UNDERSTANDING THE USAGE OF TECHNOLOGY ACCEPTANCE TOWARDS THE AGRICULTURE IN MODERN WORLD

A project report submitted in fulfillment of the requirement for the award Bachelor of Technology Management (High Technology Marketing) With Honours

By

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SUPERVISOR DECLARATION

I certify that this thesis entitled "Understanding the usage of technology acceptance in agriculture in modern world " was prepared by YUVENDRAN A/L ELANGOVAN has meet the required standard for submission in partial fulfillment of requirement for the award of Bachelor of Technology Management (High Technology Marketing) With Honours at Universiti Teknikal Malaysia Melaka.

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‘With the exception of citations and quotations that have been properly acknowledged, I hereby declare that this thesis is based on my original work.' I further declare that it has not been submitted for any degree or award at Universiti Teknikal Malaysia Melaka or any other institution earlier or concurrently.'

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DEDICATION

I would like to appreciate the dedication to my precious parents, Mr Elangovan and Mrs Vasanki who have been my ultimate source of motivation. They always gave me strength when I thought of giving up, who continuously provide their moral, spiritual, emotional and financial support. A special thanks to my supervisor, Miss Atikah Saadah Binti Selamat and panel, Dr. Atirah Binti Sufian who guided me throughout this research. To my relatives, friends and who shared their words of advice and encouragement to complete this research project. Without their blessing and encouragement, this research is impossible to complete in a very short period of time.

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ABSTRACT

A wide range of usage of technology in agriculture and the acceptance will be discuss in this research. In this research, we'll examine how effective the technology which used in agriculture will result in the agriculture performance in Malaysia. In this study, it includes of two main independent variable which are Perceive usefulness and perceive ease to use and the dependent variable agriculture performance in with modern technology in Malaysia. Quantitative research was used to conduct this research. Therefore, a questionnaire-based survey was used to collect data from 150 to 200 respondents among the management people from agriculture firm, co-workers, and farmers in Perak, Malaysia. This research uses quota sampling as non-probability sampling where samples were selectively to chosen. The data obtained is analyzed using Statistical Package from the Social Science (SPSS). From the results, perceive usefulness and perceive ease of use had strong impact on the usage of technology in agriculture. The hypothesis in this research was valid and supported by the findings. The findings of this study revealed that all relevant constructs had shown significant relationship between the usage of technology acceptance in agriculture performance in Malaysia.

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CHAPTER 1

INTRODUCTION

1.0 INTRODUCTION

In this chapter, it will discuss about our research topic of the "understanding the of technology acceptance in agriculture". It includes the background of study, problem statement, research question, research objectives, scope and limitation of study, significant of study, and summary of this chapter.

1.1 BACKGROUND OF STUDY

Agriculture was an important step in the growth of sedentary human civilization, since it produced food surpluses that allowed people to live in cities. Agriculture has been around for thousands of years. Beginning at least 105,000 years ago, fledgling farmers began to sow wild grains approximately 11,500 years ago. Domestication of pigs, sheep, and cattle began around 10,000 years ago. Plants were grown separately in at least 11 different parts of the world. In the twentieth century, industrial agriculture based on large-scale monoculture grew to dominate agricultural production, despite the fact that around 2 billion people still relied on subsistence agriculture. Agriculture produces various key goods, which may be roughly classified as foods, textiles, fuels, and raw materials (rubber, woods, papers). Cereals (grains), vegetables, fruits, oils, meat, milk, eggs, and fungus are examples of food classes.

Modern agronomy, plant breeding, agrochemical including pesticides and

fertilisers, and technology advances have dramatically enhanced food yields while incurring ecological and environmental harm. Selective breeding and modern animal husbandry procedures have also increased meat output, but have generated worries about animal welfare and environmental impact. Contributions to global warming, aquifer depletion, deforestation, antibiotic resistance, and growth hormones in industrial meat production are all examples of environmental challenges. Agriculture contributes to and is affected by environmental deterioration, such as biodiversity loss, desertification, soil degradation, and global warming, all of which can reduce agricultural productivity. Although certain genetically modified organisms are prohibited in some countries, they are routinely used.

In today's modern time Technological innovations have greatly shaped agriculture throughout time. From the creation of the plow to the global positioning system (GPS) driven precision farming equipment, humans have developed new ways to make farming more efficient and grow more food. We are constantly working to find new ways to irrigate crops or breed more disease resistant varieties. These iterations are key to feeding the ever-expanding global population with the decreasing freshwater supply.

1.2 PROBLEM STATEMENT

Agriculture is one of the most vital industries for a country's development. This is because agriculture produces food for individuals while also providing a source of money for the government. Agriculture practices have declined in certain emerging and disadvantaged nations during the last few decades for a variety of reasons. The first factor is extreme climate change, which has resulted in a scarcity of nutrients and water in many areas. The second factor is a shortage of manpower, which is the most prevalent difficulty faced by countries that rely on agriculture. Nowadays, young people are reluctant to participate in agricultural operations because they believe it is unsuitable for the future generation, and they prefer to work for corporations. According to Margaret Cunningham (2021) one of the most serious issues confronting agriculture is the loss of agricultural land, since as more land is

lost, it becomes more difficult to produce the amount of food required to feed the world's rising population. Every year, about three million hectares of agricultural land are lost because the soil deteriorates and becomes useless owing to erosion, which occurs when soil components shift from one site to another due to wind or water.

To overcome this types of problems many countries are introduced many types of technologies in agriculture such as Drone technology, many harvesting machine, tractors, modern equipment, modern technique which gives proper nutrition to the soil in natural way. Besides, these technologies are also helps to reduce the cost in agriculture activities and also produce more outcome which helps to gain more profits. But still in many countries the agriculture activities are being lesser day by day although they have more opportunity outside there but they did not realized. In human civilization agriculture are our fundamental.

1.3 RESEARCH QUESTION

1.3.1 What are the relationship between perceive usefulness and perceive ease towards with the agriculture performance?

1.3.2 Which of the independent variable (perceive usefulness and perceive ease to use) have the most significant to improve the agriculture performance?

1.4 RESEARCH OBJECTIVE

1.4.1 To identify the relationship of perceive usefulness and perceive ease to use toward the agriculture performance.

1.4.2 To determine the factor which have the most significant improvement on agriculture.

1.5 SCOPE OF THE STUDY

The scope of this research paper is to focus on the acceptance of technology in agriculture activities in today's modern world. This research scope consist of latest technologies which used in modern agriculture and also the effectiveness. Besides problem solving, reasons of agriculture activities are being lesser and the importance of agriculture activity.

1.6 SIGNIFICANCE OF THE STUDY

The findings of this research will redound to the benefit of the society considering that technology acceptance play an important role in agriculture. Through this research, the community will further realize technology as an enhancing way towards agriculture. Moreover, the analysis presented in this research will convey valuable information for the future research that will explore other capabilities of technology in enhancing different industry. Besides, through the analysis made by this research, it will benefit the start-up agriculture industry in deciding which technology should they employ. As well, this research will enable the government or policy maker to gain more data or statistic on the technology which helps to enhance the agriculture industry revenue.

1.7 SUMMARY

As a conclusion, this research focus on the acceptance of technology in agriculture activities in today's modern world. The research starts with discussing the background of study and coming up with problem statement of this study. After that, the researcher had dedicated two research question and research objective for this study. The researcher also highlighted the scope and limitation in this study. Finally, the significant to conduct this study also be discussed in this chapter. In the next chapter, the study will continue with literature review of this research.

CHAPTER 2

LITERATURE REVIEW

2.0 INTRODUCTION

Literature review is an evaluative research of information in the literature related to the research. It is important to establish a literature base because it provided a clear understanding of existing knowledge base for the problem occurred in the real world. Therefore, the literature review is based on the original, authoritative and present sources like journals, articles and others published sources. The definitions of agriculture technology will be discussed in this chapter. Perceive usefulness and perceive ease to use which are the independent variable such as types of technology, the effectiveness, how they use the technology and accept it as an easy way to use will also be discussed in this chapter.

2.1 AGRICULTURE TECHNOLOGY

Agricultural technology, often known as agro-technology, is the application of technology in agriculture, horticulture, and aquaculture with the goal of increasing output, efficiency, and profitability. Agricultural technology can refer to agricultural products, services, or applications that improve different input/output processes.

The 20th century saw significant breakthroughs in agricultural technologies, including the creation of synthetic fertilizers and pesticides, as well as new agricultural machinery such as mass-produced tractors and agricultural aircraft for aerial pesticide application. Agricultural plastics, genetically modified crops,

enhanced drip irrigation, and soil-less farming systems such as hydroponics, aquaponics, and aeroponics are examples of recent improvements.

Robots, temperature and moisture sensors, aerial photographs, and GPS technology are all often used in agricultural today. Precision agriculture and robotic technologies, as well as modern equipment, enable enterprises to be more lucrative, efficient, safe, and environmentally friendly.

2.2 INDEPENDENT VARIABLE

2.2.1 PERCEIVE USEFULNESS

Perceived usefulness is recognized to be a direct predictor of the intention to utilize the technology (Park et al., 2014). Perceived usefulness is interpreted differently by various researchers. This means that agriculture workers will have different perspectives on the extent to which the use of technology will assist them in making activities easier and more convenient to perform. Similarly, perceived usefulness is defined as an individual's perception that using the new technology would increase or improve his or her performance (Davis, 1993). If technology can increase the advantages of its use to the user, the user is more likely to continue using it since the user may receive benefits. Based on this context of the study, Agriculture workers will accept the Modern technology in agriculture if they provide benefits to them by, improving the Agriculture workers' performance and receiving benefits from using technologies such as machines, nanotech, drone technology, agrofarming technology and so on

2.2.2 PERCEIVE EASE OF USE

Perceived ease of use (PEOU) reflecting the extent to which a person believes it is easy to use a particular system. According to Davis (1989), perceived ease-of- use is "the degree to which a person feels that utilizing a

specific technology would be effortless." User-centric conception is ease of use. I have Specify the perceived ease of use as a self-determining factor to examine the impact of technology use in agriculture intention of users. According to Davis (1989), perceived ease of use is the degree to which a person believes that utilizing a particular system would be free of effort. Agriculture workers adopting the technology is as important as the easiness to use the technology. Individuals are more likely to accept a technology if it is easy and convenient to use. (Richad et al., 2019) further state that when the interaction between the user and the technology is clear and easy to comprehend, users of technology do not need to exert much effort in using them. In the context of this study, the perceived ease of use is used to measure the extent to which the technology acceptance is much user-friendly and convenient for agriculture workers to use to help to make easily for the agriculture activity.

2.3 DEPENDENT VARIABLE

2.3.1 AGRICULTURE PERFOMANCE WITH MODERN TECHNOLOGY

According to Mangla (2018), sustainability performance focuses on the efficient use and consumption of natural resources in order to achieve a balance in the ecological, economic, and sociological aspects of agricultural food. Agriculture performance consist of natural resources (air, water and sun light), the effectiveness of agriculture activity which consist of soil nutrition, soil quality, men power, technology which have used and so on.

Nidhi Sharma, Amit Kumar Mungarwal (2019) said Modern agriculture is driven by continuous improvements in digital tools and data as well as collaborations among farmers and researchers across the public and private sectors. During the Green Revolution in the 1960s, India could achieve self-sufficiency in food grain production by using modern methods of

agriculture like better quality of seeds, proper irrigation, chemical fertilizers and pesticides.

As time passed, more technological advances appeared in agriculture. The tractor was introduced, followed by new tillage and harvesting equipment, irrigation and air seeding technology, all leading to higher yields and improved quality of the food and fibre that was grown. It is possible for farmers to utilise scientific data and technology to improve crop yields and keep themselves up-to-date with cutting edge methods of farming.

2.4 USAGE OF TECHNOLOGY

Technology is the ever-changing consequence of collected knowledge and application in all techniques, skills, methods, and procedures employed in industrial manufacturing and scientific research. Technology is incorporated in the functioning of all machinery, with or without thorough understanding of their function, for an organization's stated purpose. Systems are the building blocks of society's technology. Systems apply the intended application of a technology's acquired knowledge by acquiring an input, adjusting this input for the system's intended purpose via a process, and then creating a result that affects the system's final intended purpose. This is often referred to as a technical system or a technological system.

Through the adoption of tools such as the internet and email for communications, word processing, spreadsheets, and presentations for office productivity, electronic databases for record keeping, and robots and artificial intelligence for automation, technology has evolved and shaped our workplaces in numerous ways. While technology, technological advances, and ultimately society's pursuit of the technological singularity have aided economic development and the rise of a leisure class, many technological processes produce unwanted by-products such as pollution and the depletion of natural resources from the Earth's environment. As a result, philosophical arguments have erupted on the employment of technology and whether technology helps or deteriorates the human state. Neo-Luddism,

anarcho-primitivism, and similar reactionary movements criticize the pervasiveness of technology by stating that technology harms the environment and destroys human relationships.

Despite this, philosophies such as trans humanism and techno-progressivism see ongoing technology progress as good to society and the human condition. Although technology is still being questioned and disputed, its critical role as the backbone of industrial production and scientific research continues to thrive.

2.5 TAM MODEL

The Technology Acceptance Model (TAM) is a hypothesis that describes how people perceive technology. Davis (1986) developed this model to describe how system parameters affect computer-based technology system users. TAM is the most extensively used model for identifying factors that influence technology adoption. According to the hypothesis, when consumers are faced with new technology, various variables impact their decision about how and when to utilise the technology (Ardiansah, Chariri, Rahardja, & Udin, 2020; Lindsay et al., 2011). TAM aims to explain the factors of general computer adoption and user behaviour across a wide range of end-user computing technologies and user groups (Rondan-Catalua et al., 2015).TAM was used to try to find basic factors that had been proposed by prior research. It defines the links between perceived utility, perceived ease-of-use, computer usage attitude, and desire to utilise technology (Teo et al., 2011).

This model demonstrates that when consumers are introduced with new technology, certain aspects impact their judgments about how and when to utilise it. The perceived utility and perceived ease-of-use are the two most essential variables. Thus, user acceptability of an information system is determined by two criteria, namely perceived utility and perceived ease-of-use, according to TAM. Together, these variables shape attitudes regarding the use of technology, which might influence behavioural intentions to use, ultimately leading to system usage.

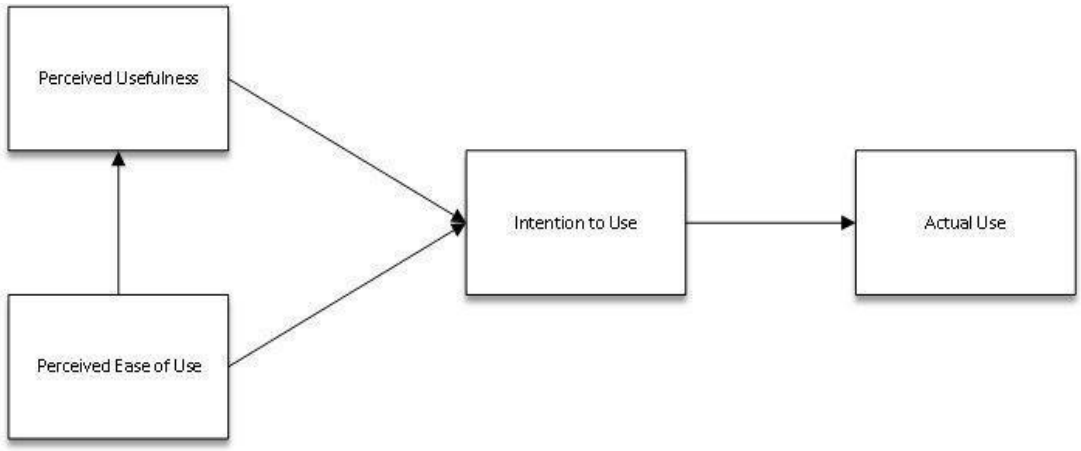

Figure 2.1 : TAM Model

2.6 RESEARCH FRAMEWORK

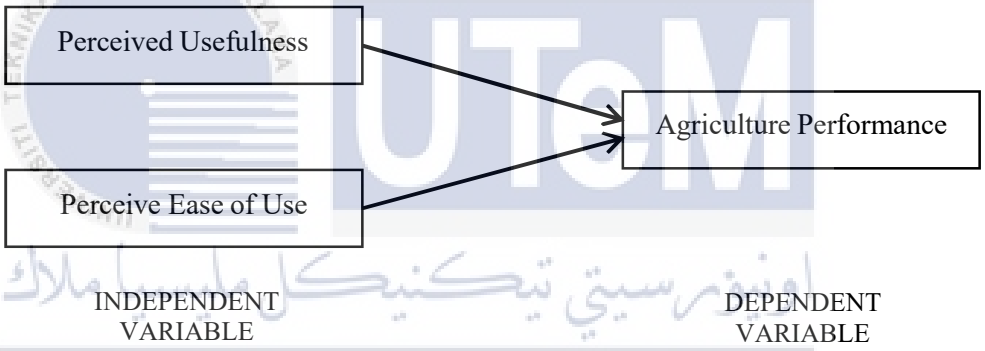

Figure 2.2 : Research Framework

2.7 HYPOTHESIS TESTING

A research hypothesis is a distinct, explicit, and testable claim or prediction regarding the likely outcome of a scientific research study based on a specific attribute of a population, such as anticipated disparities between groups on a given variable or correlations between variables. One of the most significant tasks in organizing a scientific quantitative research study is defining the research hypothesis. The researcher developed two hypothesis based on the study framework in Figure 2.2.

Hypothesis 1 (H1) : Perceive Usefulness

H1 : There is a significant relationship between perceive usefulness and towards agriculture performance.

Hypothesis 2 (H2) : Perceive Ease of Use

H2 : There is a significant relationship between perceive ease of use and agriculture performance.

2.8 SUMMARY

The researcher has examined the definition of agriculture performance, perceive usefulness, perceive ease of use, agriculture performance with modern technology, usage of technology and TAM Model. The researcher created a study framework with two independent variables and one dependent variable. The researcher also created two hypothesis tests to assess the link between the independent and dependent variables. The study will continue with the research methods of this research in the next chapter.

CHAPTER 3

RESEARCH METHODOLOGY

3.0 INTRODUCTION

This chapter was concisely described research methodology that associated with this study. As per Rajasekar et al. (2013), research methodology is known as an organized technique for problem-solving which is the scientific studies on how to conduct a research. Whereas according to Kothari (2004), research involve numerous elements such as defining issues, gathering data, making conclusion, conclusion testing and formulating hypothesis.

An organized plan of research method has been conducted for this study and includes design of study, sampling plan, instrument, and data analysis procedures. Moreover, all the research methods that been used are also has been explained in this chapter. Researcher also had explained research design and selected methodology. Source of primary and secondary data that been developed for this study has been further described. Other than that, population, and design of the questionnaire as well as sampling design are been discussed too. Several data analysis approaches are deeply explained, and the summary is included.

3.1 RESEARCH DESIGN

According to Saunders et al. (2020), a research design is a blueprint that is typically utilized in conducting a study on how to address research questions and achieve research goals by outlining the reason for selecting data sources, collecting techniques, and data analysis procedures. The purpose of research design is to assess

the validity of hypotheses that have been established. This study is looking at the usage of technology acceptance towards the agriculture in modern world.

3.1.1 QUANTITATIVE RESEARCH

Quantitative analysis is one of the data collecting designs that includes surveys, experiments, and observations. While developing the quantitative study, all variables should be link-able, quantifiable, and related to one another, and they should be referred to one another while developing the questionnaire. The survey questions include online surveys, smartphone surveys, face-to-face interviews, and various other options. Survey questionnaires with questions about relevant factors will be used in this study to analyse the association between the two variables.

3.1.2 EXPLANATORY RESEARCH

Explanatory research, according to Yousaf (2017), is undertaken to analyse topics that have never been thoroughly studied or well-investigated before. It is sometimes referred to as causal research. Aside from that. According to Saunders et al. (2020), explanatory research is concerned with investigating causal links between research variables. This will aid comprehension and inspire researchers to pursue opportunities to learn something new.

The goal of an explanatory research design is to investigate the cause and effect relationship between the independent variable and the dependent variable. All secondary data from current and historical studies would be evaluated in this study. The primary data would then be studied to identify the relationship between the deployment of technology acceptance and the agriculture performance.

3.2 DESCRIPTIVE RESEARCH

A descriptive research is a sort of decisive research that seeks to answer a specific topic (Malhotra & Peterson, 2006). A descriptive study's goal is to identify the population or phenomena being studied. The quandary of when and why the function is carried out remains unresolved. It makes no response. The issue of "what" is instead addressed. In this study, descriptive research was utilized to survey a representative sample of managers, co-worker from agriculture firm and farmers in Perak to explore the usage of technology in agriculture. Furthermore, the link between agriculture performance is investigate in this study.

3.3 RESEARCH INSTRUMENT

Once the study design and technique are determined, the researcher should begin selecting research instruments. Questionnaires are chosen and utilized in the data collection process. As a consequence, the researcher may readily analyse and explain the outcomes of the data acquired via the survey forms.

3.3.1 QUESTIONNAIRE

A questionnaire is a data collection device that consists of a series of questions designed to elicit information from respondents. According to a recent study by Saunders et al. (2020), in order to gather and assemble enough data, the questionnaire must be well prepared and effectively organized.

The questionnaire is developed base on the impact of technology toward the agriculture activity to investigate the relationship between both independent and dependent variables. The cost of using questionnaires is relatively low and appeared to be more confidential and anonymous. The questionnaire distributed to estate managers and the management people of estate was requested to complete the survey form. The questionnaire was in English language to provide flexibility for all workers.

3.3.2 QUESTIONNAIRE DESIGN

Questionnaire is designed into three parts that need to be answered by the respondents. The first section of questionnaires, which is Section A, consists of demographic questions of respondents that includes gender, age, job role, and industry. The second section of the questionnaire is developed to convey questions to respondents related to the independent variables of the research, perceive usefulness and perceive ease of use. This is to determine the acceptance of technology in agriculture. Last section of this questionnaire is related to the dependent variables where researcher is concentrated on the agriculture performance.

In the questionnaire, the researcher utilized a 5-point Likert scale to assess each response from the respondents. Sullivan and Artino (2013) developed the 5-point Likert scale as an evaluation instrument for determining the level of agreement or disagreement with a statement in order to determine the most influential factor. According to Joshi et al. (2015), the usage of Likert scales is sometimes used to better understand the views of respondents that are related with a single "latent" variable.

3.4 SAMPLING PLAN

A sample frame is a list that a researcher uses to identify the population of interest. The sampling frame is a collection of elements from which a researcher can draw a sample of the target population. They are often the persons from whom we may gather data for our research. The sample frame for my study issue is estate managers and farmers. Estate management and farmers are the one who using technology in their farming activity. So the exact sampling frame will be estate managers or owners, and the farmers who are doing agriculture activity.

3.4.1 SAMPLING STRATEGY

Sampling is the process of picking respondents from a larger population. According to Saunders et al. (2016), sampling design is connected to survey research, therefore researchers must collect data from the sample to meet study goals. objectives. There are two types of sampling strategies: probability sampling and convenience sampling. Non-probability sampling is used. The non-probability technique is frequently used in quantitative research. research. The non-probability sampling approach is divided into four types: Quota sampling, snowball sampling, convenience sampling, and purposive sampling are all methods of sampling.

Quota sampling has been used to conduct in this research. Quota sampling is more specific with respect to sizes and proportions of sub examples, with subgroups chosen to reflect corresponding proportions in the population. In quota sampling, we decide while designing the study how many people with which characteristics to include as participants. Characteristics include age, place of residence, gender, class, profession, marital status, use of a particular contraceptive method. The researcher will deliver a questioner form to the few estate managers and their employee or farmers around Perak through google form and face to face.

3.4.2 POPULATION

A population may be described as a large collection of people or items with similar qualities that a researcher is interested in. The population is a wider group of people who can be employed as study participants. The primary population of interest in this study is estate managers, co-worker from agriculture firm and farmers in Perak. In the research, there is a population group. As a result, a sample is required to complete the study.

3.4.3 SAMPLE SIZE

According to Martin Murphy (2016), population helps to inform the development of a population definition and sampling framework that will be used in the research project. Besides, Sekaran (2003) defined sample as the subset units that derived from the population. However, population is large group, it is difficult to include a large group of population in research. Therefore, sample is required in order to fulfil the research. In this case, the sample size of this research topic is managers, co-worker from agriculture firm and farmers in Perak. Quota Sampling Method is used to determine the sample measurements for this study. The sample size for this study is 160 participants, according to the sampling procedure.

3.5 Time Horizon

A time horizon, also known as a planning horizon, is a fixed point in the future at which particular operations are evaluated or assumed to cease. Allocating such a set horizon time is crucial in accounting, finance, or risk management so that choices may be evaluated for performance over the same time period. In the real world, a temporal horizon is a physical impossibility (Kelly & Booth, 2013). The two temporal horizon possibilities are cross-sectional studies and longitudinal studies.

According to the Closer Learning Hub website, longitudinal studies differ from one-time or cross-sectional research. The major difference is that cross-sectional studies interview a fresh sample of people each time, whereas longitudinal studies follow the same sample of people through time.

Since the researchers had a limited time to complete the investigation, researcher used horizontal cross-sectional period. During the first semester, the researcher followed the study proposal from chapter 1 to chapter 3. Meanwhile, during the second semester, researchers collected data from respondents, evaluated it, and finished the report.

3.6 DATA SOURCE

Ajayi (2017) defines data as a set of values for quantitative or qualitative variables, as well as the facts or statistics that aid in forming conclusions from a study. According to previous studies, data gathering and search should be completed before proceeding with the current procedure or analyzing information. There are two types of data sources, primary and secondary data.

3.6.1 PRIMARY DATA

Primary data, according to Saunders et al. (2020), is material acquired particularly for research purposes. Primary data is the first gathering of information, which is usually delivered in the form of originals or raw materials. The data will be analyzed and interpreted using statistical methods. Personal interviews, telephone interviews, Delphi approaches, focus groups, video conferencing, self-administered surveys, and other primary data gathering techniques are among them. The questionnaire approach will be employed as the major data source for gathering related data and information in this study. Questionnaire surveys are used because they allow for the collection of data from a wide sample size. To eliminate any bias concerns and to ensure a fair collection of data, questionnaires will be distributed at random. Respondents' personal information will be kept private, and data will be collected solely for academic reasons.

3.6.2 SECONDARY DATA

According to Sekaran and Bougie (2010), secondary data is information obtained in the past or from other previous researchers that has previously been published. While Johnston (2017) defined secondary data as data collected by the previous researcher for some other primary purpose employing statistical equipment. Secondary data is typically derived from main data that has been statistically processed. According to Saunders et al. (2020), secondary data is often used in subsequent research to give new knowledge, explanations, and conclusions. Secondary data may be gathered

from a variety of sources, including journals, online papers, websites, books, and prior researcher works, in order to obtain relevant information for the study. Secondary data is gathered in Chapter 2 to further define the legitimate theory of the associated study, which can aid in providing a better grasp of the research issue

3.7 DATA ANALYSIS METHODS

The data analysis method includes the analysis of data collected from primary sources and generalizes them to the findings of this study. Previous researchers, Sekaran and Bougie (2010), said that data received from respondents will be analysed to evaluate the research hypotheses. The data will be interpreted and evaluated, with analytical and logical reasoning used to analyse the aspects provided by the data.

According to Yin's results, data analysis is better recognized as a process that involves reviewing, classifying, and tabulating information to solve the concerns of the topic in a specific research. Data analysis is used to minimize the amount of gathered data by organizing it, providing summaries, and employing statistical approaches. For data analysis, the Statistical Package for Social Science (SPSS) software is often used. IBM stressed that SPSS is simple to use, adaptable, productive, risk-reducing, and appropriate for users of any skill level and project size and complexity.

3.7.1 RELIABILITY TEST

The reliability test measures the scale needed during the study period to generate a steady and consistent outcome. According to Chakrabartty (2013), the reliability test was used to assess the study's reliability, consistency, repeatability, and precision. According to Heale and Twycross (2015), dependability is the second quality evaluation in quantitative research of a given study. Internal and external reliability are components of

dependability. Internal reliability is defined as the consistency of data collection and assessment, whilst external reliability is defined as the consistency of the research generated when the results are identical to those of the original study.

3.7.2 VALIDITY TEST

According to Heale and Twycross (2015), validity is typically employed in quantitative research to appropriately evaluate the notion. However, Mohamad et al. (2015) noted that validity is defined as the individual scores of a major instrument that allow researchers to create outstanding findings. Furthermore, Pallant (2011) stated that the research instrument (questionnaire) must be appropriately developed in order to exactly measure the study's idea.

There are two sorts of validity, internal validity and external validity. Internal validity, according to Kirk (2015), is the validity that may be concluded when there is a causal link that represents the relationship between variables. Internal validity of the questionnaire, according to Saunders et al. (2016), should be described as the capacity of the research questionnaire to discover the required study content.

Internal validity is employed to guarantee that the study is free of errors. According to Saunders et al. (2016), the external validity, also known as the study findings, should be extended to all comparable situations. External validity is utilized to determine whether or not the causal link revealed in the study may be extrapolated or inferred to the larger environment.

3.7.3 DESCRIPTIVE ANALYSIS

A quick descriptive analysis is one that summarizes the data obtained to describe the population as a whole or as a sample. According to Zikmund et al. (2013), descriptive analysis is commonly employed to quantify

demographic traits using sample data. Typically, images and charts are utilized to illustrate all of the data to describe the variations in the respondent's replies. Descriptive analysis can assist to better interpret the data obtained comprehension. In the study, Saunders et colleagues (2020) found three techniques for quantifying the central tendency: mean, median, and standard deviation. The mode is a simple metric used to measure the core trend. The median is commonly utilized as the middle number when looking for the distribution's midpoint. The extreme value of the distribution will have no effect on the median when compared to the mode. In the measurement of central tendency, the mean is the average of all data values. The standard deviation is often used to define the distribution of numerical data

3.7.4 PEARSON'S CORRELATION COEFFICIENT

Pearson's Correlation Coefficient (r) is used to calculate the strength of the relationship between two variables. In this study, Pearson's Correlation Coefficient is used to assess the strength of the relationship between the independent variables (perceive usefulness and perceive ease of use) and the dependent variable (agriculture performance with modern technology). This is done to determine whether or not the association is substantial. Pearson's correlation coefficient, which runs from -1 to +1, indicates perfect negative and perfect positive correlations, respectively, but a value of 0 indicates completely independent association. If the Pearson's correlation coefficient is negative, the relationship between independent and dependent variables is negative, indicating that as one variable increases, the score on another drops. If the Pearson's correlation coefficient is positive, the link between independent and dependent variables is positive. This suggests that if one variable increases, so will the score on another.

3.7.5 MULTIPLE REGRESSION ANALYSIS (MRA)

The goal of regression analysis is to find correlations between two or more variables that have a cause-effect connection. It is also known as a quantitative research instrument that is used to examine many variables.

Multiple regression analysis is the simultaneous examination of the influence and connection of numerous independent variables on a single, interval scaled dependent variable (Zikmund, 2013). MRA supports researchers in establishing which independent variable (perceive usefulness and perceive ease of use) has the most effect on the dependent variable (agriculture performance with modern technology). The regression coefficient scale ranges from 0 to 1, with low significance less than 0.05 and high significance larger than 0.05. The multiple regression analysis equation is as follows:

Equation: $y = a + bx1 + cx2$
Where,

y	Dependent Variable (Agriculture performance /improvement)
a	Constant value / Other Influences
b	Influence of x1 (perceive usefulness)
c	Influence of x2 (Perceive ease of use)
x1, x2,	Independent Variables

Table 3.1 : Table of Multiple Regression Analysis

3.8 LOCATION OF THE STUDY

To choose a suitable spot for this analysis, the location chosen is useful for further study, especially in population selection and sampling. In this study, the researcher selected few estates around Perak as the location and for more effective distribution of the questionnaire to get more accurate results. The questionnaires generated in Google Form and hard copy papers will be distributed through digital platform such as WhatsApp and face to face.

3.9 SUMMARY

The researcher detailed the approach used to collect data and information about the variable in this chapter. The application of all study approaches and processes has been shown further. For this investigation, a quantitative technique was employed. To gather and analyse the data, primary data, such as a questionnaire, were delivered to the target respondents. Secondary data for this research has been acquired to provide theoretical support for the research issue. A statistical programme such as SPSS software was used to analyse data from research questionnaires. Finally, a range of procedures have been implemented to assess the reliability and validity of the study's findings.

CHAPTER 4

DATA RESULT AND FINDINGS

4.0 INTRODUCTION

In this chapter, researcher have analyzed and explained the collected data from the digital questionnaire survey distributed using Google Forms and also printed questionnaire survey form through face to face. IBM SPSS Version 27 to analyze data and the outputs were interpreted and presented through table, and charts. Furthermore, this chapter marks out the reports for pilot study, reliability analysis, descriptive statistical analysis, Pearson's Correlation Coefficient, multiple linear regression analysis discussion on findings based on objectives and a short conclusion. The questionnaire survey has been examined, checked and pre-tested with FYP supervisor who is an expertise in chosen topic before the survey properly conducted.

In order to scrutinize the reliability of the questionnaire survey, a pilot study was conducted on 30 respondents based on the sample population. This study has been carried out to examine Cronbach's Alpha using the software. The tabulation of frequency was used to list down the overall findings. Based on the sample size (165), respondents from agriculture worker in Perak Synn Heng Trading Sdn Bhd Ladang Eaglehurst, Eng Thye Plantation Ladang Gula, and also individual agriculture business owner and workers from there received this questionnaire survey made using Google Forms and also printed questioner Forms.

4.1 PILOT STUDY

The pilot study or pilot test has been carried out to ensure that the questionnaire survey is understandable, error-free, and accurate. Before the questionnaire survey distributed to the big audience, the sentence structure, spellings, and the typography been double checked with this pilot study. The aim for this pilot study is to eliminate confusion for respondents when answering survey questions. Hereby, the researcher avoids incorrect analytical results.

The formula for doing so is proposed by Roscoe (2019). Most studies require a sample size of between 30 and 500 people. There should be at least 30 people in each sub sample (males vs. females, juniors vs. seniors, etc.). Several times (ideally 10 times or more) the number of variables in a study should be used to determine the sample size for multivariate research (including multiple regression analyses). Sample sizes as small as 10–20 can yield reliable results in straightforward experimental studies with rigorous experimental controls (matched pairs, etc.). Therefore the researcher choose 30 respondent logically for this study. Pilot test as well analyzed using SPSS for reliability test and to assess it validity, credibility, and the Cronbach's Alpha was calculated. The researcher lists the range value of Cronbach's Alpha in 4.1 where the alpha ratios is lower than 0.5, it is considered unacceptable, alpha 0.5-0.6 is poor, alpha 0.6- 0.7 is considered acceptable, alpha 0.7-0.9 considered to be good, and alpha higher than 0.9 considered excellent.

The reliability statistics for pilot study is :

Case Processing Summary			
		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0
a. Listwise deletion based on all variables in the procedure.			

Table 4.1 : Case processing summary of Pilot Study

Reliability Statistic		
Cronbach's Alpha	Cronbach's Alpha Based on Standarized Item	N of Items
0.857	**.870**	**16**

Table 4.2 : Realibity Analysis of Pilot Study

Table 4.1 and Table 4.2 is the analysis of pilot study for this study. Reliability statistics used all the question on the questionnaire to run the pilot test. In this pilot study, researcher exclude demography data. The Cronbach's Alpha is 0.857 which is good.

Summarized Reliability Statistics of Pilot Study for Section B and C

Variables		Cronbachs's Alpha (α)	N of Items	Internal Consistency
PU	Perceive usefulness	0.778	6	Good
PUE	Perceive ease to use	0.731	5	Good
AP	Agriculture performance	0.615	5	Acceptable

Table 4. 3 : Summarized Reliability Statistics of Pilot Study for Section B and C

Table 4.3 shows the variables for this questionnaire survey is in acceptable. The overall Cronbach's alpha value is more than 0.6 which is acceptable

4.2 DESCRIPTIVE ANALYSIS

Descriptive statistics is the practise of utilizing and analyzing descriptive statistics, a descriptive statistic is a numerical summary of some aspect of a datasets. The researcher outlines the data analysis that was used to constructively characterize and demonstrate the summaries the data obtained from respondents in order that patterns may develop that satisfied all conditions of the data. Descriptive analysis performed on data gleaned from a survey sent out to 165 potential respondents.

4.2.1 Section A : General Information

In this section the respondent's demographic data was collected. The number of respondent for this section is 384 respondents.

4.2.1.1 Gender

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	118	73.8	73.8	73.8
	Female	42	26.3	26.3	100.0
	Total	160	100.0	100.0	

Table 4.4 : Descriptive Analysis of Respondent's Gender

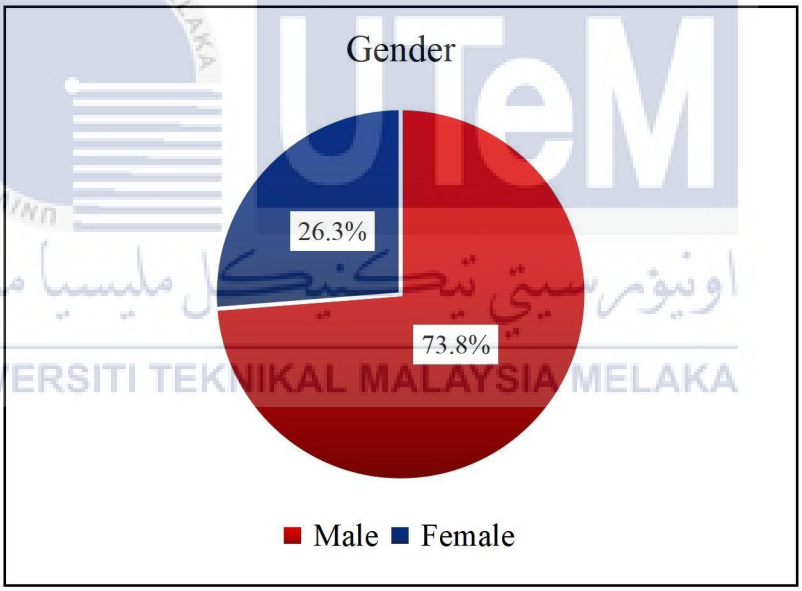

Chart 4.1 : Respondent's Gender

Based on Table 4.4 and Chart 1, 73.8% of respondent is male which is 118 respondents and 26.3% is male which is 42 respondents. This data shows that male respondent answered the questionnaire more than female respondents.

4.2.1.2 Respondent's Age

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25	12	7.5	7.5	7.5
	26-35	21	13.1	13.1	20.6
	36-45	71	44.4	44.4	65.0
	46-55	48	30.0	30.0	95.0
	56 and above	8	5.0	5.0	100.0
	Total	160	100.0	100.0	

Table 4.5 : Descriptive Analysis of Respondent's Age

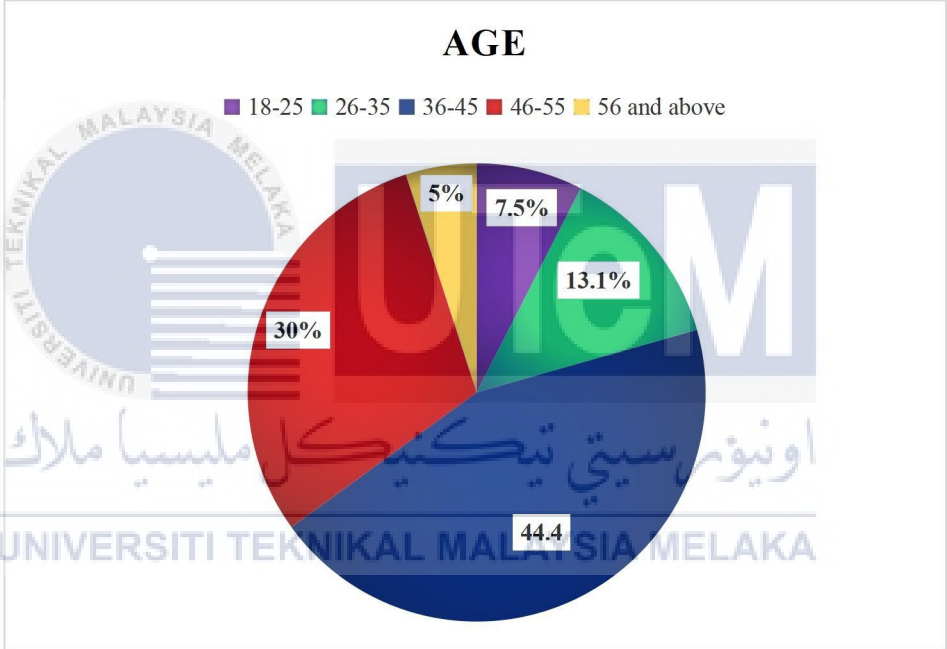

Chart 4.2 : Respondent's Age

According to Table 4.5 and Chart 4.2, the more respondents are on 36-45 years old group which is 44.4% (71 respondents). Then, the second highest is 46-55 years old group which is 30% (48 respondents). Then, 26-35 years old group respondents are 21 or 13.1% respondents. 7.5 which is 12 respondents are from 18-25 years old group respondents and the least number of respondents are more than 56 years old which is 5% or 8 respondents.

4.2.1.3 Job Position

Job Position					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	General Managers	7	4.4	4.4	4.4
	Head Department (managers)	15	9.4	9.4	13.8
	Supervisor	14	8.8	8.8	22.5
	General Worker	96	60.0	60.0	82.5
	Others	28	17.5	17.5	100.0
	Total	160	100.0	100.0	

Table 4.6 : Descriptive Analysis of Respondent's Job Position

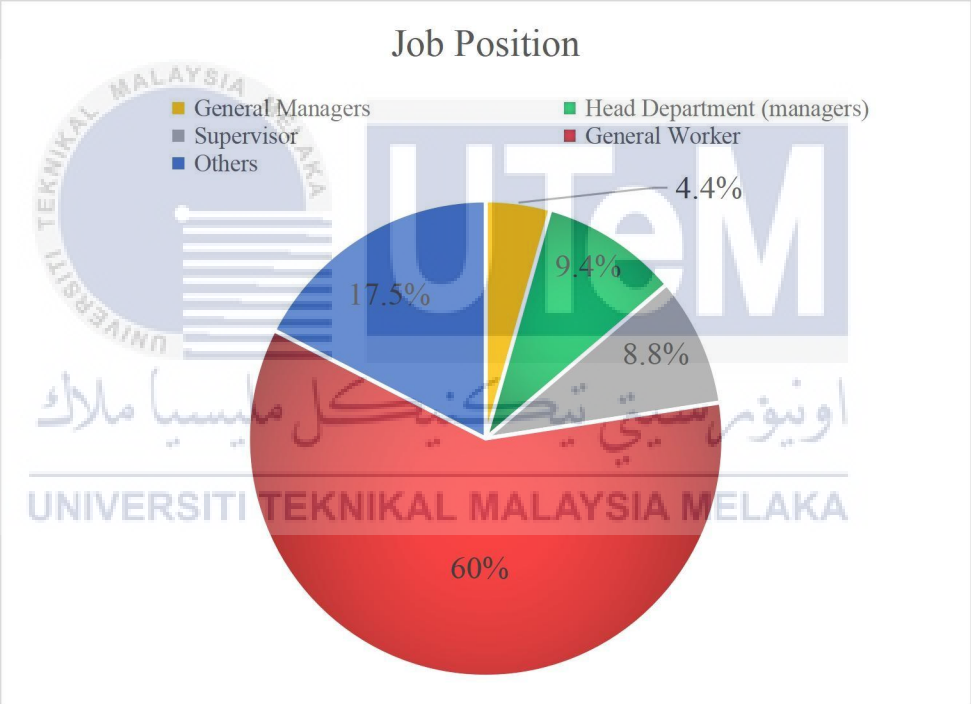

Chart 4.3 : Respondent's Job Position

Based on table 4.6 and chart 4.3 shows general workers have highest number of respond with 60% which is 96 respondent out of 160. Follow by others(individual business owners) with 17.5% or 28 respondent. Head department (managers) are the second least 9.4% with 15 respondent and 7 respondent for General managers with 4.4%.

4.2.1.4 Education Level

Education Level					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Primary	35	21.9	21.9	21.9
	Secondary	79	49.4	49.4	71.3
	Certificate/ Diploma	25	15.6	15.6	86.9
	Graduate Degree	20	12.5	12.5	99.4
	Others	1	.6	.6	100.0
	Total	160	100.0	100.0	

Table 4.7 : Descriptive Analysis of Respondent's Education level

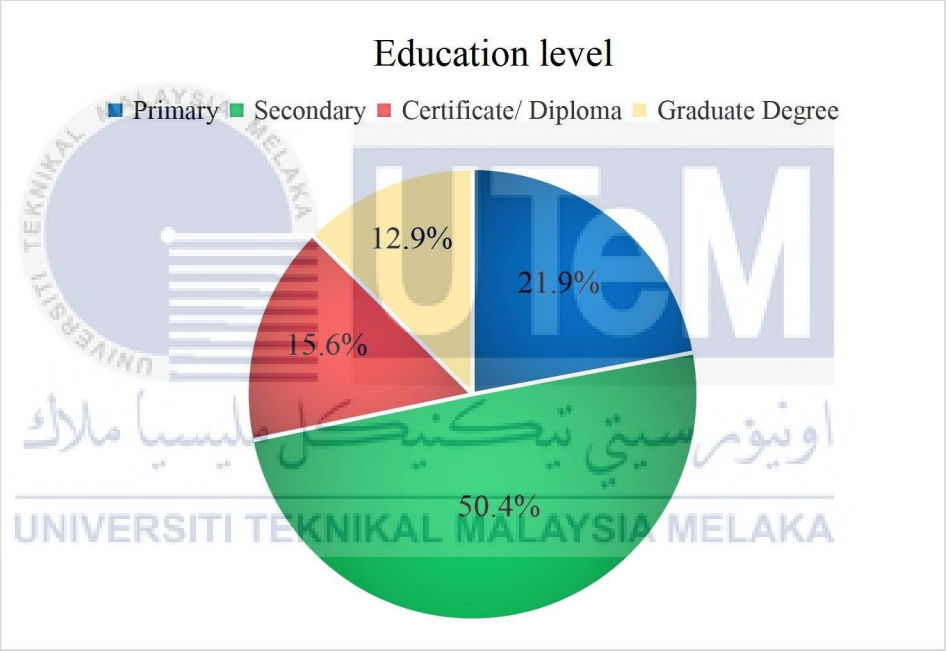

Chart 4.4 : Respondent's Education level

Based on Table 4.7 and Chart 4.4, 50.4% of total respondent's educational background are Secondary which is 80 respondents. The second highest of respondent are from primary educational background which is 35 respondents or 21.9%. 15.6% of respondent's are Certificate/Diploma holders with 25 respondent and 20 respondent are Degree holders which is 12.5 respondents.

4.2.1.5 Working Experience

Work Experience					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1 year	19	11.9	11.9	11.9
	Less than 5 years	46	28.7	28.7	40.6
	More than 5 yeras	95	59.4	59.4	100.0
	Total	160	100.0	100.0	

Table 4.8 : Descriptive Analysis of Respondent's Working Experience

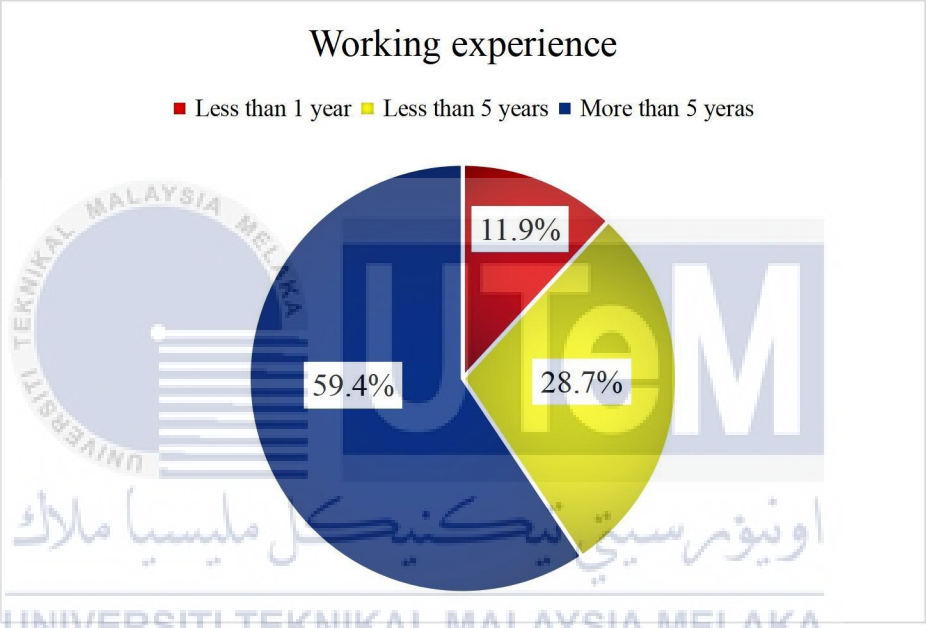

Chart 4.5 : Respondent's Working Experience

Based on table 4.8 and chart 4.5, the highest response are 59.4% from working experience more than 5 years with 95 respondent. For work experience less the 5 years there are 28.9% or 46 respondent. 11.9% of respondent are with less that 1 year experience with 19 respondent.

4.2.1.6 In which agriculture sub sector you are working

Agriculture sub sector					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Crops	108	67.5	66.9	66.9
	Livestock	47	29.4	29.4	96.3
	Fisheries	5	3.1	3.1	99.4
	Others	0	.0	.6	100.0
	Total	160	100.0	100.0	

Table 4.9 : Descriptive Analysis of Respondent's Agriculture sub sector

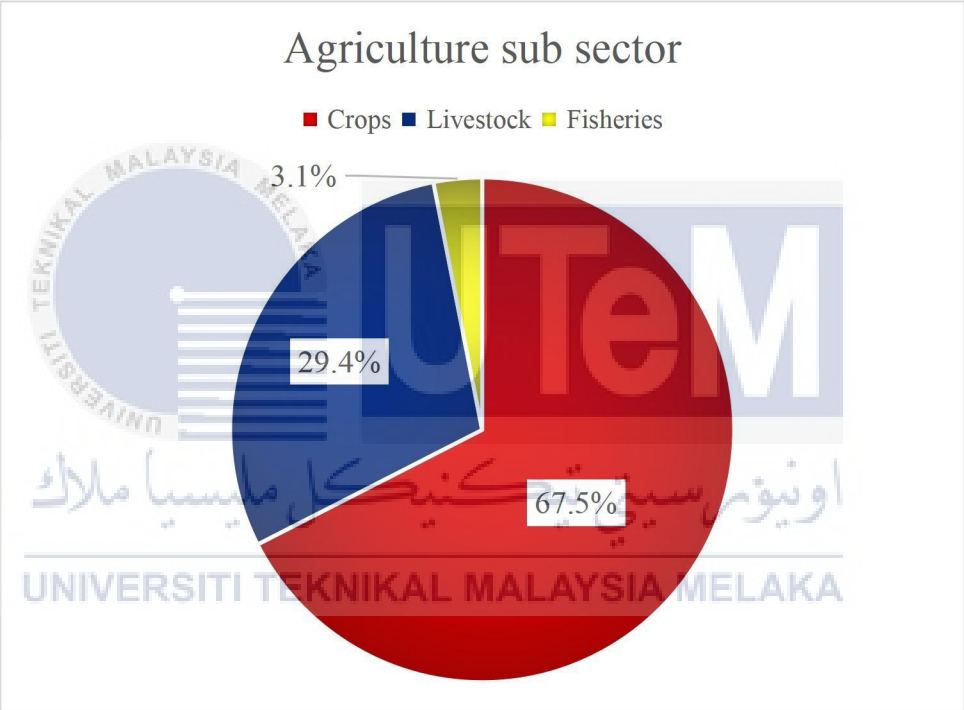

Chart 4.6 : Respondent's Agriculture Sub Sector

According the table 4.9 and chart 4.6, 67.5% of the respondent are from the sub sector crops with 108 respondent out of 160 respondent. Followed by livestock sector 29.4% or 47 respondent. The least sub sector are from fisheries 3.1% with 5 respondent.

4.2.2 Section B : The relationship between perceive usefulness and perceive ease to use toward the agriculture performance

4.2.2.1 Perceive usefulness toward the agriculture performance

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Using technology in agriculture can improve farmers' income.	160	1.00	5.00	4.1563	.75691
Using technology can facilitate transactions.	160	2.00	5.00	4.3000	.73373
Using technology contributes to business prosperity.	160	3.00	5.00	4.2313	.62668
Using technology can increase more demand from customers.	160	3.00	5.00	4.2813	.68379
Using technology system could be useful for me.	160	2.00	5.00	4.4312	.65032
Using technology is useful for my agriculture activity.	160	3.00	5.00	4.5000	.61430
Valid N (listwise)	160				

Table 4.10 : Descriptive analysis for Perceive usefulness

	Lowest
	Highest

Based on Table 4.10, the analysis shows that the maximum mean for section B questions are 4.50 which is respondent felt technology helps him by using technology is useful for my agriculture activity. The standard deviation for this question is 0.614. Then, the lowest mean is 4.156. for the question using technology in agriculture can improve farmers' income.. The standard deviation is 1.22. The minimum scale for all the questions are 1 and the maximum is 5.

4.2.2.2 Perceive ease to use toward the agriculture performance

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
It is easy to set up and manage the technology in agriculture activities.	160	2.00	5.00	4.2375	.66812
The technology that is used in agriculture activities is transparent and understandable	160	2.00	5.00	4.3563	.60757
It is easy to learn about methods of the technology used in agriculture	160	3.00	5.00	4.3188	.60783
Using technology in agriculture is much more convenient compared to traditional way	160	2.00	5.00	4.4688	.59264
Using technology will increase the accessibility	160	3.00	5.00	4.3375	.66245
Valid N (listwise)	160				

Table 4.11 : Descriptive analysis for Perceive ease to use

	Lowest
	Highest

According to Table 4.11, the analysis shows that the maximum mean for Perceive ease to use questions are 4.468. which is Using technology in agriculture is much more convenient compared to traditional way. The standard deviation for this question is 0.592. Then, the lowest mean is 4.23 for the question It is easy to set up and manage the technology in agriculture activities, some people are still hard handle technology due to their education background. The standard deviation is 0.668.. The minimum scale for all the questions are 1 and the maximum is 5.

4.2.3 Section C : Agriculture Performance

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Technological innovations can improve economical return from agriculture sector	160	3.00	5.00	4.3562	.60757
Technology helps the agriculture lands suitable for the local soil and climate condition	160	2.00	5.00	4.2750	.73502
Technology in agriculture creates more job opportunities	160	1.00	5.00	4.1500	.87019
Technology reduce the level of production risk (The possibility of output levels will be lower than projected.)	160	2.00	5.00	4.3688	.65032
Technology can helps to prevent the natural resources such as soil and water quality from the agriculture activity	160	2.00	5.00	4.4000	.70220
Valid N (listwise)	160				

Table 4.12 : Descriptive analysis for Section C

	Lowest
	Highest

According to Table 4.12, the analysis shows that the maximum mean for section C questions are 4.40 which is Technology can helps to prevent the natural resources such as soil and water quality from the agriculture activity. The standard deviation for this question is 0.702. Then, the lowest mean is 4.15 for the Technology in agriculture creates more job opportunities The standard deviation is 0.870. The minimum scale for all the questions are 1 and the maximum is 5.

4.3 PEARSON'S CORRELATION COEFFICIENT

Pearson Correlation Coefficient analysis is applied to measure the link between the independent and dependent variables as well as the strength of the relationship. Table 4.13 displays the strength of the correlation coefficient. (Saunders et al., 2020).

Correlation Coefficient	Correlation Strength
0.71 to 1 (0.71 to -1)	Perfect positive (Negative)
0.31 to 0.70 (-0.31 to -0.70)	Strong Positive (Negative)
0.1 to 0.30 (-0.1 to - 0.30)	Weak positive (Negative)
0	Perfect Independence

Table 4.13 : strength of the Pearson's Correlation Coefficient

Correlations				
		PU	PEU	AP
PU	Pearson Correlation	1	.542**	.375**
	Sig. (2-tailed)		<.001	<.001
	N	160	160	160
PEU	Pearson Correlation	.542**	1	.440**
	Sig. (2-tailed)	<.001		<.001
	N	160	160	160
AP	Pearson Correlation	.375**	.440**	1
	Sig. (2-tailed)	<.001	<.001	
	N	160	160	160
**. Correlation is significant at the 0.01 level (2-tailed).				

Table 4.14 : Pearson's Correlation Analysis

[Source: Data Analysis SPSS]

The independent and dependent variables for this study are displayed in Table 12 using a Pearson Correlation Analysis. According to the findings, every independent variable positively correlates with the dependent variable. Firstly, there is a strong correlation between Perceive usefulness and Perceive ease to use, which is 0.542. The second correlation is the 0.375 correlation between perceive ease to use and Agriculture performance.

In conclusion, the dependent variables are in the strong and moderate range whereas the independent factors are statistically significant. The researchers were able to determine the relationship between the independent and dependent variables due to all of the correlation coefficients at the level of 0.01 (2-tailed).

4.4 RELIABILITY ANALYSIS

In order to assess the internal consistency and reliability of the variables, the researcher will also carry out a Cronbach's Alpha study. As a result, SPSS was used to calculate Cronbach's Alpha.

Cronbach's Alpha of equal to or greater than 0.7 was considered acceptable. If the Cronbach's Alpha is greater than 0.8, it is regarded good, and 0.9 and above is considered excellent. If the Cronbach's Alpha was less than 0.6, it was regarded poor, and if the Cronbach's Alpha was less than 0.5, it was considered unacceptable.Each of the two independent variables and one dependent variable was examined for dependability in this study (Saunders, Lewis and Thornhill,2016)

Case Processing Summary			
		N	%
Cases	Valid	160	100.0
	Excluded[a]	0	.0
	Total	160	100.0
a. Listwise deletion based on all variables in the procedure.			

Table 4.15 :Case Processing Summary for Research

Reliability Statistics	
Cronbach's Alpha	N of Items
.710	16

Table 4.16: Reliability Statistic Data Analysis

Table 4.15 and table 4.16 shows the reliability statistics for overall questionnaire without demography data. The Cronbach's Alpha is 0.710 which is acceptable.

4.5 MULTIPLE REGRESSION ANALYSIS

Multiple regression analysis is a method for estimating a value based on two or more independent and dependent variables. In this study, multiple regression analysis is used to examine the relationship between the independent variables and the dependent variables using these independent variables and one dependent variable. The results of the multiple regression analysis with one dependent variable and two independent variables (Perceive usefulness and Perceive ease to use) using SPSS are as follows (Agriculture performance)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.469[a]	.220	.210	.35378

a. Predictors: (Constant), PEU, PU

Table 4.17 : Model Summary

The modal summary of the Multiple Regression Analysis is shown in Table 4.17. According to table 4.17, the r value is 0.469, indicating that the dependent and independent variables had a relationship. Next, the r square value is 0.220, indicating that 22% of the variation in the dependent variable can be strongly linked to the two

independent variables. This can also be explained by the Perceive ease to use and perceive usefulness have an impact on 22% of the Agriculture Performance.

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.534	2	2.767	22.108	<.001[b]
	Residual	19.650	157	.125		
	Total	25.184	159			

Table 4.18 : Table ANOVA

a. Dependent Variable: AP

b. Predictors: (Constant), PEU, PU

Table 4.18 shows the ANOVA analysis by using SPSS. The result show that model has more systematic variation than non-systematic variation because the p value is 0.001 which is less than 0.05. hat indicates that there is a significant relationship between the perceived usefulness, perceived ease of use and towards the agriculture production. The researcher accepts that the overall of the multiple regression model is significant at 5% level of significance and the alternative hypotheses are well fitted in the model and accepted.

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.703	.394		4.316	<.001
	PU	.212	.092	.193	2.305	.022
	PEU	.390	.098	.335	3.990	<.001

a. Dependent Variable: AP

Table 4.19 : Table Coefficients[a]

Table 4.19 shows the coefficient of multiple regression analysis. Based on the result, Perceive usefulness has highest beta which is 0.193. Second is Perceive ease to use, which is 0.335.

Technology acceptance towards the agriculture in modern world = 1.703 + .212 + .390

This equation indicates the relationship between the dependent variable which is the agriculture performance with the independent variable perceive usefulness and perceive ease of use. Based on the result, each of the independent variables has a different level of contribution towards the dependent variable and provide a significant prediction towards the agriculture performance in modernworld.

Perceive ease to use is the strongest predictor variable where, the unstandardized beta, $\beta = .390$, $t(335) = 3.990$, $p<0.05$. The standardized beta, $\beta=.390$ has also the highest value compared to the other independent variables. It can be seen clearly that perceive ease to use positively influence the dependent variable, agriculture performance.

Next, perceive usefulness has subsequent stronger predictor where $\beta = .212$, $t(193) = 2.305$, $p<0.05$. The standardized beta, $\beta = .212$ is also the second highest positive value among the independent variables.

In conclusion of the result, it is shown that the higher beta values are usually supported with higher t-values and smaller p-values. This means that the independent variable positively influences the dependent variable when the beta value contributes a larger coefficient value. In a nutshell, the researcher summarized the findings for objective 2 by stating Technology acceptance factor has the greatest influence and would be regarded as a vital success element in enhancing the agriculture performance in modern world.

4.6 HYPOTHESES TESTING ANALYSIS

	Hypothesis	Correlation Coefficient (R)	p-Value	Result
H1	There is a significant relationship between perceive usefulness and towards agriculture performance.	0.375	<.001	Accepted
H2	There is a significant relationship between perceive ease of use and agriculture performance.	0.440	<.001	Accepted

Table 4.20 : Hypotheses Analysis

According to table 4.20, the hypotheses analyzed by the p-value. The p-value is lower than 0.05 where the test results of hypothesis is acceptable. All the independent variables are accepted because the significance value is lower than 0.05. The researcher concluded that all the independent variable are valid to the agriculture performance. A simple model has been created for better understanding as per shown below :

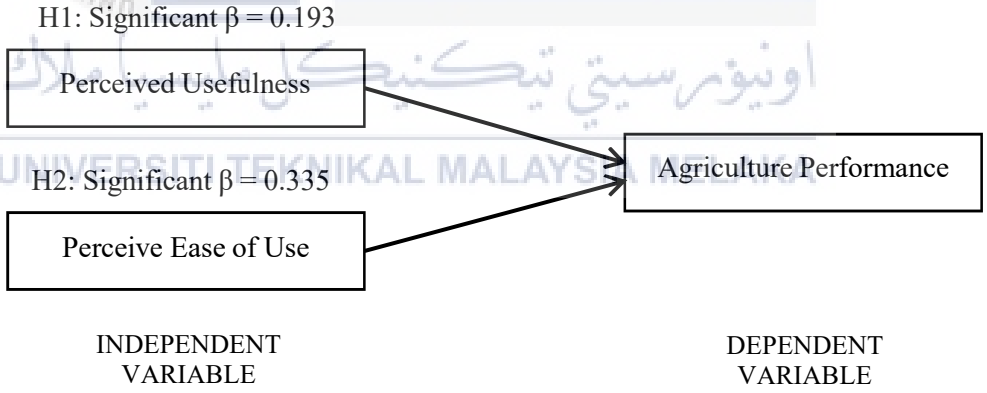

Figure 4.1 : Significance value of Independent Variable and Dependent Variable

4.7 SUMMARY

In this chapter, the data analysis collected from the 160 respondents using questionnaire survey and with the tests carried out in the SPSS software was focused. The researcher used descriptive frequency analysis, descriptive statistics reliability analysis, correlation coefficient analysis, and multi regression analysis. All the information gathered been portrayed in a understandable table, charts and figures. Next chapter will be discussing about the final conclusion on achieving the objectives.

CHAPTER 5

CONCLUSION

5.0 INTRODUCTION

In this chapter, researcher explain the data collected from the respondents comprehensively. The finding of this scrutiny was used to analyze whether the hypothesis proposed was precise. The researcher used several techniques and methods to explain this part of the research study. In addition, this chapter summarizes the reliability statistics, descriptive analysis, findings, and discusses the key implications in terms of theoretical contribution, managerial level, and policymaker or practitioners. Any limitations found in the research study will be concluded in this part.

5.1 DISCUSSION ON FINDINGS

In this part, the researcher discusses the findings of objectives for further discussions for hypothesis testing. According to the data collection method, researcher refers to secondary data for discussing the objectives comprehensively

5.1.1 Objective 1 : To identify the relationship of perceive usefulness and perceive ease of use toward the agriculture performance.

	Hypothesis	Correlation Coefficient (R)	p-Value	Result
H1	There is a significant relationship between perceive usefulness and towards agriculture performance.	0.375	<.001	Accepted
H2	There is a significant relationship between perceive ease of use and agriculture performance.	0.440	<.001	Accepted

Table 5.1 : Analysis of Hypotheses Testing

The first objective of this study is to identify the relationship of perceive usefulness and perceive ease of use toward the agriculture performance which is achieved by using Pearson's Correlation Coefficient Analysis by Statistical Package for Social Sciences (SPSS) software. The acceptance of technology in Agriculture is proven by the previous researchers which are stated in Chapter 2 Literature Review. The factors of independent variables consist of perceived ease of use and perceived usefulness. The effectiveness of technology acceptance by perceive usefulness and perceive ease of use is proved using the Pearson's Correlation Analysis resulting into a strong correlation value with the Significant 2-tailed Analysis resulting 0.001, which is lower then 0.05, thus H1 and H2 is both accepted.

According to previous study, the acceptance of technology in agriculture performance reveals that perceived ease of use and perceived usefulness of a technology impacts the intention of users to accept it (Pillai & 77 Sivathanu, 2020). Thus, it is proven that the perceived ease of use and perceived usefulness influences agriculture sector to use technology in agriculture activity. According to (Chen et al., 2020) perceived ease of use is based on how strongly they agree that the usage of technology is simple to

use and that it allows agriculture workers to do their duties with minimal effort. Perceived usefulness in technology acceptance is expected to help Agriculture workers to believe that using the new technology would increase or improve his or her performance (Davis, 1993). If technology can increase the advantages of its use to the user, the user is more likely to continue using it since the user may receive benefit accept the Modern technology in agriculture

5.1.2 OBJECTIVE 2 : To determine the factor that have the most significant improvement on agriculture

The Second objective analyzed the most critical variable towards agriculture performance in which is the perceived ease of use. This objective is achieved through the Multiple Linear Regression analysis from Statistical Package for Social Science (SPSS) software. Based on the analysis in Chapter 4, showed that the perceived ease of use factor contributes most of the effectiveness on Agriculture performance to understand the usage of technology acceptance with the value of $\beta=0.335$, $t(542)=3.990$, $p<0.05$.

According to (Chen et al., 2020) , perceived ease of use factor is important to technology acceptance towards the agriculture performance technology. According to (Chen et al., 2020) perceived ease of use is based on how strongly they agree that the Technology acceptance in agriculture is simple to use and that it allows agriculture worker to do their duties with minimal effort. Perceived ease to use technology acceptance in agriculture is expected to help Agriculture field to solve and improve the problem they are facing in the agriculture performance

5.2 RESEARCH IMPLICATION

5.2.1 THEORETICAL IMPLICATION

This section of the research stated that the study contains several implications theoretically to have a deeper understanding on the usage of technology towards the agriculture in the modern world. There are two factors being studied and analyzed through this study that found influencing students' acceptance which are the perceived usefulness and perceived ease of use.

The resources needed to complete this study were obtained from many researchers' studies, which were used as a reference to do more research on this issue, as shown in Chapter 2 Literature Review. This study can help us learn more about usage of technology acceptance towards the agriculture. Furthermore, other researchers conducting research relating to this study might utilize the researcher's findings from Chapter 4 on the critical factors influencing the agriculture performance. This data is usually useful, and it may also be used as a source of justification in future study.

To summarize, the researcher's theoretical technique was determined to be effective, and the findings of this study can help others gain a better understanding about the usage of technology acceptance towards the agriculture based on the independent variable listed above and the impact of demographic factor. This research will be beneficial to other researchers in the future as they seek to expand their understanding on this issue.

5.2.2 PRACTICAL IMPLICATION

In practical implication, the outcome of this study could be reviewed or provided as a guideline for the for other researchers to understand and analyse the technology acceptance towards the agriculture in modern world. In this study, researcher was able to achieve the objectives of the research using Pearson's Correlation Coefficient and Multiple Regression analysis and

to test the hypothesis on the relationship between independent variable (perceived usefulness and perceived ease of use) with the dependent variable (agriculture performance). The outcome from Chapter 4 stated that the two independent variable, consisting perceived usefulness, perceived ease of use and influence the agriculture performance in modern world.

It is very important to have a perceived ease of use factor in platforms suggested to be used in education especially in tertiary in order to get the acceptance from students. Technology in agriculture should be implement by all the agriculture sector and provide sufficient guidance, training and proper knowledge regarding the benefits of technology and the way to use towards the workers/farmers by the government agriculture ministry, NGO and also the by company/owners. They should be thorough in their efforts to reduce the number of difficulties associated with research. This would aid in the adoption and implementation of the new technologies in agriculture. To do this, the authorities of the agriculture sector must be serious about accurately providing the proper knowledge about technologies to development the agriculture sector.

5.3 Limitation of Research

Even though the current study contributes to the body of knowledge, it has its own limitation that effects that research. The limit that this study consist was lack of previous studies in Malaysia about this research area. This research is conducted to determine the usage of technology acceptance towards the agriculture in modern world, it is a big scope of study to be conducted in Malaysia. Due to that reason this study limited about previous article that had been conducted about this research area. Other than that, agriculture sector in Malaysia still lack of advance technologies. Many people in Agriculture especially the employees (farmer) faces difficulties in using new technologies due to their poor education background gives a limit to this research.

Researcher also faces difficulties by the techniques/method used to collected he data from the respondent. Most of the workers in agriculture sector are from age category 36-45 and 46-55 and some of them with poor education background, it is hard to get the answers for the questioner. The researcher explain one by one to get the answers and faced difficulty by convey the information correctly.

5.4 Recommendation for Future Research

There are several recommendations for future research to better understand about the topic of this study. The first recommendation is improving the way of using the online questionnaire instrument in a way it could draw the attention and willingness of participants to report it honestly. This can be done by providing close ended questions with short answers and variety answers option in questions rather than using Likert Scale questionnaire which does not give interest to the respondent to respond to it. If this method is implemented, the result of the study would be different. As the self-reported data is reliant on participants' honesty, increasing anonymity may increase participants' willingness to express their true thoughts.

Furthermore, obtaining a larger sample size in which representing huge numbers of agriculture workers around Malaysia would make the result and findings more precise and broader. Since the study focuses just on farmers and agriculture sector in Perak, the results are limited. The research sample size should represent overall Malaysia agriculture industry and the farmers around Malaysia towards this topic in which also increase generalization on technology acceptance in agriculture.

Moreover, In Malaysia, agriculture along with allied sectors like fishery and applications keeping in view farmers' aspiration to try new technology in the future. Government research organizations and marketers need to weave their advertising campaign to reflect the economic benefit and appreciation for use of the technology in his/ her reference group. Technology base agriculture offers them an opportunity

to move up the economic ladder and enhance perceived economic well being. This study expand the scope consist of latest technologies which used in modern agriculture and also the effectiveness. Farmers contemplate that their economic status will be perceived better by others who are important to them if they adopt technology base agriculture. Due to social influence, technology acceptance as an easy to use for agriculture with a favorable attitude towards it. It also makes them believe that their financial situation will be better than their past situation.

5.5 SUMMARY

This research is focuses on the study to understand the usage of technology acceptance towards the agriculture in the modern world. The results stated hypotheses (H1,H2) are accepted which indicates the two independent variables such as perceive usefulness and the perceive ease to use have significant relationship with agriculture performance. Among the three independent variables, perceived ease of use has the strongest bond towards agriculture performance' acceptance and the weakest determinant affecting the farmers' acceptance is the perceived usefulness which have been present in previous chapter as it is also significant. Furthermore, several limitations in this study have been stated in this chapter. Moreover, some useful recommendation for future research have been suggested in order to reduce the limitations and gain more accurate results as well as lead to better quality study in the future

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APPENDIX

APPENDIX 1: QUESTIONNAIRE

UNDERSTANDING THE USAGE OF TECHNOLOGY ACCEPTANCE IN AGRICULTURE IN MODERN WORLD

SECTION A: Demographic Profile

Section A is to fill some personal details of the respondents. Please tick (√) the answers of the question. All answers will be kept strictly confidential.

SECTION A

1. Gender
   - Male
   - Female

2. Age
   - 18-25
   - 26-35
   - 36-45
   - 46-55
   - 56 and above

3. Job Position
   - General Manager
   - Head Department (Manager)
   - Supervisor
   - General Worker
   - Others, please specify _____

4. Education Level
   - Primary
   - Secondary
   - Certificate/Diploma
   - Graduate/Degree

5. How long have you been working in this field?
   - Less than 1 year
   - Less than 5 years
   - More than 5 years
   - Others, please specify_____

6. In which agriculture sub sector are you working?
   - Crops
   - Livestock
   - Fisheries
   - Others, please specify_____

SECTION B : The relationship between perceive usefulness and perceive ease to use towards the agriculture performance.

LIKERT SCALE

Respondents will choose whether they agree or disagree with each statement using the Likert scale from (1): Strongly Disagree; (2): Disagree; (3): Neutral; (4): Agree and (5): Strongly Agree. Respondent need to circle one answer only on the following statement.

Perceive Usefulness refers to the degree to which a person feels that utilizing a certain system will improve his or her work performance.						
1	Using technology in agriculture can improve farmers' income.	1	2	3	4	5
2	Using technology can facilitate transactions..	1	2	3	4	5
3	Using technology contributes to business prosperity.	1	2	3	4	5
4	Using technology can increase more demand from customers.	1	2	3	4	5
5	Using technology system could be useful for me.	1	2	3	4	5
6	Using technology is useful for my agriculture activity.	1	2	3	4	5

Perceive Ease of Use refers to the degree to which a person feels that utilizing a specific technology would be effortless.						
1	It is easy to set up and manage the technology in agriculture activities.	1	2	3	4	5
2	The technology that is used in agriculture activities is transparent and understandable.	1	2	3	4	5
3	It is easy to learn about methods of the technology used in agriculture.	1	2	3	4	5
4	Using technology in agriculture is much more convenient as to compared to traditional way.	1	2	3	4	5
5	Using technology increase the accessibility.	1	2	3	4	5

Section C : Agriculture Performance

Agriculture Performance refers to sustainability performance which focuses on the efficient use and consumption of natural resources in order to achieve balance in the ecological, economic and sociological aspects of agriculture.						
1	Technological innovations can improve economical return from agriculture sector	1	2	3	4	5
2	Technology helps the agriculture lands suitable for the local soil and climate condition	1	2	3	4	5
3	Technology in agriculture creates more job opportunities	1	2	3	4	5
4	Technology reduce the level of production risk (The possibility of output levels will be lower than projected.)	1	2	3	4	5
5	Technology can helps to prevent the natural resources such as soil and water quality from the agriculture activity	1	2	3	4	5

APPENDIX 2: GANTT CHART PSM 1

Particulars	Weeks															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PSM Speech Talk Briefing																
Supervisor Seeking																
Submit Research Title																
Related Articles Reviewing																
Chapter 1																
Chapter 2																
Chapter 3																
First Draft Submission																
Finalize the PSM																
Present Research Proposal																

APPENDIX 2: GANTT CHART PSM 2

WEEK/ ACTIVITIES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Create Questionnaire									MID SEMESTER BREAK							
Distribute Questionnaire																
Collect Questionnaire																
Analysis Data																
Submission Chapter 4																
Submission Chapter 5																
Proposal Correction																
Slide Preparation																
Submission of FYP 2																
Presentation 2																