CRITICAL SUCCESS FACTORS OF ERP IMPLEMENTATION WITHIN MALAYSIA SMEs

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APPROVAL

I/ We hereby declare that I/ we have read this dissertation/report and in my opinion, this dissertation/report is sufficient in terms of scope and quality as a partial fulfilment of the requirements for the award of Bachelor of Technology Management (Technology Innovation) with Honours.

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DEDICATION

First and foremost, I would like to express my appreciation and gratitude to my beloved parents, relatives, and friends who have always helped and encouraged me, and I would also take this opportunity to express my gratitude to my beloved supervisor Madam Nor Ratna Binti Masrom for her guidance and encouragement during this final year project. Without their support, this investigation would not have been necessary.

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Next, I would like to thank the researcher who had done a similar study and published it online. Even, though he topics of this study are different, the theory and knowledge provided are useful for references in this final year project.

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ABSTRACT

The technology development leave very significant footprint on how commercial organisations operate in terms of accounting and management which is the expansion of information. Global market economics have improved as a result of communications technologies (ICT) which led to the creation of ERP. ERP is described as configurable application software that consists of integrated business modules and is intended to support the primary business activities and functions. SMEs in Malaysia, however, are still using low-tech technology to manage the company. Technological acceptance in Malaysian SMEs proceeds at a very low pace due to high costs for implementation and maintenance. Most importantly, the lack of expertise also lacks of internal and external capacity become the hindrance of ERP implementation. The UTAUT theory are being used as part of this research for enhanced the reliability of this research. These systems are constantly active in the "background" of projects. The study aims to investigating the critical success factor of ERP acceptance of ERP implementation within SMEs in Malaysia. This study includes five independent variables which are performance expectancy, effort expectancy, social influence, hedonic motivation and facilitating condition to measure toward the use behaviour on ERP. Primary data was collected 150 questionnaire surveys using a probability sampling technique through a questionnaire by providing questionnaire to the public while secondary data was used for the literature review. The proposed research framework was the result after analysing information from the literature review by referring past research. The result shown that there are 3 significant factor that influenced the ERP implementation and the CSF is the performance expectancy.

Key word: acceptance of ERP, critical success factor, use behaviour

ABSTRAK

Perkembangan teknologi meninggalkan jejak yang sangat signifikan mengenai bagaimana organisasi komersial beroperasi dari segi perakaunan dan pengurusan yang merupakan pengembangan maklumat. Ekonomi pasaran global telah meningkat sebagai hasil teknologi komunikasi (ICT) yang membawa kepada penciptaan ERP. ERP digambarkan sebagai perisian aplikasi yang dapat dikonfigurasi yang terdiri daripada modul perniagaan bersepadu dan bertujuan untuk menyokong aktiviti dan fungsi perniagaan utama. PKS di Malaysia, bagaimanapun, masih menggunakan teknologi berteknologi rendah untuk menguruskan syarikat. Penerimaan teknologi di UKM Malaysia berjalan pada kadar yang sangat rendah kerana kos pelaksanaan dan penyelenggaraan yang tinggi. Yang paling penting, kekurangan kepakaran juga kekurangan kapasiti dalaman dan luaran menjadi penghalang pelaksanaan ERP. Teori UTAUT digunakan sebagai sebahagian daripada penyelidikan ini untuk meningkatkan kebolehpercayaan penyelidikan ini. Sistem ini sentiasa aktif dalam "latar belakang" projek. Kajian ini bertujuan untuk menyiasat faktor kejayaan kritikal penerimaan ERP pelaksanaan ERP di PKS di Malaysia. Kajian ini merangkumi lima pemboleh ubah bebas yang merupakan jangkaan prestasi, jangkaan usaha, pengaruh sosial, motivasi hedonik dan keadaan pemudah cara untuk mengukur tingkah laku penggunaan pada ERP. Data primer dikumpulkan 150 tinjauan soal selidik menggunakan teknik persampelan kebarangkalian melalui soal selidik dengan memberikan soal selidik kepada orang ramai sementara data sekunder digunakan untuk tinjauan literatur. Kerangka penyelidikan yang dicadangkan adalah hasil setelah menganalisis maklumat dari tinjauan literatur dengan merujuk penyelidikan masa lalu Hasilnya menunjukkan bahawa terdapat 3 faktor penting yang mempengaruhi pelaksanaan ERP dan CSF adalah jangka prestasi.

Kata kunci: penerimaan ERP, faktor kejayaan kritikal, tingkah laku penggunaan

TABLE OF CONTENT

Chapter 4 Data Analysis

LIST OF TABLE.

LIST OF FIGURES

LIST OF ABBREVIATION

ABBREVIATION	MEANING
SMEs	Small and medium Enterprise
CSF	Critical Success Factor
UTAUT	Unified Theory of Acceptance and Use of Technology
ERP	Enterprise Resources Planning
PE	Performance Expectancy
EE	Effort Expectancy
SI	Social Influence Expectancy
HM	Hedonic Motivation Expectancy
FC	Facilitating Condition Expectancy
FP	Firm Purpose
TE	Training and education purpose
PP	Production output purpose
IV	Independent variable
DV	Dependent variable

LIST OF APPENDICES

CHAPTER 1

INTRODUCTION

1.0 Introduction

Chapter 1, are focusing on examining the critical success factor (CSF) of ERP acceptance within Small and Medium-sized Enterprises (SMEs) using UTAUT model this chapter will also include a discussion of the research background, problem statement, research scope, research questions, research objectives, significance of study, limitations of study, and operational definition.

1.1 Background of research

SMEs are stands for Small and Medium-sized Enterprises (SMEs) which are in total there than 200 employees in the company. The SME sector is crucial to the market world and modern economy by proving to be the most tremendously innovative system that are appealing to involves with. The amount of employees within SMEs varies by industry (Al-Herwi, 2019). Small and Medium-sized Enterprises (SMEs), recently have dominated the international business establishment with strong existence, particularly in developing countries. SMEs realize several significant contributions to national economies especially in terms of GDP, job creation, and economic growth (Games, 2019). Due to the huge contribution of SME, Malaysia economic development and growth right now is heavily dependent on the development of regional economies for instance from the west coast states such as Selangor with

the highest number of SMEs with 19.8% in 2019 (HRDF, 2019). SME are the largest employers, particularly in less urbanised areas. SMEs are also responsible for a significant proportion of the region's output hence entrepreneurship development is typically carried out by operating private firms that operate primarily within their own regions (Kozak, 2019).

According to the Organization for Economic Co-Operation and Development (OECD), SME has account for a whooping number growth of employment with 60% to 70% in most OECD countries (OECD, 2017). Malaysia is also a member of this forums; hence it can be stated that the existence of SMEs has a significant impact and importance for Malaysia. Malaysia places a strong emphasis on SMEs in their policies due to the outstanding potential advantages and prospective great opportunities generated by SMEs, as SMEs continue to be the backbone of their economies (Chin & Lim, 2018). The primary drivers for Malaysian SMEs were services and manufacturing of SMEs GDP activities which both sectors contributed 80% GDP growth in 2020. However, the contribution of the SME sector to GDP fell to 38.2 percent in 2020, with a value-added of RM512.8 billion. This degradation of GDP fell from 38.9 percent (value added: RM553.5 billion) from the previous year (Department of Statistic Malaysia, 2020). The growth and development of SME sector is widely regarded as a critical component of a country's thriving economy and a significant economic mover.

Nowadays, competition is going global rather than local, with companies increasingly and aggressively trying to force in reducing total costs, cut production and management costs, maximize investment return, and improve customer demand response (Liñán et al., 2020). Changes in economic conditions in global level and the increasing competition in sector or market, present additional challenges for SMEs to thrive. Thus, an effective and efficient enterprise information systems are needed to enhance the competitive advantage where is really important for company sustainability. Present SMEs recognise the importance of making and properly use the information and data that they have into take more informed and well precise decisions. In this case by implementing ERP (enterprise resource planning) in their businesses (Alaskari et al., 2019). According to Chaveesuk & Hongsuwan (2017) with advancements in knowledge and information technology (IT, ICT) over the last decade, the implementation of enterprise-wide technology is being considered hence

the system of Enterprise Resource Planning (ERP) are viewed as a catalyst for business operation success and sustainability.

Enterprise Resource Planning (ERP) relates to an integration of cross-functional system that aids in the management of a company and business operations (Ali & Miller, 2017). Ali & Miller (2017) also stated that ERP have been discovered to be highly complex to use and risky for enterprise to implement it within their company. However, the benefit it brings cannot be ERP ignored. ERP system products cover various departments within an organisation, such as Human Resources (HR), finance, accounting, logistics, inventory, and so on. Instead of using separate applications for each department, an ERP implementation that drives all features and functionality in an integrated fashion is a better idea (Kharuddin et al., 2015). Based on to the finding in this study, it is appeared that the critical success of implementation ERP in SMEs is affected by several factor that can be internal and external factor. According to Kiran & Reddy (2019) ERP implementation in SMEs has been found to be appropriate when the SMEs' IT facilities and information systems are compatible. Furthermore, it is critical to adhere to industry best practices. ERP solutions are obtained to be more beneficial when the full range of their services are utilised throughout the organisation. ERP is being used more frequently in SMEs (Khadrouf et al., 2020).

1.2 Problem Statement

According to Khadrouf, Omar, Chouki, Marieme, Talea, Mohamed, Bakali, Assia (2020) ERP implementation in SMEs has rapidly increased due to the globalization. When SMEs adopt an ERP system, knowledge and system than being used by SMEs to manage their business daily tasks usually simple version. However, an expertise still needed in other to teach other on how to use it. This system will become hard to use if the knowledge that needed to conduct the system not at the passable level. Misconduct the system will result in business failure. When considering an ERP system, most SMEs consider costs of implementation. This makes them hesitant to invest after initial start-up. However, some SMEs particularly those

whom seeking future growth and development tend to consider the changes in organization.

Thus, they believe ERP system could indeed bring out business to be more efficient and successful. ERP systems are also expected to improve and standardise internal processes, maintain continuous monitoring, reduce operating costs, improve customer and supplier relations, and improve organisations' decision-making capacities. As a result, Malaysian SMEs may benefit from implementing an ERP system. Nonetheless, adopting an ERP is a difficult decision, and implementation is a complex, costly and risky process (Yildirim & Kuşakçi, 2018). Implementing an ERP system can be costly and time consuming where it involve maintenance, updates, materials, training, and consultation are all included in the overall cost (Smes et al., 2016).

Following and addressing the critical success factors increases the likelihood of a successful ERP implementation. When conducted the research by reading various publications on CSFs for ERP implementation, the researcher discovered that there were more than 15 CSFs. Each CSF has a cost, schedule, and level of achievement (Smes et al., 2016). If SMEs focus on all CSFs, they will eventually run out of resources. As a result, the research methodology focuses on identifying CSFs that are relevant to only a subset of ERP modules using a UTAUT model (Eneizan et al., 2019). The method of ERP implementation will be considered in this research in order to discover the relation between method of implementation and the critical success factor (CFS). From here the researcher will try to identify how the adoption of ERP implementation in SMEs by using UTAUT model in order to identify the critical finding in this research which are what are the critical success factor of ERP acceptance in SMEs Malaysia.

1.3 Research Question

This study addresses the following research question:

i. What are the factors influence ERP usage for Malaysia SMEs?
ii. How the relationship between factor of ERP usage and the use behaviour within Malaysia SMEs?

iii. Which is the most significant factor influencing ERP usage in Malaysia SMEs?

1.4 Research Objective

The research's objective was to identify the critical success factor of ERP implementation in small and medium-sized enterprises (SMEs) using UTAUT model.

i. To identify the factor, influence ERP usage for Malaysia SMEs
ii. To measure the relationship between factor of ERP usage and the use behaviour within Malaysia SMEs
iii. To find out the most significant factor influencing ERP usage in Malaysia SMEs

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1.5 Scope of Research

The research's scope is the distribution of questionnaires to discover the critical success factor of ERP implementation in SMEs. The respondents will be wide range of employees in Malaysian small and medium sized businesses from the bottom level which are entry level until senior and executive management. This study focuses on respondents in wide ranges level since ERP is a system and resources that are creates for business management efficiency. Hence, the involvement of every position within business is a must for this research. This study will make utilisation of the Unified Theory of Acceptance and Use of Technology (UTAUT) theory. This study discover UTAUT hypothesises that behavioural intention or use behaviour is determined by performance expectancy, effort expectancy, social influence, hedonic motivation and facilitating conditions. Including. how the ERP are being use within SMEs. Hence, it will provide how it will affect the process and operation in SMEs.

1.6 Significance of Study

1.6.1 Practical Contribution

This study will assist businesses in better understanding the advantages of using ERP in SMEs. According Moutaz Haddara (2017) when it comes to planning and coordination, an ERP is invaluable. Organization can view detailed information about current available inventory and customer orders, as well as compare provider, purchase orders and forecasted future demand. They can make changes to avoid problems, if necessary, this is because employee can check on the status of other departments to guide their own decisions. ERP software improves communication and collaboration. ERP system also a comprehensive source of data, also presents a variety of analytics and report that can be game changers for the business. It is claimed that this theoretical model will provide practitioners with clear guidance to make appropriate the implementation. Using this ERP system in SMEs, it will teach companies how to collaborate with their company planning with resources in order to lower production costs and operational efficiency in order for the company to succeed. The advantage of using this system is that it may improve competitive advantage.

1.6.2 Theoretical Contribution

Unified Theory of Acceptance and Use of Technology (UTAUT) theory also acts as a theoretical foundation. UTAUT 2 theory is aims to explain user intent and perceptions about using an information system, as well as subsequent or acceptance usage behaviour. This research will enlighten on the critical success factor of ERP implementation in SMEs using UTAUT 2 model. The ability of ERP in managing daily task become a great contributor for SMEs in terms of assisting the company performance. This research is designed to help important key persons, such as SMEs, with information and recommendations. As a result, this research will also assist SMEs in identifying crucial elements that have been proved to either critical success factor of ERP implementation are the reason why SMEs accept those technology.

1.7 Limitation of Study

Contrary to popular belief among students, researchers, and development partners, study limitations are not in any way negative issues. Limitations are not always problems or issues that reduce the research's usefulness and validity. The ultimate consequences of limitations on any studies will be determined by the researcher's expertise, proactiveness, experience, and the nature of the study. There are several limitations to conducting this research, including time constraints, a limited number of respondents, a limited geographic area, and respondent honesty. Since this study only focuses on SMEs in Malaysia, the results are more focused on small and medium-sized enterprises than on respondents from other industries. In addition, the researcher will only have three months to collect related data. One of the main limitations was the respondent's honesty when answering the questionnaire about their experience or knowledge regarding ERP and SMEs.

1.8 Operational Definition

1.8.1 Enterprise Resource Planning.

According to Mahmood Ali and Llyod Miller (2017), ERP systems are made up of various software modules that enable organisations to automate and integrate the majority of business functions by accessing and sharing common information, data, and practises across the enterprise in real time. They stated that "the heart of a (ERP) system is a central database that draws data from and feeds data into a series of applications supporting diverse company functions. " The use of a single database greatly simplifies the "flow of information throughout a business.". An ERP system's defining feature is the integration of various organisational functions, so that information is entered only once and is then available across the organisation with real-time updates (Ali & Miller, 2017). Researchers referred ERP systems as enterprise system (ES), enterprise resource management and business system. Respectively conceptualized ERP System as comprehensive packaged software solutions of Information System (IS) designed to integrate all business processes and work to

present a complete outlook of the business from a singular IT and information architecture (Nair et al., 2021).

It is also described ERP an information strategy that merge all information within an organization and create a comprehensive information infrastructure involving all organizational units and functions. From the research, it is clarified that ERP system is more than just a product or software and they further conceptualized ERP into four components (Nair et al., 2021). The first component is software component (Finance, Human Resources, Supply Chain Management, Supplier Relationship Management, Customer Relationship Management, Business Intelligence), which is the visible to users and seen as ERP product. The second component is process flow, which deals with the information flow among modules within ERP system. Third is customer mind-set, that define the influence of ERP system on users, team, and organization.

1.8.2 Critical success factor.

This section discusses the various factors that contribute to successful ERP acceptance in SMEs. Many factors can be classified as people factors, technological factors, or organisational factors. Each factor contains their own critical success which are in context performance, effort, social, motivation and facilitating condition. Critical success factors (CSFs) are elements that are vital for a successful strategy and could affect the performance in a either positive or negative direction. The concept was introduced by D. Ronald Daniel of McKinsey & company was the first to introduce the concept of CSF in Harvard Business Review in 1961. This concept became popular when it was later used to assist in defining the CEO's information needs that are most critical to the success of the business.

Since then, the use of CSF has become widespread in many areas defines the concept, as “those things that must be done if a company is to be successful”, thus those factors within the firms that helps organisations to be favourable on a competitive market. It should not be confused with competitive advantage, as a few actors on a certain market can only achieve it. However, CSFs can be possessed by all organisations in a given market, and can rather be seen as a must for survival. A

common mishappening is to think that the percentage of growth within an organisation is the CSF but that is not the case. This means when an organisation is aiming for superiority over others, the manager should concentrate on few CSFs very well instead of a greater number of factors reasonably well.

1.8.3 Acceptance of ERP

According to Venkatesh (2016) UTAUT categorises five vital factors which are: performance expectancy, effort expectancy, social influence, hedonic motivation, and facilitating conditions. Age, gender, and experience are all moderators that contribute to considering behavioural involvement in the use of technology and actual use of technology primarily within the contexts of an organisation. The system's success depends on the adoption of ERP (Ahmed et al., 2017). It's crucial to have the support of the system users if you want to make sure your firm uses the ERP system effectively. Numerous academics have studied the amount of ERP use and user approval. The technology acceptance model (TAM), which focuses on the criteria perceived usefulness (PU) and perceived ease of use (PEOU) and their impact on usage from the standpoint of the user, is the main methodology used in this research. It has been demonstrated that PU and PEOU have an impact on users' intents toward the ERP system. Therefore, users will be more likely to use the ERP system beyond what management requires when it is viewed as being simple to use.(Kiran & Reddy, 2019). There have also been studies that look into the impact that different firm characteristics have on the use of ERP. Support from top management is regarded as being essential to determining how successfully an ERP system will be used Almuhayfith and Shaiti (2020) evaluated the factor in their investigations, which validated its implementation on ERP utilisation.

1.8.4 Use Behaviour

It will be practical to start with thinking about fundamental issues like What is "behaviour"? What exactly is technology? What connection exists between technology and behaviour? Technology is a complicated term with many nuances that can imply

very different things to different people based on their scholarly interests, philosophies, and theoretical affiliations (Oliveira et al. 2019). Technology is frequently used to refer to both the engineering process by which new devices are created and, more frequently, its products (the devices themselves). Terms like technological devices, technological artefacts, technological tools, interactive systems, and technological design are frequently used interchangeably. Alendeom et al. (2020) undertook a thorough review of biological definitions of the term "behaviour" offered by significant publications and experts in the area in an effort to shed light on the aforementioned theoretical issues. Using the results of this study, the authors offer a definition that is both especially precise and potentially helpful: Behaviour is defined as the internally coordinated responses of entire living organisms (individuals or groups) to internal and/or external stimuli.

1.9 Chapter Summary

This chapter completed the research's background, which is connected to the present status of Small and Medium Enterprises (SME) in Malaysia. There are also statements regarding why this research is being conducted. In addition, three research questions and objectives have been presented in this chapter. The purpose of this research is to investigate the critical success factor of ERP implementation in SMEs. There are various limitations to doing this study, such as a restricted number of respondents, time limits, a limited geographic area, and respondent honesty. The importance of this study is that it provides information and knowledge regarding critical success factor of ERP acceptance within Malaysia SMEs. It will also assist the organization to understand the level of acceptance in implementing the ERP in SME.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

In this chapter will explore on the literature review and relevant theoretical model. The researcher discussed about the variables, measurement and definition of ERP, ERP acceptance and readiness using UTAUT, critical success factor of ERP implementation in SME and method of implementation of ERP in SME. The independent variable, critical success factor of ERP implementation in SME, implementation clearly defined it. The dependent ERP acceptance using UTAUT and method of implementation of ERP in SME is defined according to the previous literature. Then, the relationships between the variables such as critical success factor of ERP implementation and ERP adoption using UTAUT are clearly identified. Finally, the hypothesis of the research developed.

2.1 Underlying Theories

Since the UTAUT model was introduced in 2012, researchers in the field of information systems have been increasingly testing its suitability, validity, and reliability to explain technology adoption in various contexts (Chang, 2012). According to Venkatesh (2003) UTAUT proposed basic of four factors that influence

information technology intention and usage. The first is performance expectation. It is the degree to which a person believes that using the system will help him or her improve job performance. The second factor is expected effort. It refers to the ease with which the system can be used. The third factor is facilitating conditions. It is the extent to which a person believes that an organisational and technical infrastructure exists to support system use. The fourth factor is social influence. It is the extent to which a person believes that others believe he or she should make use of the new system.

2.2 ERP acceptance in SMEs

An ERP system is a business management system that consists of integrated sets of comprehensive software that can be used when to successfully manage and integrate all business functions within an organisation. These packages typically include a collection of mature business applications and tools for financial and cost accounting, sales and distribution, and inventory management supply chain management, human resources, production planning, and computer-integrated manufacturing chain, as well as customer information (Ranjan et al., 2016). An ERP system allows a company to integrate all of its primary business processes in order to increase efficiency and maintain a competitive position. A successful ERP system implementation enables an organisation to realise benefits in terms of increased productivity and competitive advantage.

ERP systems were referred to by researchers as enterprise system (ES), enterprise resource management, and business system, in that order. According to (Ullah et al., 2018), ERP System is defined as a comprehensive packaged software solution of Information System (IS) designed to integrate all business processes and work to present a comprehensive view of the business from a single IT and information architecture. They also defined ERP as an information strategy that combines all information within an organisation to create a comprehensive information infrastructure that includes all organisational units and functions. Although ERP was traditionally implemented by large organisations, it is now being adopted by businesses of all sizes such as Small and Medium-sized Enterprise.

However, ERP is not a one-size-fits-all solution because businesses of varying sizes and quality do not share the same characteristics. ERP is for large companies, and smaller companies must adapt their business model and approach to the practises and software used by large corporations. Small and medium-sized enterprises (SMEs) have had a difficult time as the economy has opened up. Because they lack the sturdiness associated with large corporations (Saade, 2016). However, this is not the most compelling reason to dismiss the benefits of ERP implementation for SMEs. This study defines ERP implementation as process used by companies to manage and integrate integrating all of the processes needed to run firm with a single system in business development (Investopedia.com).

ERP software system can also integrate planning, purchasing inventory, sales, marketing, finance, human resources, and more. Due to the reason that has been stated, ERP implement used by an organisation to managing the operation and process to meet their business and organisational goals in order to gain a competitive advantage over their competitors.

AUTHOR	TITLE	VARIABLES	METHOD	RESPONDENT	RESULT
Kharuddin, Saira Foong, Soon Yau Senik, Rosmila (2015)	Effects of decision rationality on ERP adoption extensiveness and organizational performance	system usage and user satisfaction	Quantitative	ERP adopter and Non-ERP adopter	This study investigates how decision rationality influences ERP adoption extent and, as a result, organisational performance. The roles of two system success measures, system usage and user satisfaction, in mediating system success are also investigated
Khadrouf, Omar Chouki, Marieme Talea, Mohamed Bakali, Assia 2020	Influence of SME characteristics on the implementation of ERP	Economic/financial dimension, Environmental dimension, Technological dimension, Organizational dimension	Qualitative	organization	the most influential characteristics of SMEs are "ownership type, decision-making, and financial resources." The SME context had the greatest impact on "implementation, use, and maintenance."
Smes, Australian Venkatraman, Sitalakshmi Fahd, Kiran 2016	Challenges and Success Factors of ERP Systems in Australian SMEs	Availability of Skilled Resources, Internal Change Management Effective, ERP selection, Customization, Confidentiality, Communication.	Qualitative	Australia SME	Customers and stakeholders have become fully engaged with the range of services provided on the cloud ERP platform as a result of the ERP system in the SME. At the same time, SME customers desired more choice and control.

Table 1: Other Variables in ERP implementation.

Firm performance will be used in this research as one of the ERP implementations practises that was chosen and included in this study. However, there are a few limitations to this. Successful businesses are essential for developing countries. Many economists compare them to engines in terms of determining their social, economic, and political development. To thrive in a competitive business environment, every firm must operate under performance-based conditions. Firm performance has recently emerged as an important concept in strategic management research, and it is frequently used as a dependent variable (Taouab & Issor, 2019). Although it is a widely used concept in academic circles, there is little agreement on its definition and measurement. Nevertheless, because there is no operational definition of firm performance on which the majority of scholars agree, different interpretations will be proposed by different people based on their personal perceptions. This concept's definitions can be abstract or general, less or more defined (Rajapathirana & Hui, 2018).

2.3 Critical Success Factor (CFS) of ERP acceptance

In 1961, Daniel D.R. was the first introduced the concept of "critical success factors" in his seminar HBR article "Crisis of management information." He distinguishes three types of useful data for businesses: environmental, competitive, and internal data, and contends that the enterprise information system (IS) should be discriminatory and selective in reporting internal data. One of the most important research topics in today's ERP systems is the success of ERP implementation. Critical success factors (CSF) are those elements that are required to achieve the desired organisational goals from ERP. Many studies have been conducted in order to identify factors that influence the success of ERP installations for instance (Saade, 2016) and (Yildirim & Kuşakçi, 2018).

The success of all ERP acceptance is directly related to the success of the critical success factor which are focusing on four issues which are “what are the critical factors influencing ERP implementation success in SMEs?”, “What factors contributed to ERP success in a sensible manner?”, “Which critical factors should be prioritised in determining the success of ERP implementation in SMEs?” and “What

factors contribute to the success of ERP implementation?"(Ahmed et al., 2017) . The researcher has identified three CSF of ERP implementation in context of organizational, technological and environmental. However. this context hypotheses are being use by researcher for literature review and not affect the real and final analysis of critical success factor.

2.3.1 Organizational

The relationship between organisational culture and information systems is critical for firms to realise the system's potential benefits. Organizational culture is both a key driver and a barrier to the adoption of innovative ERP technology**.**

H1: Top-level management support has a direct positive impact on ERP implementation intention.

H2: The implementation intention of ERP is directly influenced by organisational culture.

2.3.2 Technological

The technological context includes technology and ICT infrastructure as well as employers and employee's skills. The implementation of ERP is based on an organization's technology and ICT infrastructure, which facilitates the flow of information within the organisation.

H3: Employers and employee's skills in ICT have a direct positive influence on ERP implementation.

H4: ICT infrastructure has a direct positive influence on ERP implementation intentions.

2.3.3 Environmental

Environmental context includes both the regulatory and competitive environments. It has been discovered that regulatory environment support is an important factor in the acceptance of innovations such as ERP (Nandi & Kumar, 2016)

H5: A less strict regulations environment has a direct positive impact on ERP implementation intentions.

H6: A challenging environment has a big positive impact on ERP implementation intentions.

2.4 Acceptance of ERP implementation with UTAUT model

Numerous studies have been conducted to investigate the concepts of technology acceptance. The diversity within the field of technology acceptance, particularly in terms of successful adoption of information systems, makes it difficult to define and differentiate the concepts of technology acceptance and technology adoption (Taherdoost, 2018). Momani & Jamous, (2017) define technology acceptance as "an attitude toward a technology" that is influenced by a variety of factors. Technology adoption is defined as the process that begins when a user of new tech becomes familiar with the technology and decides to use it and implement it within the process or work for improving the task.

Hence theory of acceptance will be applied in the framework of research. The UTAUT model are the theory that the researcher decides to use to analyse the critical success factor (CSF) that influence the acceptance and readiness of ERP implementation within SME. Compare to other theories such as Technology Acceptance Model (TAM) or Igbaria Model (IM) where based on psychology, sociology and communication. UTAUT model identified five factors that influence information system adoption. They were created by customising the fourteen original constructs drawn from eight acceptance theories. Significant constructs include effort expectancy, hedonic motivation, performance expectancy, social influence, and

enabling conditions. age, gender and experience were also identified as significant moderating variables.

The topics investigated included technology acceptance factors that will influencing the ERP system acceptance where use behaviour will be dependent variable. Use behaviour were classified into three distinct categories where each of this factor will have their own specific elements:

2.4.1 For firm purpose

Non-functional aspects of ERP systems that have a significant impact on end-user satisfaction with ERP systems. Two important human acceptance in technology factors identified in the literature are user experience and training. Being able to adapt to change is crucial in today's quickly changing business environment, and ERP will assist one to make their company more agile. A strong ERP system is adaptable, modular, and scalable enough to change with the needs of the market and customers. As your business expands, the firm can tack on smoothly connected apps as needed. The firm can first build selected applications that make sense now.

2.4.2 For training and education purpose

In terms of integration, training and education, ERP systems are easy and understandable to operate. The technical adoption factors identified in the various resources examined ranged from aspects relating to the provision of business functionality to aspects relating to the integration of business functionality, access to business functionality, and timely implementation periods (*Paper*, n.d.). The entire company is connected to a single platform to facilitate data management through ERP programme training and education. The programme may gather, store, and analyse data that is readily available, including employee information, admission form data, work schedule data, fee payment data, and other crucial data. It generates data and makes it available to all departments, allowing for more effective management of the information during the administrative process

2.4.3 For production output purpose

Correspond to how an ERP system can be used to manage an enterprise's day-to-day operations and how an ERP system can support business processes. The business acceptance factors identified in the various resources examined ranged from aspects related to advancing business operations to improving operational efficiencies. ERP is referred to as a lean production enabler because it supports lean manufacturing by supporting streamlined work-flow-order processes that boost output, cut costs, and enhance decision-making (HRDF, 2019). By examining how much of an information system is visual or multimedia based, Tajhjono (2009) presents an alternate way. This information system was created for shop-floor tasks in order to boost industrial operations' productivity and efficiency. This kind of solution can integrate with an ERP system and be utilised in LM for standardisation and visualisation as well as training and task assistance.

2.5 The Interaction of The Research

Several studies have been conducted by researchers to determine the relationship between ERP critical success factor of implementation, method of implementation and acceptance and readiness of ERP implementation within the SMEs. As a result, in order to provide adequate evidence to explain the following link, this study provides research hypotheses based on the development of a theoretical model supported by prior literature.

2.5.1 The relationship of critical success factor of acceptance and method of implementation.

Traditional ERP is a top-down hierarchical system that begins with long-term planning, moves through mid and short-term scheduling, and concludes with execution (SIKICH.com, 2016). Business sectors is a very competitive sector nowadays, so in terms to gain the market advantage in today's competitive world, it is primarily determined by their ability to provide items to customers at low cost and high quality.

It is important that business to identify the factor that could improves firm performance, management and operation in order to cut everything that could bring saving in terms of time and cost. From here the implementation of ERP can help to gain the goal and mission. Hence, an appropriate method is required to apply the ERP. The researcher has identify three method of implementation which are phased, parallel and big bang (Dunaway, 2016).

2.5.1.1 The phased

Implementation is planned in stages, with each phase implementing the ERP system for one or more business processes. These phases can be planned by business department, manufacturing facility, location, and other factors The phased approach takes longer to implement than the big bang method, but it provides a higher level of security because if there any errors it will not affect all business operations. It also relieves the implementation team of stress because there are fewer things to worry about during each phase.

2.5.1.2 The parallel

Throughout the parallel approach, a new ERP system is implemented while legacy systems continue to operate in parallel. This reduces implementation risks because you can fall back on legacy systems if critical errors occur in the new system. However, running two systems at the same time introduces technical complications, such as data synchronisation issues. It also increases the cost of implementation because you will need to rely on implementation as well as IT experts throughout the process.

2.5.1.3 The big bang

The big bang approach involves deploying ERP software for the entire organisation at once. This means that the system will be deployed across all business functions on the go-live date—manufacturing, operations, finance, sales, marketing,

and so on. The big bang approach necessitates extensive planning because software is typically implemented on a predetermined date. Furthermore, there is a lot of pressure to get things done correctly because any mistake can potentially affect all business functions.

2.5.2 The relationship of critical success factor in ERP acceptance within SMEs by implying UTAUT model.

a) Performance Expectancy (PE)

In the UTAUT model, performance expectation is the most important antecedent that explains end users' behavioural intentions. It can be defined as "the extent to which a company believes that using a specific application programme will assist in arriving at a specific solution or job performance" (Venkatesh, 2003). It demonstrates an individual's perceived belief in the performance capability of newly adopted technology (Suki & Suki, 2017). According to the UTAUT tenant, users are more likely to adopt a technology if it serves their purpose. In this study, it is assumed that PE represent the degree to which a person believes in the implementation of ERP. Hence, it will influence the staff members want to use an ERP system that can help improve performance in performing various tasks and thus provide a system that is highly integrated and coordinated, the use of ERP is expected to bring benefits to the task as it is easier and faster to do and complete the work that is there.

H1: There is a significant relationship between PE and the use behaviour of ERP implementation within SMEs.

b) Effort Expectancy (EE)

The ease of use of technology is measured by effort expectancy in other words EE comprises aspects related to the case of use of technology and defined as the degree of ease that an individual associates with the use of technology adoption. According to the UTAUT theory, users are more likely to adopt a technology if it serves their personal purpose. Similarly, to the findings of performance expectancy, studies for

technology acceptance revealed that effort expectancy is a stronger predictor of intention to use a technology. However, When ERP end-users perceive that the system is simple to use, it increases their proclivity to use it. So, it is assumed that EE represents the belief about the ease of use of ERP in the firm use by the employee. This construct reflects how comfortable employee are with the use of ERP within firm where it measures the individual's perception of the level of effort required to use ERP in the firm. It is concluded that the higher the perceived EE (ease of use of technology, convenience), the more likely it is that a employee intends to adopt the use of ERP in the firm.

H2: There is significant relationship of EE and the use behaviour of ERP implementation within SMEs.

c) Facilitating Conditions (FC)

Facilitating Conditions are UTAUT constructions that are thought to have a direct effect on technology adoption. They are defined as a person's belief that organisational and technical infrastructure exists to support the use of the system. The degree to which a person believes that the system's organisational and technical infrastructure exists. The use of the new ERP system is a significant step taken by the company to improve employee performance; with this system, the company will modernise the level of facilities in the office in the form of work tools such as laptops and internet network enhancements in order to increase infrastructure evenly, and thus a hypothesis is formed above.

H10: There is significant relationship of FC and the use behaviour of ERP implementation within SMEs.

d) Social Influence (SI)

The extent to which a person believes that another important person believes he must use a new system is defined as social influence. Because of the demands of the work that make requires using this system is available. ERP system of understanding given to employees with higher levels is expected to influence social,

then form the above hypothesis by emphasising how far the effects of social influence are expected to influence social. In this study, social influence is related to the influence exerted on respondent by close people (for example, boss, manager, colleagues, friends) who believe in the use of ERP in the firm.

H11: There is significant relationship of SI and the use behaviour of ERP implementation within SMEs

e) Hedonic Motivation (HM)

Hedonic motivation refers to the willingness to initiate behaviours that increase positive experience (pleasant or good) and decrease negative experience. In this case, the motivation of the user to use the system can have an impact on the use of ERP. If the user are motivated in using the system it will be a great investment in the firm.

H12: There is significant relationship of HM and the use behaviour of ERP implementation within SMEs

2.6 Theoretical Framework

The researcher focuses the references on Unified Theory of Acceptance and Use of Technology (UTAUT). The research design posited in Figure 2.1. This model is obtained to analyse the relationship of human behavioural intention with acceptance of ERP. In this case the behavioural intention is dependent variable. For independent variable the researcher has identify five factor which are performance expectancy, effort expectancy, social influence, facilitating condition and hedonic motivation which will. Age, gender, experience are moderator in this theory.

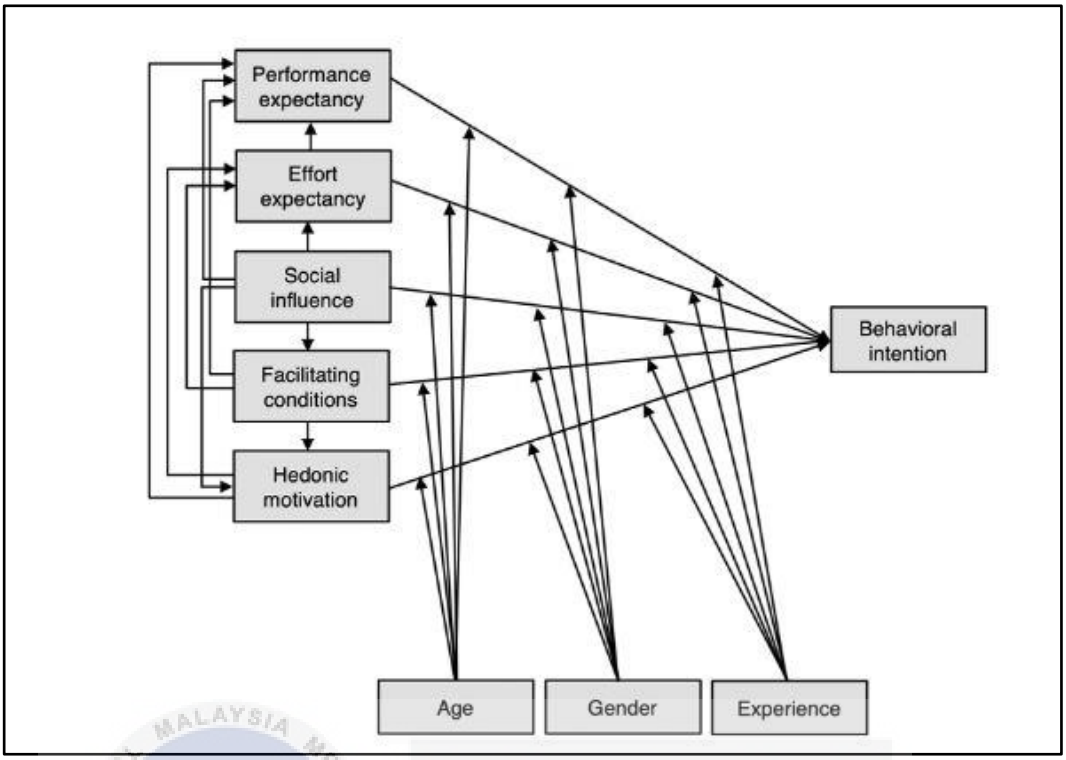

Figure. 1. UTAUT model adjusted to the context of this study, based on Venkatesh et al. (2017).

The constructs of the UTAUT model have a significant role as direct predictors of the intention to behave, structuring a research model that considers performance expectancy; effort expectancy; social influence; facilitating conditions, and attitudes regarding the use behavioural, which, in turn, affect the real utilization of a ERP system. The typical pandemic situation we are facing implies that, when applying the questionnaire, employee are working online with a degree of great uncertainty in relation to the return of face-to-face working. The purpose of this model is to relate the endogenous variable of employee to accept ERP (as didactic tools in the firm) and a certain number of explanatory or exogenous variables. The variables that we will present resulted from an analysis of technological competences and resistance factors, and address several themes.

2.7 Conceptual Framework

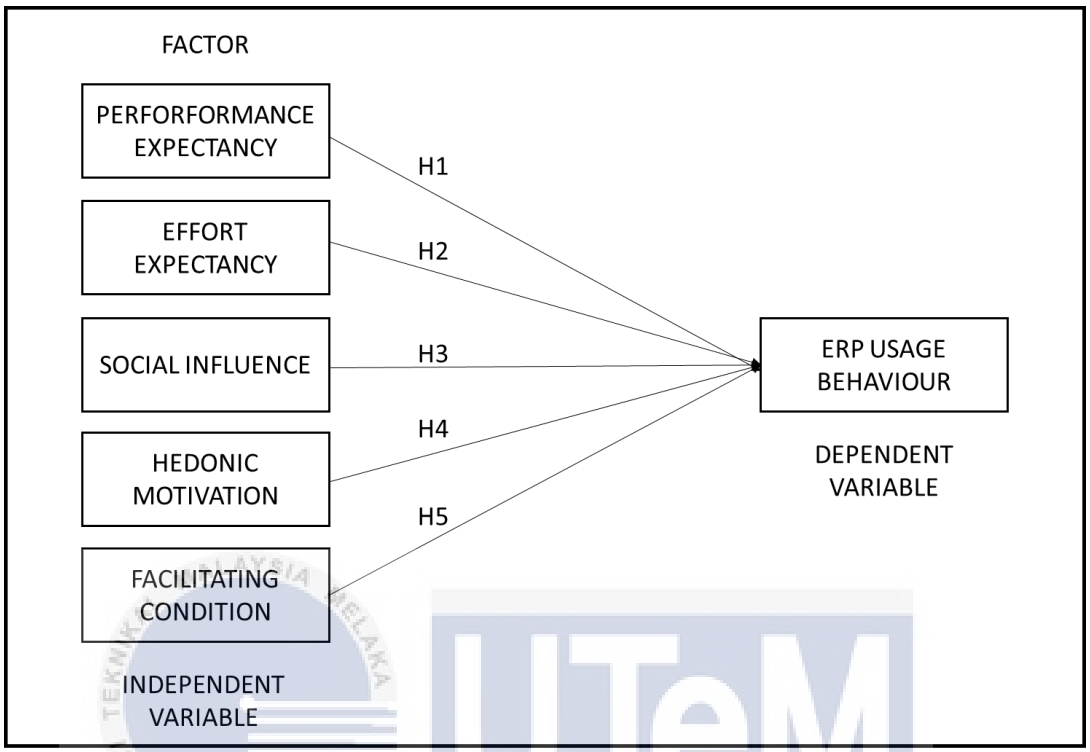

Figure 2: adaption from (Yildirim & Kuşakçi, 2018)

Figure 2.2 shows the conceptual model of the research. Based on the Yildirim & Kuşakçi, 2018) model, The framework also shows relationship between In this case the behavioural intention are contain five independent variable factor which are performance expectancy, effort expectancy, social influence, facilitating condition and hedonic motivation which will. For the dependent variable it will be usage behaviour. From usage behaviours the researcher can identify the degree of usage intention of the ERP implementation. Therefore, the aim of the research framework is to study the critical success (CFS) factor of ERP implementation in SMEs.

2.8 Chapter Summary

The literature reviews that are being covered in this research topic are about the critical success factor of ERP acceptance within Malaysia SMEs. Furthermore, in this chapter, the researcher examined the definition of ERP implementation, Critical Success Factor (CFS) of ERP implementation, acceptance of ERP implementation with UTAUT model, the effect on use behaviour and the interaction of research. All of which are based on previous research. The researcher received the studied conceptual framework from (Yildirim & Kuşakçi, 2018) but modified it to suit the research variables, which included five independent variables and one dependent variable.

CHAPTER 3

RESEARCH METHODOLOGY

3.0 Introduction

In Chapter 3, the research design and various forms of method adopt by this research will be thoroughly explained. This chapter will discuss every aspect of conducting this research, including the location of population, time horizon, population frame, interview sampling techniques and data analysis method. According to Hugh Willmott (2016) research methodology is defined here as the medium by which a method constantly striving to be systematic, such as scientific, are developed, applied, and justified within specific communities. Methodology is not reducible to a single method, nor is it the sum of methods. Rather, it provides the (philosophical) foundation for claims about the systematically production of knowledge and the use of specific methods. Following that, one of the research designs is picked for this study for a variety of factors. This chapter will also explain data collection method would also detail the procedures for gathering related data and information. The sample and two types of samples have been defined, and one of the samples will be selected for this study for a variety of reasons. Regarding that, the sample size for this study was determined, and the comprehensive information from the pilot study was presented.

3.1 Research Design

In general, research design refers to a structure for planning and carrying out a specific research project. The research design is the most important aspect of the study because it includes all four important considerations: the strategy, the conceptual framework, the identification of who and what to study, and the tools and procedures to be used for data collection and analysis (Hugh Willmott, 2020). The research design typically is divided into four category descriptive, quasi, quantitative and qualitative method. In this study the researcher used casual research. As the relationships between the dependent variable, critical success factor of ERP adoption with the independent variable which are based onto UTAUT theory of acceptance which conducted through survey to compile the findings.

According to Saunders et al. (2009), a survey strategy can be used to conduct descriptive research. In order to collect data from the intended respondents, questionnaires were the most popular and widely used method in business and management research. In this research context, data was to be collected regarding to the ERP adoption within SEMEs by using UTAUT theory. From the questionnaire, researcher hopes that data collected can provide a clear picture on the critical success factor of ERP adoption and usage intention of this system implementation within SMEs in Malaysia.

3.1.1 Descriptive Research

With no control over the variables, descriptive research can be defined as a statement of the current state of affairs. Additionally, "descriptive research might be characterised as the straightforward effort to ascertain, characterise, or identify what is. Through a process of data collecting that enables them to explain the situation more thoroughly than was possible without using this method, descriptive research "aims to shed light on present challenges or problems." Descriptive research is essentially utilised to characterise different facets of the phenomenon. Descriptive research, a common method, is used to characterise the traits and/or behaviours of a sample population (Nassaji, 2015). It can describe categories of information like gender or

patterns of interaction when using technology in a group setting. It can also involve collections of quantitative information that can be aggregated along a scores on a test, such as test scores or the number of times a person chooses to use a specific feature of a multimedia programme. In descriptive research, data that describe events are gathered, organised, tabulated, illustrated, and described. In order to help the reader, comprehend how the data is distributed, it frequently includes visual aids like graphs and charts.

Figure 3: Process of Quantitative Research

3.2 Methodology Choice

The researcher decides to use descriptive research method in this study in order to guide for collection and explanation of data finding. It is for identify the casual relationship between independent variable and dependent variable. A population, circumstance, or phenomenon is intended to be accurately and methodically described through descriptive research. What, where, when, and how questions can be answered, but why questions cannot will not be use. A descriptive research design can investigate one or more variables using a wide range of research techniques. Contrary to experimental research, the researcher only observes and measures the variables in this type of study.

The process of collecting and analysing numerical data is known as quantitative research. It can be used to discover patterns and averages, to make predictions, to test causal relationships, and to generalise results to larger populations. The positivism paradigm, which advocates for approaches embedded in statistical breakdown and includes other strategies such as inferential statistics, hypothesis testing, mathematical exposition, quasi-experimental design randomization and experimental is the source of quantitative research (Adedoyin, 2020). Quantitative research methods emphasise objective measurements and statistical, mathematical, or numerical analysis of data collected via polls, surveys, and questionnaires, or by manipulating pre-existing statistical data with computational techniques.

3.2.1 Quantitative research approach

Quantitative research objectives are quantifiable and cannot be separated from variables and hypotheses; variables are concepts with variations that can take many different values, whereas hypotheses are untested assumptions or propositions about the relationship between variables. According to QuestionPro.com (2022) the most common type quantitative research that being used are survey research. This is the most basic tool used in all quantitative outcome research methodologies and studies. Surveys are used to ask questions to a sample of respondents and come in many forms,

including online polls, online surveys, paper questionnaires, web-intercept surveys, and so on.

3.3 Data Resources

Techtarget.com (2022) defines data as a set of quantitative or qualitative variable values. Data is information in the form of facts or figures from which judgments are made. Before one can present and interpret information, it must first be gathered and sorted. Data can be viewed as the raw material from which information is obtained, just as trees are the raw material from which paper is produced. Gathering data can be accomplished by a primary source (the researcher is the first to obtain the data) or a secondary source the researcher obtains data that has already been collected by other sources, such as data published in a scientific journal (Adedoyin, 2020).

3.3.1 Primary data

Primary data is information gathered for the first time by the researcher through direct efforts and experience, with the specific goal of addressing his research problem. Also known as first-hand data or raw data. Primary data collection is quite costly because the research is carried out by the organisation or agency itself, which necessitates resources such as investment and manpower. The investigator has direct control and supervision over the data collection. Primary data can be collected through various method and sources include surveys, observations, experiments, questionnaire, personal interview and focus group.

3.3.2 Secondary data

Secondary data refers to information that has already been collected and recorded by someone other than the researcher themself for a purpose unrelated to the current research problem. It is a readily available form of data derived from various

sources such as censuses, government publications, internal organisational records, reports, books, journal articles, websites, and so on. Secondary data has several advantages because it is easily accessible and saves the researcher time and money. However, because the data is gathered for purposes other than the problem at hand, the usefulness of the data may be limited in a number of ways, including relevance and accuracy. Secondary can be data collection sources are government publications, websites, books, journal articles, internal records etc.

3.4 Location of Research

Malaysia is a country in southern Asia that is part of the Malay Peninsula, near to the island of Borneo. As a result, Malaysia was chosen as the research location since Malaysia has a large number of Small and Medium-sized Enterprises (SME). The location will be particular to the SMEs Malaysia firm whose employees are at the executive level or higher. The specific location for conducting the research will be both in peninsular and east Malaysia.

3.5 Time Horizon

Time horizons typically refer to study periods or chronological horizons of varying breadth distinguish three basic time horizons: short-term – up to 10 years; medium-term – up to 25 years; and long-term – more than 25 years. Muller & S. Derek (2020) distinguish static observations from a future point in time, which is usually associated with socially constructed strategies as an alternate solution time horizon. This type of retrospective is typically used in the construction of "static" or "end-state" scenarios. Time horizon defines the research time frame – cross-sectional or short-term study, involving data collection at a specific point in time or longitudinal – data collection repeated over a long period of time in order to compare data. The questionnaire will be delivered to respondents between July until September of 2022. The investigation will be finished November 2022, and the results of the collected data will be presented in November 2022.

3.6 Research Strategy

The research strategy provides the overall direction of the research, including the process by which the research is carried out. Research strategies include experimentation, archival research, ethnography, action research, grounded theory, narrative inquiry, survey, and case studies. The research's methodology that being choose are the questionnaire which is was created to satisfy the study's requirements. In order to validate the research in terms of accuracy, the ideas for the questions were generated based on references to prior studies. In order to cover the research's scope, several of the questions were also self-structured. This research employed a survey as its primary research method. Commonly, a descriptive approach uses a questionnaire as a method to collects the data. Questionnaires are well-liked because they allow for the highly efficient collection of large amounts of data from a sizable population. Additionally, the questionnaire technique is regarded as authoritative by the general public and is relatively simple to explain and comprehend.

3.6.1 Pilot test

A small feasibility study known as a "pilot study" is used to test several components of the approaches intended for a bigger and more thorough and confirmatory research. In essence, a pilot study is carried out to avoid the occurrence of a fatal flaw in a study that is expensive in terms of both time and money (Lowe, 2019).The primary goal of a pilot study is not to provide answers to specific research questions but rather to stop researchers from beginning a large-scale study without sufficient knowledge of the methods suggested (In, 2017). It is possible to do a preliminary analysis using the pilot test data to make sure that the information gathered will make it possible to respond to the research questions. One benefit of performing a pilot study is that it may provide early warning about potential failure areas for the main research project, potential protocol violations, or whether planned procedures or instruments are ineffective or overly complex (Fraser et al., 2018). These are significant justifications for conducting a pilot study, but there are others, such as

persuading funding organisations that one research proposal for the primary study deserves funding. Pilot studies are therefore carried out for a variety of reasons.

3.6.2 Experimental and non-experimental

Experimental research is a type of study that employs a scientific approach to manipulate one or more control variables of the research subject and then measure the impact of the manipulation on the subject. It is well-known for allowing the manipulation of control variables. Non-experimental is research in which an independent variable is not manipulated. Rather than manipulating an independent variable, non-experimental researchers simply measure variables as they occur in the lab or in the real world; the subject of this paper will be real-world conduct. Non-experimental information is collected through surveys, observation and case studies, while experimental data is collected through observational studies, simulations, and surveys.

Case studies and simulations are the main differences between these data collection tools. Even so, similar tools are used in a variety of ways. In experimental research, an observational study might be used during a laboratory experiment to see how the effect of a control variable manifests over time. However, when used in non-experimental research, data is collected at the discretion of the researcher rather than through a clear scientific reaction. at the end of result, could see a difference in the level of objectivity in this case.

3.6.3 Questionnaire strategy

According to Neuman (2014), the history of surveys can be traced back to ancient time censuses, which involved the government collecting data from the entire population in a geographical entity. The descriptive nature of survey research is dependent on the data collection procedure, which entails gathering data from a representative sample of total respondents in order to generalise the results to the entire population under investigation. A survey is a data collection instrument for quantitative research, and there are two types of surveys: questionnaires and

interviews. The rapid adoption of technology has transformed survey research dramatically in recent years. There are automated telephone surveys that use random dialling methods, computerised kiosks in public places that allow people to provide feedback, and online surveys that we complete when we visit websites.

In the survey strategy, the questionnaire is used to collect quantitative data. Questionnaires are quantitative data that enable researchers to collect a large amount of data and information from a large number of respondents. The survey strategy is suitable for the researcher to carry out the data gathering procedure in order to explore the critical success factor of ERP implementation in SMEs. A survey strategy is typically associated with a deductive approach using an online questionnaire. The questionnaire will use Google Form as a platform for answering the survey. The respondent may fill the form give any responded and submit it online.

3.6.4 Questionnaire design

To collect data for this study, a questionnaire will be distributed to employees in SMEs ranging from entry level to executive level and above. The questionnaire will be designed by the researcher to assess the critical success factor of ERP implementation in SMEs effect. In the questionnaire design for the survey study, there will be 3 part which are section a, section b and section c. In section a, the question will be asked regarding the demographic of the respondent such as age, gender, position in organization and general question regarding respondent characteristic. In section b, the question will be more critical for the research. The question will ask the opinion of respondent regarding the critical success factor of ERP implementation in SMEs according to UTAUT theory. Meanwhile in section c, will be ask and focus on the use intention of ERP implementation in order to fulfil the requirement for research question number three.

Section A question is mostly based on what already a fact. However, for section b and c the question will based on their knowledge, expertise and understanding regarding the subject matter. As a result, Likert scale is an ordered scale from which respondents select one option that best represents their point of view. It is frequently used to assess respondents' attitudes by asking how strongly they agree or disagree

with a specific question or statement. A typical scale might be "strongly disagree, strongly disagree, disagree, neutral, agree, strongly agree." The benefit of using a Likert scale is that it can help respondents avoid some of the common pitfalls of survey design, such as asking overly broad questions that respondents may find difficult to answer. This may cause them to become frustrated and respond too quickly, compromising the quality of the researcher's data.

Critical Success Factor	**No**	**Item**	**Resources**
Performance Expectancy	PE1	I would find ERP useful for improve my work	(Lin, 2019)
	PE2	I think using ERP in my day-to-day operation would be convenience.	
	PE3	I think using ERP will help save working time	
	PE4	Using ERP increase my chance of achieving things that are important to such as personal goals	
	PE5	Using ERP will enhance my effectiveness in production	
Effort Expectancy	EE1	I would find ERP easy to use	(Elsafty et al., 2020)
	EE2	It would not take me long time to learn how to use this system	
	EE3	My interaction with ERP would be clear and understandable	
	EE4	It will be easy for me to become skilful using ERP system	

	EE5	I would find it easy for ERP to do what I want to do	
Social Influence	SI1	People who influence my behaviours thin that I should use ERP for my daily work	(Khatimah et al., 2019)
	SI2	I think I am more likely to use ERP system if my co-workers or friends use it	
	SI3	I use ERP because my boss and colleagues use it	
	SI4	People whose opinions that I value prefer that I use this system	
	SI5	The company are supportive the uses of this system	
Hedonic Motivation	HM1	I think using ERP is fun	(Moorthy et al., 2019)
	HM2	I think using ERP can improve my skill	
	HM3	I think using ERP is enjoyable	
	HM4	Using ERP system is a good idea for my well-being.	
	HM5	I think this system can improve my chance to get promote	
Facilitating Condition	FC1	This system is useful and convenience for production	(Lin, 2019)
	FC2	I am familiar with system like ERP	
	FC3	I am familiar with process of managing company	
	FC4	ERP system compatible with other system I use	

	FC5	I can get help when I have difficulties when using this system	

Table 2: Questionnaire items for independent variable

Use Behaviour	No	Item	Resources
For Firm purpose	FP1	1. ERP are useful for company that always make day-to day production.	(Chavez & Duberg, 2021)
	FP2	2. ERP system able to streamline MY entire organization.	
	FP3	3. ERP suitable for every size of company.	
	FP4	4. ERP adoption leads to do the job requirement more rapid	
	FP5	5. ERP adoption results in more efficiency	
For Training and Education purpose	TE1	1. The adoption of ERP will give appropriate knowledge regarding management and production.	(Chavez & Duberg, 2021)
	TE2	2. Using ERP and its ability has outstanding flexibility on works	
	TE3	3. Facilitated higher order thinking	
	TE4	4. Use of this system to document	

		personal/professional growth	
	TE5	5. ERP able to analyse performance/achievement or company and the employee.	
For Production output purpose(Engdahl & Svensson, n.d.)	PP1	1. The use of ERP would increase the amount of production in the company.	
	PP2	2. ERP allow to use the material appropriately	
	PP3	3. ERP system help in reducing the time of operation	
	PP4	4. ERP able to located the best management and solution for production output.	
	PP5	5. ERP able to accomplish the company target and goals.	

Table 3: Questionnaire items for dependent variable

3.7 Sampling Design

A sampling design is a solution that makes use of a subset of the population to make a decision which is representative of the whole population. The sample design included information about sample size and their coverage, as well as descriptions of national sample designs that also included sampling stages, sampling units, selection probabilities and so on size of the samples. The sampling designs included specific details about the procedures for sampling techniques at each sampling stage. A sample is a fraction of the population that claims to represent the characteristics of the whole (Muhammad & Kabir, 2018).

3.7.1 Sampling Population

The process of selecting a sample in order to estimate population characteristics. In other words, it is also the process of learning about an overall population by examining a subset of it. In this research, the sampling will be take from the target population which are the Malaysian Small and Medium-sized Enterprise. The sampling will be focusing on every level and position within the firm. According to The Malaysia Reserve.com (Dec, 2021), around 1.15 million SMEs account for 97.2 percent of all business establishments in the country.

3.7.2 Sampling Technique

There are two fundamental approaches for sampling which are probability sampling and non-probability sampling. Probability sampling is a random or chance sampling. In this case, the sample is drawn in such a way that each unit of the population has an equivalent and positive chance of being chosen. This ensures that the sample accurately represents the entire population. Probability sampling can be accomplished by randomly selecting a sample from among all units of the population. For non-probability sampling, non-probability sampling refers to any sampling method in which some elements of the population have no chance of selection also known as out of coverage sampling where the probability of selection cannot be accurately determined.

It entails the selection of elements based on speculation about the target population, which form the selection criteria. As a result, because the element selection is not random, the non-probability sampling doesn't really allow for the measurement of sampling errors. Non-probability sampling is a non-random and subjective sampling method in which the sampler's personal judgement or discretion is used to select the population elements that comprise the sample (Muhammad & Kabir, 2018). In this researcher, the sampling technique that will be use is probability simple random sampling with number of respondents is 150 in Melaka.

3.7.3 Sample Size

Krejcie and Morgan selected the sample size for this study (1970). Small and medium-sized businesses account for 97.2 percent (1.5 million) of all businesses established in Malaysia (The Malaysia Reserve.com). According to the sample size chart from Krejcie and Morgan (1970), a total of 384 sample sizes were used, with a population size of 1.5 million SMEs responding to the questionnaire survey in Malaysia. Because of time constraints and the need for highly precise data, the sample size was kept small.

TABLE 1
Table for Determining Sample Size from a Given Population

N	*S*	*N*	*S*	*N*	*S*
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size.
S is sample size.

Figure 4: Sample size for different sizes and population

Source: Krejcie & Morgan (1970)

3.8 Reliability

According to Mark Saunders (2016), reliability is defined as the ability to produce the same results as previous research, and the research is considered reliable. The researcher also defined reliability as the consistency with which the same result was obtained using the collected data. The researcher will calculate reliability using Cronbach's Alpha. Cronbach's Alpha is a statistic that indicates whether or not the test and scales used in a study are acceptable (Laerd statistic.com). Cronbach's Alpha is composed of an alpha coefficient with a value ranging from 0 to 1. Cronbach's Alpha will show the Coefficient Range as well as the Strength of Association. It is acceptable if the Cronbach's Alpha is greater than 0.7.

Cronbach's Alpha	Reliability value
Less than 0.6	Poor
0.6 to less than 0.7	Questionable
0.7 to less than 0.8	Acceptable
0.8 to less than 0.9	Good
0.9 or more	Excellent

Table 4: Cronbach's Alpha Coefficient Range and Strength of Association

3.9 Validity

The accuracy of a method measures what it intends to measure is referred to as its validity. If research has high validity, it produces results that correspond to real physical or social properties, characteristics, and variations. The design of questionnaires is critical in research because it influences the validity and reliability of data obtained. To avoid inaccurate responses or data collection later on, the questionnaire design must be abstract. Several strategies may be used during exploration to improve the quality of information obtained. The legitimacy or validity of data may be improved by discussing the solution in a variety of contexts. Inside legitimacy, outer legitimacy, and develop legitimacy are the three types of legitimate.

3.10 Data Analysis Method

Data analysis is a method of putting facts and figures together to solve a research problem. It is critical for answering the research question. Another important aspect of the research is data interpretation, which is derived from data analysis and draws inferences and conclusions. It is frequently difficult to deduce the raw data, in which case the data must be analysed and the result of the analysis deduced (Communication, 2014). Following data collection, the researcher will use the Statistical Package for Social Sciences (SPSS) software version 20.0 as to analyse the data. The SPSS will use by researcher to explain all the data that has been collects and identify

This programme can manage large amounts of data efficiently, allowing for the evaluation of data collection and inquiry for quantitative research. Furthermore, SPSS can comprehend massive quantities of data and end up making information collection and organisation easier with a variety of internal administration effects. SPSS, for example will use its regular recurrence to ensure that the data collected is accurate, consistent, and legitimate. When conducting the survey, it will also put speculation to the test. Exploratory 34 factor analysis, descriptive analysis, Pearson's correlation coefficient, and multiple regression analysis are among the analysis methods used.

3.10.1 Exploratory Factor Analysis (EFA)

The factor analysis was used to look into the pattern of correlations between the variables investigated. In this investigation, the researcher will use explanatory factor analysis. The KMO's test has a value between 0 and 1, with 0 indicating that the sum of partial correlations is large relative to the sum of correlations, implying that factor analysis is likely to be insignificant and a value close to 1 indicating that correlation patterns are fairly small and factor analysis yields distinct and reliable. Factor analysis is used to determine the construct validity of independent and dependent variables so that they can be used in future studies.

Furthermore, it allows the researcher to reduce the amount of data collected to make it more manageable. This study's analysis contends that each observed response

to 17 questions is influenced by three underlying common variables. Because the intensity of the relationship between each component and each measured item varies hence certain dimensions may be more influenced than others. Comparable items will be grouped together under the same dimension by factor analysis, and if the items are clustered together under the same dimension.

3.10.2 Pearson's Correlation Coefficient

Pearson's Correlation Coefficient (r) is used in SME Malaysia to assess the strength of the relationship between the independent variables and the dependent variable. Pearson's Correlation Coefficient would be used in this study to determine whether the correlation is significant or not between the independent variables of critical success factor (CSF) of SMEs implementation, method of implementation of SMEs and the dependent variable of adoption ERP implementation to determine whether the correlation is significant or no. According to (Lewis & Thornhill, 2019).

Pearson's correlation coefficient has a value between -1 and +1, indicating perfect negative and perfect positive correlations, respectively, whereas a value of 0 indicates no relationship correlation. If the Pearson's correlation coefficient is negative, the relationship between the independent and dependent variables is negative, which means that as one variable increases, the result of the other decreases. If the Pearson correlation coefficient is positive, the relationship between the independent and dependent variables is positive, implying that when one variable rises, so does the other.

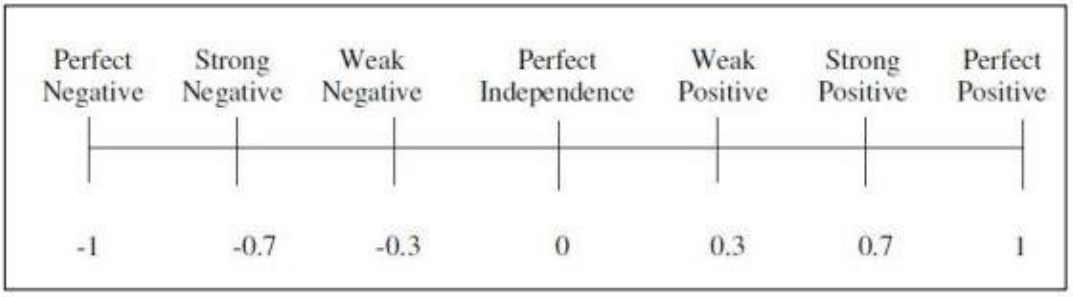

Figure 5: Pearson's Correlation Coefficients

Sources: (Saunders, Lewis & Thornhill, 2019)

3.10.3 Descriptive Analysis

Descriptive analysis entails numerically describing and analysing variables in order to determine the core trend and dispersion (Lewis & Thornhill, 2019). In this study, descriptive analysis tools were used to determine the demographics of targeted respondents in both frequency and percentage terms. In short, descriptive analysis is also used to collect and categorise the population. Each descriptive statistic aids in the comprehension of a large amount of data. The researcher will use descriptive analysis to distinguish age, gender, level of education, job position, and work experience among SMEs business respondents. The most well-known types of descriptive statistics are centre measures such as mean, median, and mode, which are used at virtually all levels of mathematics and statistics (Will Kenton, 2019). This could be represented by independent and dependent variables such as mode, mean, median, and range. In this research, frequency analysis will be used and can be explained in terms of percentage. The level mean score that can be divided into low and high medium is shown in table 5 below.

Range of Mean	Level
0.00 – 1.67	Low
1.68 – 3.33	Medium
3.34 – 5.00	high

Table 5: Mean Score Table

3.10.4 Multiple Regression Analysis

Multiple Regression Analysis is a valuable tool for researchers that can lead to the development of a great statistician. This study will look into two or more relationships between an independent and an independent variable, such as impact intensity and cause. Saunders 2007 is the foundation for this theory. Using multiple regression analysis in this study, it will be possible to determine which independent

variables, such as s critical success factor (CSF) of SMEs implementation, method of implementation of SMEs implementation have the greatest effect on acceptance and readiness of ERP implementation in SMEs. Below is an example of a multiple regression formula.

Equation: $Y = \alpha + \beta1(X1) + \beta2(X2) + \beta3(X3)$

Figure 6: MRA equation

Y represents the dependent variable, which is the acceptance and readiness of ERP implementation in SMEs, α is the constant value/other effects and β is the coefficient. The X1, X2, and X3 variables represent independent variables such as critical success factor (CSF) of SMEs implementation and method of SMEs implementation. R is the coefficient of correlation and the square root of R-squared in the multiple regression analysis model. The variance in the dependent variable that can be explained later by the independent variable is represented by R square.

Where;

y = dependent variable (use behaviour)

α = constant terms

β = coefficient

x1 = IV

x2 = IV

x3 = IV

3.11 Chapter Summary

The researcher demonstrated the approach that would be used to collect data and information about the variables in this chapter. It looks at the techniques used to answer the research questions. The researcher will use an explanatory research design

and a quantitative approach for this research project. This research used both primary and secondary data sources. To collect responses for this study, the survey approach and questionnaire design will be used as the research strategy. For digital questionnaire, Google Form will be used to collect responses from SMEs respondents. Because these areas have a high concentration of SMEs, the researcher chose Malaysia as the site of the investigation. In this study, the researcher will conduct cross-sectional sample design and pilot testing. The Statistical Package for Social Science (SPSS) will be used by the researcher in the data analysis section to evaluate the data using Exploratory Factor Analysis, Pearson's Correlation Descriptive Analysis, and Multiple Regression Analysis. The coefficient will also be discussed in the section on data analysis. The various methods that will be used to validate the reliability of this study research can be trusted.

CHAPTER 4

DATA ANALYSIS

4.0 Introduction

The outcome of the data analysis gathered by the response to the title which the critical success factor of ERP implementation within SMEs using UTAUT model was provided and analysed in this chapter. To begin, the reliability of each factor was assessed on 10 respondents using Exploratory Factor Analysis (EFA) in SPSS software as a pilot test. Second, quantitative data analysis was presented using descriptive statistics in the study. The descriptive analysis showed the results of demographic study. Third, to evaluate the link between variables, the coefficient is utilized for Pearson correlation. Next, the proposed hypotheses have been measured using the multiple regression coefficients and the hypothesis investigated in this research has been clarified based on the results. In this research, there are 150 questionnaires gathered using investigator-based surveys, which are randomly disseminated via Google Form online to employees in Malaysia at the senior management. The researcher utilized the Statistical Package for Social Science (SPSS) software version 27 to analyse the data, and the results will be presented in table form.

4.1 Pilot Test

The pilot test acts as the initial step in finishing the sample by testing on a small scale to address all potential issues that could result in the research system failing. The pilot test can only be put into practise if the study's subject, problem, goal, and strategy or procedures have all been properly defined. A pilot study has two phases, the first of which was to find as many real-world arrangements as possible that would impede the development of the research procedure. The second involved classifying all measurement-related activities and determining whether or not these instruments will be useful in interpreting the analysis's outcomes in the future.

Therefore, a pilot test was conducted to pre-test the questionnaire on 10 academic respondents.

Case Processing Summary

		N	%
Cases	Valid	10	100.0
	Excluded[a]	0	.0
	Total	10	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.987	.988	40

Table 6: Pilot Test on reliability of questionnaire.

(Source: IBM SPSS output)

According to the reliability test result performed from the 10-questionnaire collected for pilot test as shown in Table 6, the Alpha coefficient for al the 40 question is 0.987, which is recognised as high reliability, as when a reliability coefficient of 0.7 or higher was considered “acceptable” in most social sciences research situation.

4.2 Descriptive Analysis

The researcher utilized descriptive statistics to assess the demographic background of the total of 150 respondents in this study. The gender, age, education level, job position and duration of work experiences, as well as the industry group and number of employees at your firm, are all examined in this part. A set of questionnaires tailored for answering research question which are

4.2.1 Demographic Background of Respondent

In this section, a total of 150 questionnaires were distributed and 150 questionnaires were collected through electronic media distribution through Google form and also, there were a number of optimistic feedbacks acquired through social media channel for instance, Facebook and Instagram. Overall, the response rate is 100%, due to the easiness in accessing these questionnaires.

First part of the questionnaire consists of 7 questions related with demographic profile of the respondents, those age range, gender, race, education level, working experience, industry and the existence of ERP within company. Data management and analysis for demographic profile was performed using IBM SPSS 27.0. All the collected data for Part A was presented in descriptive statistic, such as table and pie chart and. In additional, each of the pie chart was summarized in a paragraph form to insulate the data in clearer form. The output of IBM SPSS for demographic can be referred to the Appendix C.

a) Gender

		Frequency	Percent
Valid	FEMALE	82	54.7
	MALE	68	45.3
	Total	150	100.0

Table 7: Gender of Respondents

(Sources: SPSS Output)

The gender of all respondents who filled out the questionnaires is in Table 7. The total of female respondents was 82, accounting for 54.3%, while the total number of male respondents was 68, accounting for 45.7%. The overall number of female respondents exceeds the number of male respondents.

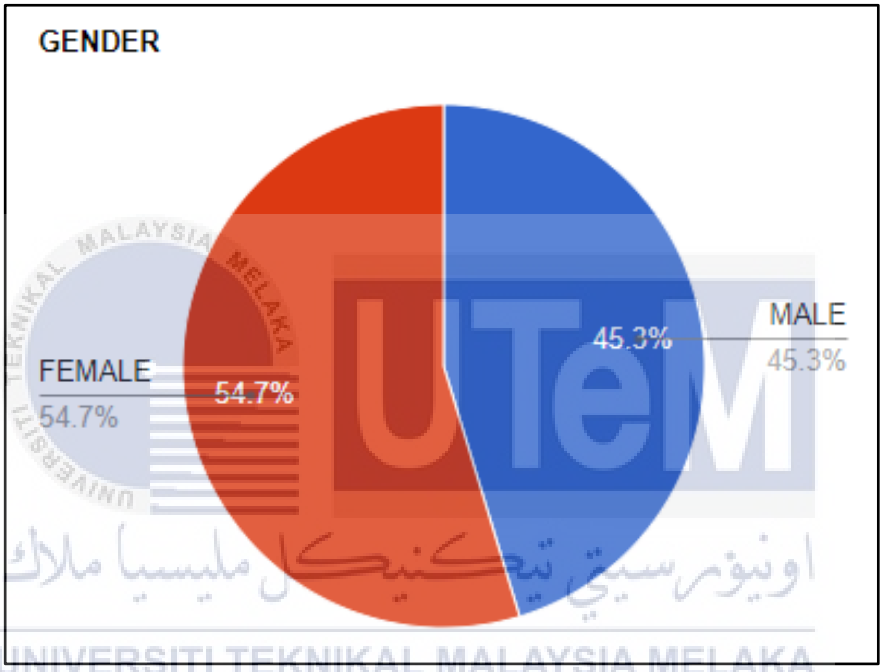

Figure 7: Gender of Respondent

b) Age

		Frequency	Percent
Valid	20-29 years old	86	57.3
	30-39 years old	24	16.0
	40-49 years old	16	10.7
	50-59 years old	24	16.0
	Total	150	100.0

Table 8: Age of Respondents

(Sources: SPSS Output)

The percentage for age range of all 150 respondent was shown in figure 9 as in form of pie chart. The range of respondents who completed the questionnaires was between 20 to 59 years old and above. The majority of the respondents are between the ages of 20 to 29, accounting for 86 out of a total of 57.3% of the total number of respondents. A total of 24 respondents, or 16.0 % of the total, were between the ages of 30 to 39. This result is same for age range of 50-59 where the total of respondent is 24,16.0%. Only 16 respondents, or 10.7% of the total, were from the age range of 40-49.

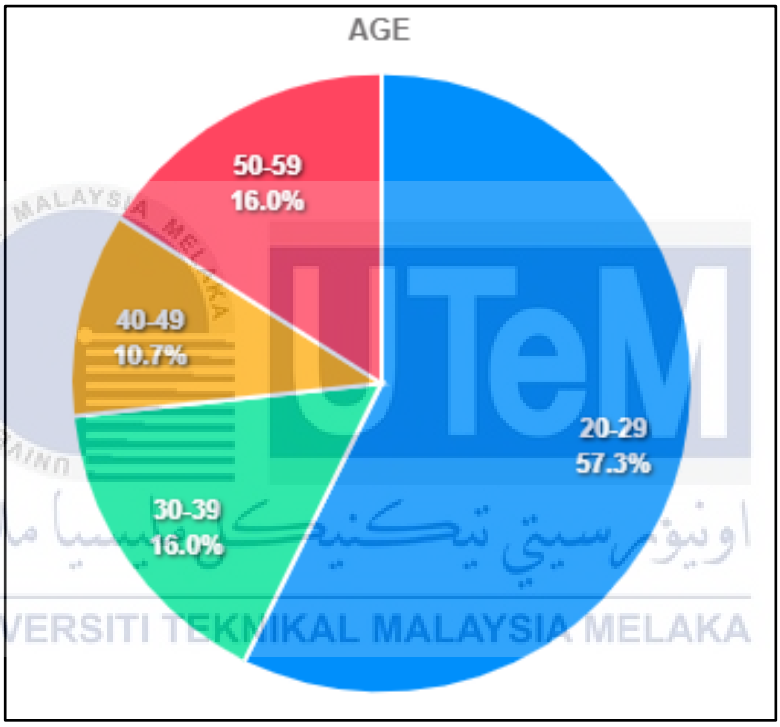

Figure 8: Age of Respondents.

c) Race

		Frequency	Percent
Valid	BIDAYUH	1	.7
	CHINESE	21	14.0
	INDIAN	13	8.7
	KADAZAN	2	1.3
	MALAY	113	75.3
	Total	150	100.0

Table 9: Race of Respondents

(Sources: SPSS Output)

From the table above there are 5 race that has answer these questionnaires. From the figure 4.3.3, the majority of the respondents are, accounting for 113 out of a total of 76.5% of the total number of respondents. A total of 21 respondents, or 14.3 % of the total, were Chinese. Then, 13 respondents, or 8.2 % of the total, were Indian. Next, 2 respondents from Kadazan represent 1.3%. Only 1 respondent, or 0.7% is Bidayuh.

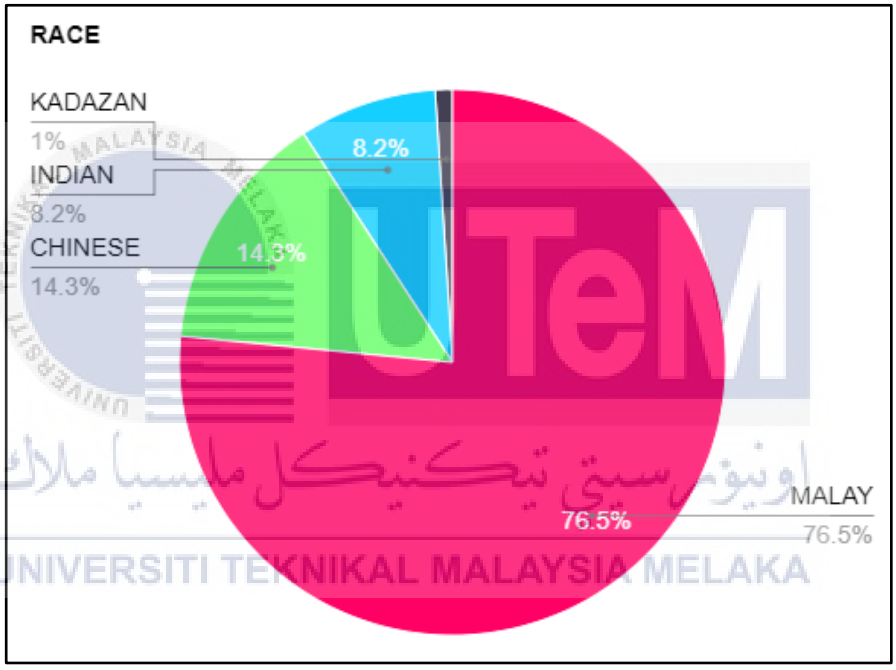

Figure 9: Race of respondent

d) Education level

		Frequency	Percent
Valid	SPM	5	3.3
	STPM/DIPLOMA/FOUNDATION	32	21.3
	BACHELOR DEGREE	98	65.3
	MASTER DEGREE	14	9.3
	PhD. DEGREE	1	.7
	Total	150	100.0

Table 10: Education level of Respondents

(Sources: SPSS Output)

The Table 10 shown the education level of respondent in this research. Most of the respondent were graduated with Bachelor's Degree, with 98 respondents made up of 65.3% from the overall percentage. There were 32 respondents are holding STPM/Diploma/Foundation or other equivalent qualification, which stand up to the second highest portion with 21.4% of the total percentage. Respondent with Master degree hold up third place with 14 respondents, or 9.2%. Where the SPM are qualified by 5 respondents with 3.3%. For Doctorate degree (Ph.D.) only received one respondent (0.7%).

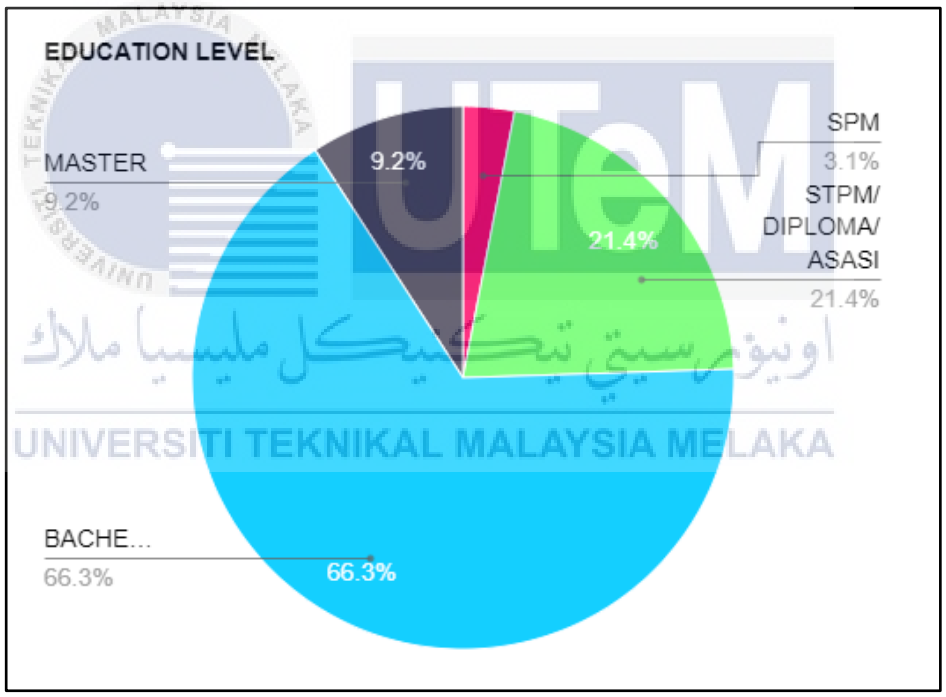

Figure 10: Education level of respondent

e) Industry

		Frequency	Percent
Valid	ACCOUNTING	1	.7
	AGRICULTURE	9	6.0
	AVIATION	1	.7
	EDUCATION	4	2.7
	ENGINEERING	24	16.0
	FOOD and BEVERAGE	43	28.7
	IT	4	2.7
	MANUFACTURING	32	21.3
	OIL AND GAS	7	4.7
	RETAILING	23	15.3
	SERVICES GOVERNMENT	1	.7
	TELECOMMUNICATION	1	.7
	Total	150	100.0

Table 11: Industry of Respondents

(Sources: SPSS Output)

The group of company belongs of all 150 respondents in their organization were included in Table 4.3.5. Food and Beverage sector had the highest proportion of 43 respondents (28.7 %). Overall, 32 respondents were from the manufacturing sector, with a percentage of 21.4%. There were 24 respondents at the engineering sector for 16.0% of the total. For retailing the number of respondents is 23 which represent 15.3%. Besides, agriculture sector had 9 respondents with a percentage 46.0%. Oil and gas sector had 7 respondents with a percentage of 4.7%. For education and IT both of this sector got 4 respondent which represent 2.7%. Last, other sector such as accounting, telecommunication, service government and aviation, all four of them had the lowest respondent which is 1 respondent with 0.7%.

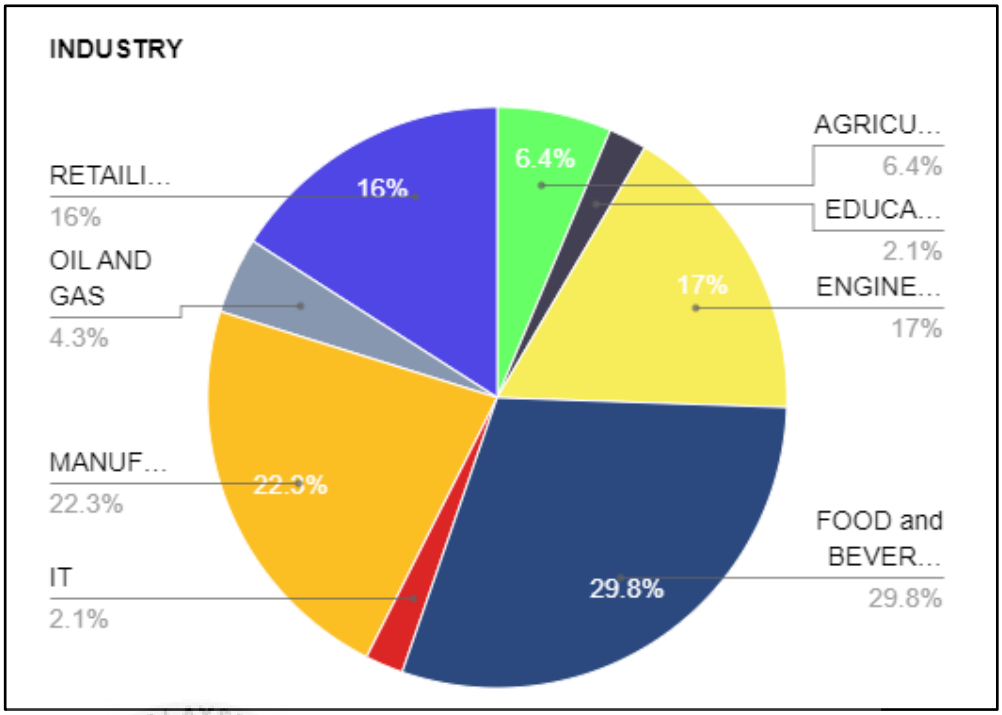

Figure 11: Industry of respondent

f) Working Experience

		Frequency	Percent
Valid	BELOW 5 YEARS	85	56.7
	BETWEEN 5 – 10 YEARS	31	20.7
	MORE THAN 10 YEARS	34	22.7
	Total	150	100.0

Table 12: Working experience of Respondents

(Sources: SPSS Output)

The range of the duration of work experiences for all 150 respondents was shown in Table 12. With a percentage of 56.7%, below 5 years of working experience had the largest total of 85 responses. Then there were 31 responses with a rate of 20.7 % who had between 5-10 years of working experience. Following that, the lowest total of respondent with 34 respondents (22.7%) had worked for more than 10 years.

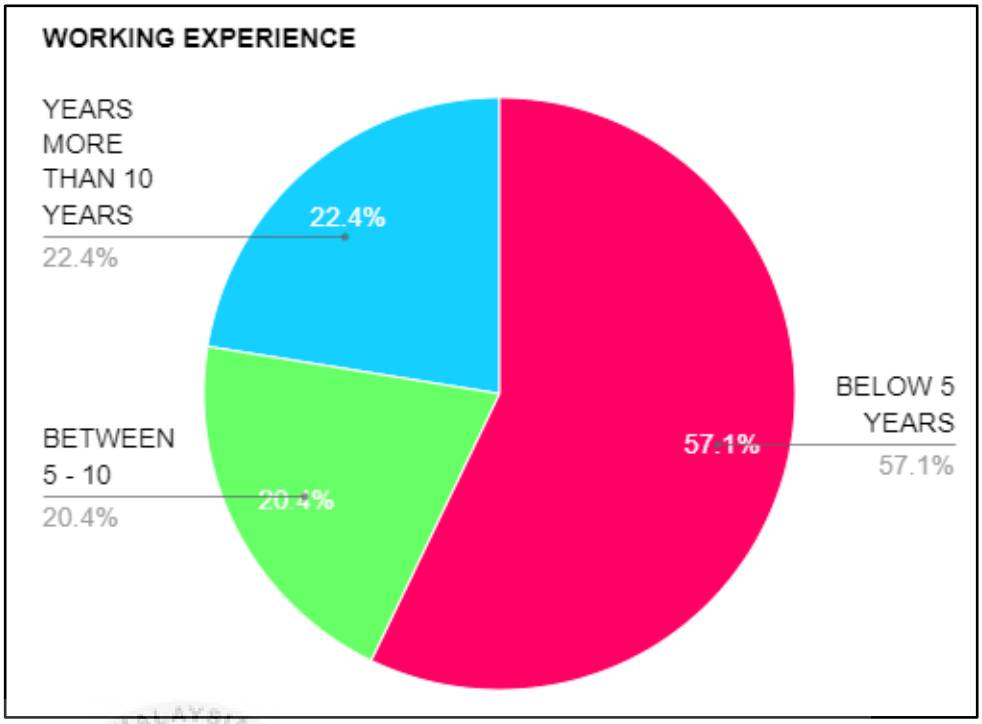

Figure 12. Working experience of the Respondents

g) Did your company use ERP system (Example- ORACLE, ACUMATICA, MICROSOFT, SAGE, VECOUNT)

		Frequency	Percent
Valid	**NO**	22	14.7
	YES	128	85.3
	Total	150	100.0

Table: 13: Did your company use ERP system of the Respondents

(Sources: SPSS)

Table 13. The total of respondent's answers 'YES' if their company use ERP system was 128, accounting for 85.3%, while the total number of respondents answer 'NO' was 22, accounting for 14.7%. The overall number of respondents answer 'YES' exceeds the number of 'NO' respondent.

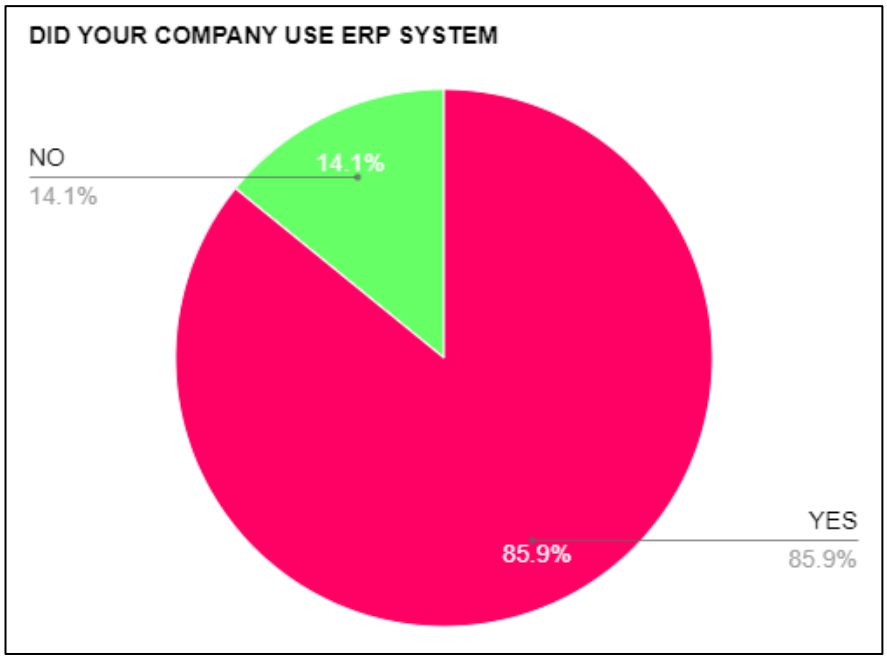

Figure: 13. Did your company use ERP system of the Respondents

4.3 Descriptive Statistic

The fundamental characteristics of the data in a study are described using descriptive statistics. Simple summaries of the sample and the measurements are provided. Quantitative descriptions are presented in an understandable fashion using descriptive statistics. Many different measurements could be used in a research project. Alternately, researchers might assess many individuals using any metric. One can rationally simplify massive volumes of data with the use of descriptive statistics. Each descriptive statistic distils a large amount of data into a more concise summary.

4.3.1 Mean score of variables

Mean score analysis is used to determine and inform characteristics of a particular question or concern. Data obtained with quantitative and statistical techniques used to summarize the details. The results will be shown every variable data of critical success of ERP acceptance within SMEs through minimum, maximum, mean, and standard deviation. The five-point Likert scale was used to measure the 40 total items in the questionnaire.

4.3.1.1 Independent Variable – Critical Success Factor

a) Performance Expectancy

Measurement Items		N	Minimum	Maximum	Mean	Std. Deviation
PE1	I would find ERP useful for improving my work	150	1	5	4.13	.880
PE2	I think using ERP in my day-to-day operation would be convenience	150	1	5	4.08	.807
PE3	I think using ERP will help save working time	150	1	5	4.18	.786
PE4	Using ERP increase my chance of achieving things that are important to such as personal goals	150	1	5	4.11	.764
PE5	Using ERP will enhance my effectiveness in production	150	1	5	4.17	.878

Table 14: Descriptive Statistic for Performance Expectancy

Table 14 describes the descriptive statistics of the independent variable which is performance expectancy (PE). It illustrates that the scale of minimum rating for each item is 1 while the maximum rating is 5. According to the table, the results show that the highest mean value is 4.18 with the item of "I think using ERP will help save working time" and its standard deviation value is 0.786. Currently it shown that most

of the respondent though of ERP able to save working time will affect the adoption of ERP. This is because, this factor show that the respondent has personal expectation that technology will help in reducing the working time indirectly will have a good impact on the works. Next, the item of "Using ERP will enhance my effectiveness in production" showed the mean value of 4.17 and the standard deviation was 0.878. Besides, item of "I would find ERP useful for improving my work" had a mean value of 4.13 and standard deviation of 0.880 while item of "Using ERP increase my chance of achieving things that are important to such as personal goals" with the mean value of 4.11 and standard deviation of 0.764. At last, the lowest mean value is 4.08 form the item of "I think using ERP in my day-to-day operation would be convenience" and its standard deviation value is 0.807.

b) Effort Expectancy

Measurement Items		N	Minimum	Maximum	Mean	Std. Deviation
EE1	I would find ERP easy to use	150	1	5	3.87	.907
EE2	It would not take me long time to learn how to use this system	150	1	5	3.72	.898
EE3	My interaction with ERP would be clear and understandable	150	1	5	3.93	.868
EE4	It will be easy for me to become skilful using ERP system	150	1	5	3.95	.911
EE5	I would find it easy for ERP to do what I want to do	150	1	5	3.93	.910

Table 15: Descriptive Statistic for effort Expectancy

Table 15 describes the descriptive statistics of the independent variable which is Effort Expectancy (EE). It illustrates that the scale of minimum rating for each item is 1 while the maximum rating is 5. According to the table, the results show that the highest mean value is 3.95 with the item of "It will be easy for me to become skilful using ERP system" with its standard deviation value is 0.911. It shows that the respondent has high expectation of able to mastering using this system which affect the adoption of ERP. Next, the item of "My interaction with ERP would be clear and understandable" and "I would find it easy for ERP to do what I want to do" showed the mean value of 3.93 for both item and the standard deviation was 0.868 and 0.910 respectively. Besides, item of "I would find ERP easy to use" had a mean value of 3.87 and standard deviation of 0.907. At last, the lowest mean value is 3.72 form the item of "It would not take me long time to learn how to use this system" and its standard deviation value is 0.898.

c) Social Influence

Measurement Items		N	Minimum	Maximum	Mean	Std. Deviation
SI1	People who influence my behaviours think that I should use ERP for my daily work	150	1	5	3.82	.875
SI2	I think I am more likely to use ERP system if my co-workers or friends use it	150	1	5	3.85	.847
SI3	I use ERP because my boss and colleagues use it	150	1	5	3.86	.890
SI4	People whose opinions that I value prefer that I use this system	150	1	5	3.90	.880

SI5	The company are supportive the uses of this system	150	1	5	3.97	.859

Table 16: Descriptive Statistic for Social Influence

Table 16 describes the descriptive statistics of the independent variable which is Social Influences (SI). It illustrates that the scale of minimum rating for each item is 1 while the maximum rating also 5. From the table above, the results shown that the item with highest mean value is 3.97 with the item of "The company are supportive the uses of this system" with its standard deviation value is 0.859. This proved that the support from company will have the highest influences in accepting the ERP adoption. Next, the item of "People whose opinions that I value prefer that I use this system" showed the mean value of 3.90 and the standard deviation was 0.880. Besides, item of "I use ERP because my boss and colleagues use it" had a mean value of 3.86 and standard deviation of 0.890 while item of "I think I am more likely to use ERP system if my co-workers or friends use it" with the mean value of 3.85 and standard deviation of 0.847. At last, the lowest mean value is 3.82 form the item of "People who influence my behaviours think that I should use ERP for my daily work" and its standard deviation value is 0.875.

d) Hedonic Motivation

Measurement Items		N	Minimum	Maximum	Mean	Std. Deviation
HM1	I think using ERP is fun	150	1	5	3.79	.862
HM2	I think using ERP can improve my skill	150	1	5	3.98	.855
HM3	I think using ERP is enjoyable	150	1	5	3.87	.892

HM4	Using ERP system is a good idea for my well-being.	150	1	5	3.91	.922
HM5	I think this system can improve my chance to get promote	150	1	5	3.89	.956

Table 17: Descriptive Statistic for Hedonic Motivation

The result from table 17 show that the highest mean value for the hedonic motivation (HM) was (M=3.98) with the items on "I think using ERP can improve my skill" The standard deviation value is 0.855. It is because with using ERP technology as pair of tools will assist in improving individual skill. This system are most conducive to a successful aid as they encourage staff by providing feedback that detect the pattern in performance with the highest ability. Next, the second highest item is item of "Using ERP system is a good idea for my well-being." Showed the mean value of 3.91 and the standard deviation was 0.922. Besides, item of "I think this system can improve my chance to get promote" had a mean value of 3.89 and standard deviation of 0.956. For "I think using ERP is enjoyable" with mean value of 3.87 and standard deviation 0.892. At the same time, the lowest mean value indicates the item on "I think using ERP is fun" which is the value (M=3.79) and the standard deviation was 0.862. Due to the various age and education of the level of this system user, some of the respondent might having hard time to using it. The minimum rating scale for each item was 1 and the highest rating scale was 5.

e) Facilitating Condition

Measurement Items		N	Minimum	Maximum	Mean	Std. Deviation
FC1	This system is useful and convenience for production	150	1	5	3.92	.945
FC2	I am familiar with system like ERP	150	1	5	3.87	.932
FC3	I am familiar with process of managing company	150	1	5	3.97	.944
FC4	ERP system compatible with other system I use	150	1	5	3.93	.946
FC5	I can get help when I have difficulties when using this system	150	1	5	3.93	.981

Table 18: Descriptive Statistic for Facilitating Condition

Table 18 describes the descriptive statistics of the independent variable which is Facilitating Condition (FC). It illustrates that the scale of minimum rating for each item is 1 while the maximum rating is 5. According to the table, the results show that the highest mean value is 3.97 with the item of "I am familiar with process of managing company" and its standard deviation value is 0.944. This shown that the respondent understands that using ERP system allow streamlined workflow to have greater efficiency in managing company. Next, the results show that the second highest mean value is 3.93 shared with two items with are "ERP system compatible with other system I use" and "I can get help when I have difficulties when using this system" and its standard deviation value is 0.946 and 0.981 respectively. Besides, item of "This system is useful and convenience for production" had a mean value of 3.92 and

standard deviation of 0.945. At last, the lowest mean value is 3.87 form the item of "I am familiar with system like ERP" and its standard deviation value is 0.932.

4.3.1.2 Dependent Variable – Use Behaviour

a) For firm purpose

Measurement Items		N	Minimum	Maximum	Mean	Std. Deviation
FP1	ERP are useful for company that always make day-to day production.	150	1	5	4.17	.878
FP2	ERP system able to streamline MY entire organization.	150	1	5	4.07	.828
FP3	ERP suitable for every size of company.	150	1	5	4.08	.894
FP4	ERP acceptance leads to do the job requirement more rapid	150	1	5	4.04	.926
FP5	ERP adoption results in more efficiency	150	1	5	4.09	.951

Table 19: Descriptive Statistic For Firm Purpose

Table 19 describes the descriptive statistics of the independent variable which is For Firm Purpose (FP). It illustrates that the scale of minimum rating for each item is 1 while the maximum rating is 5. According to the table, the results show that the

highest mean value is 4.17 with the item of "ERP are useful for company that always make day-to day production." and its standard deviation value is 0.878. This shown that the respondent really understands that with using technology will be useful in providing them a better day-to-day work production. Next, the results show that the second highest mean value is 4.09 which is "ERP adoption results in more efficiency" with its standard deviation value is 0.951. Besides, item of "ERP suitable for every size of company." had a mean value of 4.08 and standard deviation of 0.926. The item of "ERP system able to streamline MY entire organization" showed the mean value of 4.07 and the standard deviation was 0.828. At last, the lowest mean value is 4.04 form the item of "ERP acceptance leads to do the job requirement more rapid" and its standard deviation value is 0.926.

b) For Training and Education purpose

Measurement Items		N	Minimum	Maximum	Mean	Std. Deviation
TE1	The adoption of ERP will give appropriate knowledge regarding management and production.	150	1	5	3.99	.927
TE2	Using ERP and its ability has outstanding flexibility on works	150	1	5	3.99	.905
TE3	Facilitated higher order thinking	150	1	5	3.97	.955
TE4	Use of this system to document personal/professional growth	150	1	5	4.05	.968
TE5	ERP able to analyse performance/achieveme	150	1	5	4.05	.925

	nt or company and the employee.					

Table 20: For Training and Education purpose

Table 20 describes the descriptive statistics of the independent variable which is For Training and Education purpose (TE). It illustrates that the scale of minimum rating for each item is 1 while the maximum rating is 5. As, the results show that the highest mean value is 4.05 with the item of "Use of this system to document personal/professional growth" and "ERP able to analyse performance/achievement or company and the employee." and its standard deviation value is 0.968 and 0.925 respectively. This shown that the respondent stand firm that documentation and tracking performance is a must within organization in order to become productive. Next, the results show that the second highest mean value is 3.99 it is the same mean value for two item which are "The adoption of ERP will give appropriate knowledge regarding management and production" and "Using ERP and its ability has outstanding flexibility on works" with their standard deviation value is 0.927 and 0.905 respectively. For the lowest mean value is 3.97 form the item of "Facilitated higher order thinking" and its standard deviation value is 0.955.

c) For Production Output Purpose

Measurement Items		N	Minimum	Maximum	Mean	Std. Deviation
PP1	The use of ERP would increase the amount of production in the company.	150	1	5	4.06	.892
PP2	ERP allow to use the material appropriately	150	1	5	4.11	.778

PP3	ERP system help in reducing the time of operation	150	1	5	4.12	.874
PP4	ERP able to located the best management and solution for production output.	150	1	5	4.14	.803
PP5	ERP able to accomplish the company target and goals.	150	1	5	4.21	.848

Table 21: Descriptive Statistic For Production Output purpose

Table 21 describes the descriptive statistics of the independent variable which is For Production Output Purpose (PP). It illustrates that the scale of minimum rating for each item is 1 while the maximum rating is 5. According to the table, the results show that the highest mean value is 4.21 with the item of "ERP able to accomplish the company target and goals" and its standard deviation value is 0.848. This shown that the respondent wants the ERP aid them in production in order to achieve the company target and goal. Next, the results show that the second highest mean value is 4.14 which is "ERP able to located the best management and solution for production output." with its standard deviation value is 0.803. Besides, item of "ERP system help in reducing the time of operation" had a mean value of 4.12 and standard deviation of 0.874. The item of "ERP allow to use the material appropriately" showed the mean value of 4.11 and the standard deviation was 0.778. At last, the lowest mean value is 4.06 form the item of "The use of ERP would increase the amount of production in the company" and its standard deviation value is 0.892.

4.3.2 Descriptive Statistic Result for Independent and Dependent variables.

Descriptive Statistic

(Sources: SPSS)

	N	Minimum	Maximum	Mean	Std. Deviation
Performance Expectancy (IV)	150	1.00	5.00	4.1347	.70644
Effort Expectancy (IV)	150	1.00	5.00	3.8800	.78064
Social Influence (IV)	150	1.20	5.00	3.8813	.75586
Hedonic Motivation (IV)	150	1.00	5.00	3.8893	.77357
Facilitating Condition (IV)	150	1.00	5.00	3.9240	.82435
Use Behaviour (DV)	150	1.00	5.00	4.0764	.72317
Valid N (listwise)	150				

Table 22: Descriptive Analysis

The descriptive analysis for all interval-scale variables among 150 respondents was stated in Table 22 above. All variables were analysed based on the continuous scale and the result showed that the mean of the overall variable is 3.0 above. Performance Expectancy variable get the highest mean which is 4.1347 and the standard deviation is0 .70644. The second highest mean is 'Use Behaviour' variable which 4.0764 and the standard deviation is 0.64729. Next, the mean of competitive advantage variable is 4.1672 and the standard deviation is 0.72317, followed by the 'Facilitating Condition' variable with the mean is 3.9240 and the standard deviation

0.82435. For ‘Hedonic Motivation’ the mean value is 3.8893 and the standard deviation 0.77357. Beside ‘Social Influence’ mean value is 3.8813 and the standard deviation 0.75586. At the lowest is ‘Effort Expectancy’ with 3.8800 as the mean value while the standard deviation is 0.78064.

4.4 Exploratory Factor Analysis

Exploratory Factor Analysis (EFA) is a multivariate statistical approach that has emerged as a critical instrument in the creation and validation of psychological theories and measures (Marley et al., 2018). By executing EFA, variables compared with the original variables will be reduced to a minimal number. EFA was utilized in this research before it was sent by the researcher to the respondents to provide validity and reliability of the questionnaire.

This factor analysis sampled 150 respondents from 68 males and 82 females aged 20 to 29, aged 30 to 39, aged 40 to 49, aged 50 to 59. Each response has been adjusted to make it easy for the respondent to assess its score on the critical success factor of ERP implementation within SME that influence the user intention. Each of the factors has been assigned a score of 1= Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree. Analysis was carried out on 15 elements, formed into 5 different variables, including the performance expectancy, effort expectancy, social influence, hedonic motivation and facilitating condition.

4.4.1 The KMO and Bartlett’s Test

Using the SPSS program, the factor ability of 25 listed items in the questionnaire was first evaluated using factor analysis, and the criteria of factor ability of the items were determined to indicate if the items listed under the independent variables. The Kaiser-Meyer-Olkin (Kaiser, 1960) and Bartlett's Test of Sphericity were used to determine the factor ability of each item mentioned under their respective independent variables (Bartlett, 1954).

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.917
Bartlett's Test of Sphericity	Approx. Chi-Square	3309.867
	df	300
	Sig.	.000

Table 23: KMO and Bartlett's Test. Sources SPSS

Based on Table 23, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy showed a commendable result of 0.932. The factor analysis was the suitable approach for evaluating the data and those factors are mutually reliable between the proposed values of 0.5 and 1.0. Furthermore, the Bartlett's Sphericity test was significant $\chi 2$ (df =780) and ($p<0.000$). The items reported in the independent variable showed pattern relationship with each other, with the significant level of ($p<0.05$) and approximate Chi-square was 6015.475.

4.4.2 The Communalities (Principal Component Analysis)

Communalities

	Initial	Extraction
PE1	1.000	.633
PE2	1.000	.724
PE3	1.000	.751
PE4	1.000	.804
PE5	1.000	.806
EE1	1.000	.609
EE2	1.000	.793
EE3	1.000	.821
EE4	1.000	.710
EE5	1.000	.747
SI1	1.000	.708
SI2	1.000	.770
SI3	1.000	.798
SI4	1.000	.794
SI5	1.000	.724
HM1	1.000	.731

HM2	1.000	.652
HM3	1.000	.675
HM4	1.000	.716
HM5	1.000	.685
FC1	1.000	.729
FC2	1.000	.740
FC3	1.000	.669
FC4	1.000	.687
FC5	1.000	.725

Extraction Method: Principal Component Analysis.

Table 24: The Communalities (Extraction method: Principal Component Analysis)

(Source: SPSS output)

Based on table 24, variables with low communalities (less than 0.4) were removed from the study since the goal of factor analysis was to try to characterize the variation through common components (Peter Samuels, 2016). The Kaiser criterion was thus considered reliable when the average extracted communalities was more than 0.7. The communalities values were all more than 0.4, and the factor analysis was considered appropriate and reliable for 25 items

4.4.3 Total Variance Explain

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12.740	50.958	50.958	12.740	50.958	50.958	6.092	24.370	24.370
2	2.173	8.690	59.649	2.173	8.690	59.649	4.480	17.918	42.288
3	1.684	6.734	66.383	1.684	6.734	66.383	4.047	16.189	58.477

4	1.606	6.425	72.808	1.606	6.425	72.808	3.583	14.332	72.808
5	.880	3.521	76.329						
6	.757	3.029	79.358						
7	.566	2.264	81.621						
8	.523	2.091	83.713						
9	.490	1.961	85.674						
10	.437	1.748	87.422						
11	.364	1.456	88.878						
12	.322	1.290	90.168						
13	.310	1.239	91.407						
14	.297	1.187	92.595						
15	.261	1.044	93.639						
16	.255	1.018	94.657						
17	.234	.938	95.595						
18	.210	.838	96.433						
19	.169	.676	97.109						
20	.152	.609	97.718						
21	.144	.577	98.295						
22	.120	.480	98.775						
23	.111	.443	99.218						
24	.100	.401	99.618						
25	.095	.382	100.000						

Extraction Method: Principal Component Analysis.

Table 25: Total Variance (Extraction method: Principal Component Analysis)

(Source: SPSS output)

The Principal Component Analysis (PCA) was used to extract the data, as shown in table 25. The basic idea of PCA is to decrease the dimensional of a data set that contains a high number of linked variables while preserving the variance that occurs in the data set (Zakaria, 2021). The value in this table is the proportion of each variable's variation that is illustrated by the retained component with eigenvalues > 1 (Jollife & Cadima, 2016). Four factors were discovered using Principal Component Analysis. The factor 1 eigenvalues have a variance of 50.958 %, with a total initial eigenvalue of 12.740. The eigenvalues for factor 2 have a variance of 8.690%, with a total initial eigenvalue of 2.173. The factor 3 eigenvalues have a variation of 6.734%,

with a total initial eigenvalue of 1.684. The factor 4 eigenvalues have a variation of 6.425%, with a total initial eigenvalue of 1.606. Despite the fact that the total number of elements mentioned was 25, only 7 components were retrieved.

4.4.4 Component Matrix

Component Matrix[a]

	Component			
	1	2	3	4
PE1	.758	-.047	.212	.108
PE2	.761	-.071	.356	.113
PE3	.731	.027	.374	.278
PE4	.623	.112	.557	.305
PE5	.687	.090	.538	.192
EE1	.633	.357	.122	-.259
EE2	.697	.346	.100	-.422
EE3	.729	.439	.066	-.302
EE4	.705	.381	.083	-.245
EE5	.739	.354	.099	-.255
SI1	.678	.216	-.286	.346
SI2	.691	.238	-.268	.406
SI3	.692	.281	-.382	.306
SI4	.720	.245	-.314	.342
SI5	.688	.235	-.386	.215
HM1	.769	-.070	-.218	-.295
HM2	.751	-.177	-.147	-.188
HM3	.695	-.153	-.241	-.331
HM4	.776	-.276	-.159	-.111
HM5	.730	-.257	-.079	-.281
FC1	.773	-.355	.016	-.071
FC2	.736	-.440	-.006	-.068
FC3	.683	-.439	.061	.080
FC4	.666	-.472	-.114	.090
FC5	.707	-.446	.057	.152

Extraction Method: Principal Component Analysis.
a. 4 components extracted.

Table 26: Component Matrix (Extraction method: Principal Component Analysis)

(Source: SPSS output)

Table 26 shows component matrix of variables. This table contains component loads, which means the correlation between variables and component, the possible values ranges can be from -1 to +1 because this is correlation values of the item

4.4.5 Cronbach Alpha Test of Reliability for EFA

Case Processing Summary

		N	%
Cases	Valid	150	100.0
	Excluded[a]	0	.0
	Total	150	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.976	.976	40

Table 27: Reliability Statistics for all item (Sources: SPSS Output)

Table 27 above showed that Cronbach's Alpha for all variables (independent and dependent) and compute to test the reliability of research. There was reliability analysis between five independent variable which are performance expectancy, effort expectancy, social influence, hedonic motivation and facilitating condition. For dependent variable there is one which is use behaviour. The total items measured in this research were 10 out of 150 respondents. The rule of thumb for the reliability test is that 0.7 or higher represents good reliability. Therefore, from the test, it shows that the result was 0.976 and is considered very good reliability.

Variables	Cronbach's Alpha	Number of Items	Results
Performance Expectancy (IV 1)	.909	5	Excellent
Effort Expectancy (IV 2)	.919	5	Excellent
Sosial Influence (IV 3)	.919	5	Excellent
Hedonic Motivation (IV 4)	.913	5	Excellent
Facilitating Condition (IV 5)	.918	5	Excellent
Use Behaviour (DV 1)	.963	15	Excellent

Table 28: Cronbach's Alpha Test of Reliability

Sources: SPSS Output

4.5 Reliability Test for Overall Research

The reliability is defined by Saunders et al (2016) as replication and consistency. The Cronbach's Alpha Coefficient was used to assess the level of reliability. The range of Cronbach's Alpha coefficients and the strength of association are shown in Table 4.18 below.

Cronbach's Alpha Coefficient	Reliability Level
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Table 29: Cronbach's Alpha Coefficient Range and Strength of Association

(Sources: Saunders et.

Case Processing Summary

		N	%
Cases	Valid	150	100.0
	Excluded[a]	0	.0
	Total	150	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Measurement of Item	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Performance Expectancy	.909	.911	5
Effort Expectancy	.919	.919	5
Social Influence	.919	.918	5
Hedonic Motivation	.913	.913	5
Facilitating Condition	.918	.918	5
For firm purpose	.931	.931	5
For Training and Education purpose	.930	.930	5
For Production output purpose	.924	.926	5
All of the Items above (IV+DV)	.976	.976	40

Table 30: Reliability Test for All Item.

(Sources: SPSS Output)

Table 30 displays the reliability statistics from this study as calculated using Cronbach's Alpha. An overview of case analysis reveals that valid data totals 150 units, while excluded data totals zero, showing that all data in this study is consistent with

the research goal. Furthermore, 40 items have been appraised, with a Cronbach's Alpha score of 0.976. When the result is 0.65 or above, the research is considered to have acceptable reliability (Saunders et al 2016). As a consequence, the study's results are good since the Cronbach's Alpha value is 0.976 and all of the Cronbach's Alpha values for each variable are greater than 0.

4.6 Inferential Analysis

4.6.1 Pearson's Correlation Coefficient

Pearson Correlation was used to perform a validity test to characterize the relationship between independent and dependent variables. Correlation coefficient may determine the connection strength between the independent and dependent variables (Saunder et. al., 2016). Table below illustrates that R-values are interrelated by Pearson's Correlation Coefficient

Pearson Correlation Coefficient (R-value)	Interpretation
±0.70 to ±1.0	Very strong relationship
±0.40 to ±0.69	Strong relationship
±0.30 to ±0.39	Moderate relationship
±0.20 to ±0.29	Weak relationship
±0.01 to ±1.9	No relationship

Table 31: Range of Pearson's Correlation Coefficients and the Interpretation (Source: Saunders et. al., 2

Correlations

		PE	EE	SI	HM	FC	FP	TE	PP
PE	Pearson Correlation	1	.624**	.577**	.592**	.638**	.743**	.679**	.706**
	Sig. (2-tailed)		.001	.001	.001	.001	.001	.001	.001
	N	150	150	150	150	150	150	150	150
EE	Pearson Correlation	.624**	1	.596**	.628**	.480**	.611**	.549**	.566**
	Sig. (2-tailed)	.001		.001	.001	.001	.001	.001	.001
	N	150	150	150	150	150	150	150	150
SI	Pearson Correlation	.577**	.596**	1	.596**	.533**	.589**	.588**	.561**
	Sig. (2-tailed)	.001	.001		.001	.001	.001	.001	.001
	N	150	150	150	150	150	150	150	150
HM	Pearson Correlation	.592**	.628**	.596**	1	.726**	.652**	.691**	.667**
	Sig. (2-tailed)	.001	.001	.001		.001	.001	.001	.001
	N	150	150	150	150	150	150	150	150
FC	Pearson Correlation	.638**	.480**	.533**	.726**	1	.663**	.684**	.625**
	Sig. (2-tailed)	.001	.001	.001	.001		.001	.001	.001
	N	150	150	150	150	150	150	150	150
FP	Pearson Correlation	.743**	.611**	.589**	.652**	.663**	1	.769**	.755**
	Sig. (2-tailed)	.001	.001	.001	.001	.001		.001	.001
	N	150	150	150	150	150	150	150	150
TE	Pearson Correlation	.679**	.549**	.588**	.691**	.684**	.769**	1	.788**
	Sig. (2-tailed)	.001	.001	.001	.001	.001	.001		.001
	N	150	150	150	150	150	150	150	150
PP	Pearson Correlation	.706**	.566**	.561**	.667**	.625**	.755**	.788**	1
	Sig. (2-tailed)	.001	.001	.001	.001	.001	.001	.001	

	N	150	150	150	150	150	150	150	150

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

Table 32: Correlations between Variables (Sources: SPSS Output)

Remarks

PE : Performance Expectancy (independent variable)

EE : Effort Expectancy (independent variable)

SI : Social Influence (independent variable)

HM : Hedonic Motivation (independent variable)

FC : Facilitating condition (independent variables) = PP

FP : Firm Purpose (dependent variable)

TE : Training and Education Purpose (dependent variable)

PP : Production Purpose (dependent variable)

*Use behaviour (combination of 3 variables where FP+TE+PP)

The Pearson correlation coefficient, *r*, can take a range of values from +1 to -1. Coefficient with positive value that is greater tan 0 indicates a positive relationship between variables; coefficient with negative value that is lesser than 0 but larger tan -1 indicates a negative relationship between variables; and coefficient value with 0 indicates no relationship between variables.

- Positive relationship between variables; $r = (0 < r \leq +1)$
- Negative relationship between variables; $r = (0 < r \leq +1)$
- No relationship between variables; $r = 0$

Whereas, when value of Sig. (2-tailed) or significant is less or equal to 0.01, there is statistically significant correlation between independent variable and dependent variable. When the value of Sig. (2-tailed) is more than 0.01, there is no statistically significant correlation between independent variable and dependent variable.

4.6.1.1 Performance Expectancy factor relationship with Use Behaviour.

Correlations

		PERFORMANCE EXPECTANCY	USE BEHAVIOUR
PERFORMANCE EXPECTANCY	Pearson Correlation	1	.770**
	Sig. (2-tailed)		<.001
	N	150	150
USE BEHAVIOUR	Pearson Correlation	.770**	1
	Sig. (2-tailed)	<.001	
	N	150	150

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

Table 33: Correlation results for Performance Expectancy Factor

Based on table 33, shows that the correlation between Performance Expectancy factor with Use Behaviour. The value of correlation coefficient is 0.770, which show a positive value for the correlation coefficient. Therefore, it shows a positive relationship between the performance expectancy factor and use behaviour. The value this correlation coefficient of 0.770 is on the coefficient range from ± 0.71 to ± 1.0. Therefore, there is a very strong relationship between performance expectancy factor and use behaviour within ERP acceptance within SMEs in Malaysia.

4.6.1.2 Effort Expectancy relationship with Use Behaviour.

Correlations

		EFFORT EXPECTANCY	USE BEHAVIOUR
EFFORT EXPECTANCY	Pearson Correlation	1	.625**
	Sig. (2-tailed)		<.001
	N	150	150
USE BEHAVIOUR	Pearson Correlation	.625**	1
	Sig. (2-tailed)	<.001	
	N	150	150

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

Table 34: Correlation results for Effort Expectancy Factor

Based on table 34, shows that the correlation between Effort Expectancy factor with Use Behaviour. The value of correlation coefficient is 0.625, which show a positive value for the correlation coefficient. Therefore, it shows a positive relationship between the performance expectancy factor and use behaviour. The value this correlation coefficient of 0.625 is on the coefficient range from ±0.40 to ±0.69. Therefore, there is a strong relationship between effort expectancy factor and use behaviour within ERP acceptance within SMEs in Malaysia.

4.6.1.3 Social Influences factor relationship with Use Behaviour.

Correlations

		SOCIAL INFLUENCES	USE BEHAVIOUR
SOCIAL INFLUENCES	Pearson Correlation	1	.630**
	Sig. (2-tailed)		<.001
	N	150	150
USE BEHAVIOUR	Pearson Correlation	.630**	1
	Sig. (2-tailed)	<.001	
	N	150	150

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

Table 35: Correlation results for Social Influence Factor

Based on table 35, shows that the correlation between Social Influences factor with Use Behaviour. The value of correlation coefficient is 0.630, which show a positive value for the correlation coefficient. Therefore, it shows a positive relationship between the performance expectancy factor and use behaviour. The value this correlation coefficient of 0.630 is on the coefficient range from ±0.40 to ±0.69. Therefore, there is a strong relationship between effort social influences and use behaviour within ERP acceptance within SMEs in Malaysia.

4.6.1.4 Hedonic Motivation factor relationship with Use Behaviour.

Correlations

		HEDONIC MOTIVATION	USE BEHAVIOUR
HEDONIC MOTIVATION	Pearson Correlation	1	.728**
	Sig. (2-tailed)		<.001
	N	150	150
USE BEHAVIOUR	Pearson Correlation	.728**	1
	Sig. (2-tailed)	<.001	
	N	150	150

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

Table 36: Correlation results for Hedonic Motivation Factor

Based on table 36, shows that the correlation between Hedonic Motivation factor with Use Behaviour. The value of correlation coefficient is 0.728, which show a positive value for the correlation coefficient. Therefore, it shows a positive relationship between the hedonic motivation factor and use behaviour. The value this correlation coefficient of 0.728 is on the coefficient range from ± 0.71 to ± 1.0. Therefore, there is a very strong relationship between hedonic motivation factor and use behaviour within ERP acceptance within SMEs in Malaysia.

4.6.1.5 Facilitating Condition factor relationship with Use Behaviour.

Correlations

		FACILITATING CONDITION	USE BEHAVIOUR
FACILITATING CONDITION	Pearson Correlation	1	.716**
	Sig. (2-tailed)		<.001
	N	150	150
USE BEHAVIOUR	Pearson Correlation	.716**	1
	Sig. (2-tailed)	<.001	
	N	150	150

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

Table 37: Correlation results for Facilitating Condition Factor

Based on table 37, shows that the correlation between Facilitating Condition factor with Use Behaviour. The value of correlation coefficient is 0.716, which show a positive value for the correlation coefficient. Therefore, it shows a positive relationship between the facilitating condition factor and use behaviour. The value this correlation coefficient of 0.716 is on the coefficient range from ± 0.71 to ± 1.0. Therefore, there is a very strong relationship between hedonic motivation factor and use behaviour within ERP acceptance within SMEs in Malaysia.

4.7 Multiple Regression Analysis

In this research, hypothesis testing is required to determine if the created hypothesis is accepted or rejected. To test the hypothesis, the researcher utilized Multiple Regression Analysis. The Multiple Regression Analysis is divided into three sections: Model Summary, ANOVA, and coefficient. In testing the relationship between each independent context and dependent variable. The test is suitable to be used when relationship between two categorical variables from a single population for determining whether there is a significant association between the two variables. Multiple regression analysis is a technique that used to forecast the value of a variable according to a value of two or more variables. This method can use to analyse correlation among the independent and dependent variables. Furthermore, multiple regression analysis helps to explain the relationship among all independent variables (performance expectancy, effort expectancy, social influences, hedonic motivation and facilitating condition), and dependent variable (use behaviour). The outcomes of the regression analysis will be shown in an equation. The general purpose of multiple regression analysis is to learn more about the relationship between several independent or predictor variables and a dependent or criterion variable.

4.7.1 Multiple Regression Analysis Between IV and DV

Multiple regression analysis is a tool that used to forecast the value of variable based on the value of two or more variables. This technique used to establish correlation between the independent and dependent variables. Multiple regression

analysis helps to explain the relationship between independent variables (performance expectancy, effort expectancy, social influences, hedonic motivation and facilitating condition) and dependent variable (use behaviour).

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.857[a]	.734	.724	.37966

a. Predictors: (Constant), FACILITATING CONDITION, EFFORT EXPECTANCY, SOCIAL INFLUENCES, PERFORMANCE EXPECTANCY, HEDONIC MOTIVATION
b. Dependent Variable: USE BEHAVIOUR

Table 38: Model Summary of Multiple Regression Analysis

Based on table 38 above, the full review of results indicates that the R value was positive. Multiple regression coefficients, R = 0.857 show a strong degree of correlation. The R-value is also more than ± 0.91, which means that is has good interaction. The R square shows a value of 0.734. This suggests that eco innovation performance (dependent variables) are influenced 73.4% by the independent variables (performance expectancy, effort expectancy, social influences, hedonic motivation and facilitating condition), while the rest (100% - 73.4% = 26.6%) were other influences or causes that were not addressed in this research were affected.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	57.167	5	11.433	79.320	<.001[b]
	Residual	20.756	144	.144		
	Total	77.923	149			

a. Dependent Variable: USE BEHAVIOUR
b. Predictors: (Constant), FACILITATING CONDITION, EFFORT EXPECTANCY, SOCIAL INFLUENCES, PERFORMANCE EXPECTANCY, HEDONIC MOTIVATION

Table 39: ANOVA

In ANOVA table 39 above, the significant testing used to test the relationship between the variables. The significance level for this Multiple Regression Analysis study is below p = 0.05, which is 5% confidence level in the results. It means less than 5% of the probability that the outcome would be a mistake for analysis. F-test is used to determine the model is a good fit for data.

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.191	.201		.950	.344
	PERFORMANCE EXPECTANCY	.406	.066	.396	6.151	<.001
	EFFORT EXPECTANCY	.057	.058	.062	.983	.327
	SOCIAL INFLUENCES	.109	.057	.114	1.928	.056
	HEDONIC MOTIVATION	.229	.067	.245	3.419	<.001
	FACILITATING CONDITION	.170	.060	.194	2.843	.005

Table 40: The Coefficient

Table 40 shows that Beta values which mean individual independent variables influence on dependent variables. The result showed B1 = 0.406, B2 = 0.057, B3 = 0.109 and B4 = 0.229 and B5 = 0.170 respectively to all independent variables. It shows performance Expectancy has the highest B value among other variables and strong influences on the use behaviour of ERP with B value 0.406. It described that 40.6%, (t=6.151, p < 0.001) variation in use behaviour of ERP due to the performance expectancy factor. Besides, the second highest B value which is 0.229 is hedonic motivation factor with a variation of 22.9%, (t=3.419, p < 0.001). Next, the facilitating condition factor exhibited the B value which is 0.170 with a variation 0f 17.0%, (t=2.843, p > 0.001). Besides, social influence factor exhibited the B value which is 0.109 with a variation of 10.9%, (t=1.928, p > 0.001). Lastly, the lowest B value is the effort expectancy factor which is 0.057 with a variation 5.7%, (t=0.983, p > 0.001). The unstandardized coefficient (B), the standardized coefficient (Beta) and the

significant level were determined by t-test. After examining the B value, the independent variable of performance expectancy factor and hedonic motivation factor was making significant contribution to the prediction model.

The five independent variables are the critical success factor of ERP acceptance within SMEs in Malaysia. From the linear equation, there is a positive relationship between, performance expectation, effort expectation, social influences, hedonic motivation and facilitating condition with the use behaviour of ERP. The linear equation is as shown below:

Y = b0 + b1X1 + b2X2 + b3X3 + b4X4

Where:

Y = Use behaviour of ERP

b0 = Regression Constant

X1 = Performance Expectancy

X2 = Effort Expectancy

X3 = Social Influence

X4 = Hedonic Motivation

X5 = Facilitating Condition

b1 b2 b3 b4 = Regression Coefficient

Use behaviour of ERP = 0.191 + 0.406 (performance expectancy) + 0.057 (effort expectancy) + 0.109 (social influence) + 0.229 (hedonic motivation) + 0.194 (facilitating condition)

4.8 Hypothesis Test

Referring to Table 40, the hypothesis can be evaluated by looking at the significance value of the table. The hypothesis is used to test each independent variable such as performance expectancy, effort expectancy, social influence, hedonic motivation and facilitating condition that will influence use behaviour of ERP that act as the dependent variable. All the factors stated by the researcher in Chapter 3, used significant value to interpret hypothesis testing. The use of statistics to assess the probability that a given hypothesis was correct is a test of the hypothesis. Testing

hypothesis was conducted to check all dependent variables using data derived from the regression analysis. The result showed in table 4.15 will be tested by comprising the significant value whether smaller or larger than 0.05.

Hypothesis 1

Performance expectancy

H0: Expectancy of performance do not influence the acceptance of ERP.

H1: Expectancy of performance does influence the acceptance of ERP.

Accept H1

The results show the relationship between performance expectancy(independent) and use behaviour on ERP (dependent). Based on the table 40 the significant value for perceived performance expectancy is 0.001. This value is less than 0.05. As a result, H1 accepted and it is positively influenced the acceptances on ERP.

Hypothesis 2

Effort expectancy

H0: Acceptance of ERP implementation is not influenced by effort expectancy.

H2: Acceptance of ERP implementation is influenced by effort expectancy

Reject H2

The results show the relationship between effort expectancy (independent) and use behaviour on ERP (dependent). Based on the table 40 the significant value for perceived effort expectancy is 0.327. This value is more than 0.05. As a result, H2 rejected and it is negatively influenced the acceptance of ERP.

Hypothesis 3

Social influences

H0: Social influence do not have any significant on user to accept the implement of ERP.

H3: Social expectancy do has any significant on user to accept the implement of ERP.

Reject H3

The results show the relationship between social influence (independent) and use behaviour on ERP (dependent). Based on the table 40 the significant value for perceived social influence is 0.056. This value is less than 0.05. As a result, H1 rejected and it is negatively influenced the acceptance of ERP.

Hypothesis 4

Hedonic Motivation

H0: Hedonic motivation do not influence the acceptance of ERP within firm.

H4: Hedonic motivation do influence the acceptance of ERP within firm

Accept H4

The results show the relationship between hedonic motivation (independent) and use behaviour on ERP (dependent). Based on the table 40 the significant value for perceived hedonic motivation is 0.001. This value is less than 0.05. As a result, H1 accepted and it is positively influenced the acceptance of ERP.

Hypothesis 5

Facilitating Conditions

H0: The facilitating condition do not have any significant relationship of ERP acceptance in SMEs

H5: The facilitating condition do have any significant relationship of ERP acceptance in SMEs.

Accept H5

The results show the relationship between facilitating condition (independent) and use behaviour on ERP (dependent). Based on the table 40 the significant value for perceived facilitating is 0.005. This value is less than 0.05. As a result, H1 The

facilitating condition do have any significant relationship of ERP acceptance in SMEs. As a result, H5 accepted and it is positively influenced the acceptance of ERP.

4.9 Summary

As conclusion, this chapter has been discussed the data analysis of the research. Through using the SPSS version 27.0 via questionnaires 150 respondents, the data collected were analysed quantitatively. There are six forms of analysis such as frequency analysis (background of the respondent), descriptive analysis, correlation analysis, reliability test, regression analysis and hypotheses test. In addition, this chapter also included the result provided for a hypothesis that was established in Chapter 3.

Table 41: Research Objective, Research Question, Research Hypothesis, and Result

Research Question	Research Objective	Research Hypothesis	Data Analysis
What are the factor acceptance of ERP implementation within SMEs?	To identify which factor acceptance of ERP implementation within SMEs		Descriptive analysis, Mean, standard deviation, cronbach alpha, The KMO and Bartlett's Test
How the relationship between factor ERP acceptance within SMEs and the use behaviour?	To identify which factor acceptance of ERP implementation within SMEs		Person correlation analysis
Which are critical factors according that has significant	To identify which are critical factors according that has	**H1:** Expectancy of performance does influence the	Significant

on acceptance of ERP implementation within SMEs in Malaysia?	significant on acceptance of ERP implementation within SMEs in Malaysia?	acceptance of ERP. **H2:** Acceptance of ERP implementation is influenced by effort expectancy **H3:** Social expectancy do has any significant on user to accept the implement of ERP. **H4:** Hedonic motivation do influence the acceptance of ERP within firm **H5:** The facilitating condition do have any significant relationship of ERP acceptance in SMEs	Insignificant Insignificant significant significant

Table 41: Conclusion of Hypotheses

CHAPTER 5

DISCUSSION, RECOMMENDATIONS AND CONCLUSION

5.0 Introduction

This chapter will examine the overall results' conclusion. This chapter will go through the statistical analysis summary, the justification of research objectives, the implications of the study, the limitations of the research, and the recommendations. First, the researcher summarizes the survey results using statistical analysis. Following that, the study objective will be supported based on the test results obtained from Exploratory Factor Analysis, Pearson's Correlation Coefficient, and Multiple Regression Analysis using the SPSS program. Furthermore, the researcher highlighted the research's implications and stated the study's limitations. The researcher will make recommendations to future researchers who wish.

5.1 Discussion on the Demographic Objectives

The total of the respondents for this research were 150 respondents. The total number of male respondents was 68, accounting for 45.3%, while the total number of female respondents was 82, accounting for 54.7%. The overall number of female employees exceeds the number of male employees. Next, the range of age for the respondents which were answering the questionnaire is between 20 years old to 59 years old. Most of the respondents are between of 20 to 29 years old, accounting for 86 out of 150 respondents, a total of 57.3% of the total number of respondents. A total

of 24 respondents, or 16.0% of the total, were between of 30-39 years old and 50-59 years old. Only 16 respondents, or 10% of the total, were 40-49 years old.

Besides that, most of the respondents had a bachelor's degree, accounting for 98 respondents out of 65.3%. There were 32 respondents who responded, with STPM/Diploma and foundation for 21.3% of the total. 14 respondents, 9.3% are master holder. The holder got 5 respondents with 3.3%. Only 1 respondent for PhD representing 0.7% of out of all respondents. Furthermore, for the race of respondent, Malay had the highest proportion of 113 respondents (75.3%). Overall, 21 respondents were Chinese, with a percentage of 14.0%. There were 13 respondents whom were India, accounting for 8.7% of the total. With a percentage of 1.3%, 2 respondents were Kadazan. For the lowest, only one respondent is Bidayuh with 0.7%.

In addition, the working industry of respondent are also collected. According the table in demographic part in Chapter 4, the industry with highest number of respondents are Food and Beverage accounting for 43 respondents out of 150 (28.7%). For the second highest, are from manufacturing industry accounting for 32 respondents with 21.3%. Engineering industry got 24 respondents with 16.0%. For retailing the number of respondents is 23 which represent 15.3% out of 150 respondents. Agriculture able to get9 respondents out of 150 represent 6.0%. For oil and gas industry only 7 respondents represent 4.7. Two industry which are education and IT able to get 4 respondents for both of them with 2.7%. Only 1 respondent come from accounting, aviation, service government and telecommunication which represent 0.7%.

Besides, for the range of the duration of work experiences, below of working experience had the largest total of 85 responses with a percentage of 56.7 %.. Then there were 34 responses with a rate of 22.7% who had between 5 and 10 years of working experience. Following that, 31 respondents (20.7%) had worked above 10 years which are the lowest among others. Other than that, for the company that already use the ERP system within their company the total of respondents said ‘YES’ are 128 out of 150 accounting for 85.3%. For ‘NO’ answer only 22 respondents said it representing 14.7%.

5.2 Discussion on Finding

5.2.1 Discussion on research objective.

Research Objective 1: TO IDENTIFY THE FACTOR, INFLUENCES ERP USAGE IN MALAYSIA SME

For the first research objective, the researcher has investigated the ERP acceptance factor from the literature review. The researcher has used the resource-based view (RBV) model in this research. The researcher explained the relationship between the independent variables which are the acceptance of enterprise resource planning (ERP) and the dependent variable is the use behaviour on ERP within SMEs. All the independent variables which are performance expectancy, effort expectancy, social influence, hedonic motivation and facilitating condition are the determinants in the RBV model that had seen as the acceptance of enterprise resource planning in Malaysian SMEs that will influence the use behaviour on ERP from the previous study(Kiran & Reddy, 2019). UTAUT theory are being used as the guided for identify the factor of ERP acceptance. In the several UTAUT studies that were highlighted in our literature study, the seven factor of acceptance for Enterprise Resource Planning (ERP) was primarily the subject of attention. In this paper, the researcher aimed to learn more, and in that sense, one's focused on the pedagogical use of ERP technologies in the firm. the objective 1 had been achieving. The validation of researcher hypothesis will allow to identify the critical success factor that explain the acceptances of ERP implementation within SMEs in Malaysia (Qian et al., 2016).

Research Objective 2: TO MEASURE THE RELATIONSHIP BETWEEN THE FACTOR OF ERP USAGE AND THE USE BEHAVIOUR WITHIN MALAYSIA SMEs

For this second objective, the result of the explanatory factor was proved by the researcher with the Multiple Regression Analysis (MRA). There were seven independent variables that influence the acceptance of ERP within Small and Medium-

Sized Enterprises (SME), which are factor performance expectation, effort expectation, social influence, hedonic motivation and. Through the hypothesis testing, all the relationship are accepted which are significant to the supply chain strategy on competitive advantage among Malaysian Small and Medium-Sized Enterprises (SME). The from calculation in chapter 4 showed that several independent variables have a direct significant effect on use behaviour except effort expectancy and social influences which was an insignificant predictor of use behaviour on ERP. The researcher carried out a stepwise multiple regression analysis to detect the most effective variables and test all independent variables together in the research model and it was found that only performance expectation, hedonic motivation and facilitating condition on use behaviour when this model was tested altogether.

The significant influence presented by the results of performance expectancy (PE) with use behaviour allows researcher to conclude that employees believes that the use of ERP helps them to perform task effectively and quickly where their personal need and want are fulfil(Nair et al., 2021). Performance expectancy is also related to use behaviour where if the PE increases, it also increases the use behaviour. As for, according to the finding, PE, they have a significant influence on use behaviour where it is the highest among others factor. In this research, it was important to verify the positive effect performance expectancy able to influences one decision of accepting technology in their working space either for firm, training and education, and for production. In other word, are able to aid them in them a panoply of contents and activities that meet the goals and target of the company. FC have also had a significant influence on use behaviour, which in from researcher context shows that the investment made in facilitating condition in company able to influence the use behaviour, this is because it is still necessary to find a way to improve adequate technical support when a need to increase the performance and competitiveness in firm where the ERP will be used for.

For hedonic motivation (HM), personal reason also become main factor why ERP are accepted and how it will influence the use behaviour of ERP. This is because by having personal goal it will provide in monitoring changes in the future environment that may also have an impact on the position of the firm(Nair et al., 2021). The ERP system would have offered a highly effective setting for company environment to attain higher potential. Acceptance of this system also helped

businesses operate more efficiently by lowering their inventory costs, increasing their profitability, and shortening their manufacturing lead times (AlMuhayfith & Shaiti, 2020). An ERP system can go across a company by significantly changing a number of procedures and also demonstrating benefits at different levels of management where the employee would be directly impacted. However, two factor has a significant negative influence on use behaviour which are social influence (SI) and effort expectancy (EE). One of the reason for EE for having negative influenced on use behaviour are because the employee find it more difficult and time-consuming it is to learn to use ERP which are foreign to them. The ERP system was helping most of the respondents. The ERP system helped the responders perform their jobs more effectively. Participants expressed the greatest appreciation for this perk.

However, they believed that the system was failing to adequately inform employees of organisational changes that would have an impact on their careers. The respondent's task is currently not totally made easy by the ERP system. Users of the ERP system who have higher expectations for the system's general benefits have also reaped greater rewards from using it than users who had lower expectations (Xulu & Suknunan, 2020). The respondents who had low expectations for overall advantages also reported having low ERP system usage benefits. In this case, the researcher can observe that in general the respondent, do not feel insecure and learn to use ERP with some ease.

Research Objective 3: TO FIND OUT THE MOST SIGNIFICANT FACTOR INFLUENCING ERP USAGE IN MALAYSIA SMEs

For third objective is to identify the critical success factor from the list of factor that has been search on. The result show that performances expectancy (PE) has the highest significant influence on ERP acceptance which means it is the critical success factor of ERP acceptances. It does not mean that others factor not important however from the finding and calculation the performance expectancy score the highest. Performance expectancy is one of the top fundamental variables in UTAUT model which was proved in this study. In this case the employee believes that using ERP within will helps in improving the working style which are aligned with the current

company target and goal. From the conducted study, it is reasonable to infer the significance of how innovation and change are handled as underpinning good technology utilisation in SMEs.

This is a vital success factor in the performance expectations, which must be led by a motivated employee with high expectations for their working environment, supported by those in charge of the institution and close to the employee, who have strong technological aptitude and broad pedagogical vision (Chavez & Duberg, 2021). Some explanation behind this could be that the respondents may perceive performance expectation as the extent to which the use of ERP will help them during working such as shortening the working hour and make them more efficient in their element. There are high possibility that they also considering the information sharing abilities of the ERP system as a characteristic in being top in performance. Another explanation could be that, when performance is high, there is less need to involves human interaction due to the employees being able to directly access the source of the information (colleagues) and therefore there is a more need to use the ERP system (Ali & Miller, 2017).

5.3 Implication of Study

This study compiles a significant portion of the body of research on ERP deployment into a single study, enabling us to assess our current state of knowledge and potential future directions. According to the study, we have a solid grasp of the theoretical underpinnings and conceptual framework of ERP deployment. However, there is still much work to be done in order to completely comprehend the forces behind the pre-implementation and implementation phases of the ERP. In order to compare and contrast various implementation models and tactics for decision-making, this research offers practitioners a single location to look at the complexities of ERP acceptance in implementation in order to fit company goal in SMEs.. According to the conclusions, a singular focus on each stage of implementation could help small and medium-sized enterprises (SMEs) overcome the challenges of ERP systems adoption and deployment. No typical industry ERP acceptance model has been found, despite the literature revealing a wide variety of various ERP system deployment approaches

intended to solve acceptance issues. Additionally, developing strategies to meet the expectations of the company and employees in the ERP system that can have an impact on how users behave at the end of the day is a necessary first step in ERP planning.

5.4 Limitation of Study

The scope of this study has several restrictions. The researcher had a limited time period of 4 months to gather data from the respondents; as a result, the researcher was unable to get additional responses from the respondent. This was the first limitation encountered when doing this research. From September 2022 through November 2022, the researcher gathered data by delivering a questionnaire via google form, email and on social media such as Facebook and Instagram. The method of conducting the survey was the second constraint that the research faced while doing this research. This method faced several difficulties for the respondents when they wanted to distribute the questionnaire to some companies and public, such as not having the exact email address of the company or the company not responding to the email, respondent are not the right target, and the respondent having hard time to understanding the question hence QnA section such a hard time to do. The final constraint was the quantity of responses. In this study, only 150 respondents' data was obtained by the researcher. Next limitation is the quantity of respondent examined. Increasing the number of respondents evaluated would make the analysis more accurate. The capacity to draw statistical conclusions from any research study is the other restriction. This is a result of the wide range of study topics, techniques, constructions, and environments.

5.5 Recommendation of future study

The following recommendations for future study should be taken into consideration in light of the restrictions mentioned above. In order to measure the actual crucial success element for a certain SMEs company from a particular industry, an efficient method must first be developed. Future study might think about extending the sample size and including more societal groups to address the second and third

restrictions (increase the number of respondent). Additionally, more work needs to be put into investigating other factors, particularly those related to technical features, that may have an impact on the crucial success factor and the way people utilise things. With regard to working culture, a comparative study involving different industry of SMEs in Malaysia could reveal the manner in which different culture of working predictor's factor into the acceptance of ERP. Future studies should also consider the addition of new predictors to the acceptance factors, which were used to extend the UTAUT model

5.6 Conclusion

The studies looked at UTAUT theory works with a focus on findings on the main UTAUT constructs that identified the critical success factor and how these factors influenced how SMEs used ERP. Although PE appeared to be the most important factor among the five, the results supported earlier research indicating all five UTAUT components were involved in use behaviour. A number of recommendations for future works and further findings imply that UTAUT has become more explicative. Researchers who want to analyse user behaviour using UTAUT models should be aware of the immediate implications. They will be able to plan what variables to look at, what research to do in the future, and what theoretical frameworks to employ for their study. The results will also be helpful for managerial efforts to ensure that a new technology or system is adopted and used by the workforce and the SMEs. From the study carried out, it is possible to perceive, as underlying the good use of ERP, the relevance of how the system able to change the use behaviour of technology acceptance in company. This is, in itself, a critical success factor in the acceptance of technology, which must be led by the performance expectation, effort expectation, social influence, hedonic motivation and facilitating condition. Which are need to be supported by those who lead the institution and close to the employee with technological competence and broad pedagogical vision. Thus, the dimensions identified in table 5 factor but 1 as are critical success factors which are performance expectancy to consider when managing SMEs.

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APPENDIX 1

QUESTIONNAIRE

CRITICAL SUCCESS FACTORS OF ERP IMPLEMENTATION WITHIN MALAYSIA SMEs

Introduction of the research and the purpose of the research.

Assalamualaikum and Hello!

I am Nurul Izzah Binti Che Alias, a final year student of University Teknikal Malaysia Melaka (UTeM) and studying in Bachelor of Technology Management with Honors (Technology Innovation). I'm conducting a research study regarding

"CRITICAL SUCCESS FACTORS OF ERP IMPLEMENTATION WITHIN MALAYSIA SMEs "

The main purpose of this research is to find the critical success factor of ERP adoption within small and medium enterprise. All the data and information of respondent that has been collect is kept strictly secret and will be used for research purposed only. This questionnaire contains THREE (3) section and will take approximately 5 - 10 minutes to complete. Please read the question carefully before answering them. Thank you for your cooperation in completing this survey.

For further clarification please contact:

Nurul Izzah Binti Che Alias

E-mail: izzjiyu17@gmail.com **Tel:** 011-2196 3144

Supervised by, Puan Nor Ratna Binti Masrom

Faculty of Technology Management and Technopreneurship

Universiti Teknikal Malaysia Melaka (UTeM)

Email: norratna@utem.edu.my

SECTION A

Demographic Profile

Enterprise resource planning (ERP) refers to a type of software that organizations use to manage day-to-day business activities such as accounting, procurement, project management, risk management and compliance, and supply chain operations. A complete ERP suite also includes enterprise performance management, software that helps plan, budget, predict, and report on an organization's financial results. **This section is for analysing and summarize the details of the respondent.**

1. Age
   - **20-29 years old**
   - **30-39 years old**
   - **40-49 years old**
   - **50-59 years old**
2. Gender
   - **Male**
   - **Female**
3. Race
   - **Malay**
   - **Indian**
   - **Chinese**
   - **Other:-------**
4. Education level
   - **SPM**
   - **STPM/DIPLOMA/ASASI**
   - **BACHELOR**
   - **MASTER**
   - **PHD**

5. Working Experience
    - **Below 5 years**
    - **Between 5 – 10 years**
    - **More than 10 years**

6. Industry
    - **Manufacturing**
    - **Food and beverage**
    - **Agriculture**
    - **Retailing**
    - **Engineering**

7. **Did your company use ERP system (Example- ORACLE, ACUMATICA, MICROSOFT, SAGE, VECOUNT)**
    - **YES**
    - **NO**

Section B

Factor affecting the acceptances ERP implementation within SMEs according to UTAUT .

*Enterprise resource planning (ERP) refers to a type of software that organizations use to manage day-to-day business activities such as accounting, procurement, project management, risk management, and compliance, and supply chain operations. A complete ERP suite also includes enterprise performance management, software that helps plan, budget, predict, and report on an organization's financial results.

Here is the statement that reflect the reason why ERPs are being adopted and implement within your SME. Please tick (/) your opinion by usinthe g appropriate scale.

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

Performance expectancy	1. I would find ERP useful for improving my work
	2. I think using ERP in my day-to-day operation would be convenience
	3. I think using ERP will help save working time
	4. Using ERP increase my chance of achieving things that are important to such as personal goals
	5. Using ERP will enhance my effectiveness in production
Effort expectancy	1. I would find ERP easy to use
	2. It would not take me long time to learn how to use this system
	3. My interaction with ERP would be clear and understandable
	4. It will be easy for me to become skilful using ERP system
	5. I would find it easy for ERP to do what I want to do
Sosial influence	1. People who influence my behaviours thin that I should use ERP for my daily work
	2. I think I am more likely to use ERP system if my co-workers or friends use it
	3. I use ERP because my boss and colleagues use it

	4. People whose opinions that I value prefer that I use this system
	5. The company are supportive the uses of this system
Hedonic motivation	1. I think using ERP is fun
	2. I think using ERP can improve my skill
	3. I think using ERP is enjoyable
	4. Using ERP system is a good idea for my well-being.

	5. I think this system can improve my chance to get promote
facilitating condition	1. This system is useful and convenience for production
	2. I am familiar with system like ERP
	3. I am familiar with process of managing company
	4. ERP system compatible with other system I use
	5. I can get help when I have diffilculties when using this system

SECTION C

Use Behaviour.

This section provides the view of the ERP use behaviour. Please tick (/) your opinion by using appropriate scale.

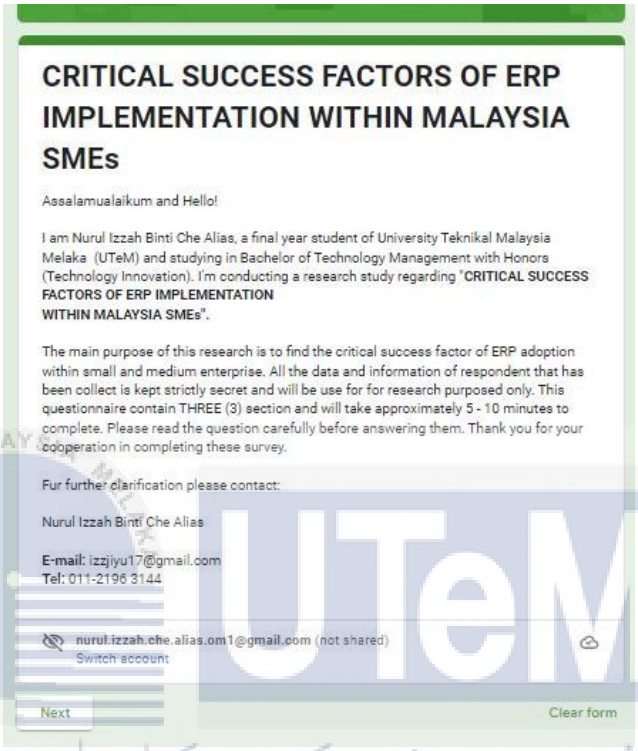
Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

For Firm purpose	6. ERP are useful for company that always make day-to day production.
	7. ERP system able to streamline MY entire organization.
	8. ERP suitable for every size of company.
	9. ERP adoption leads to do the job requirement more rapid
	10. ERP adoption results in more efficiency

For Training and Education purpose	6. The adoption of ERP will give appropriate knowledge regarding management and production.
	7. Using ERP and its ability has outstanding flexibility on works
	8. Facilitated higher order thinking
	9. Use of this system to document personal/professional growth
	10. ERP able to analyse performance/achievement or company and the employee.
For Production output purpose	6. The use of ERP would increase the amount of production in the company.
	7. ERP allow to use the material appropriately
	8. ERP system help in reducing the time of operation
	9. ERP able to located the best management and solution for production output.
	10. ERP able to accomplish the company target and goals.

APPENDIX 2

GOOGLE FORM QUESTIONNAIRE



CRITICAL SUCCESS FACTORS OF ERP IMPLEMENTATION WITHIN MALAYSIA SMEs

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The main purpose of this research is to find the critical success factor of ERP adoption within small and medium enterprise. All the data and information of respondent that has been collect is kept strictly secret and will be use for for research purposed only. This questionnaire contain THREE (3) section and will take approximately 5 - 10 minutes to complete. Please read the question carefully before answering them. Thank you for your cooperation in completing these survey.

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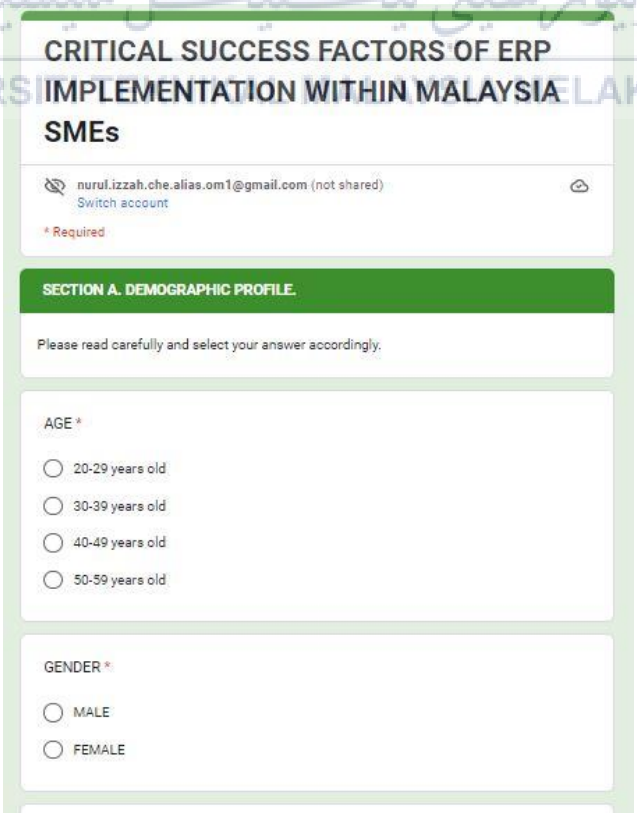
nurul.izzah.che.alias.om1@gmail.com (not shared)
Switch account

Next Clear form



CRITICAL SUCCESS FACTORS OF ERP IMPLEMENTATION WITHIN MALAYSIA SMEs

nurul.izzah.che.alias.om1@gmail.com (not shared)
Switch account

* Required

SECTION A. DEMOGRAPHIC PROFILE.

Please read carefully and select your answer accordingly.

AGE *

- 20-29 years old
- 30-39 years old
- 40-49 years old
- 50-59 years old

GENDER *

- MALE
- FEMALE

WHAT IS ERP?

Enterprise resource planning (ERP) is a type of software system that helps organizations automate and manage core business processes for optimal performance. ERP software coordinates the flow of data between a company's business processes, providing a single source of truth and streamlining operations across the enterprise. It's capable of linking a company's financials, supply chain, operations, commerce, reporting, manufacturing, and human resources activities on one platform.

**Perancangan sumber perusahaan (ERP) ialah sejenis sistem perisian yang membantu organisasi mengautomasikan dan mengurus proses perniagaan teras untuk prestasi optimum. Perisian ERP menyelaras aliran data antara proses perniagaan syarikat, menyediakan satu sumber kebenaran dan memperkemas operasi di seluruh perusahaan. Ia mampu menghubungkan kewangan, rantaian bekalan, operasi, perdagangan, pelaporan, pembuatan dan aktiviti sumber manusia syarikat pada satu platform.*

Did your company use ERP system *
(Example - ORACLE, MICROSOFT, SAGE, VECOUNT)

- ◯ YES
- ◯ NO

SECTION B : CRITICAL SUCCESS FACTOR

Factor affecting the ERP implementation within small and medium - sized enterprise (SMEs) according to UTAUT
2.

**Faktor yang mempengaruhi pelaksanaan ERP dalam perushaan kecil dan sederhana (PKS) mengikut UTAUT 2.*

Please tick (/) your opinion by using appropriate scale

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)

Performance Expectancy *

	1	2	3	4	5
I would find ERP useful for improve my work	◯	◯	◯	◯	◯
I think using ERP in my day-to-day operation would be convenience	◯	◯	◯	◯	◯
I think using ERP will help save working time	◯	◯	◯	◯	◯

APPENDIX 3

GANTT CHART FYP 1

Procedure for FYP 1	Week														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Activities															
PSM Briefing session															
Topic and supervisor search and confirmation															
First meeting with Supervisor															
Modify research topic															
Briefing on the content of chapter 1															
Introduction															
Write up Chap 1															
Completion of Chap 1															
Briefing on the content of chapter 2															
Discussion on the scope of research															
Literature Review (LR)															
Write up Chap 2															
Completion of Chap 2															
Briefing on the content of chapter 3															
Research Method															
Write up Chap 3															
Completion of Chap 2															
Submission of FYP 1															
Presentation of FYP 1															

GANTT CHART FYP 2

Procedure for FYP 2	Week														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Activities															
PSM Briefing session															
Meeting with FYP supervisor															
Interview questions development															
Meeting with FYP supervisor															
Modify interview questions															
Data collection															
Completion of chapter 4															
Completion of chapter 5															
Presentation of FYP 2															
Final correction for thesis															
Submission of FYP 2															