

THE TOOLS OF TECHNOLOGY INNOVATION TOWARDS SMALL AND  
MEDIUM ENTERPRISES QUALITY PERFORMANCES



NUR HANIS SHAHIRAH BINTI JEPRI

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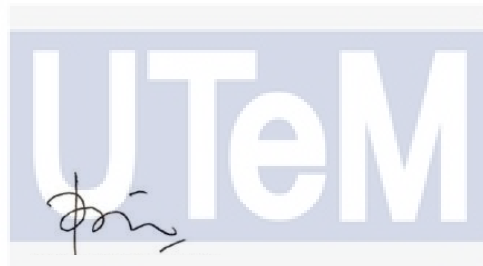
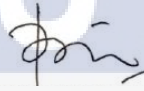
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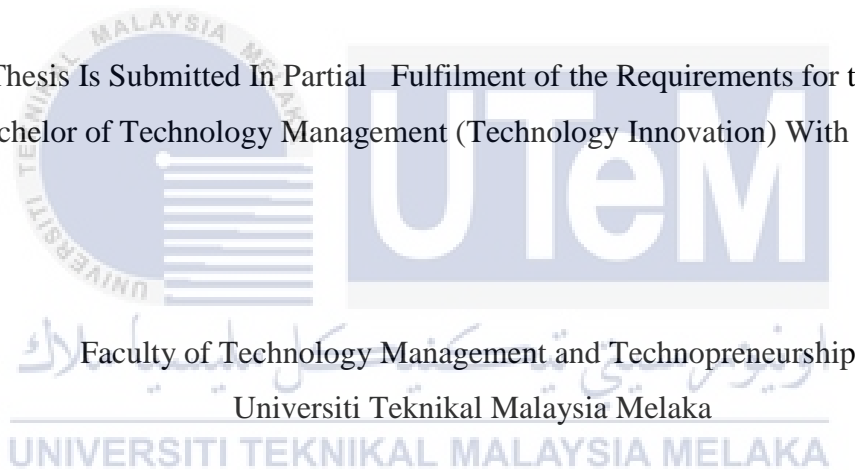
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NUR HANIS SHAHIRAH BINTI JEPRI

This Thesis Is Submitted In Partial Fulfilment of the Requirements for the Award of  
Bachelor of Technology Management (Technology Innovation) With Honours



JANUARY 2023

## DECLARATION

‘I hereby state that my dissertation, report, or thesis, "TECHNOLOGY INNOVATION TOOLS TOWARDS QUALITY PERFORMANCE OF SMALL AND MEDIUM ENTERPRISES," is the result of my own research, with the exception of any explanations or information from other research that is specifically mentioned in the sources. The paper is not approved about any qualification and is not submitted concurrently with any other academic application.’

  
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## DEDICATION

All praise is due to Allah, Alhamdulillah. I would want to convey my sincere gratitude to my family members, who always support and motivate me in a variety of spiritual, materialistic, and inspirational ways.

I also want to extend my sincere gratitude to my supervisor, Dr. Kamarudin Bin Abu Bakar, who is willing to put in a lot of effort and patiently mentor me during the entire research process, as well as to my classmates and friends who exchange knowledge with me while I'm in school. It would have been challenging to accomplish this investigation without their approval and assistance.

I also want to say thank you to everyone who spent the time to answer to my question. Without them, my dissertation might not have been possible.

Last but not least, I wanna thank me, I wanna thank me for believing in me, I wanna thank me for doing all this hardwork, I wanna thank me for having no days off, I wanna thank me for never quitting and to all those who doubted me.

Lastly, Alhamdulillah, I made it!

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## ABSTRACT

A new or enhanced product or method that differs considerably from its predecessor in terms of technological quality is referred to as a technological innovation. The three objectives of this study are to: 1. Test the relationship between the significance of technological innovation tools and the quality performance of small and medium-sized businesses; and 2. Examine the statistically significant correlation between technological innovation tools and the quality performance of such businesses. 3. To confirm that small and medium-sized businesses have the best performance in terms of technology innovation tools. The Statistical Package for Social Sciences (SPSS) was also utilised in this study for demographics, reliability, normality, correlation, and regression tests, as well as for a pilot study with 30 respondents. The researcher can obtain results like relationship, correlations, dominance and can also accept alternate hypotheses for all of the hypotheses except for the independent variable, which forces the researcher to accept the null hypothesis. The results of this study have significance for the industry as well as for the respondents' expertise. In conclusion, this study discovered innovative technical techniques for improving the performance quality of small and medium-sized businesses.

**Keywords** – *Technology Innovation, Small and Medium Enterprises Quality Performances, SPSS, Tools, Respondents, Null hypothesis, Alternative hypothesis.*



## **ABSTRAK**

*Produk atau kaedah baharu atau dipertingkatkan yang jauh berbeza daripada pendahulunya dari segi kualiti teknologi dirujuk sebagai inovasi teknologi. Tiga objektif kajian ini adalah untuk: 1. Menguji hubungan antara kepentingan alat inovasi teknologi dan prestasi kualiti perniagaan kecil dan sederhana; dan 2. Periksa korelasi yang signifikan secara statistik antara alat inovasi teknologi dan prestasi kualiti perniagaan tersebut. 3. Untuk mengesahkan bahawa perniagaan kecil dan sederhana mempunyai prestasi terbaik dari segi alat inovasi teknologi. Pakej Statistik Sains Sosial (SPSS) juga digunakan dalam kajian ini untuk ujian demografi, kebolehpercayaan, normaliti, korelasi, dan regresi, serta untuk kajian rintis dengan 30 responden. Penyelidik boleh memperoleh keputusan seperti perhubungan, korelasi, dominasi dan juga boleh menerima hipotesis ganti untuk semua hipotesis kecuali pembolehubah bebas, yang memaksa penyelidik untuk menerima hipotesis nol. Hasil kajian ini mempunyai kepentingan kepada industri dan juga untuk kepakaran responden. Kesimpulannya, kajian ini menemui teknik teknikal yang inovatif untuk meningkatkan kualiti prestasi perniagaan kecil dan sederhana.*

*Kata Kunci – Inovasi Teknologi, Prestasi Kualiti Perusahaan Kecil dan Sederhana, SPSS, Alat, Responden, Hipotesis nol, Hipotesis Alternatif.*

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**LIST OF ABBREVIATIONS**

<b>ABBREVIATION</b>	<b>MEANING</b>
IV	Independent Variables
DV	Dependent Variable
SPSS	Statistical Package for Social Science
URL	Uniform Resource Locator



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## CHAPTER 1

### INTRODUCTION

#### 1.1 Introduction

In Chapter 1, the study's framework is discussed. It will provide a thorough summary of the backdrop of the study's use of technological innovation tools to enhance small and medium-sized organisations' performance standards. Because of this, this chapter can help readers learn more about technological innovation tools. Additionally, this chapter will explore the problem statement by defining technological innovation tools and the quality of small and medium-sized businesses' performance. The significance of the study and its scope are also included in this study, along with the goals and research inquiries.

#### 1.2 Background of Study

Mihaela (2011) defines innovation as a new product, technique, or improvement that significantly differs technologically from its predecessor. Technological product innovation involves newly released goods on the market, whether they are new goods (product innovation) or new methods of doing things (process innovation). Innovation refers to a process or product that offers the business particular advantages. Product innovation, process innovation, and business model innovation are all terms that apply to three separate things (Kahn, 2018).

According to Afuah (1998), innovation as latest understanding embodied in products, processes, and services and also the technology that the company employs

and the market in which it works. According to Carr, K et al (2016), innovation isn't solely central to changes in ancient apply however arguably liable for humanity' outstanding success at colonizing the planet and diversifying the products, technologies, and systems among it. Innovation could be a method that mixes science, technology and management because it is to realize newness and increase from the exposure of the thought to its exploitation within the variety of manufacturing, trade and consumption (Twiss, 1989).

As incumbent advantage dwindles, technology advancements create possibilities for entrepreneurs to start new enterprises and gain a competitive advantage. Furthermore, because the outcome of technological innovation can only be forecast imperfectly, incumbents are faced with uncertainty and risk (Baum, 1996). Economic growth and human well-being are both fuelled by technical innovation (James and Adam, 2019).

The reasons why researcher choose technology innovation because it can give a lot of benefits such as it can boost the productivity in term of business. It can be seen where nowadays most of the people have their smartphone and internet so if they are doing a business, they can use it to reach their goals quickly. Technology innovation also can boost a productivity in term of the careers. A recent projection from the World Economic Forum predicts that by 2022, 133 million new employment will have been generated, with 75 million of those occupations being related to robotics, AI, and automation. This is owing to the fact that technological advancements have brought new and improved commercial strategies. It enables companies to conduct business in a more timely, convenient, and efficient manner.

### **1.3 Technology Innovation**

Technology innovation could be a science's polar opposite and additional notably too basic analysis comparable to a dominant cultural influence price of the 20th century and it emerged as a phrase or conception as a result of in discourse, action, and policy, it absolutely was helpful to incorporate in understandings of economic process a bigger range of individuals than simply scientists and additional a variety of tasks other than science or fundamental research and The process of technology innovation is a holistic one (Godin, 2016). The method of invention and innovation is

the method of technical progress within the economy on the other hand, refers to the application of recent scientific achievements to industrial output. (Prasana et al, 2019). They are made up of a variety of features that vary depending on the method and components used, such as goals, actors, drivers, and assets, inputs, actions, and outputs, price generation, systematic and inedible background, and other discourse variables. Its value noting that each of these features or particular has undergone and continues to fast changes that throw standard interpretation and scopes of innovation as technology innovation into inquiry (Edward, 2018).

According to Romer (1986), technological advancement as a driver of economic development. In addition to research and development (R&D), the new philosophy of progress takes into account the value of physical, human, and public capital. Due to rapid technical developments and small creation and technology lifecycles in the globalised world, technologically creative activities are among the prestigious variables that have an impact on SMEs' ability to achieve property competitive advantage and increase market survivability. (Bonito, 2018; Rogers, 2010).

According to Afuah (1998), technical innovation can take many forms, including component data, interactions between components, methods, procedures, and skills that come with a good or service. The need for body innovation may or may not exist. It could be a procedure, a service, or a product. New products or services aimed at meeting market needs should be considered product or service innovations. Process innovation is bothered with the establishment of latest components into an organization's action, such as input substances, duty descriptions, work and knowledge flow mechanisms, and instruments required to make a product or provide a service. In a nutshell, these technology innovation can be the tools towards Small and Medium Enterprises to look up or maintain their quality performances.

#### **1.4 Small and Medium Enterprises**

Small and medium businesses are referred to as SMEs. SMEs continue to play a vital part in Malaysia's economy. In most nations, small and medium-sized businesses (SMEs) have emerged as the engine of economic expansion. Thaker et al. (2013) claim that the contribution of SMEs to Malaysia is bigger than that of numerous

non-OIC nations like Korea, Singapore, Vietnam, and South Africa, as well as some members of the Organization of Islamic Cooperation (OIC) like the United Arab Emirates, Indonesia, and Egypt. The economy's growth rate is still low.

As a result, SMEs are encouraged to discover strategies to stay competitive in the market, such as through engaging in online commerce. SMEs are classified by the Malaysian Small and Medium Enterprises Corporation (SME Corp. Malaysia) based on yearly sales turnover or the quantity of full-time workers. The criteria used to designate SMEs in Malaysia are influenced by well-known government bodies and researchers in the sector.

Medium-scale businesses have 51 to 150 people and annual sales of RM10 million to RM25 million, whereas small-scale enterprises have fewer than 50 full-time workers and less than RM10 million in annual sales. According to Sandberg et al (2002), on the other side, small business performance is defined as their capacity to generate income and jobs through business entrepreneurship, viability, and continuity. In a nutshell, Small and Medium Enterprises can maintain or boost their quality performance through technology innovation.

### **1.5 Problem Statement**

In recent years, the performance of small businesses has been linked to their ability to innovate. From several evolutionary positions, the theoretical perspective of innovation capability has been investigated. Leadership capability is vital for innovation since it depends on a leader who is accountable for directing and supporting innovation and sustainability in the business (Akram et al, 2019). According to Ullah (2021), in the modern economy, technology innovation is vital for SME survival. As the world's technology innovation accelerates, it is critical for Malaysian SMEs to embrace the technology innovation in order to not only avoid falling behind, but also to contribute to economic growth. Therefore, technology innovation towards Small and Medium Enterprises may have an issues or problems.

The problem or issues that occurred first is the access limitation which defined as a lack of equipment or connectivity (Johnson, 2016). This is because if the company does not have computers and internet connection, the implementation of technology

for business is not feasible. According to Johnson (2016) also, the problem of insufficient technological training also one of the issues that occurred. Employees will not be able to use new technologies to their full capacity if their employers do not provide effective professional development on them. Both of this problem can give an impact towards Small and Medium Enterprises quality performances. Next is in term of the rising cost. According to the RSA Economic Imperative Report (2017), SMEs see rising company costs as a significant threat to their operations. This is because the technology is not a cheap so the price of the product or services in that company will be increase too. Hence, SMEs should take an endless efforts to abide by and outdone their rivals to use and survive within the technology innovation things.

Based on the expectation and therefore the problems facing, the researcher found that online business aids companies in becoming more cost-effective. This is because customers and businesses can benefit from online business because it is faster and less expensive. Thus, online business appears to be a new medium for enhancing business, particularly in terms of improving quality performance and ensuring long-term viability. As a result, business start-ups choose to go online, particularly for Small and Medium Enterprises in certain industries such as food and beverage, textile and apparel, and beauty and cosmetics. As a result, a quantitative study is being planned to examine what tools of technology innovation that small medium firms would use to maintain or boost their quality performance. For this case, the respondents are among the small and medium enterprises people that have considerations their quality performances. Thus it is also very interesting to expect a new findings in the research topic that could clarify and confirm that Small and Medium Enterprises could be a continuous contributions in the current difficult economic situation.

## **1.6 Research Questions**

1. Is there any significance relationship between the tools of technology innovation and small medium enterprises quality performances?
2. Is there any significance correlation between the tools of technology innovation and small medium enterprises quality performances?
3. In which variable is most dominant in the tools technology innovation and small medium enterprises quality performances?

## 1.7 Research Objectives

1. To test the significance relationship between the tools of technology innovation and small medium enterprises quality performances.
2. To examine the significance correlation between the tools of technology innovation and small medium enterprises quality performances.
3. To verify the most dominant in the tools technology innovation and small medium enterprises quality performances.

## 1.8 Significant of Study

From the analysis of technical innovation tools to the quality performance of small and medium-sized firms, these research report's goals are successfully attained.

The researcher can gain a deeper understanding on the tools of technology innovation towards small and medium enterprises quality performances. Besides that, the researcher can examine the most significant tools of technology innovation that will use by the small and medium enterprises for their quality performances.

This study is beneficial where it can provide readers a lot of information especially to the small and medium enterprises about the tools that they can use to measure their quality performances.

## 1.8 Scope and Limitation of Study

The study have a few scope that may influence its finding either directly or indirectly.

First, the information assortment can simply target little medium enterprises people in middle management. This can be as a result of its thanks to apprehend their performances. Secondly, the understanding and ability of respondent in Technological Innovation either they need the flexibility or not in victimisation smartphone and conjointly the social media mobile app to get their performances particularly throughout pandemic Covid-19. They also got to have the net line to use that sort of