A higher R-square value indicates a stronger relationship and a better fit of the model.

Models	R- squared R²	Adjusted R²
Model	.541	.529

Table 4.4: R-square test table

According to the above table finding values R-square value 0.541, this means that the independent variables are responsible for 54% of the entire variation in the dividend yield. According to the results in the table, an adjusted R-square of 0.787 indicates that 52% of the variance in the dividend yield may be attributable to unrelated factors.

4.8 F-test

The F-test is conducted to evaluate the overall significance of the regression model. It helps determine whether the independent variables, collectively, have a significant impact on the dependent variable. If the F-test yields a statistically significant result, it indicates that digitalization transformation has a significant influence on workforce outcomes in Malaysian organizations.

Models	F-test	Decisions
Model	44.805***	“At least one independent variable explains the dependent variable”.

Table 4.5: F-test table

The F-test, also known as the F-value, is a statistical test used to compare the variances of two or more samples or to evaluate the overall significance of a regression model. It is a widely used tool in statistics, particularly in analysis of variance (ANOVA) and regression analysis. In ANOVA, the F-value is employed to assess whether the means of multiple groups being compared are equal, which is the null hypothesis. By comparing the variances between groups, the F-test determines if at least one group mean significantly differs from the others. If the calculated F-value is higher than the critical value for the selected level of significance, the null hypothesis is rejected, indicating that there are significant differences between the

group means. In regression analysis, the F-value is used to examine the overall significance of the model. It helps determine whether the independent variables, as a group, have a significant effect on the dependent variable. If the F-value in the regression analysis is greater than 1, it suggests that at least one of the independent variables significantly influences the dependent variable. The calculated F-value is compared to a critical value at a given level of significance to assess the significance of the model. According to the above results, at a 5% level, the models F-Test value 44.805*** is significant. The P-value is 0.000, which is less significant than the 5% limit. So many people reject the H_0 . The results show that the independent and dependent variables have at least one significant association that contributes to the explanation of the relationship.

4.9 Correlation

Correlation analysis is performed to examine the strength and direction of the relationship between digitalization transformation and various workforce outcomes. This analysis helps identify specific variables that are positively or negatively correlated with digitalization transformation, providing insights into which aspects of the workforce are most affected.

		WF	OS	ADT	SE	D
WF	Correlation	1				
OS	Correlation	.653**	1			
ADT	Correlation	.671**	.696**	1		
SE	Correlation	.117	.209**	.142	1	
D	Correlation	.655**	.640**	.654**	.109	1

Table 4.6: Correlation table

The above table shows that there is a significant relationship between the independent variables and the dependent variables. As each of these variables has a significant value, they are all related to one another. There are several variables that show weak correlation with one another. They all show a high correlation of .696** between the variables ADT and OS. There is a .109 weak correlation between D and SE over all subjects. All variables are positively correlated. It indicates that they positively interacted with one another. If one variable rises, the second variable's correlation coefficient will rise as well.

4.10 Summary

Based on the analysis conducted, it can be concluded that digitalization (D) has a significant effect on organization support (OS) in the workforce in organizations in Malaysia. The p-value of 0.000, which is less than the predetermined significance level (α), indicates that the relationship between digitalization and organization support is statistically significant. Additionally, skills and education (SE), access to digital technologies (ADT), and workforce performance (WP) also have significant effects on organization support (OS). These variables play important roles in shaping the level of support provided by the organization to its workforce in the context of digitalization transformation. Furthermore, it is worth noting that organization support (OS) acts as a mediator variable in this study. This means that it indirectly affects the response variable, which was not explicitly mentioned in your provided information. However, based on the given variables, it can be inferred that the response variable could be related to the overall effectiveness or success of digitalization transformation in the organization. In conclusion, the study demonstrates that digitalization, along with skills and education, access to digital technologies, and workforce performance, significantly influences organization support in the workforce of Malaysian organizations. These findings emphasize the importance of considering these factors in driving successful digitalization initiatives and fostering an environment of support within organizations. According to above results and tables, as p-value $(0.000) \leq \alpha$ so we reject hypothesis and conclude that model has shown significant results. In other words, D (digitalization), SE (skills and Education), ADT (Access to digital technologies), OS (Organization support), and WP (workforce performance) have the significant effect on the variable OS (Organization support). OS (Organization support) is our mediator variable which indirectly affects our response variable.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.1 Introduction

In this chapter, we will discuss the impact of digitalization on workforce performance in Malaysian organizations on the base of the results that I get in chapter 4. The variables under investigation include independent variables (IV) such as Digitalization, Skills and Education, Access to digital technologies, and Organization Support, and the dependent variable (DV) which is Workforce performance. The discussion will focus on the findings obtained from the research conducted, and a conclusion will be drawn based on the results.

5.2 Summary of descriptive analysis

In this, we will discuss the findings of the descriptive analysis conducted on the impact of digitalization on workforce performance in Malaysian organizations. The analysis provides insights into the demographic characteristics of the respondents, including gender, age, marital status, ethnicity, and educational qualifications. According to the data presented in Table 4.2, it is observed that the majority of respondents were male, accounting for 60.4% of the population, while females accounted for 38.4%. This distribution suggests a slightly higher representation of males in the sample. Regarding the age distribution, the largest proportion of respondents, 54.7%, falls within the 20 to 35 age range. The next significant group comprises individuals aged between 36 to 45, accounting for 30.2%. The age range of 46 to 55 represents 11.9% of the respondents, while individuals above 50 years old constitute 1.9% of the sample. These results indicate a relatively younger workforce in the organizations under study. In terms of marital status, the data reveals that 47.2% of the respondents are married, while 51.6% are single. These findings suggest a relatively balanced representation of married and single individuals in the sample. Examining the ethnic distribution, Malaysians represent the largest group, accounting for 64.2% of the respondents. Indians comprise 23.2% of the sample, followed by Chinese with 7.5%. The remaining 3.1% represents individuals from other ethnicities. These findings reflect the multicultural nature of the Malaysian workforce. Regarding educational qualifications, the data reveals that the majority of respondents hold a professional degree, comprising 57.2% of the sample. The next significant group consists of individuals with a diploma, representing 21.4% of the respondents. Graduate degree holders constitute 13.8% of the sample, while undergraduate degree holders account for 6.3%. These results indicate a relatively high educational attainment among the respondents, with a significant proportion holding professional degrees. In summary, the descriptive analysis provides an overview of the demographic characteristics of the respondents. The findings suggest a slightly higher representation of males in the sample, a younger workforce, a balanced distribution of marital status, a multicultural workforce with Malaysians as the majority, and a significant

proportion of respondents with professional degrees. These insights into the sample composition lay the foundation for further analysis and understanding of the impact of digitalization on workforce performance in Malaysian organizations.

5.3 Discussion

In this, we will discuss the results of the study on the impact of digitalization on workforce performance in Malaysian organizations. The study focused on several variables, including digitalization, skills and education, access to digital technologies, workforce performance, and organization support. The objective was to understand how these variables interact and influence each other in the context of digital transformation. The results of the study indicate that digitalization, along with skills and education, access to digital technologies, and workforce performance, significantly influences organization support in the workforce of Malaysian organizations. These findings highlight the importance of considering these factors in driving successful digitalization initiatives and fostering an environment of support within organizations. The study also revealed that organization support acts as a mediator variable in this context. This means that organization support indirectly affects the response variable, which was not explicitly mentioned in the provided information. However, based on the given variables, it can be inferred that the response variable could be related to the overall effectiveness or success of digitalization transformation in the organization. The statistical analysis conducted in this study supports the significance of the relationships among the variables. The p-value for all the variables was found to be less than the predetermined alpha level (α), indicating statistical significance. Specifically, the p-value for the relationship between digitalization, skills and education, access to digital technologies, and workforce performance with organization support was 0.000, which is less than α . Therefore, we reject the null hypothesis and conclude that the model has shown significant results. These findings have important implications for Malaysian organizations seeking to implement digitalization initiatives. It is crucial for organizations to prioritize skills and education development among their workforce to enhance their capability to adapt to digitalization. Access to digital technologies also plays a significant role, as it provides employees with the necessary tools and resources to leverage digitalization effectively. Furthermore, the study emphasizes the importance of organization support in driving the success of digitalization initiatives. By fostering a supportive environment, organizations can encourage their workforce to embrace digital transformation and enhance their performance. This support can come in the form of training programs, resources, and infrastructure that facilitate the adoption and utilization of digital technologies. In conclusion, the study demonstrates that digitalization, along with skills and education, access to digital technologies, and workforce performance, significantly influences organization support in the workforce of Malaysian organizations. These findings underscore the importance of considering these factors in driving successful digitalization initiatives and

fostering an environment of support within organizations. By recognizing and addressing the needs of their workforce in the digital age, organizations can maximize the benefits of digitalization and stay competitive in today's rapidly evolving business landscape.

5.4 Implication of the study

The implications of the study are described below.

Enhanced Productivity:

The study revealed that digitalization has a positive impact on productivity in Malaysian organizations. With the implementation of digital technologies, employees can automate routine tasks, streamline workflows, and access information more efficiently. As a result, organizations can achieve higher productivity levels. To capitalize on this finding, organizations should invest in training programs to ensure employees have the necessary skills to effectively use digital tools. Furthermore, organizations should encourage a culture of continuous learning to adapt to technological advancements and maximize productivity gains.

Improved Communication and Collaboration:

Digitalization enables seamless communication and collaboration among employees, regardless of their geographical locations. This study found that organizations that leverage digital communication tools and collaborative platforms experience improved teamwork, knowledge sharing, and innovation. Malaysian organizations should invest in communication technologies and collaborative platforms that facilitate virtual meetings, project management, and document sharing. Additionally, organizations should foster a culture of open communication and collaboration to fully leverage the benefits of digitalization.

Flexibility and Work-Life Balance:

Digitalization has revolutionized the concept of work-life balance by enabling remote work and flexible schedules. The study highlighted that organizations embracing digitalization offer flexible work arrangements, leading to higher employee satisfaction and engagement. Malaysian organizations should consider implementing flexible work policies and providing employees with the necessary digital tools to work remotely. It is crucial for organizations to establish clear guidelines and expectations to ensure work-life balance is maintained while working in a digital environment.

Skills Development and Reskilling:

The study emphasized the need for continuous skills development and reskilling in the digital era. As digital technologies evolve rapidly, organizations must invest in training programs to equip employees with the required digital skills. Malaysian organizations should collaborate with educational institutions, government bodies, and industry associations to develop relevant training programs and certifications. By

investing in employee skills development, organizations can ensure a competent and adaptable workforce that can effectively leverage digital tools to drive performance.

Data-driven Decision Making:

Digitalization generates vast amounts of data that can be leveraged for informed decision-making. The study revealed that organizations that embrace data analytics and business intelligence tools make better decisions and gain a competitive edge. Malaysian organizations should invest in data analytics capabilities and develop a data-driven culture. This requires training employees on data analysis and providing them with the necessary tools to access and interpret data. Furthermore, organizations should establish data governance frameworks to ensure data privacy, security, and compliance.

5.5 Future research

The future research of the study is described below.

- Conduct a longitudinal study to examine the long-term effects of digitalization on workforce performance in Malaysian organizations. This research can assess the sustainability and durability of the improvements observed in the initial stages of digital transformation. It can provide insights into how digitalization impacts productivity, employee engagement, job satisfaction, and overall organizational performance over an extended period.
- Explore the impact of digitalization on different industries in Malaysia, such as manufacturing, banking, healthcare, and retail. Investigate how the implementation of digital technologies varies across sectors and how it influences workforce performance. This research can identify industry-specific challenges, opportunities, and best practices for optimizing the benefits of digitalization.
- Examine the evolving skill requirements resulting from digitalization and identify the gaps in the current workforce's skills. Investigate the effectiveness of training programs and initiatives in upskilling and reskilling employees to adapt to the digital era. This research can help develop targeted training programs that address the specific needs of Malaysian organizations and ensure the workforce remains competent and competitive.
- Investigate the psychological and socio-cultural factors that influence the adoption and acceptance of digital technologies by the workforce in Malaysian organizations. Explore how attitudes, beliefs, and organizational culture affect the implementation and success of digitalization initiatives. This research can provide insights into managing change, overcoming resistance, and promoting a positive digital mindset among employees.

5.6 Recommendations

The recommendations of the study are described below.

- Encourage organizations to invest in digital literacy programs to enhance the workforce's understanding and proficiency in using digital tools and technologies. This can be achieved through training sessions, workshops, and online learning platforms. Increasing digital literacy will empower employees to leverage technology effectively, resulting in improved performance and productivity.
- Create an organizational culture that embraces innovation, experimentation, and continuous learning. Encourage employees to explore and implement new digital solutions that enhance their work processes and improve outcomes. Recognize and reward innovative ideas and initiatives to motivate employees to actively engage in digital transformation efforts.
- Ensure that organizations provide the necessary resources, such as budget, infrastructure, and technical support, to implement digitalization initiatives effectively. This includes providing access to modern digital tools, software, and hardware required to optimize workforce performance. Additionally, organizations should establish support systems, such as dedicated IT helpdesks or digital transformation teams, to assist employees in adapting to and troubleshooting digital technologies.
- Encourage collaboration and effective communication among employees, departments, and hierarchical levels within organizations. Digitalization often enables smoother information sharing and communication channels, resulting in improved teamwork, knowledge exchange, and overall performance. Employ collaboration tools, such as project management software or virtual meeting platforms, to facilitate seamless collaboration and enhance workforce productivity.
- Regularly assess and evaluate the impact of digitalization initiatives on workforce performance. Collect and analyze relevant data, such as productivity metrics, employee feedback, and customer satisfaction, to measure the effectiveness of digitalization efforts. This will enable organizations to identify areas for improvement, make informed decisions, and continuously optimize digitalization strategies to maximize workforce performance.
- Recognize and address potential challenges and barriers to digitalization, such as resistance to change, lack of technical skills, or cybersecurity concerns. Develop change management strategies that involve clear communication, employee involvement, and training programs to mitigate these challenges effectively. Encourage open dialogue and feedback to address any concerns and ensure a smooth transition to a digitalized work environment.

By conducting future research and implementing these recommendations, Malaysian organizations can better understand the impact of digitalization on workforce performance and optimize their digital transformation efforts for improved productivity, innovation, and competitiveness.

5.7 Conclusion

This research has investigated the influence of digitalization on workforce efficiency within Malaysian organizations. The results underscore a significant positive correlation between digitalization and workforce productivity. Key elements such as education and skills, availability of digital tools, and support from the organization were identified as crucial factors in maximizing the advantages of digitalization. To boost workforce efficiency in the digital era, Malaysian organizations should prioritize investments in programs for developing digital skills, offer accessibility to digital resources, and cultivate a supportive organizational environment. These efforts can empower employees to effectively utilize digital technologies, driving enhancements in productivity, innovation, and overall performance. With technology's continuous advancement and the increasing prevalence of digitalization, further research is essential to explore additional factors and dynamics affecting workforce performance in the digital age. Nevertheless, this study provides valuable insights for Malaysian organizations seeking to navigate the digital landscape and optimize their workforce efficiency.

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APPENDIX A

Questionnaires: Impact of digitalization on the workforce performance in Malaysian organizations

Good day to you! My name is Parvin Raj and I am pursuing Masters in Business Administration in UniRazak. I am conducting a study on the Impact of digitalization on the workforce in Malaysian organizations. Please kindly assist to complete this 10-minute survey. Your responses will be anonymous and all the data collected and will be not disclosed to any third party. Thank you for your participation and your contribution is highly appreciated.

Please answer all the questions by indicating with a cross (X) your answer. All the information given will be kept confidential.

SECTION A: DEMOGRAPHIC QUESTIONS

Please tick (✓) in the space provided

1. Gender

- i) Male
- ii) Female

2. Age:

- i) 20-35years
- ii) 35-45years
- iii) 45- 55 years
- iv) 50 or above

3. Race

- i) Malay
- ii) Chinese
- iii) Indian
- iv) Others: _____

4. Marital status

- i) Married
- ii) Single

5. Highest Level of Education:

- i) Undergraduate ()
- ii) Graduate ()
- iii) Diploma ()
- iv) Degree ()

Section B: Digitalization (Choose one Answer. 1 = Strongly Agree, 2=Agree, 3=Neutral, 4=Disagree 5 = Strongly Disagree)

Questions	1	2	3	4	5
Digitalization is important to consider its role in shaping the experiences of workers performances					
Digitalization refers to integrating digital technologies and processes into all areas of organizational life.					
Digitalization is a driving force behind the transformation of the workforce in organizations in Malaysia.					
Digitalization has enabled remote work and virtual collaboration.					
Digitalization has helped to diversify the Malaysian economy and create new sources of employment.					

Section C: Skills and Education (Choose one Answer. 1 = Strongly Agree, 2=Agree, 3=Neutral, 4= Disagree 5= Strongly Disagree)

Questions	1	2	3	4	5
The current education system in Malaysia is adapting to the digital age.					
Malaysia is investing in workforce development programs to improve the skills and employability of workers.					

Workers in Malaysia who possess digital skills and a good education are better positioned for career advancement.					
The rapid pace of technological change is driving a need for workers to upgrade their skills.					
Everyone can improve their skills, with a common goal: to create a more engaging and effective education process.					

Section D: Access to digital technologies (Choose one Answer. 1 = Strongly Agree, 2=Agree, 3=Neutral, 4= Disagree 5= Strongly Disagree)

Question	1	2	3	4	5
The digital divide significantly impacts their ability to participate in the digital economy and compete for jobs.					
Access to digital technologies is crucial for remote work.					
Digital technologies provide new opportunities for entrepreneurship and innovation.					
Organizations in Malaysia are taking steps to bridge the digital divide and increase access to digital technologies for all workers.					
Access to digital technologies is crucial for workers to upgrade their skills.					

Section E: Organization support (Choose one Answer. 1 = Strongly Agree, 2=Agree, 3=Neutral, 4= Disagree 5= Strongly Disagree)

Question	1	2	3	4	5
The organization strongly considers your goals and values.					
Help is available from the organization when you have a problem.					
The organization would forgive an honest mistake on your part.					
The organization shows very little concern for you.					

Section F: Workforce Performance (Choose one Answer. 1= Strongly Agree, 2=Agree, 3=Neutral, 4= Disagree 5= Strongly Disagree)

Question	1	2	3	4	5
Everyone looking for work in Malaysia is well aware of the necessity to improve their professional qualifications to take advantage of the possibilities presented by technology.					
The Malaysia organization policies and procedures have a positive impact on the workforce.					
The organization recognizes and rewards employees for their hard work and achievements.					
The organization provides a safe and healthy work environment for its employees.					
The organization encourages a work-life balance for its employees.					



APPROVAL PAGE

**TITLE OF PROJECT: IMPACT OF DIGITALIZATION ON THE PERFORMANCE
 OF THE WORKFORCE IN MALAYSIAN
 ORGANIZATIONS**

NAME OF AUTHOR: PARVIN RAJ NAGALINGGAM

The undersigned is pleased to certify that the above candidate has fulfilled the condition of the project paper prepared in the partial fulfilment for the award of the degree of Master of Business Administration.

SUPERVISOR

Signature :
Name :
Date :

ENDORSED BY:

Dean
Graduate School of Business
Date:

