# APPROVAL

'I hereby declared that I have read this thesis and this research is sufficient in terms of scope and quality. This project is submitted to Universiti Teknikal Malaysia Melaka as a requirement for completion and reward Bachelor Degree in Technology Management (High Technology Marketing) with Honours (BTMM)'.

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# THE IMPACT OF INDUSTRIAL REVOLUTION 4.0 ON CUSTOMER SATISFACTION IN MALAYSIA'S RETAIL INDUSTRY

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A project paper submitted

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# DECLARATION

"I hereby declare that this research paper is the result of my own and independent work except the summary and experts that have been specifically acknowledge."

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# DEDICATION

This paper is wholeheartedly dedicated to my beloved parents and families who have been my main source of inspiration and support throughout my whole life, I am very much thankful and blessed with the enormous love from my family.

I owe my deepest gratitude to my respected supervisor and panel for the continuous guidance, persistent help and immense motivation to me in completing my research.

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# ABSTRACT

According to Retail Group Malaysia (2018), 4.5% growth in retail sales to RM108.30 billion is forecasted in 2019 and retail is also a huge business for Malaysia and it accounts for 10% of the nation's Gross Domestic Profit (GDP). Retail and consumer goods business have concentrated on digitizing the customers interface in latest years as mentioned by Dutzler et al (2016). Within the fourth industrial revolution, advanced technology innovations will further revolutionize retail at a rate determined not by distributors, but by the technology-savvy customers that serve who relentless in their quest for easier, frictionless life that define the difference between today and yesterday. Modern features that involve digitizing activities and re-engineering in retailing have shifted new changes in level of customer satisfaction. Thus, this study aims to examine the impact of industrial revolution 4.0 on customer satisfaction in Malaysia's retail industry. A non-probability convenience sampling of 384 respondents were collected by using questionnaire survey method throughout Malaysia and it took about two months to complete the whole process of data collection and analysis. All the data gained were analysed by various statistical methods in Statistical Package for the Social Science (SPSS). SERVQUAL Model of reliability, assurance, tangibility, empathy and responsiveness is used as the factor of fourth industrial revolution thus five hypothesis relationships among variables are tested. Findings show that reliability as the most significant factor that impact customer satisfaction with a value significant of $p < 0.000$. On the other hand, the findings reveal that responsiveness and assurance were insignificant towards customers' satisfaction. This study findings concluded to help retailers in closing the gap in reaching higher customer satisfaction in Malaysia's retail industry and to understand customers' needs and wants in accordance with the rising of technologies in these modern retailing.

*Keywords: Customer Satisfaction, Industrial Revolution 4, Retail Industry, Malaysia, SERVQUAL Model, Reliability, Technology.*

# ABSTRAK

Menurut Kumpulan Peruncit Malaysia (2018), pertumbuhan jualan runcit sebanyak 4.5% kepada RM108.30 bilion diramalkan pada 2019 dan industri runcit juga merupakan perniagaan besar bagi Malaysia dan ia menyumbang 10% daripada Keuntungan Domestik Kasar Negara (KDNK) negara. Perniagaan barangan runcit dan barangan pengguna tertumpu pada mendigitalkan antara muka pelanggan sejak kebelakangan ini seperti yang dinyatakan oleh Dutzler et al (2016). Dalam revolusi perindustrian keempat, inovasi teknologi canggih akan terus merevolusikan industri runcit pada kadar yang ditentukan bukan oleh para pengedar, tetapi oleh pelanggan yang celik teknologi yang berkhidmat secara tidak henti-henti dalam pencarian mereka untuk hidup yang lebih mudah serta selesa sekali gus menentukan perbezaan antara hari ini dan semalam. Ciri-ciri moden yang melibatkan aktiviti mendigitalisasi dan kejuruteraan semula dalam peruncitan telah membawa perubahan baru terhadap tahap kepuasan pelanggan. Oleh itu, kajian ini bertujuan untuk mengkaji kesan revolusi industri 4.0 terhadap kepuasan pelanggan dalam industri runcit Malaysia. Sampel dari 384 responden dikumpulkan dengan menggunakan kaedah soal selidik di seluruh Malaysia dan mengambil masa kira-kira dua bulan untuk menyelesaikan keseluruhan proses pengumpulan data dan analisis. Semua data yang diperoleh dianalisis dengan pelbagai kaedah statistik dalam Pakej Statistik untuk Sains Sosial (SPSS). Model SERVQUAL kebolehpercayaan, jaminan, ketara, empati dan responsif digunakan sebagai faktor revolusi perindustrian keempat jadi lima hipotesis yang mengkaji hubungan antara pembolehubah ini diuji. Penemuan dari kajian ini menunjukkan bahawa kebolehpercayaan sebagai faktor paling penting yang mempengaruhi kepuasan pelanggan dengan nilai signifikan $p < 0.000$. Sebaliknya, kajian menunjukkan bahawa respon dan jaminan tidak penting terhadap kepuasan pelanggan. Penemuan kajian ini dilaksanakan bagi membantu peruncit menutup jurang untuk

mencapai tahap kepuasan pelanggan yang lebih tinggi dalam industri runcit Malaysia dan untuk memahami keperluan dan kehendak pelanggan sesuai dengan peningkatan teknologi dalam peruncitan moden ini.

*Kata Kunci: Kepuasan Pelanggan, Revolusi Industri 4.0, Industri Peruncitan, Malaysia, Model SERVQUAL, Kebolehpercayaan, Teknologi.*

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# CHAPTER 1

# INTRODUCTION

## 1.0    Introduction

In this chapter, we discussed shortly on the summary of this research which include research background, statement of research problem, research question, research objective, scope of study, research limitations, significance of research as well as the summarization. The research title is the impact of Industrial Revolution 4.0 on customer satisfaction in Malaysia's retail industry. According to a report by KPMG (2017), Industrial Revolution 4.0 is relevant in every industry including retail industry because technologies can think, learn and adapt well with human's life and this is forecast to have a massive impact across all industries. Thus, retailers are accustomed to change due to changing in consumer behaviour due to the presence of technologies of Industrial Revolution 4.0.

## 1.1    Background of Study

The emergence of Industrial Revolution 4.0 has helped in the arising of digitalization era. These changes affect numerous industries, and retailing is one of them. Hodson et al (2017) emphasizes that the retail industry is being piloted by a fresh, dynamic, universal transformation that further increases the general competitive nature of retail business. Heck and Rogers (2014) points out that the characteristics of Industry 4.0 is growing competitiveness through savvy hardware, utilizing data about high-wage locations, demographic changes, assets, energetic efficiency and urban production. The world of retailing continues to improve swiftly as interchange between the physical and the digital world bridges the gap between them. Retailers find it difficult to mature from multi-channel business models towards fully integrated Omni-channel operations, in which the role of the store and online channels are complementary and are managed in an integrated and seamless manner (Hodson et al, 2017).

In addition to that, Forest and Hoanca (2015) predicted that consumers and their purchasing decisions will continue to be dominated by manufacturers and retailers. However in Roblek et. al. (2016) study, they agreed that on the demand side, customers will increase their awareness in regard to the importance of the quality and reliability of the acquired and given information and technical condition of the products. Espejo and Dominici (2016) agreed with the statement and they added that the awareness will influence the accumulation and interpretation of data in real time and thus, affecting coming guidelines of value creation for the customers.

A storm of the next revolution in retail is already beginning where customer requires the need for fully integrated operational and technology model and new industry capabilities that fits for purpose in going digital. According to Prepletaný (2013), "Relationship among clients and retailers are hence reached out past the physical store into the digital sphere". So there is growing needs to understand how these changes of retail industry impacted by the presence of Industrial Revolution 4.0 affect customer satisfaction. From a report by Ernst & Young (2016), customers from of all ages and socioeconomics, demands a seamless and highly customizable shopping experience, through the channel they'd like to utilize and while they want

to stay in charge, they also hold lofty expectations and desires of retailers that lead the way in offering items and services in a customized, impeccable and highly convenient way.

Customer satisfaction is estimated by how a product or services offered by a company can outperform customers' expectation. If products or services performance did not meet with the expectation, customer will feel unhappy or dissatisfied and if product or services performance exceeds their expectation, customer will feel delighted and happy. According to report on Industrial Revolution 4.0 and retail industry by KPMG (2017), businesses can now have a real-time knowledge of their customers both on and offline by using the all channel approach which is seamless. With this online and offline activities fully integrated, it is now possible for customers to browse online, make an appointment in digitally enabled stores and have the technology in that store highlight items for them.

Digital platforms aid in the complementation of brick and mortar business. They enhance customer experience all while providing other data and logistic benefits (Bert Feinberg, 2015). In line with the study, the researcher would like to investigate how Industry Revolution 4.0 factors can impact customer satisfaction. As well as that, the researcher would like to understand how these technological changes can influence for the better progress in the competition of retail business in Malaysia.

## 1.2    Problem Statement

Industry Revolution 3.0 proved the invention of computers as well as automation system helps in conquering industrial scene. Now is the time for change as customers are getting used to shop at the traditional brick and mortar stores. Retailing back then used to be so simple where retailers opened a store, provide products, buy and sell one and the process repeated over again. As the technology continues to change rapidly thus bringing out innovations in the way retailers has driven a revolution in the way retailers engage, interact and transact with customers. Emrah (2010) emphasized that in a radical and combative market environment today,

it is a must for retail stores to focus on customer oriented system and customer satisfaction represents an up-to-date outlook for quality in business life and serves the advancement of a genuine customer-oriented culture and management.

Industry Revolution 4.0 on the other hand has proven to bring a whole new digitalization era in almost everything including retail industry. It is safe to say, in order for retail to expand, terms such as increasing the number of stores and developing an online presence are extremely vital. The instantaneous development of technology and rising usage of mobile digital devices worldwide, such as smartphones and tablets, have an extreme transforming effect on consumer behaviour and retail businesses generally (Bain, 2012; Nielsen, 2013). The competition to offer multi-channel retailing was on, with market leaders rushed to grab online market share, looking to innovate and increase their offering to consumers.

Customers expect real time data and insight on transparent stock availability, real time pricing, mobile checkout and also in-store technologies. While for some categories online retailing was built on price, this is quickly advancing into increasingly elevated expectations on ease of use and buying experience, with customers now asking for sensibly great price, great convenience and great experience inevitably (Hodson et al, 2017). As customer wants and demands are changing faster than ever, businesses, and retailers in particular, need to stay side by side to stay pertinent to customers by provision of picture-perfect, appealing, dependable and trustworthy shopping experiences along multiple shopping channels and at each customer touch point (Prepletaný, 2013).

Retailers need to identify on which factors of Industrial Revolution 4.0 whether to focus on combining brick and mortar stores or the web and mobile or both to achieve high competitive advantage. Changing may be costly and not all retailers can afford and adapt with the technologies especially the traditional retailers. However, to enhance customer satisfaction in Malaysia's retail industry do not specifically need a high technology modern retail system, but the basic changes such as on time delivery, real time data, responsive and prompt replies on customers' problem is what the customers are seeking for. Near term and long term tactics is needed to build brands, customer trustworthiness and market share growth. Thus,

what are the gap that retailers in Malaysia need to close in order to adapt and adopt Industrial Revolution 4.0 factors in fulfilling everything customer demands and needs to get to the point of customer satisfaction?

KPMG (2017) report stated that, whatever the technological advancements are, one basic rule of commerce endures is that customer is the king, especially when customers is armed with technologies of their own and expects to get what they want faster, cheaper and in more ways than ever before. Without understanding the recent needs and wants by customer, retailers are unlikely able to maintain their market in these rapid technological retailing trend. Thus, there is the need to study on the impact of industry revolution 4.0 on customer satisfaction in Malaysia retail industry, which is the aim of the proposed research.

## 1.3    Research Question

To further understand the research regarding the impact of 4<sup>th</sup> Industrial Revolution on customer satisfaction in Malaysia retail industry, the study has to be able to provide answers for questions as follows:

i)      What are the level of satisfaction of Malaysia's retail customer impacted from Industry Revolution 4.0?

ii)     What are the relationship between Industry Revolution 4.0 and customer satisfaction in Malaysia's retail industry?

iii)    What are the most remarkable factors that affect the customer satisfaction in Malaysia's retail industry impacted from Industrial Revolution 4.0?

## 1.4    Research Objective

Throughout the research on the impact of Industrial Revolution 4.0 on customer satisfaction in Malaysia's retail industry, researcher want to achieve objective as per below:

i)      To determine the level of satisfaction of Malaysia's retail customer impacted from Industry Revolution 4.0

ii)     To identify the relationship between Industry Revolution 4.0 and customer satisfaction in Malaysia's retail industry.

iii)    To study what are the most significant factors that affect the customer satisfaction in Malaysia's retail industry impacted from Industrial Revolution 4.0.

## 1.5    Scope of Study

The researcher concentrated on customer satisfaction in Malaysia's retail industry as the dependent variable whilst focusing on Industrial Revolution 4.0 as the independent variable. The researcher identified what are the impact that the inception of Industrial Revolution 4.0 factors has brought on the customer satisfaction in Malaysia's retail industry. Hence, the questionnaire which consists of a set of question was given to 384 respondents from the public at all level. The choice of respondent was because retail industry is relevant to everyone and as days go by, no one can run from technology. Thus, there's need to understand what factor of Industrial Revolution 4.0 that enhance customer satisfaction in Malaysia's retail industry.

Next, the researcher would like to study on the recent improvised Malaysia's retail industry from the waves of Industrial Revolution 4.0 which can be seen being applied everywhere and in every industries. The unpredictability of the retail marketplace itself forces retailers to embrace a multi-channel remain so as to improve on the products and services they offer (Prepletaný, 2013). In order to bring about the best result, the study will be conducted in whole Malaysia because of the