DETERMINANT OF THE INTENTION TO USE MARKETING ANALYTICS FOR SMES PERFORMANCE AMONG EAST COAST REGION OF MALAYSIAN ENTREPRENEURS

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LIST OF ACRONYMS

Abbreviation	Definition
DV	Dependent Variable
ECRM	East Coast Region of Malaysian
EF	Environmental Factor
IVs	Independent Variable
OF	Organizational Factor
PLS-SEM	Partial Least Square-Structural Equation Modeling
SM	Social Media
SP	SMEs Performance
SMEs	Small and Medium Enterprise
SMMA	Social Media Marketing Analytics
SPSS	Statistical Package for The Social Sciences
TF	Technological Factor
TOE	Technology-Organization-Environment

ABSTRACT

The spread of the use of marketing analytics has led to a positive perception of Social Media Marketing Analytics among SMEs, especially in the East Coast region of Malaysia (ECRM) and created a potential impact on business performance. The widespread embrace of social media marketing has changed the way businesses promote themselves, with small businesses enjoying a huge advantage as a result. The primary objectives were to examine the impact of technology factors (TF) and SMEs performance (SP), to investigate the relationship between organizational factors (OF) and SP and, to assess the influence of environmental factors (EF) and SP in the ECRM. The researcher focuses on the relationship between the independent variables (technological, organizational, and, environmental) and dependent variables (SMEs performances). This study uses a quantitative methodology to study the behavior, views, and intentions of SMEs entrepreneurs in the ECRM, regarding their understanding of the use of marketing analytics on SP using the online questionnaires in Google Forms. A total of 400 respondents participated in this study. The analysis utilized the Statistical Package for the Social Science (SPSS) version 26, encompassing the descriptive analysis, reliability analysis, normality testing, spearman correlation, multi-linear regression, and hypothesis testing. The result revealed a positive and significant relationship between TF, OF, and EF and SP in the ECRM. The findings revealed that all the hypotheses were accepted. For the future work, it is suggested to apply the qualitative data as the other methods for collecting the data. It is known to support the results of the study.

Keywords: Intention, Marketing Analytics, Small and Medium Enterprises, SMEs Performance, Technological-Organizational-Environmental Framework.

ABSTRAK

Penyebaran penggunaan analisis pemasaran memberi kesan kepada Analisis Pemasaran Media Sosial (SMMA) dalam kalangan PKS khususnya di wilayah Pantai Timur Malaysia (PTM) dan juga prestasi perniagaan. Perkembangan pemasaran media sosial telah mengubah cara promosi perniagaan, dengan perniagaan kecil menikmati kelebihan yang besar sebagai hasilnya. Objektif utama adalah untuk mengkaji kesan penggunaan teknologi dan prestasi PKS, untuk menyiasat hubungan antara faktor organisasi dan prestasi PKS, dan, untuk menilai pengaruh faktor persekitaran dan prestasi PKS di wilayah PTM. Pengkaji memberi tumpuan kepada hubungan antara pembolehubah bebas (teknologi, organisasi dan, persekitaran) dan pembolehubah bersandar (prestasi PKS) menggunakan Skala Likert untuk pengukuran data. Kajian ini menggunakan metodologi kuantitatif untuk mengkaji tingkah laku, pandangan dan niat usahawan PKS di wilayah PTM, berhubung pemahaman mereka terhadap penggunaan analisis pemasaran terhadap prestasi PKS menggunakan soal selidik dalam talian Google. Seramai 400 orang responden telah menyertai kajian ini. Analisis menggunakan Statistical Package for Social Sciences (SPSS) versi 26, merangkumi profil demografi peserta, analisis deskriptif, analisis kebolehpercayaan, ujian normaliti, korelasi spearman, regresi linear berganda dan ujian hipotesis. Hasil kajian menunjukkan hubungan yang positif dan signifikan antara pembolehubah bebas dengan prestasi PKS di wilayah PTM. Untuk kerja akan datang, adalah dicadangkan untuk menggunakan data kualitatif sebagai kaedah lain untuk mengumpul data. Ia diketahui menyokong hasil kajian.

Kata kunci: *Niat, Analitis Pemasaran, Perusahaan Kecil dan Sederhana, Prestasi PKS, Rangka Kerja Teknologi-Organisasi-Persekitaran.*

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Marketing analytics is the systematic collection, analysis, and interpretation of data connected to marketing activity (Dar et al.2023). Marketing analytics help to generate useful insights that are used to enhance decision-making and increase the effectiveness of marketing campaigns (France & Ghose. 2019). By applying technology and analytical processes to marketing-related data, businesses can understand what drives consumer actions, refine their marketing campaigns, and optimize their return on investment. Small and Medium-sized Enterprises (SMEs) are businesses that operate on a smaller scale in terms of staff count, income, or assets compared to larger organizations. The definition of SMEs can vary based on specific criteria set by different countries but generally, they encompass a wide spectrum of businesses, from micro, small, and medium enterprises with just a few employees to moderate workforce and revenue. In Malaysia, businesses that do not exceed RM 20 million a year are defined as SMEs or the number of full-time employees below 75 (SMEinfo Portal.2021).

Social media (SM) plays a significant role in enhancing business performance, especially for SMEs (Hanafizadeh., et al. 2021). Customers can engage with and share information about brands due to the popularity of SM (Hajli. 2014). It could result in better purchasing decisions. Furthermore, SM seems to be a novel strategy for SMEs to enhance sales or organizational performance (Hajli. 2015). Many SMEs are establishing a SM presence to get the word out to and get involved with consumers and clients.

Social Media Marketing Analytic (SMMA) is being used by businesses today as part of their strategy to effortlessly contact all of their target customers and as a platform to assess consumer intent (Zimmerman., et al. 2015). The use of SMMA allows SMEs to improve their performance whether it is for monitoring the efficacy of promotional activities or gathering information about client demands and preferences. Nonetheless, organizations continue to struggle to execute and adapt approaches and methodologies for a successful SM analytic program that is appropriate for the business's domain (Ruhi. 2014).

Since people are constantly updating and participating in creating and distributing information on SM, it is considered as a massive source of collecting data and evidence. Online searches and transactions also contribute to the richness of information gathered by Artificial Intelligence. All this evidence is real-time and updated from time to time which provides an opportunity for SMEs to customize their strategic plan (Joshi & Rathod. 2021). They offered SMEs a vast platform of SM for them to use, such as Facebook, Instagram, TikTok, Telegram, etc including the use of data analytic to study and cater to their pieces of information (Appel., et al. 2020).

All those SM platforms collect insights and take activities that are matched with consumer choices and preferences, eventually developing novel ways of promoting brand image or products to consumers. They often generate marketing pieces, which means that the marketing strategy is based on proof of material provided by a wide number of audiences (Mary Jane. 2023). Evidence-based marketing is a practice in which they make marketing decisions based on actual data rather than generalizing any conclusions based on market research conducted on a particular field of consumers. Such evidence-based advertisements are adaptable and may alter their points of view in response to changing audience reactions

(Mary Jane. 2023). They can change content and even intended consumers in response to marketing operations. Technology is frequently utilized to figure out which innovative ideas' consumers can connect with since building a meaningful connection with consumers is a prerequisite for growing sales and performances (Mary Jane. 2023).

Consumer insights aid in targeting possible customers with a more efficient and persuasive approach. SMEs can be more confident in spending money on advertising upon fact-based social media marketing, allowing them to track the Return on Investment (Joshi & Rathod. 2021)

Examining the facts around SM usage for small businesses, it is surprising that 93% of owners of SME businesses use SM as a marketing tool. This interesting curiosity serves as proof of the growing impact that internet platforms have on how successful enterprises are in today's globalized society (Alexander. 2023). This interesting data demonstrates how marketing strategies have evolved from old ways to adopt cutting edge technological breakthroughs. It also motivates aspiring entrepreneurs and established business owners to jump on the bandwagon of SM to boost their companies to new heights. This figure is not just some piece of numerical information in the context of small enterprises; instead, it is the dynamic, beating heart that gives modern marketing strategies life and helps companies shine in the spotlight of success and recognition. Furthermore, relatively few studies have been conducted to investigate how SMEs use SM and the impact of this endeavour on their performance (Ahmad et al., 2019). Therefore, this study has the following objectives: (1) To examine the impact of technology adaptation on SME performance in the East Coast Region of Malaysia (2) To investigate the relationship between organizational factors and SME

performance in the East Coast Region of Malaysia (ECRM), and (3) To assess the influence of environmental factors on SME performance in the East Coast Region of Malaysia.

The purpose of this article is to find the use of SMMA tools for measuring business performance. The researcher explained locating data, exposure, impact, behaviour inferences, and some of the use cases with necessary business insights for social media analytic. As a contribution to SMMA research, the Technology-Organization-Environment (TOE) framework have been chosen. Hence, the methodology used is a quantitative analysis of the articles regarding social media analytic. In addition, to improve and offer some helpful suggestions for SMEs, the researcher gather particular data about the effectiveness and impact of using SM in business. This information is used to define how business intelligence, business analytic, and data visualizations is used.

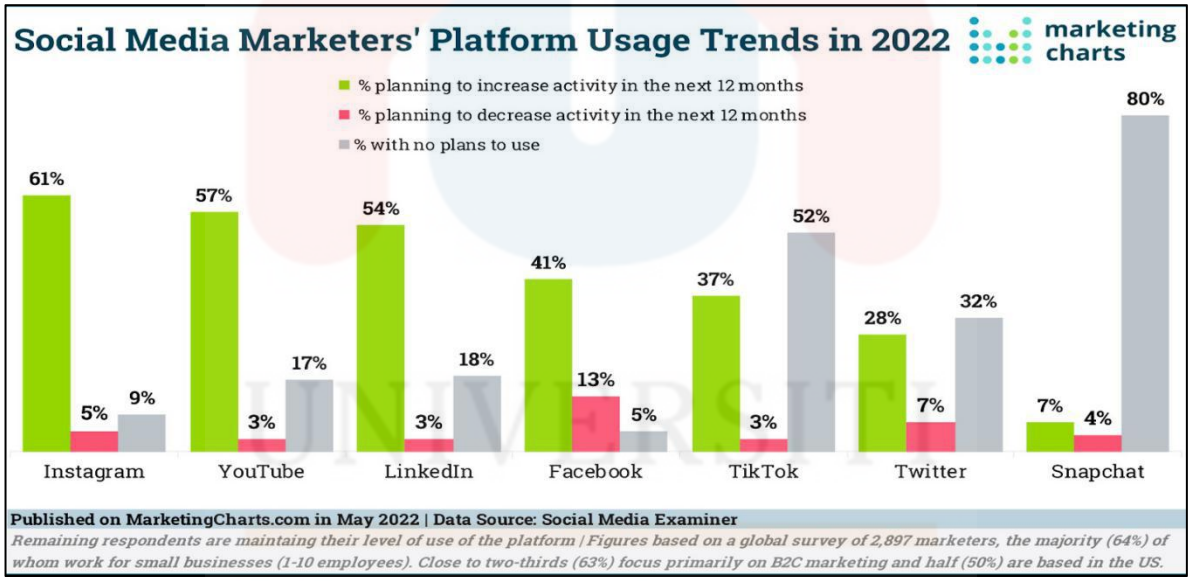
The following section shows the theoretical basis and present research hypotheses in the following section. Next, two sections provide data collecting and data analysis, as well as the validation of the conceptual research model and the study conclusions. The final section examines the studies implications, limitations, and future research directions.

1.2 Problem Statement

SMEs are not yet actively creating key performance metrics for marketing analytics, SMEs not actively monitoring analytic data that would provide additional insight into their customer bases' growth and engagement (Marsha et al. 2016). Most of the academic literature discusses the SMMA in large organizations and rarely focuses on SMEs. Thus, some of the SMEs could not properly utilize the use of SM to enhance their businesses. Non-effectiveness marketing strategy would probably drag the SMEs towards the worst case or might diminish their

customers. In addition, SMEs could not reach their target customer due to the weaknesses in handling SM platforms (Hassan et al., 2023).

Based on the Figure 1.1, the number of social media marketers globally who use SM platform tools is still disheartening. There are many reports that highlight how many SMEs struggle to utilize or dig out the exact function of using SMMA (Hassan et al. 2023). For example, Facebook provides an ad system in which the users can target their customers in more specific ways such as age, gender, search history, and area. Proportionately, without a basic understanding of the advantages being offered by SM platforms and a lack of knowledge to engage customers in SM will result in countless opportunities missed (Adegbuyi et al., 2015).



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igure 1.1: Social media marketers' platform usage trends in 2022 (JC Lupis, 2022)

1.3 Research Questions

The research questions for this study have been listed as below:

RQ1: What is the relationship between technological adaptation and SMEs performance in East Coast Region Malaysia?

RQ2: What is the relationship between the organizational factor and SMEs performance in East Coast Region Malaysia?

RQ3: What is the relationship between environmental factor and SMEs performance in East Coast Region Malaysia?

1.4 Research Objectives

To achieve the main purpose of this study, there are three research objectives to be carried out in this research. The main objectives of this research study are:

1. To examine the impact of technology factor and SMEs performance among East Coast Region Malaysia.
2. To investigate the relationship between organizational factor and SMEs performance among East Coast Region Malaysia.
3. To assess the influence of environmental factor and SMEs performance among East Coast Region Malaysia.

1.5 Scope of the Study

This study explored how marketing analytics contribute to sales performance within SME in the ECRM. The scope of this study involves SMEs entrepreneurs in the ECRM. This is because this area has more entrepreneurs who venture into this small and medium business in various sales. It is also consistent with the population of study, as well as the sample size and selection criteria. The research involved technological factors (TF), organizational factors (OF), and environmental factors (EF) in SMEs performance. The researchers also collect and

analyze this data according to the plan and time frame in the specific period used in this research. It is to achieve the objectives of the study efficiently in the research effort.

This study aims to identify whether using marketing analytics can develop SMEs performance among SMEs entrepreneurs. The variables measured and analyzed in this research include demographic variables that are among ECRM Entrepreneurs, dependent variable (DV) which is SMEs performances (SP), and independent variables (IVs) such are TF, OF, and EF. To underline the limitations such as time, resources, or access to data through primary data that mostly comes from previous research and the questionnaire, researchers are identify relevant data from the sources provided.

1.6 Significance of Study

This study focuses on the elements that affect SMEs perspectives on SMMA. The aims of this study have influenced the behavior of all SMEs entrepreneurs regarding social media marketing analysis, especially entrepreneurs in the ECRM. The findings of this study is applied to social media marketing analysis because SMMA plays an important role in corporate performance nowadays. SMMA has become significant for the interests of SMEs.

As a result, the findings of this study can assist academics in becoming more educated and understanding attitudes towards marketing analytics. The researcher believes that those participating in this research, whether directly or indirectly, will profit from it.

1.6.1 Researcher

The findings of this study are important for improving researchers' understanding of the intention to use social media marketing analytics on the performance of SMEs. This study provides an opportunity to compare theories and previous research findings about the factors

that influence SME performance when using marketing analytics. This comparison can be made academically. Furthermore, the theories and measurement methods proposed by previous researchers can be tested in this study to determine whether they are applicable and accurate in the context of the local industry. This will help us better understand how to measure and evaluate the performance intentions of SMEs.

1.6.2 SMEs as a Consumer

The study's findings are useful for students who use social media marketing analytics in other ways as well. This is because SMEs can compare prices, quality, and services and have a variety of options at their disposal. With this information, SMEs will be able to make the best decisions for themselves and meet their needs. Social media marketing analytics can provide SMEs with a wider range of pricing options and, most importantly, a more convenient way to obtain information.

1.6.3 Government

This study is also significant for the government because it encourages the responsible use of data and results. Governments can use data and research findings to make important decisions about social commerce sites, providing a platform for making informed decisions about improving existing products or services or launching new ones. Indirectly, this study is important for gathering information on the economic structure of social commerce sites in this country. The collection of statistical data will involve several research problems, such as the causes of social commerce sites in the national economy and how they will be distributed.

1.7 Definition of Term

There are terms that have been used in this study:

1.7.1 Small and Medium Enterprises (SMEs)

Small and Medium Enterprises, also known as SMEs, are enterprises that fall within a specified size range, frequently based on elements such as income, number of workers, or assets. These enterprises produce jobs and have increased market competition, resulting in improved consumer satisfaction (Śląska. 2022). SMEs account for more than 90% of all businesses globally (Cadden. 2023). SMEs categorization thresholds differ by country and industry. It is classified as an enterprise with an annual sales value not exceeding RM50 million or full-time employees not exceeding 200 people (Franihuda. 2023) and is widely regarded as irrefutably contributing to economic and social benefits on a global scale. SMEs drive economic growth by generating job opportunities and being innovative and productive (Maroufkhani. 2020).

1.7.2 Marketing Analytic

According to France, S.L. & Ghose, S (2018), marketing analytics is a broad field, with academic scholars and practitioners coming from a variety of disciplines such as marketing, expert systems, statistics, and operations research. Marketing analytic refers to the practice of monitoring, managing, and analysing data related to marketing operations and strategies. To evaluate the level of effectiveness of marketing initiatives, understand consumer behaviour, and make decisions based on data, the use of good data and statistical analysis is very necessary in operations (France & Ghose. 2019). Marketing analytic is used to transform large amounts of unstructured market data to gain valuable insights (Germann. 2013; Gadden. 2023).

1.7.3 Intention

The intention to use can be referred to as a development of attraction to do something that is influenced by the intention that is used as a goal in doing something (Hajli. 2015). A person's intention is defined as a person's purpose, strategy, or determination to do something or achieve a certain objective that has been set. The social influence of what employees believe their peers and supervisors think about their use has a positive effect on their intention to use it (Gonsalves, N & Afolabi, A. 2023). Intentions that exist either consciously or unconsciously, have an important role in determining individual behaviour and the results of activities performed (Ahmad. 2019).

1.7.4 Sales Performance

Sales performance refers to the effectiveness, and results of salespeople, sales teams, or the entire sales organization in achieving sales objectives and targets (Shabbir & Gardezi. 2020). It usually involves tracking key performance indicators such as sales revenue, number of closed transactions, customer acquisition and retention, conversion rates, and other relevant data. Analysing sales performance allows organizations to analyse the success of their sales efforts and make educated decisions to improve and optimize sales strategies. According to Nguyen's (2021) research study, the performance of a firm's sales team is referred to as sales performance, and it considers how effective the firm's sales team's performance is within a certain period. Today's selling environment is pretty complex. Group sales operations, multipart sales proposals, and the participation of many business units in a single transaction all contribute significantly to this complexity (Munawar. 2023).

1.7.5 Technological

Technology refers to anything related to technology or the application of scientific knowledge for practical applications. In the context of SME marketing analysis, the technology aspect often involves the use of advanced tools, software, and platforms to analyse data, make informed decisions, and optimize marketing strategies. Marketing analytic aims to generate important insights by transforming massive volumes of unstructured market data (Cadden., et al. 2023). Technological advances in SME marketing analytic also frequently involve the use of tools and platforms that exploit data to acquire insights into consumer behaviour, market trends, and campaign effectiveness. This might involve the use of data analytic software, customer relationship management systems, social media monitoring tools, and marketing automation platforms to optimize tactics and decision-making. According to Lutfi., et al (2022), SMEs tend to use technology if they are convinced that its advantages are more than other existing technologies. The integration of these technologies allows SMEs to make data-driven marketing decisions.

1.7.6 Organizational

The term organization refers to anything related to an organization's structure, operation, and functions of an organization. According to Shabbir & Gardezi (2020), organizations might gain a competitive advantage and achieve their goals more effectively by utilizing an analytical approach. This includes elements such as the arrangement of people, resources, procedures, and systems that are organized inside a business to efficiently achieve its goals. In the context of SME marketing analysis, the term organization refers to the way a business structures and manages its marketing analysis process. Organizational readiness in SMEs has been shown to have a significant relationship with the use of new technology in previous

studies (Lutfi., et al. 2022). This involves defining roles and responsibilities, establishing workflows, and integrating analytic into the overall marketing strategy. It also includes developing a culture that values data-driven decision-making, ensuring organizations are aligned to effectively leverage data for marketing insights and optimization in the specific context. SMEs have been using business analytics to improve decision-making and to gain a competitive advantage (Cao., et al. 2021).

1.7.7 Environmental

Generally, environmental refers to the surrounding conditions or influences that affect an entity, be it a business, ecosystem, or other system (Glavan & Vukšić. 2021). In SME marketing analysis, the environment usually refers to external factors that can impact marketing efforts. These include factors such as market trends, competitive landscape, economic conditions, regulatory changes, and cultural influences. The impacts of the external environment on the enterprise were defined as competitive pressure (Lutfi., et al. 2022). The more firms feel that they are under pressure to compete, the more they will adopt new technologies (Maroufkhani., et al. 2020). Intense competition in a rapidly changing business environment is characterized by high uncertainty and complexity (Caden., et al. 2023). Understanding environmental aspects in marketing analysis helps SMEs adapt their strategies to external conditions, make informed decisions, and remain responsive to changes in the business environment (Kandil. 2018). It also involves analysing and interpreting data related to these external factors to improve the effectiveness of marketing initiatives.

1.8 Organization of the Proposal

The initial chapter of this paper provides an introduction, exploring the background of the study, which encompasses SMEs, social media, and marketing analytics. It also delves into the problem statement, research questions, research objectives, the study's scope, its significance, and the definition of key terms.

In chapter 2, the researcher discussed about the research introduction, review of relevant literature, and the research framework. The framework visually depicted the relationships between various variables.

The chapter 3, comprehensively address the research methodology, encompassing the chosen methodologies and approaches. This chapter include a summary covering the research design, methods of data collection, sample size, sampling techniques, the target population, research instruments, variable procedures, data analysis, and a concluding section.

In chapter 4, the researcher provides and discuss about the finding result by using the methods and tools that have been chosen to obtained the data needed for this study. Data analysis have been discussed in this chapter to approve the accuracy of the study.

In Chapter 5, the researcher examined all the limitation and future works for the future researcher and provide an overall conclusion for the research. The appendices are provided in the last section of the thesis which are appendix A (draft of questionnaires) and appendix B (gantt chart).

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter describes an examination of the factors influencing the ongoing perspective of SMEs entrepreneur in the East Coast Region of Malaysia (ECRM) toward marketing analytics. It begins by offering a comprehensive overview of social media, tailored for a younger audience, to foster a broad comprehension of this technology. The subsequent section analyses the theoretical approach, primarily focusing on the Technological- Organizational-Environmental (TOE) framework and other crucial factors, providing insight into the main underlying theory and the research structure. The chapter further explores the interrelation between independent and dependent variables, presenting the research hypothesis based on the established framework. The discussion of this chapter starts with the introduction, then the underpinning theory, previous study, hypothesis statement, conceptual framework, and the last one will be the summary for this chapter.

2.2 Underpinning Theory

A philosophical perspective can assist in guiding and evaluating the intentions behind the use of marketing analytics and ensure that they are aligned with ethical considerations, practical benefits, and the pursuit of knowledge and understanding in the field of marketing. This study discusses the factors influencing the adoption and use of marketing analytics in SMEs and its impact on their performances. The researcher uses TOE model. It is common to examine issues related to the use of technology or innovation (Maroufkhani., et al. 2020). The TOE framework explained the factors of internal and external that may affect the technology

adoption of firms (Lutfi., et al. 2022) it will be suitable for use and meet the needs of the research. This model also explains the intention to use marketing analytics that can influence SMEs. This is because the TOE framework describes how the technological factor (TF), organizational factor (OF), and environmental factor (EF) can influence the use of technology and how it can influence the decisions and performance of a company (Maroufkhani., et al. 2020). Researchers utilize the TOE framework regularly to develop causal relationship models for factors that impact technology use. In previous investigations, Partial Least Square (PLS) approaches were largely employed in data analysis. It is used to address the desire to use marketing analytics in SMEs to improve sales performance.

Referring to the TOE model, the TF refer to internal and external technology, including equipment and processes (Lutfi. 2016). The TF focuses on the relative advantage of technology adoption in SMEs. This factor describes both new and old technologies that are relevant to the organization. It suggests that adopting new technologies can improve the business's market position and innovation capabilities (Hoffman. 2021). According to Maroufkhani., et al (2020), adopting new technologies in SMEs can be one of the critical strategies to improve the status of the business in the market and become more innovative and productive. Evaluate technology aspects by considering the capabilities of marketing analytics tools. Evaluate the feasibility, ease of use, and cost-effectiveness of these tools for SMEs. Identify specific analytics solutions that align with business needs and resources.

The OF covers a variety of organizational characteristics, including structure, resources which is human capital, and autonomy which also covers organizational measurements such as reach, total resources, sub-optimal total resources, etc (Glavan. 2021). This factor examines internal factors in an organization. The OF monitors the formal and informal relationship between

employees and the enterprise's current organizational structures (Stjepic., et al. 2021). By determining whether there is a willingness to adopt marketing analytics among employees and top management. This involves assessing the organization's culture, existing skill sets, and willingness to embrace data-driven decision-making. This factor is also developing a change management plan to facilitate the use of marketing analytics in the organization. In addition to communicating the benefits and importance of analytics to all stakeholders. It emphasizes that the support of senior management is crucial for successful innovation adoption in SMEs (Jahanshahi. 2017).

This model also involves the EF which is related to industry, competitive arrangements, and regulatory issues that refer to industry considerations and government support (Glavan. 2021). This factor analyzes external factors that can influence the use of marketing analytics in SMEs. Understanding environmental aspects in marketing analytics helps SMEs adapt their strategies to external conditions, make informed decisions, and remain responsive to changes in the business environment (Chege. 2020). It also involves analyzing and interpreting data related to these external factors to improve the effectiveness of marketing initiatives. Consider the competitive landscape, market trends, and regulatory factors that may impact the use of analytics in sales performance and marketing strategies. The EF is external aspects of the organization (Lutfi., et al. 2022). According to Eze., et al (2019), this factor also focuses on the manner of competition, trading partners, business practices, and the impact of government on organizations.

By using the TOE model in this study to systematically evaluate these three dimensions and their relationship with SMEs' performance and marketing analytics, the researcher can identify

potential barriers or facilitators to the intention to use marketing analysis in SMEs. This analysis helps the researcher develop a strategic plan to overcome obstacles and capitalize on strengths, ultimately improving sales performance through the effective use of marketing analysis.

2.3 Previous Studies

2.3.1 Small and medium-sized enterprises

SMEs are the main drivers of employment creation in Malaysia (Department of Statistics Malaysia, 2020). Malaysia's economy is based primarily on SMEs (Liew, 2020). The number of prosperous SMEs in the area serves as a catalyst for community involvement in the industry by showcasing their numbers. Entrepreneurial traits like the drive for success are crucial for motivating staff members and organizations to realize their goals and aspirations for the company. Moreover, one of the main causes of business failure for entrepreneurs is inadequate marketing (Burns, 2019). The primary driver of entrepreneurs' efforts is their business's success, which inspires them to work even more. The entrepreneurs' confidence can be damaged, and they won't be as motivated to keep the firm going if they are unable to achieve business success despite investing a lot of time and effort (Klimas, et al. 2020). Consequently, this is progressively can impact Malaysia's economic expansion.

2.3.2 Marketing Analytics

More than merely fancy technologies are needed for marketing analytics. Marketing teams require a plan that considers all of their data in a holistic way. Regardless of size, the majority of firms today have access to web analytics tools and client data (Mela, 2018). Marketing analytics facilitates a business's comprehension of its overall goals. It also enables them to

delve deeper into the more specialized, micro-marketing trends within their industry. The proper mix of marketing materials for the company and where to focus attention during that process are determined by marketing analytics (Tama-Rutigliano, 2018).

2.3.3 Social Media (SM)

Owing to SM continued global appeal, businesses' social networks are expanding more quickly with the goal of fostering consumer online interaction (Hallock, Roggeveen, & Crittenden, 2019). The most popular SM sites in Malaysia are Facebook, Instagram, and TikTok. The usage of SM has skyrocketed in the last few years. According to Howe (2023), 26.8 million Malaysians are frequent users of SM, using these platforms to engage with friends and family, share their experiences, and information. Because of this, businesses are investing more and more in the production and sharing of content on SM (Hosanagar, & Nair. 2018).

2.3.4 Technological Factor

According to Georgiadis (2022), modern technology opens up new opportunities for companies in the SMEs to reach new consumers through digital marketing campaigns, online advertising, mobile phone apps and SM. The element of relative advantage in TF, is to put it plainly, an organization's desire to embrace innovation can be strongly influenced by how it perceives its potential to add value to its operations (Wahab & Hamzah, 2020; Lutfi, 2021). Relative advantage can also be created by a product that is perceived to be superior to the consumers. The latest advancements in technology have simplified modern life and offered more convenience to both consumers and business owners. (Bhasin, 2019). According to Lutfi & Idris, (2016) SMEs have potential in technology if they are confident that it has advantages over other existing technologies.

2.3.5 Organizational Factor

This study has determined that readiness of the organization and management support are the characteristics that influence the performance of SMEs. The level of understanding and acceptance of a new technology system's technological capabilities by managers is referred to as top management support (Al-Omoush, 2020). The senior management team in SMEs is more likely to contain the decision-makers, and their backing is essential for an innovation to be adopted (Jahanshahi and Brem, 2017). In fact, because the inclination for adoption correlates with the degree of innovative leadership or top management, they serve as the primary connection between individual and organizational technology adoption.The effective innovation adoption is significantly influenced by top management support (Jo, H., & Bang, Y. 2023)

2.3.6 Environmental Factor

The TF considers government regulations and policies that can influence the use of marketing analytics. It suggests that supportive regulations and incentives can stimulate the adoption of new technologies in SMEs (Indrawati. 2023). There are some prohibitive government regulations, but those regulations can encourage firms to adopt certain types of new technologies. Government regulations and policies in terms of encouragement, technology standards and legislation can increase the use of data analysis among firms (Lai et al., 2018). For example, Hsu, Ray, and Li-Hsieh (2014) and Lai et al. (2018) found that firms facing high levels of regulation and pressure from the government are more likely to adopt cloud technologies. This study also considers that government regulations in terms of support and incentives stimulate the use of marketing analysis.

2.4 Hypotheses Statement

2.4.1 Technological Factor

Under the TF, the relationship between TF and hypothesis 1 (H1) is that H1 states that the relative advantage of TF has a positive relationship with SME performance (SP). In other words, the hypothesis suggests that if SMEs perceive technological advances as beneficial compared to other existing technologies, it has a positive effect on their performance. Thus, this study proposes the following hypothesis for testing:

H1: *The relative advantage of technological factors has a positive relationship with SMEs performances.*

2.4.2 Organizational Factor

This study examines that OF and hypothesis 2 (H2) states that there is a positive relationship between OF and SP. This means that the level of support from top management in an organisation is expected to have a positive impact on the performance of SMEs. This factor examines internal factors in an organisation. The OF monitors the formal and informal relationship between employees and the enterprise's current organisational structures (Stjepic., et al. 2021). Thus, this study proposes the following hypothesis for testing:

H2: *The top management support of organisational factors is positively linked with SME performances.*

2.4.3 Environmental Factor

Studies in the literature of relationship between EF and hypothesis 3 (H3) state that there is a positive influence of government regulations in terms of support and incentives on SP. In other words, the hypothesis suggests that the EF, specifically government regulations, has a positive impact on the SMEs performance of SMEs in the ECRM. The study aims to assess

the influence of the EF, including government regulations, on SME performance. The findings of the study support H3, indicating that there is a significant relationship between the EF and SME performance in the ECRM. This suggests that government regulations, such as support and incentives, play a role in stimulating SME performance in the region. Thus, this study proposes the following hypothesis for testing:

H3: *The government regulations of environmental factors positively influence SME performances.*

2.5 Conceptual Framework

In this study, the researcher proposes a hybrid model by employing the Technological-Organizational-Environmental (TOE) model. It explains the factors of internal and external that may affect the technology adoption of firms (Lutfi., et al. 2022). TOE model describes how the technological, organizational, and environmental factors can influence the use of technology and how it can influence the decisions and performance of a company (Maroufkhani., et al. 2020). The researcher's summary of the literature on how to explain behavior is represented by a conceptual framework. As a result of their previous knowledge of the views of other researchers and their observations of the research. Figure 2.1 shows the conceptual framework of this study. The framework includes the TF, OF and EF as independent variables and SP as a dependent variable.

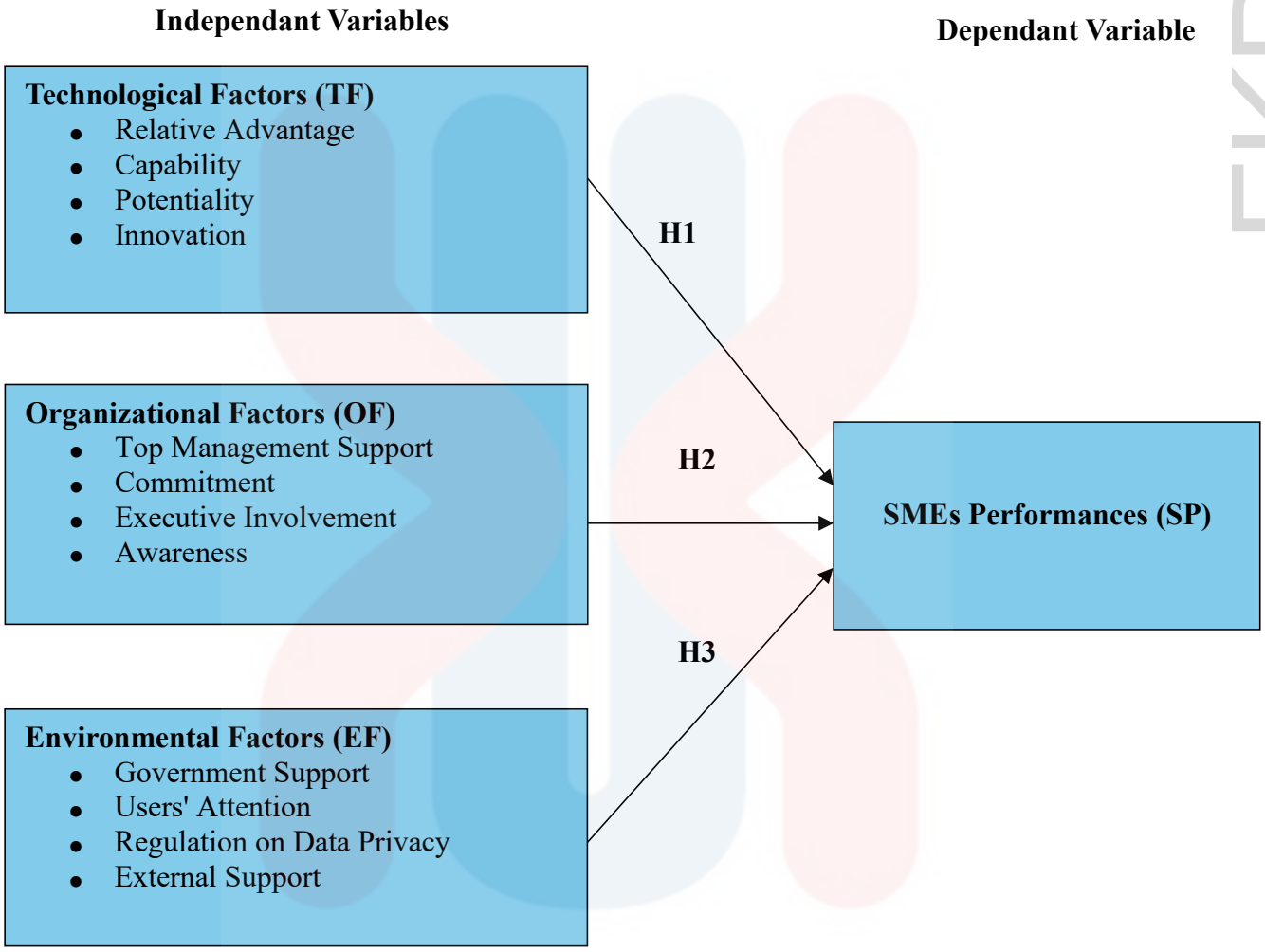

Figure 2.1: Conceptual framework of this study

2.6 Summary

From the previous study, the TOE model use includes studies on TF, OF and EF. According to the observations, a variable is a research or analysis object that can be monitored, calculated, or applied. This study established the relationship between the IVs and the DV. It will also use the TOE to generate an IVs and DV. The study discovered that raising awareness has a beneficial influence for SMEs on the ECRM. IV of this study is directly related to the success DV.

CHAPTER 3

RESEARCH METHODS

3.1 Introduction

Research methodology refers to an overall and detailed description of the procedures and methods that have been used during the research process. Methodology refers to systematic analysis, how to obtain and analyze data (Polit & Beck, 2004). This study is focus on the scope of the investigation, the methodology used to collect the data, and the information required in the study. The approach used to obtain the information and data used by the researcher be prepared and detailed in this section. Chapter 3 commence with an exposition of the introductory section, followed by an elaboration of eight additional components, namely research design, data collection method, study population, sample size, sampling techniques, research instrument development, measurement of the variables, the procedure for data analysis and be summarized at the end of the chapter.

3.2 Research Design

Research design refers to the overall strategy and analysis techniques used by the researcher in obtaining the desired data and information more accurately and following the type of research being conducted to combine the many components of the study coherently and logically.

In this study, quantitative methods is used by the researchers to obtain data and information that suite the study title. The utilization of quantitative methods, specifically statistical techniques for hypothesis testing can be applied by researchers to obtain information. Quantitative methodology uses complex statistical techniques, and it is considered an

appropriate method for collecting data. This study also is also a data collection method using questionnaires to sample or whole population to describe the attitudes, and views of the population. In SME marketing analytics, the quantitative technique entails the use of numerical data and statistical analysis to obtain insights, make informed choices, and assess the performance of marketing efforts. This might involve employing quantitative research tools like surveys, trials, and data analysis to acquire and analyze numerical data on customer behaviour, market trends, and sales performance.

3.2.1 Quantitative Research

This research uses a quantitative methodology to study the behaviour, views, and intentions of SME entrepreneurs in Malaysia, especially in the East Coast Region (ECRM), regarding their understanding of the use of marketing analytics on SME sales performance. The method used to obtain participants' perspectives on the effects of using marketing analytics is considered appropriate. This study incorporated quantitative methodology, which involve conducting surveys by distributing questionnaires in Google Forms platforms at the next stage to facilitate data collection. Researchers also formulate specific questions and hypotheses that will be answered or tested using numerical data as well as use statistical methods and software to analyse the data that will be collected.

3.2.2 Descriptive

Descriptive quantitative research is often used to present a picture of a situation, characterize relationships between variables, or summarize data. It entails gathering quantitative data using methods such as surveys, experiments, or observations. These data are often in the form of numbers or measures. Descriptive statistics that have been used can be complemented by visual representations such as histograms, bar charts, or pie charts. These visuals can provide

a clear and accessible way to convey patterns and variations in showing research findings obtained from surveys.

3.3 Data Collection Methods

Researchers use primary data for the research. Primary data refers to the first-hand data gathered by the researcher himself Sulbha Wagh (2023). The data analyze is the data that have been collected from the respondents. The present researchers decided to develop an online questionnaire using Google Form to collect the primary data from respondents. The online questionnaire was distributed through SM to collect responses from the SMEs entrepreneurs. This data is required for further statistical calculations and analysis. Quantitative data collection refers to the collection of numerical data that can be analyzed using statistical methods.

3.4 Study Population

Population refers to the entire group of people, events, and things of interest that the researcher wishes to investigate. For this study, the population refers to SMEs in the ECRM. According to Department of Statistics Malaysia (2020), the number of SMEs establishments for the ECRM is 113 515 (12.4%) SMEs which include the state of Kelantan (5.1%), Terengganu (3.2%) and also Pahang (4.1%). Given that 113 515 entrepreneurs are enrolled in SMEs. Using Krejcie and Morgan's (1970) table anticipated 384 entrepreneurs that will be the respondents for this research.

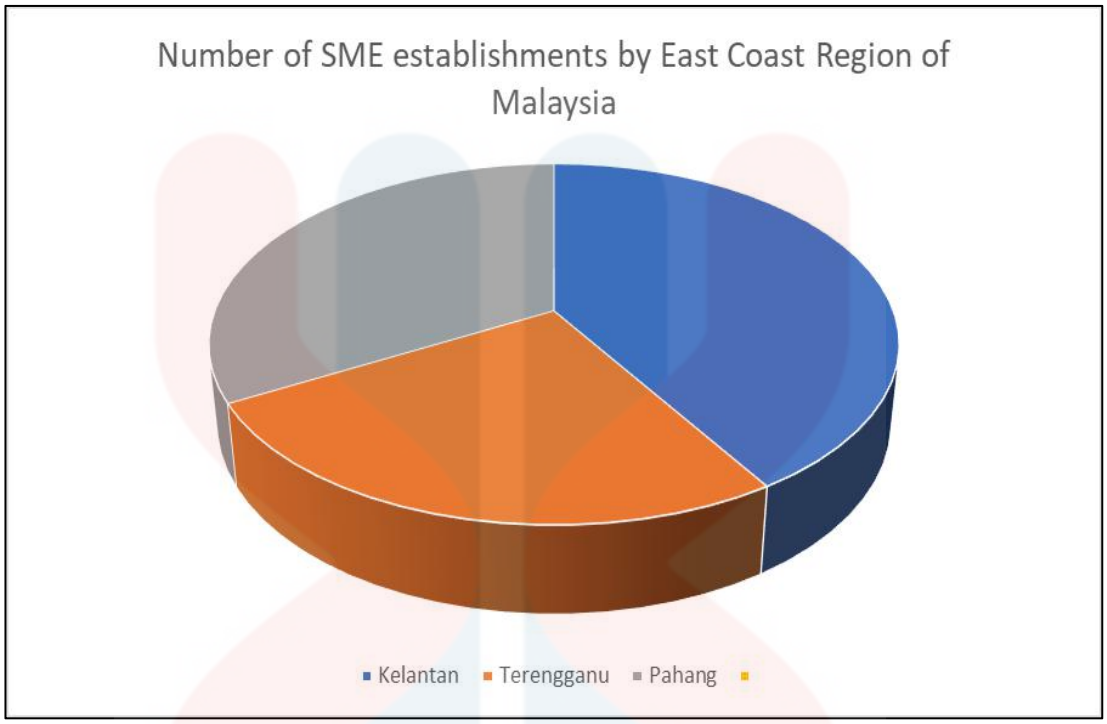

Figure 3.1: Number of SMEs establishments by ECRM
(Department of Statistics Malaysia, 2020)

3.5 Sample size

In determining the sample size for this study, we utilized the tabulated data provided by Krejcie and Morgan, (1970), to estimate the population size, which is identical to the sample size for easy reference (Kenpro, 2016). According to these tabulated sources, the total population is 1113 515 and the research sample comprises 400 respondents. The study's sample size is contingent upon the number of SMEs established in the ECRM.

Table 3.1: Tables for determining sample sizes for populations (Kenpro, 2016)

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

Note: N is Population Size: S is Sample Size *Source: krejcie & Morgan,1970*

3.6 Sampling Techniques

The sampling method, also known as the sampling technique, involves collecting and analyzing data to study a population. This method is particularly useful when dealing with large sample spaces (Admin, 2021). The non-probability sampling method relies on the subjective judgment or convenience of researchers rather than following a fixed selection process, which can lead to biased results that may not accurately represent the target population. Four types of non-probability sampling methods include convenience sampling, judgmental or purposive sampling, snowball sampling, and quota sampling. In this study, we employ the convenience sampling approach, which is chosen for its ease of data collection using tools like Google Forms and questionnaires.

3.7 Research Instrument Development

Research instrument use for this study is online questionnaire using Google Forms. Takona (2002) states that because questionnaires and interviews are good tools for evaluating factors like opinion, attitude, concept, composition, and so on, they should be used in educational research. Because it is appropriate for the researcher's topic, the questionnaire was used in this study.

3.7.1 Questionnaire Design

The data examined quantitatively. Quantitative research collects numerical data and generalizes on groups of individuals or phenomena. The web-based application Google Forms used to conduct an online poll in order to investigate the hypothesis that was put forth. Upon opening the form, participants see a consent notification and be prompted to click the continue option to indicate their desire to participate. The participants is required to furnish their personal details, including age, race, and social media marketing usage. A series of questions measuring the perception of relative advantages in technology, organizational variables for top management support, environmental factors for government laws, and the perception of social presence will be asked of the participants. They can then click complete to finish the questionnaire after answering all the questions.

According to S. Roopa (2012), questionnaires are the most common way for quantitative primary data to be collected. Questionnaires enable the collection of quantitative data in a standardized manner, ensuring that the data is internally consistent and coherent for analysis. This questionnaire is intended to identify the factors impacting ECRM entrepreneurs' intentions to employ social media marketing analytics on SMEs performance. However, the survey is a self-reporting questionnaire in which respondents are not led or accompanied

when answering the questions. The questionnaire has three parts including section A (demographic profile), section B (general question), section C (independent variable) and section D (dependent variable). These sections were graded on a five-point Likert scale, from strongly disagree to strongly agree.

Table 3.2 Likert scale (S. Roopa 2012)

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

Table 3.3: Questionnaire to respondent (S. Roopa 2012)

Section	Variables To Be Identified	No Of Item	Total of Item
A	**Demographic Profile (S. Roopa, 2012)** **A1:** Gender - Male - Female **A2:** Age - 20 years and below - 21-30 years - 31-39 years - 40 and above **A3:** Race - Malay - India - Chinese - Native of Sabah/Sarawak **A4:** Marital Status - Married - Single **A5:** Current Employment - Full-time - Part-time - Retired	A1-A8	8

	A6: Sector Industry - Manufacturing - Construction - Trade and repair services - Hotels and restaurant **A7:** Educational Level - Primary School - Secondary School - University Level - Vocational Level **A8:** Monthly Income - B40 (RM 0 - RM4849) - M40 (RM 4850 - RM 10959) - T20: 1 (RM 10960 – RM 15000) - T20: 2 (RM15000 and above)		
B	**General Question (S.Roopa, 2012)** **B1:** I have been running SME operations for a long time **B2:** I have social media accounts for business **B3:** I have more than one social media for marketing purposes **B4:** I spent much time on social media for marketing activities **B5:** Marketing on social media is more profitable than physical marketing	B1-B5	5
C	**Independents Variable (S.Roopa, 2012)** **1. Technological factor** **C1:** Social media enables business to appropriately manage the marketing more systematically **C2:** Social media enables our business to reach a larger customer **C3:** Marketability of products will improve with the help of social media **C4:** Social media enable our business to respond faster if any changes or new trend	C1-C4	4
	2. Organizational factor **C5:** Top management promotes the use of the marketing analytics in the business **C6:** Top management creates support for marketing analytics initiative within the business **C7:** Top management promotes marketing analytics	C5-C8	4

	as a strategic priority within the business **C8:** Top management is interested in the news about marketing analytics adoption		
	3. Environmental factor (Hsu et al, 2014) **C9:** Government policies encourage SME entrepreneurs to adopt new information technologies **C10:** The government provides incentives to use marketing analysis in procurement and government contracts such as offering technical support, training and funding to develop SME performance **C11:** Adequate legal protection supports the use of SME technology **C12:** There are several business laws to address security and privacy concerns over Marketing Analytics technology.	C9-C12	4
D	**Dependent Variable (S.Roopa, 2012)** **SMEs Performance** **D1:** Our SME has effectively managed operating costs and expenses. **D2:** I believe our SMEs marketing efforts have positively impacted brand visibility and customer acquisition. **D3:** Our SME has experienced consistent revenue growth in the past year. **D4:** The risk that arises in the use of marketing analytics can influence sales performance		4

3.8 Measurement of the Variables

To measure the factors, approved sets of instruments that are employed as markers or items are used. The independent variables in this study survey are technological factor it is relative advantage, organizational factor for top management support and environmental factor for government regulations. The dependent variables in this survey are SMEs performance.

3.8.1 Nominal Level of Measurement

Various perspectives on the significance of the nominal scale have been discussed. A nominal scale is used to divide units into qualitative categories in which persons within the same category share a defining property. These categories can be named, as in the case of natural categorization such as gender, which is male or female, or artificial classification such as group class A or B (Allanson, 2020). The single characteristic of a nominal scale is a descriptive feature, which signifies that it has its own label that may be used to identify the item or assign a value to it. When employed as a technique of identification, there is a direct and recognisable relationship between the item and the number value that has been assigned to the item. The researcher prepared demographic questions for the respondents in section A of the questionnaire, such as age, gender, race, marital status, educational level and monthly income.

EXAMPLES:

1. Gender/ Jantina

Table 3.4: Nominal scale (Allanson, 2020)

	Male/ *Lelaki*
	Female/ *Perempuan*

3.8.2 Ordinal Level of Measurement

Ordinal data is classified into categories inside variables, each of which has its own basic ranking technique. The distance between the categories, on the other hand, is neither continuous nor known (Bhandari, 2020). The difference between ordinal data and other types of data is uncertain. They can be named, grouped, and even classified. Researchers will benefit from understanding the various scales available so that data analysis methods may be

applied properly. For example, in part B and C of the questionnaire, the researcher utilized a Likert scale. The researcher utilized a Likert scale with five levels: strongly disagree, disagree, neutral, agree, and highly agree. Respondents will be instructed to complete the questions according to their scale level. In Sections B and C, the Likert Scale Technique will be utilized to examine the intention of using SMMA on SMEs performance.

Table 3.5: Ordinal scale (Bhandari, 2020)

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

3.9 Procedure for Data Analysis

Statistical Package for the Social Sciences (SPSS) version 26 has been used to create and analyze the data in this research. The data analysis conducted in two primary stages. In the initial phase, a descriptive statistical analysis perceed the application of statistical techniques to comprehend the dataset. This initial analysis involved the calculation of means, values, and average scores, along with a comparison of scores across various response scales. These findings lay the foundation for subsequent research steps. Furthermore, comprehensive statistical measures such as means, standard deviations, and skewness is computed for each variable, in addition to meticulous system operations. Following that, the data is converted, and assess the uniqueness of the material using Cronbach's alpha.

3.9.1 Reliability analysis

In this research, the assessment of questionnaire acceptability and validity employs reliability analysis. Consequently, the survey questionnaire is administered to a specific group of SMEs entrepreneur in ECRM that actively engage with social commerce platforms. Among the

reliability assessments conducted using SPSS, one of these evaluations is the Cronbach's Alpha test. Within reliability analysis, there are two variations of the alpha test the standard and the traditional versions.

3.9.2 Descriptive analysis

A variety of statistical methodologies were applied to address the research inquiries. Descriptive statistics were employed to evaluate the impact of individual factors on attitudes toward the utilization of social commerce platforms, gauge their variability, and control for specific variables while statistically assessing others. Throughout this study, descriptive statistics are employed to evaluate demographic data obtained from the survey, encompassing aspects such as age, gender, ethnicity, and frequency of social commerce platform use. Each of these factors undergoes a thorough examination through descriptive statistical analysis to ascertain their significance.

3.9.3 Normality test

Researcher also used normality test if the sample data had a normal distribution, researchers will use a normality test within an acceptable range to identify this. In order to execute the t-test, one-way and two-way ANOVA tests, and other statistical analyses. The distribution is not normal if there is a considerable non-linear deviation of data points from this pattern.

3.9.5 Spearman correlation

In this study, Spearman correlation is the nonparametric version of the Pearson correlation. Spearman’s correlation coefficient (p), measures the strength and direction of association between two ranked variables. Spearman correlation need two variables that are either ordinal, interval or ratio. Although, would normally hope to use Pearson correlation on interval or ratio

data, the Spearman correlation can be used when the assumptions of the Pearson correlation are markedly violated. However, Spearman's correlation determines the strength and direction of the monotonic relationship between two variables rather than the strength and direction of the linear relationship between two variables, which is what Pearson correlation determines. A perfect Spearman correlation of +1 or -1 occurs when each of the variables is a perfect monotone function of the other.

3.9.4 Multiple Regression analysis

In this study researcher also use regression analysis a method of statistics that is useful in a business environment for determining the rate at which various independent factors influence dependent variables. It is to determine the amount of correlation between two variables. It is believed that an independent variable that the researcher modifies, or controls has a direct impact on the variable that is dependent or the variable that is being studied. The dependent variable is impacted by the independent variables. In this study, the dependent variable is the SMEs performance, while the independent variables encompass technological, organizational, and environmental factors.

3.9.5 Partial Lease Square 4 (SMART PLS 4)

Smart-PLS 4 is a graphical user interface software for variance-based structural equation modeling (SEM) that employs the partial least squares (PLS) path modeling method. It is widely used for data analysis in a variety of disciplines, including marketing, business, and social sciences Chua. (2023). PLS is a rapid, efficient, and optimal covariance-based regression approach. The PLS approach lowers the variables used to predict to a smaller number of predictors, which are then utilized in a regression. The PLS algorithm is designed to generate a set of h components from a table containing n observations characterized by p

variables using the bootstrapping result and PLS-SEM algorithm result. Some programs differentiate bootstrapping results from PLS-SEM algorithm results (Lumivero,2023). The bootstrapping result describes the situation in which there is just one dependent variable. However, the PLS-SEM algorithm result is appropriate in situations where many dependent variables are present.

3.10 Summary

This chapter concludes with a comprehensive assessment and description of the research methods employed in this study. Quantitative research methods were utilized to gather data, a choice particularly suited for a substantial number of target respondents. The researcher accomplished data collection through the administration of a questionnaire, facilitating responses from SMEs in the ECRM. The sample size represents a fraction of the larger target population. There are four main components used to gather data which is convenience sampling, quota sampling, snowball sampling, and judgmental sampling. The researcher employed these methods to gather data from the respondents. To obtain feedback from participants, the researcher distributed an online questionnaire using Google Forms through a WhatsApp group and personal messages, using the convenience sampling technique.

The questionnaire encompasses three sections, specifically addressing demographic information, independent variables, and dependent variables. Prior research and gauge variables inspire these inquiries using both nominal and interval scales. As this chapter's study draws to a close, the researcher conducts a thorough analysis of each element of data collected from the questionnaire administered to SMEs in the East Coast Region.

CHAPTER 4

DATA ANALYSIS AND FINDINGS

4.1 Introduction

This report presents findings derived from data collected from a sample of 400 respondents. The analysis utilized the Statistical Package for the Social Sciences (SPSS) version 26, encompassing demographic profiles of participants, descriptive analysis, reliability analysis, normality testing, Pearson correlation, multiple linear regression, and hypothesis testing.

4.2 Pilot Test

A pilot test is a test that needs to be done by the researcher first to a number of respondents before distributing it. In this study a total of 40 respondents are required to conduct a pilot test. The reliability of the variables will be tested in this pilot test to make sure the questions yield the information requested. Table 4.1 shows the internal consistency of Cronbach's alpha coefficient range.

Table 4.1: Cronbach's alpha coefficient range table

Alpha Coefficient Range	Internal Consistency
$0.5 > A$	Unacceptable
$0.6 > A \geq 0$	Poor
$0.7 > A \geq 0.6$	Questionable
$0.8 > A \geq 0.7$	Acceptable
$0.9 > A \geq 0.8$	Good
$A \geq 0.9$	Excellent

(Sources: Soon et al, 2020)

Based on Table 4.2, Cronbach's alpha was used to evaluate the reliability by conducting the pilot test. A stated by the pilot test that has been done, the Cronbach's alpha value for all variables exceed 0.8. The table shows dependent variable, SMEs performance has a value of

0.820. Independent variables for technological has a value of 0.887, for organizational is 0.844 and for environmental has a value of 0.890 which is the highest value among the variables. This is shows that the assessment for all variable is good.

Table 4.2: Reliability analysis (Pilot Test)

Variables	Study Instruments	Number of Item	Cronbach's Alpha
Dependent	SME's Performance (SP)	4	.820
Independent	Technological Factor (TF)	4	.887
	Organizational Factor (OF)	4	.844
	Environmental Factor (EF)	4	.890

4.3 Demographic Profile of Respondent

In this section, researcher analyzed the demographic information of the respondents collected from the questionnaire. Part A of the questionnaire collects demographic information from respondents such as gender, age, race, marital status, current employment, industry sector, and educational level. The total number of respondents collected is 400 with multiple types of categories. Most of the respondents are males with a total amount of 213 (53.3%) while 187(46.8%) are female.

The majority of the respondents' age percentage (71.0%) consists of 284 respondents aged between 18-30 years. Second highest with a total respondents of 96 (24.0%) aged between 31-55 years while those aged 17 years below and 56 years above share the same percentage (2.5%) with a total of 10 respondents.

Races section, Malay recorded the majority of respondents which is (54.3%) with 217 respondents followed by Chinese (23.8%) with 95 respondents. Indian 72 respondents (18.0%) and natives of Sabah/Sarawak recorded (4.0%) 16 respondents.

Regarding marital status 269 respondents (67.3%) identified as single, whereas 131 respondents (32.8%) reported being married.

For current employment, it shows that full-time has the highest rate (59.0%) a total of 236 respondents. Part-time with a rate of (38.3%) a total of 153 respondents, and the lowest category retired with (2.8%) consisting of 11 respondents.

For industry sector, construction makes up 65 respondents (16.3%), while hotels and restaurants are 46 (11.5%). Manufacturing, like fashion and food, at 142 respondents (35.5%). Trade and repair, including E-hailing and mechanics, are the biggest 147 respondents (36.8%).

The educational level categories that show the highest data are university level 296 respondents (74.0%), and second are secondary level 72 respondents (18.0%). Third, are vocational level 28(7.0%), and the lowest are primary school with a total of 4 respondents (1.0%).

The last demographic category is the monthly income, categories include B40 (Bottom 40%) with incomes ranging from RM0 to RM4,849, representing the largest portion at (70.8%) with 284. M40 consists of those earning between RM4,850 and RM10,959, accounting for (26.7%) of 107 respondents. The T20 group is further divided into two subcategories: T20:1 (earning between RM10,960 and RM15,000 with 7 (1.7%), and T20:2 (earning RM15,000 and above) with 3 total respondents (0.7%).

Table 4.3: Demographic profile of respondents

Section	Category	Frequency (n=400)	Percent (100.0%)
A1	**Gender**		
	Female	187	46.8
	Male	213	53.3

A2	**Age**		
	17 years and below	10	2.5
	18-30 years	284	71.0
	31-55 years	96	24.0
	56 years and above	10	2.5
A3	**Races**		
	Chinese	95	23.8
	Indian	72	18.0
	Malay	217	54.3
	Native of Sabah/Sarawak	16	4.0
A4	**Marital Status**		
	Married	131	32.8
	Single	269	67.3
A5	**Current Employment**		
	Full-Time	236	59.0
	Part-Time	153	38.3
	Retired	11	2.8
A6	**Industry Sector**		
	Construction	65	16.3
	Hotels and Restaurants	46	11.5
	Manufacturing	142	35.5
	Trade and Repair services	147	36.8
A7	**Educational Level**		
	Primary School	4	1.0
	Secondary School	72	18.0
	University Level	296	74.0
	Vocational Level	28	7.0
A8	**Monthly Income**		
	B40 (RM0-RM4,849)	283	70.8
	M40(RM4,850-RM10,9590	107	26.8
	T20:1(RM10,960-RM15,000)	7	1.8
	T20:2 (RM15,000 and above)	3	.8

4.4 Descriptive Analysis

Descriptive analysis shows the mean value, standard deviation, and the relationship between the variables. In this section, the researcher analyses the dependent variable and independent variables. There were four variables used for conducting the research, one of them is a dependent variable (SMEs performance) and three independent variables (Technological, Organizational, and, Environmental). The researcher computes variables to analyse the mean

for each variable. Overall mean score and standard deviation were designed based on the 5-point Likert scale which are 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree), and 5 (strongly agree).

4.4.1 Overall Mean Score for Variables

Table 4.4 shows a summary of computed means for all items according to variables. The overall mean value for SMEs performance is 4.137 with 0.4901 SD for the dependent variable. For the independent variable, TF is 4.082 the second highest mean value, and the highest SD which is 0.6115. The OF has a low mean value among the variables which is 4.006 and 0.5680 of SD, and the mean value for EF is 4.080 with 0.5910 for SD. It shows showing the mean for all computed variables is above 4.0, which means the respondents consider all the factors in the table. According to the table, the standard deviation is less than one with a total of 400 respondents shows that the result is reliable.

Table 4.4: Overall mean score on each variable

Section	Variable	Mean	Std. Deviation (SD)	N
C	**Dependent Variable**			
	SMEs Performance	4.137	.4901	400
D	**Independent Variable**			
	Technological	4.082	.6115	400
	Organizational	4.006	.5680	400
	Environmental	4.08	.5910	400

4.4.2 Descriptive Analysis for Dependent Variable

Based on Table 4.5, the descriptive analysis of the SP factor consists of four questions. It shows the mean values and SD for each item in the variable. Item 1 which is “Our SME has effectively managed operating costs and expenses” (D1) has a mean of 4.05 (SD= 0.549). The mean for item “I believe our SMEs marketing efforts have positively impacted brand visibility

and customer acquisition" (D2) is 4.14 (SD= 0.604), "Our SME has experienced consistent revenue growth in the past year" (D3) showed a mean of 4.16 (SD= 0.623), the highest mean value and the last item for dependent variable is "The risk that arises in the use of marketing analytics can influence sales performance" (D4) has a mean of 4.21(SD= 0.636). This is indicative of a good level of all the items in the dependent variable.

Table 4.5: Descriptive analysis SMEs performance factor

No	SMEs performance	Mean	SD	N
1.	D1	4.05	.549	400
2.	D2	4.14	.604	400
3.	D3	4.16	.623	400
4.	D4	4.21	.636	400

4.4.3 Descriptive Analysis for Independent Variable

Based on Table 4.6, the descriptive analysis of TF consists of four questions. It shows the mean values and SD for each item in the variable. Item 1 which is "Social media enables business to appropriately manage the marketing more systematically" (C1) has a mean of 4.06 (SD=0. 707). The mean for item "Social media enables our business to reach a larger customer" (C2) is 3.97 (SD= 0 .800), "Marketability of products will improve with the help of social media" (C3) showed a mean of 4.16 (SD= 0.769), choosing it means high in the variable and the last item for independent variable "Social media enable our business to respond faster if any changes or new trend" (C4) has a mean of 4.13 (SD= 0.735). This is indicative of a good level of all the items in the independent variable.

Table 4.6: Descriptive analysis technological factor

No	Technological	Mean	SD	N
1.	C1	4.06	.707	400
2.	C2	3.97	.800	400
3.	C3	4.16	.769	400
4.	C4	4.13	.735	400

Based on Table 4.7, the descriptive analysis of OF consists of four questions. It shows the mean values and SD for each item in the variable. Item 1 which is "Top management promotes the use of the marketing analytics in the business" (C5) has a mean of 4.02 (SD=0. 770). The mean for item "Top management creates support for marketing analytics initiative within the business" (C6) is 4.00 (SD= 0 .736), "Top management promotes marketing analytics as a strategic priority within the business" (C7) showed a mean of 3.95 (SD= 0.717), it is the lowest mean among the item of the variable. The last item for the independent variable "Top management is interested in the news about marketing analytics adoption" (C8) has a mean of 4.04 (SD= 0.789). This is indicative of a good level of all the items in the independent variable.

Table 4.7: Descriptive analysis organizational factor

No	Organizational	Mean	SD	N
1.	C5	4.02	.770	400
2.	C6	4.00	.736	400
3.	C7	3.95	.717	400
4.	C8	4.04	.789	400

Based on Table 4.8 descriptive analysis of EF consists of four questions. It shows the mean values and SD for each item in the variable. Item 1 which is "Government policies encourage SMEs entrepreneurs to adopt new information technologies (eg, marketing analytics)" (C9) has a mean of 4.14 (SD=0.778) which is the highest mean for this variable. choosing it means high in the variable and the last item for the independent variable. The mean for item "The government provides incentives to use marketing analysis in procurement and government contracts such as offering technical support, training, and funding to develop SME performance" (C10) is 4.06 (SD= 0.689), "Adequate legal protection supports the use of SME technology" (C11) showed a mean 4.07 (SD= 0.741), "There are several business laws to

address security and privacy concerns over Marketing Analytics technology" (C12) has a mean of 4.07 (SD= 0.737). This is indicative of a good level of all the items in the independent variable.

Table 4.8: Descriptive analysis environmental factor

No	Environmental	Mean	SD	N
1.	C9	4.14	.778	400
2.	C10	4.06	.689	400
3.	C11	4.07	.741	400
4.	C12	4.07	.737	400

4.5 Reliability Analysis

The examination of systems and devices featuring components prone to failure is the central focus of reliability analysis (Zacks. 2023). This analysis marks the initial stage in scrutinizing the data obtained from the questionnaire to assess its reliability for the research at hand. A value equal to or exceeding 0.6 on the Alpha Coefficient scale indicates moderate reliability and is deemed acceptable. This section delves into the reliability assessment of the questionnaire employed in this research, which encompasses independent variables such as TF, OF, and EF, along with the dependent variable, SP. The assessment involved the analysis of Cronbach's alphas for each item and variable within each section, and the results are detailed in this section.

Table 4.9 presents reliability statistics for each variable which is SP, TF, OF, and EF. The reliability of each variable is measured using Cronbach's Alpha, and the results indicate the internal consistency of the items. Specifically, the Cronbach's Alpha values for SP, TF, OF, and EF are 0.827, 0.827, 0.747, and 0.815, respectively. These values suggest the degree to which the items within each construct consistently measure the same underlying concept. In this

context, higher Cronbach's Alpha values, such as 0.827 for SP and TF, indicate good internal consistency, suggesting that the items within these constructs are highly correlated. The OF, with a Cronbach's Alpha of 0.747, is considered acceptable, indicating a moderate level of internal consistency. Overall, these reliability statistics provide valuable insights into the robustness and consistency of the measurements within each construct in the study.

Table 4.9: Reliability statistics

Variable	Number of Items	Cronbach's Alpha	Internal Consistency
SME Performances	4	0.827	Good
Technological Factor	4	0.827	Good
Organizational Factor	4	0.747	Acceptable
Environmental Factor	4	0.815	Good

4.6 Normality Test

Table 4.10 provides the results of normality testing, conducted through Kolmogorov-Smirnov and Shapiro-Wilk tests, indicated that the data deviated from a normal distribution, warranting the use of Spearman correlation analysis. For the Kolmogorov-Smirnov test, the statistics scores for SP, TF, OF, and EF are 0.213, 0.210, 0.181, and 0.205, respectively, all associated with df of 400. The Shapiro-Wilk test, with the same df of 400, yields statistics scores of 0.892, 0.895, 0.909, and 0.892 for the same variables. These scores assess how closely the distribution of each variable aligns with a normal distribution. Generally, values closer to 1 indicate normality. In this context, the results suggest that the variables exhibit relatively normal distributions, as indicated by the statistics scores being close to 1.

Table 4.10: Normality test

Variable	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Technology	.210	400	.001	.895	400	.001
Organizational	.181	400	.001	.909	400	.001
Environmental	.205	400	.001	.892	400	.001
SME Performances	.213	400	.001	.892	400	.001

4.7 The Spearman's rho Correlation

Spearman's rank correlation coefficient is a statistical measure to show the strength of a relationship between two variables. Spearman Correlation Coefficients have been used by the researchers to identify the significant relationship between the dependent variable, SME Performances and independent variables, Technological, Organizational, Environmental Factor.

Table 4.11 shows the guidelines for interpreting correlations. The range of possible values for the correlation coefficient is -1 to 1. -1 represents a perfect negative correlation between two variables, while 1 represents a perfect positive correlation between the two variables. A correlation coefficient of 0 indicates that there is no monotonic relationship between the variables.

Table 4.11: The guidelines for interpreting correlations

Strength of Relationship Between Variables	Positive	Negative
Weak	.10 to .29	-.10 to -.29
Moderate	.30 to .49	-.30 to -.49
Strong	.50 to 1.00	-.50 to -1.00

Table 4.12 presents the results of Spearman's rank correlation coefficients, which were employed to discern significant relationships between the dependent variable, SP, and independent variables; TF, OF, and EF. The significance level for this analysis is remarkably low, at 0.000, affirming the presence of significant positive correlations among SP, TF, OF, and EF. Specifically, the Spearman Correlation coefficients between SP, TF, OF, and EF are 0.556, 0.436, and 0.583, respectively. These coefficients indicate a robust strength of correlation for each variable, suggesting a strong association between SP and the independent variables factors. The positive correlations underscore the interdependence and mutual influence among Technology, Organizational, Environmental factors, and SME performance in the context of the study.

Table 4.12: The result of spearman's rho correlation coefficient

Variables		SP	TF	OF	EF
SP	Correlation Coefficient	1.000	.556**	.436**	.583**
	Sig. (2-tailed)		.000	.000	.000
	N	400	400	400	400
TF	Correlation Coefficient	.556**	1.000	.708**	.755**
	Sig. (2-tailed)	.000		.000	.000
	N	400	400	400	400
OF	Correlation Coefficient	.436**	.708**	1.000	.631**
	Sig. (2-tailed)	.000	.000		.000
	N	400	400	400	400

EF	Correlation Coefficient	.583**	.755**	.631**	1.000
	Sig. (2-tailed)	.000	.000	.000	
	N	400	400	400	400

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

4.8 Multiple Linear Regression

Table 4.15 shows the results of coefficients of multiple regression analysis. The results revealed that all three independent variables had statistically significant relationships with SME performance. The unstandardized beta coefficient of 0.230 indicates that for every one-unit increase in technology, SP is expected to increase by 0.230 units, on average. This finding is further supported by the standardized beta coefficient of 0.287, which suggests that technology has a moderate positive effect on SP relative to the other independent variables in the model. Additionally, the t-value of 4.156 and p-value of 0.000 confirm that this relationship is statistically significant at the 0.05 level. The unstandardized beta coefficient of 0.055 suggests a weaker positive relationship between organizational factors and SP compared to TF. The standardized beta coefficient of 0.064 further confirms this, indicating a relatively small effect size. However, the t-value of 1.006 and p-value of 0.315 suggest that this relationship is not statistically significant at the 0.05 level. Similar to TF, EF were found to have a statistically significant positive relationship with SP. The unstandardized beta coefficient of 0.292 indicates that for every one-unit increase in EF, SP is expected to increase by 0.292 units, on average. This is supported by the standardized beta coefficient of 0.352, which suggests a moderate effect size. The t-value of 5.206 and p-value of 0.000 confirm the statistical significance of this relationship at the 0.05 level. In conclusion, this study suggests

that technology and environmental factors have significant positive relationships with SP, while the relationship between OF and SP is not statistically significant.

Table 4.13: Coefficients of multiple regression analysis

Model		Unstandardized coefficients		Standardized coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.786	.140		12.733	.000
	Technological	.230	.055	.287	4.156	.000
	Organizational	.055	.055	.064	1.006	.315
	Environmental	.292	.056	.352	5.206	.000

a. Dependent variable: SME Performances

For ANOVA table, F-statistic needs to be interpreted. From the table 4.13, F-statistic is equal to 43.48 at five degrees of freedom with 12% level of significant and p value at 0.000 ($p<0.05$). So, the result of the test is significant. It means that this model is dependent to each variable which are technology, organizational and environmental.

Table 4.14: ANOVA test

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	41.546	3	13.849	101.049	.000[b]
	Residual	54.272	396	.137		
	Total	95.819	399			

a. Dependent Variable: SME Performances

b. Predictors: (Constant), Environmental, Organizational, Technological

4.9 Hypothesis Testing

In statistic, the process of hypothesis testing involves putting an analyst's presumption about a population parameter to the test. Using sample data, hypothesis testing is done to determine whether a claim is plausible. The test offers proof that the hypothesis is plausible in light of the available data. A random sample of the population being studied is measured and examined by statistical analyst in order to test a hypothesis. Variable (SMEs Performances) based on the provided path coefficients and p-values.

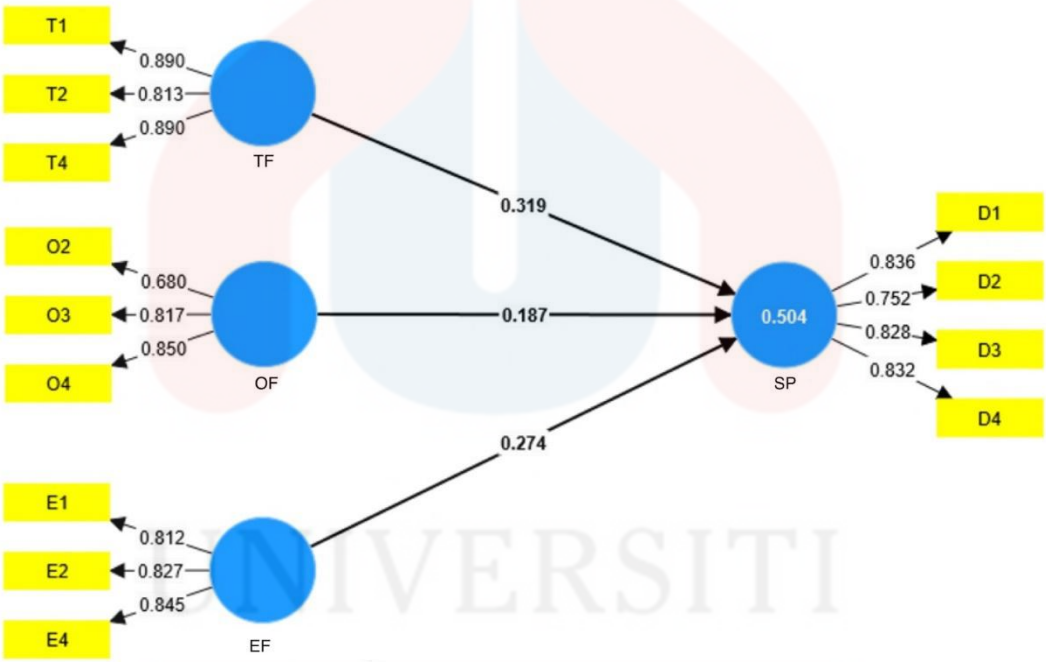

Figure 4.1: PLS-SEM Algorithm Result

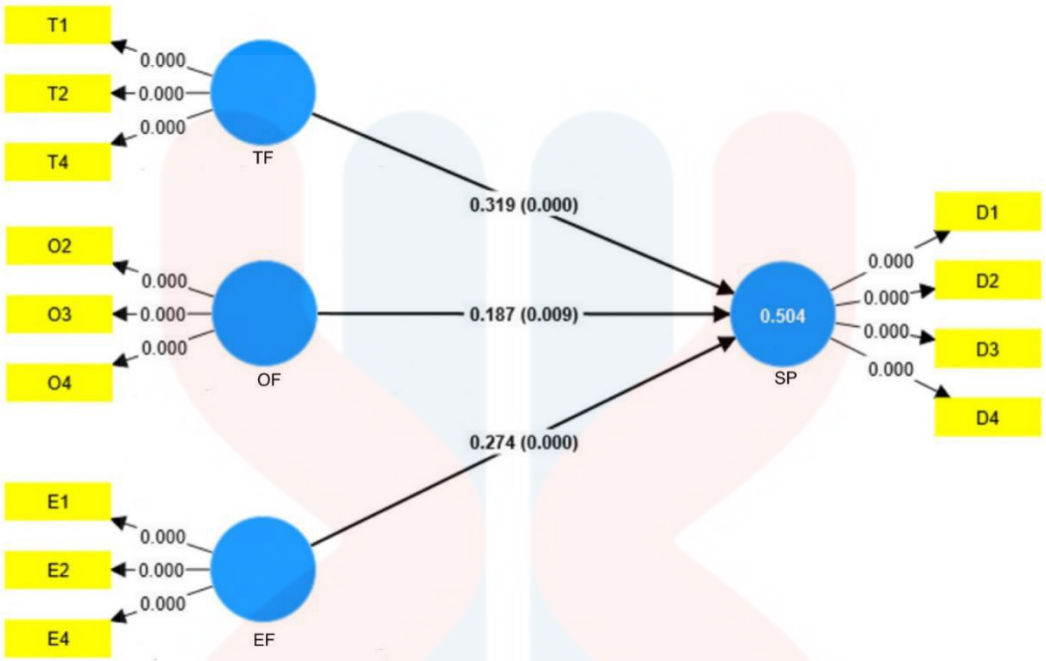

Figure 4.2: Bootstrapping Result

4.9.1 Hypothesis 1:

The relationship between TF and SP is statistically significant at a high confidence level. Table 4 shows the P-Value of TF is below than 0.05 which is 0.000 with strength of the relationship state in Beta Coefficient is 0.319.

4.9.2 Hypothesis 2:

The relationship between OF and SP is statistically significant at a high confidence level. Table 4 shows the P-Value of OF is higher than 0.05 which is 0.009 with strength of the relationship state in Beta Coefficient is 0.187.

4.9.3 Hypothesis 3:

The relationship between EF and SP is statistically significant at a high confidence level. Table 4 shows the P-Value of EF is lower than 0.05 which is 0.000 with strength of the relationship state in Beta Coefficient is 0.274.

These hypotheses suggest that there are statistically significant relationships between the independent variables (Technological, Organization, Environmental) and the dependent variable (SMEs Performances) based on the provided path coefficients and p-values.

Table 4.15: Result of the hypothesis testing of the direct relationship model

Hypothesis	Variables	Path Coefficient	P-Value	Remarks
H1	Technological (AF) → SME Performances (CA)	0.319	0.000	Statistically significant
H2	Organizational (KF) → SME Performances (CA)	0.187	0.009	Statistically significant
H3	Environmental (EF) → SME Performances (CA)	0.274	0.000	Statistically significant

4.10 Conclusion

The data analysis and the findings that covered the result of the data analysis was according to the questionnaire survey given. The data had been collected from the questionnaire derived using SPSS software. In this chapter, the interpretation of the data analysis described the relationship between the research question and research objectives. Based on the result that the researcher got from the analysis, among all the independent variables, all the variable, which is technological adaption, organizational factor and environmental factor have a significant relationship on factors of intention to use marketing analytics among east coast region of Malaysian entrepreneurs.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1 Introduction

This chapter is the last section of this study. In this chapter, the researcher provides a comprehensive analysis and explain briefly the findings of the study from the previous chapters. The explanation will cover the key findings of the research and discussion along with their implications and significance. This chapter also discusses the limitations of the study and provides recommendations for future works that can be implemented by future researchers. The last one will be concluded with an overall conclusion of the study.

5.2 Key Findings

This chapter thoroughly explores the entire review, allowing the researcher to gather comprehensive insights and assess findings in light of all available information. Furthermore, researchers could evaluate their capacity to fulfil the study's objectives. The study aimed to scrutinize the relationship between independent variables (Technological factor, Organizational factor, and Environmental factor) and the dependent variable (SME performances). Data for this study was collected through an online distribution of questionnaires. The primary objective was to investigate the factors of the intention to use marketing analytics among entrepreneurs in the East Coast Region of Malaysia. In this research, the researcher used an online Google form to gather primary data from a sample of 400 respondents.

5.3 Discussion

In this study, we focused on investigating the marketing analytics adoption among SMEs in the East Coast Region. Based on Table 3 shows the reliability statistics for the performance of SMEs which are technological factors, organizational factors and environmental factors. Specifically, Cronbach's Alpha values for SME performance, technological factors, organizational factors, and environmental factors are 0.827, 0.827, 0.747, and 0.815 respectively. These values reveal how consistently the items in each category measure the same underlying concept. The value for the technology factor is higher, which is 0.827 for SME performance meanwhile the organizational factor, which is 0.747, was considered acceptable, indicating a moderate level of internal consistency.

5.3.1 Discussion of the Hypothesis 1

The technological factors have a positive relationship with SME Performances in East Coast Region Malaysia.

The finding of this study reveals a strong link between technological factor and SMEs performance. Technological factor was found to be a significant factor influencing the SMEs performance. SME performance has a strong positive relationship with technological factor. Positive relationship has been found on export performance of the variables, for example, technological innovativeness (Abby & Slater, 1989). According to the previous study, it was discovered the technological adaption was a key factor influencing SMEs performance.

Hence, we can conclude that this study provides practical suggestions. First, the findings have shown that the SMEs performance is significantly affected by technological factor. Therefore, SMEs should strive to make their platform more beneficial and useful by using technological factor. For example, SMEs should use marketing analytics platforms to obtain business-related

information when consumers search for a particular product to make consumers feel that SMEs are useful.

5.3.2 Discussion of the Hypothesis 2

The organizational factors are positively linked with SME Performances in East Coast Region Malaysia.

The study's findings reveal a significant relationship between organizational factor and SMEs performance in East Coast Region Malaysia. In comparison to prior study, organizational factor refers to the structure and process of an organization and it can enhance the development or performance of an organization (Chege & Wang, 2020) the results also show a significant relationship between organizational factor and SMEs performance.

In this study, the result revealed that there is a positive and significant relationship between organizational factor and SMEs performance in East Coast Region Malaysia. Organizational factor is an aspect of the TOE framework, and it has an impact on SMEs performance (Khalili & Asmawi, 2012). Organizational structure tends to relate with the innovation adoption process. Specifically, in this study, organizational factor consists of four dimensions comprising absorption capacity, owners' or top management support, organizational resources and employee training. Thus, the performance of an organization or business is dependent on its ability to make use of external knowledge and how the said knowledge is employed to develop new good and services.

5.3.3 Discussion of the Hypothesis 3

The environmental factors positively influence SME Performances in East Coast Region Malaysia.

The findings of the study show a strong correlation between environmental factor and SMEs performance. However, the use of SMEs has been found to be heavily influenced by trust in some previous studies. The use of SMEs has a significant positive link with environmental factor. In several previous studies, it was found that environmental factor is an important factor that affects SME performance to improve their business. In this study, this hypothesis also has a positive and significant relationship between environmental factor and SMEs performance in East Coast Region Malaysia.

According to A Hussain, 2020, the research findings insights about environmental factors through the indirect relation of e-commerce usage to SMEs performance. This is supported by previous research findings that environmental factor has a positive and significant influence on usage decisions.

5.4 Implications

The study implies that SME management needs to operate in a dynamic business environment and strive to outperform competitors through the strategic use of marketing analytics for greater innovation that is more competitive. Managers must use this new knowledge of social media marketing to continue to add high value to products and processes in addition to marketing management and innovation. It is the combination of innovation characteristics that will give the firm an advantage. Therefore, firms must keep up with the circulation of marketing technology and also build an internal knowledge base through learning to integrate this knowledge in support of innovation and competitive advantage.

5.5 Limitation

The limitations of this study are related to the sample population, which is limited to SMEs. This type of enterprise has different resources and greater structural flexibility. Therefore, future studies are suggested to examine the proposed model on large firms. In addition, this study is only focused on the East Coast Region of Malaysia. This affects the limited competitive nature of the market and government authorities to support the use of marketing analysis among firms. Accordingly, future studies can apply the research framework among SMEs in developing and developed countries other than Malaysia.

5.6 Recommendations

An unlimited sample strategy can be used to obtain a larger number of respondents other than the East Coast Region. For future studies, researchers can compile samples across several regions in Malaysia or abroad based on differences in the use of social media marketing (SMM) in different locations. In addition, researchers can also expand the study to large industries and not just limited to SMEs. This is because these large firms are more intention to use marketing analytics and the results of the study will benefit the researcher. For the future, the researcher was suggested to apply another method such as qualitative method during data collection to explain about the question in a questionnaire. This of collecting data method is more honest and respondents answered it well (Villegas, 2023). Thus, future researchers might need to consider the recommendations to improve the results of the study.

5.7 Overall Conclusion of The Study

As a conclusion of this study marketing analytics is known to support businesses in getting insights into the performance of previous campaigns to come to conclusions about why the results happened. Marketing analytics tracks the performance of ongoing marketing

campaigns, helping marketers optimize campaigns in real-time. It considers all marketing efforts across all channels over a certain period for better decision-making and effective marketing program execution.

This study aimed to determine factors of intention to use marketing analytics among the East Coast region of Malaysian entrepreneurs. Technological, organizational, and environmental were chosen to be a factor of intention to use marketing analytics. TOE model describes how the technological, organizational, and environmental factors can influence the use of technology and how it can influence the decisions and performance of a company. 400 questionnaires have been collected from the targeted respondents. The analysis covered demographic profiles, descriptive analysis, reliability analysis, normality testing, Spearman correlation, multiple linear regression, and hypothesis testing. Those independent and dependent variables were analyzed by Spearman's rho Correlation Coefficient to determine the relationship between the dependent variable and independent variable and multiple linear regressions to identify the factors of intention to use marketing analytics among the east coast region of Malaysian entrepreneurs.

In this study, there is a limitation of the study sample population to SMEs only. Therefore, it is recommended that future research explore the proposed approach on larger enterprises. Furthermore, the limited research focus on the East Coast Region of Malaysia affects the level of market competition and restricts the use of government authority support for businesses using marketing analysis. As a result, the research approach can be used in future studies targeting SMEs in developed and developing countries other than Malaysia.

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APPENDIX A

Draft of Questionnaire

Determinant of the Intention to Use Marketing Analytics for SMEs Performance Among East Coast Region of Malaysian Entrepreneurs

Dear Respondents,

This survey is conducted to study The Intention to Use Marketing Analytics on Sme Sales Performance Among East Coast Region of Malaysian Entrepreneurs. Congratulations on being selected to answer the questionnaire. Your opinion is very important in the complication of the research. All information you provide is confidential and used for research purposes only.

All information provided is confidential and will only be used for academic purposes. Your cooperation and kind service are greatly appreciated. Thank you for taking your time to answer this questionnaire.

By clicking "I agree" below you are indicating that you are at least 18 years old and agree to participate in this research study.

Agree
Disagree

Any further information can contact:
Sebarang maklumat lanjut boleh berhubung dengan:

JULIANAH BINTI JULKEPLI (A20A1383)
Fakulti Keusahawanan dan Perniagaan
Universiti Malaysia Kelantan
Email: a20a1383@siswa.umk.edu.my
No. Tel: 014-6702164

SECTION A: RESPONDENT PROFILES/ DEMOGRAPHIC INFORMATION
BAHAGIAN A: PROFIL RESPONDEN/ MAKLUMAT DEMOGRAFIK

Please tick (/) at the appropriate answer.
Sila tandakan (/) pada jawapan yang sesuai.

1. Gender/ *Jantina*

- Male/ *Lelaki*
- Female/ *Perempuan*

2. Age/ *Umur*

- 20 years and below *(20 tahun dan kebawah)*
- 21-30 years
- 31-39 years
- 40 and above *(40 tahun dan keatas)*

3. Race/ *Bangsa*

- Malay/ *Melayu*
- Indian/ *India*
- Chinese/*Cina*
- Native of Sabah/Sarawak

4. Marital Status/ *Status Perkhawinan*

- Married/ *Berkhawin*
- Single/ *Bujang*

5. Current Employment / *Pekerjaan Semasa*

- Full-time/ *Sepenuh masa*
- Part-time/ *Separuh masa*

- Retired/ *Bersara*

6. Industry Sector/ *Sektor Industri*

- Manufacturing/ *Pembuatan*
- Construction/ *Pembinaan*
- Trade and repair services/ *Perkhidamatan perdagangan dan pembaikan*
- Hotels and restaurant/ *Hotel dan restoran*
- Others

7.Educational Level/ *Tahap Pendidikan*
Public School/ *Sekolah awam*

- Private School/ *Sekolah swasta*
- University Level/ *Peringkat universiti*
- Vocational Level/ *Peringkat vokasional*

8. Monthly Income/ *Pendapatan Bulanan*
B40 (RM 0 - RM4849)

- M40 (RM 4850 - RM 10959)
- T20:1 (RM 10960 – RM 15000)
- T20:2 (RM 15000 dan keatas)

SECTION B: GENERAL QUESTIONS
BAHAGIAN B: PERTANYAAN UMUM

Please respond to each item by ticking (√) one of the five (5) scales that reflects your intention to use marketing analytic on SMEs.

Berikan maklum balas bagi setiap item dengan menanda (√) salah satu daripada lima (5) skala yang menggambarkan niat untuk menggunakan pemasaran analitik dalam PKS.

Not at all/ *Tidak sama sekali*	A little/ *Sedikit*	Moderately/ *Sederhana*	A lot/ *Banyak*	Extremely/ *Sangat banyak*
1	2	3	4	5

No.	Statements/ Penyataan	Rating/ *Penilaian*				
		1	2	3	4	5
B1	I have been running SME operations for a long time/ *Saya telah menjalankan operasi SME untuk masa yang lama.*					
B2	I have social media accounts for business/ Saya mempunyai media sosial untuk menjalankan perniagaan					
B3	I have more than 1 social media platform for marketing purposes/ Saya mempunyai lebih daripada 1 platform media sosial untuk tujuan pemasara					
B4	I spent much time on social media/ *Saya banyak meluangkan masa dalam sosial media.*					
B5	Marketing on social media is more profitable than physical marketing/ *Pemasaran dalam media sosial lebih menguntungkan berbanding pemasaran fizikal.*					

SECTION C: IV (TECHNOLOGICAL, ORGANIZATIONAL AND ENVIRONMENTAL)

BAHAGIAN C: IV (TEKNOLOGI, ORGANISASI DAN PERSEKITARAN)

The items below are statements that reflect the intention to use marketing analytic on SMEs. Please tick (√) one of the 5 scales.

Item di bawah merupakan penyataan yang menggambarkan niat ingin menggunakan pemasaran analitik dalam PKS. Sila tandakan (√) salah satu daripada 5 skala tersebut.

Not at all/ *Tidak sama sekali*	A little/ *Sedikit*	Moderately/ *Sederhana*	A lot/ *Banyak*	Extremely/ *Sangat banyak*
1	2	3	4	5

No.	Statements/ Penyataan	Rating/ *Penilaian*				
		1	2	3	4	5
C1	Social media enables business to appropriately manage the marketing more systematically. / *Media sosial membolehkan perniagaan mengurus pemasaran dengan lebih sistematik*.					
C2	Social media enables our business to reach a larger customer. / Social media enables our business to reach a larger customer/*Media sosial membolehkan perniagaan menjangkau kawasan yang lebih luas.*					
C3	Marketability of products will improve with the help of social media./*Sosial media dapat meningkatkan kebolehpasaran produk*					
C4	Social media enable our business to respond faster if any changes or new trend./ *Media sosial membolehkan kita untuk bertindak balas dengan lebih pantas jika berlaku sebarang perubahan trend*.					
C5	Top management promotes the use of the marketing analytics in the business./ *Pengurusan atasan menggalakkan penggunaan analisis pemasaran dalam perniagaan.*					
C6	Top management creates support for marketing analytics initiative within the business./ *Pengurusan atasan mencipta sokongan untuk inisiatif analisis pemasaran dalam perniagaan.*					

C7	Top management promotes marketing analytics as a strategic priority within the business./ *Pengurusan atasan mempromosikan analisis pemasaran sebagai keutamaan strategik dalam perniagaan.*					
C8	Top management is interested in the news about marketing analytics adoption. / *Pengurusan atasan berminat dengan berita tentang penggunaan analisis pemasaran.*					
C9	Government policies encourage SME entrepreneurs to adopt new information technologies (eg, marketing analytics)./ *Dasar kerajaan menggalakkan usahawan PKS untuk mengguna pakai teknologi maklumat baharu (cth., analisis pemasaran).*					
C10	The government provides incentives to use marketing analysis in procurement and government contracts such as offering technical support, training and funding to develop SME performance./ *Kerajaan menyediakan insentif untuk menggunakan analisis pemasaran dalam perolehan dan kontrak kerajaan seperti menawarkan sokongan teknikal, latihan dan pembiayaan untuk membangunkan prestasi PKS*					
C11	Adequate legal protection supports the use of SME technology. / *Perlindungan undang-undang yang mencukupi menyokong penggunaan teknologi PKS.*					
C12	There are several business laws to address security and privacy concerns over Marketing Analytics technology./ *Terdapat beberapa undang-undang perniagaan untuk menangani kebimbangan keselamatan dan privasi ke atas teknologi Analitis Pemasaran.*					

SECTION D: DV (SALES PERFORMANCE)
BAHAGIAN D: DV (PRESTASI JUALAN)

Please respond to each item by ticking (√) one of the five (5) responses that reflects the intention to use marketing analytics on SMEs.

Berikan maklum balas bagi setiap item dengan menanda (√) salah satu daripada lima (5) jawapan yang menggambarkan ingin menggunakan analitik pemasaran dalam PKS.

Not at all/ *Tidak sama sekali*	A little/ *Sedikit*	Moderately/ *Sederhana*	A lot/ *Banyak*	Extremely/ *Sangat banyak*
1	2	3	4	5

No	Statements/ *Penyataan*	Rating/ *Penilaian*				
		1	2	3	4	5
D1	I am satisfied with the financial performance of my SME./ *Saya berpuas hati dengan prestasi kewangan SME saya.*					
D2	Our SME has effectively managed operating costs and expenses. / *SME kami berjaya menguruskan kos operasi dan berpelanjaan dengan cekap.*					
D3	I believe our SMEs marketing efforts have positively impacted brand visibility and customer acquisition. */ Saya percaya usaha pemasaran SME kami telah memberikan kesan positif terhadap pengenalan jenama dan penarikan pelanggan*					
D4	Our SME has experienced consistent revenue growth in the past year. /*SME kami telah mengalami pertumbuhan pendapatan yang konsisten dalam tahun lepas.*					

Terima kasih / Thank you

TAMAT/ *END*

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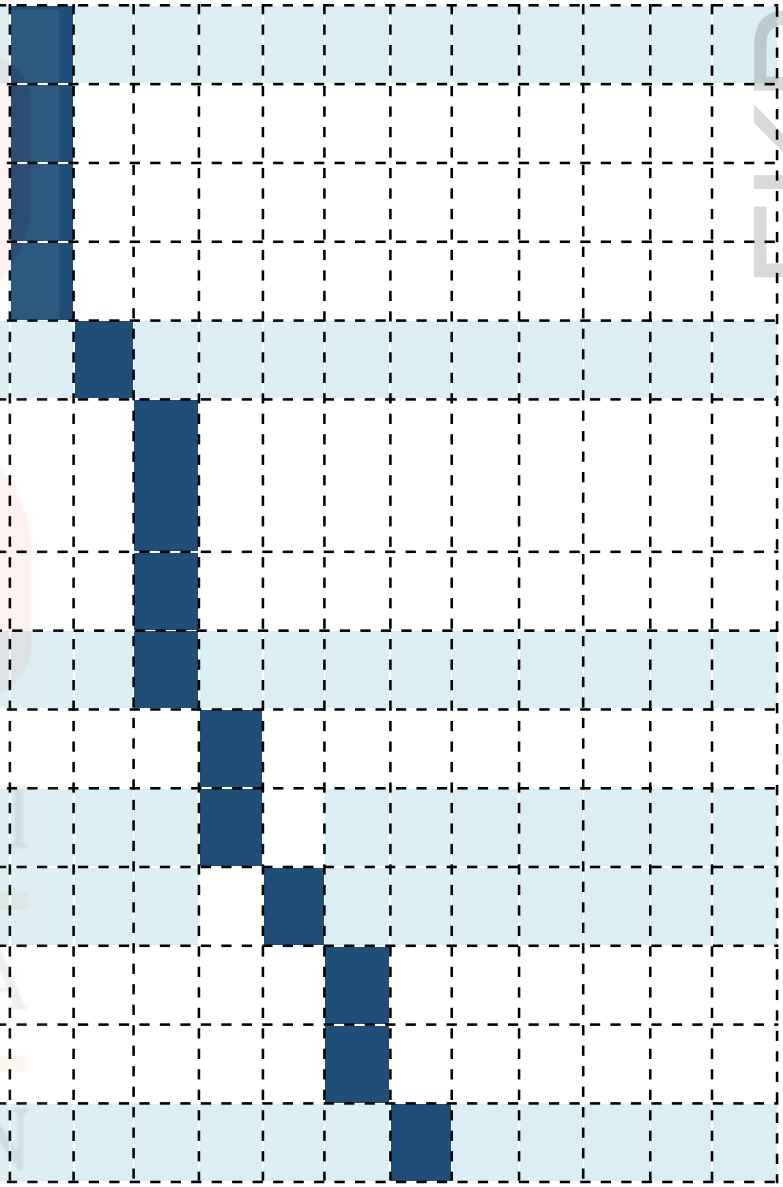
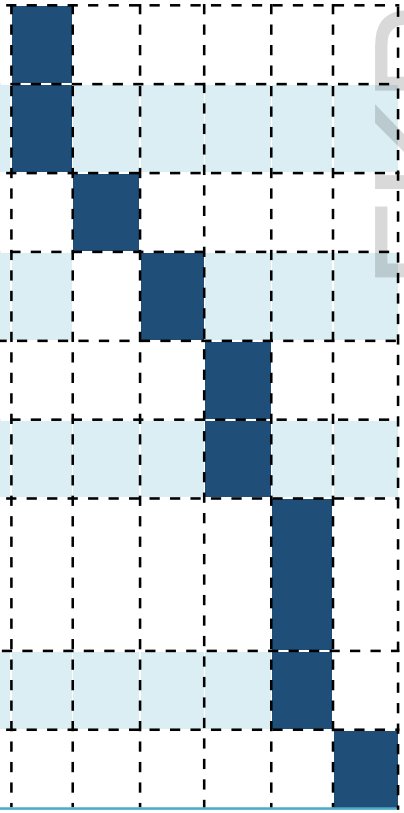
Appendix B

BIL / DATE		ACTIVITES/ WEEK	PPTA I					PPTA II								
			1	2	3	4	5	6	7	8	9	10	11	12	13	14
1.	8 Oct 2023	PPTA briefing for students														
2.	16 Oct 2023	Identify the issues/ problem of research														
3.	19 Oct 2023	Read article based on the study topic														
4.	20 0ct 2023	Group discussion about the finding related topic														
5.	22 Oct 2023	Basic report writing workshop via Zoom/ Google Meet platforms														
		Meet the supervisor to discuss about the group research title and determine the study objectives of the topic														
6.	23 Oct 2023	Group discussion about the base paper that needs to be used on the research project proposal														
		Find the related article with the topic														

7.	24 Oct 2023	Determine the title of the study and the base paper used
8.	26 Oct 2023	Group writing on PPTA I
9.	1 Nov 2023	First physical group meeting with supervisor
10.	1 Nov 2023	First project proposal draft writing
11.	6 Nov 2023	Do corrections
12.	8 Nov 2023	Physical Class and submission of the research project proposal draft to supervisor
13.	10 Nov 2023	Submission for the correction draft to supervisor
14.	16 Nov 2023	Submission of video presentation of research project proposal
15.	17 Nov 2023	Do the pilot test
16.	19 Nov 2023	Distributes the questionnaire to the respondents
17.	2 Dec 2023	Data Collection
18.	3 Dec 2023	Data analysis workshop via Zoom/ Google Meet platform
19.	4 Dec 2023	Do the data analysis
20.	10 Dec 2023	Data transfer



21.	14 Dec 2023	Meet the supervisor to discuss about research project for PPTA II	
		Group discussion about the research project for PPTA II	
22.	17 Dec 2023	Group writing on PPTA II	
		Complete all the chapters of research proposal project	
23.	1 Jan 2024	Check turnitin	
		Correction maker	
24.	17 Jan 2024	Submission for the final draft of the research project report to the supervisor	
25.	15 Jan 2024	Physical presentation of the project at COLLOQUIUM	
26.	25 Jan 2024	Final report submission process and overall evaluation	

Title of Paper: Determinant of the Intention to Use Marketing Analytics for SMEs Performance Among East Coast Region of Malaysian Entrepreneurs

Student's Name: _____ **Matric No.** _____

CATEGORY	POOR (1-3)	AVERAGE (4-6)	GOOD (7-9)	EXCELLENT (10-12)	SCORE
Abstract	Problem is vague, does not provide a summary of the whole project	Summarizes problem, method, results and conclusions with limited details	Summarizes problem, method, results, and conclusions but lacks some details	Clearly states problem to be resolved, coherently summarizes method, results, and conclusions	____ x 5 12 =
Introduction	Fails to identify a relevant research topic or is not clearly defined and/or the paper lacks focus throughout.	Identifies a research topic but may be too broad in scope, somewhat unclear and needs to be developed further.	Identifies a relevant research topic that provides adequate direction for the paper with some degree of interest for the reader.	Identifies a relevant research topic that provides direction for the paper that is engaging and thought provoking.	____ x 15 12 =
Research Methods	Little of explanation provided for the choice of methodology and few links made to the research objective. Research methodology is no connection to the theoretical framework	Some explanation provided for the choice of methodology and its links to the research objective. Research methodology is limited connection to the theoretical framework.	A good explanation of the choice of methodology and its links to the research objective. Research methodology is provided connection to the theoretical framework	Clear explanation of the choice of methodology and its links to the research objective. Research methodology is clearly supports the theoretical framework.	____ x 15 12 =
Analysis and Discussion	Demonstrates a lack of understanding and inadequate analysis of the research topic. Analysis is superficial based on opinions and preferences rather than critical analysis.	Demonstrates general understanding with limited critical analysis of the research topic. Summarizes perspectives, counter-arguments, or opposing positions.	Demonstrates an understanding and some critical analysis of the research topic. Adequately compares/contrasts perspectives, counter-arguments, or opposing positions but broader connections and/or implications are not as thoroughly explored.	Demonstrates a sophisticated understanding and careful, critical analysis of the research topic. Compares/contrasts perspectives, considers counter arguments or opposing positions, and draws original and thoughtful conclusions with future implications.	____ x 30 12 =
Conclusion and Future Research	Presents a conclusion, irrelevant recommendations and/or implications for future	Presents a conclusion, limited recommendations and/or implications for future research	Presents a conclusion, logical recommendations and/or implications for future research	Presents a coherent conclusion, clear recommendations and/or implications for future research	____ x 15 12

	research				=
Organization	Paper lacks logical organization and impedes readers' comprehension of ideas.	Paper is somewhat organized, although occasionally ideas from paragraph to paragraph may not flow well and/or connect to the central position or be clear as a whole.	Paper is adequately organized. Ideas are arranged reasonably with a progression of thought from paragraph to paragraph connecting to the central position.	Paper is effectively organized. Ideas are arranged logically, flow smoothly, with a strong progression of thought from paragraph to paragraph connecting to the central position.	____ x 10 12 =
Format and References	Frequent errors in spelling, grammar, punctuation, spelling, usage, and/or formatting. Does not cite sources.	Some errors in spelling, grammar, punctuation, usage, and/or formatting. Citation style is either inconsistent or incorrect.	Minor errors in grammar, punctuation, spelling, usage, and/or formatting. APA citation style is used in both text and references.	Basically free from grammar, punctuation, spelling, usage, or formatting errors. APA citation style is used in both text and references.	____ x 10 12 =
				TOTAL (100 MARKS)	
				GRAND TOTAL (10%)	

Name of Examiner: _____ Date: _____**Name of**

Supervisor: _____

Recommended For Best Paper Award: **Yes / No**