CRITICAL SUCCESS FACTORS FOR INTENTION TO FAMILY TAKAFUL ADOPTION IN MALAYSIA

BY

NUR AQILAH ZAINORDIN

A thesis submitted in fulfillment of the requirement for the degree of Doctor of Philosophy (Islamic Banking and Finance)

IIUM Institute of Islamic Banking and Finance
International Islamic University Malaysia

DECEMBER 2024

ABSTRACT

This study investigates the critical success factors for intention to family takaful adoption in Malaysia**.** The research explores the direct relationships among performance expectancy, effort expectancy, price value, hedonic motivation, social influence, facilitating conditions, and habits concerning the behavioral intention to engage in family takaful in Malaysia. Additionally, the study examines the inverse relationship between behavioral intention and trust. A total of 389 respondents were surveyed using a convenience sampling technique and quantitative methods. Hypothesis testing employed Partial Least Squares Structural Equation Modeling (PLS-SEM) to assess the relationships between variables. The findings indicate that Muslim behavioral intention to participate in family takaful in Malaysia is significantly influenced by performance expectancy, effort expectancy, facilitating conditions, hedonic motivation, and price value. Moreover, the association between family takaful participation and behavioral intention is mediated by trust. Trust influences the behavioral intention to participate in family takaful. However, habit and social influence do not significantly affect the behavioral intention to engage in family takaful in Malaysia. This study introduces an extended UTAUT2 model, untested in the context of family takaful, contributing to Islamic financial product marketing and consumer behavior.

Keywords: family takaful, UTAUT2, Malaysia, PLS-SEM

ملخص البحث

تتناول هذه الدراسة العوامل الحاسمة لنجاح نية اعتماد التكافل العائلي في ماليزيا. تستكشف الدراسة العلاقات المباشرة بين توقع الأداء، وتوقع الجهد، وقيمة السعر، والدافع الترفيهي، والتأثير الاجتماعي، والظروف الميسرة، والعادات فيما يتعلق بالنية السلوكية للانخراط في التكافل العائلي في ماليزيا. بالإضافة إلى ذلك، تفحص الدراسة

العلاقة العكسية بين النية السلوكية والثقة. تم استطلاع آراء 389 مشاركاً باستخدام أسلوب أخذ العينات

الملائمة والأساليب الكمية. واعتمد اختبار الفرضيات على نمذجة المعادلات الهيكلية بطريقة المربعات الصغرى الجزئية -PLS) SEM) لتقييم العلاقات بين المتغيرات. تشير النتائج إلى أن نية المسلمين في المشاركة في التكافل العائلي في ماليزيا تتأثر بشكل كبير بتوقع الأداء، وتوقع الجهد، والظروف الميسرة، والدافع الترفيهي، وقيمة السعر. علاوة على ذلك، تتوسط الثقة العلاقة بين النية السلوكية والمشاركة في التكافل العائلي، حيث تؤثر الثقة على النية السلوكية للمشاركة. ومع ذلك، لا تؤثر كل من العادات والتأثير الاجتماعي بشكل كبير على النية السلوكية

للانخراط في التكافل العائلي في ماليزيا. تقدم هذه الدراسة نموذج UTAUT2 الموسع، الذي لم يتم اختباره

من قبل في سياق التكافل العائلي، مما يساهم في تسويق المنتجات المالية الإسلامية وفهم سلوك المستهلك

الكلمات المفتاحية: التكافل العائلي، UTAUT2، ماليزيا، PLS-SEM

APPROVAL PAGE

The thesis of Nur Aqilah Zainordin has been approved by the following:

_____
Engku Rabiah Adawiah Bt Engku Ali
Supervisor

_____
Razali bin Haron
Co-Supervisor

_____
Romzie Bin Rosman
Internal Examiner

_____
Zatul Karamah Bt Ahmad Baharul Ulum
External Examiner

_____
Akram M Z M Khedher
Chairman

DECLARATION

I hereby declare that this thesis is the result of my own investigations, except where otherwise stated. I also declare that it has not been previously or concurrently submitted as a whole for any other degrees at IIUM or other institutions.

Nur Aqilah Zainordin

Signature ..... Date .....

INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA

DECLARATION OF COPYRIGHT AND AFFIRMATION OF FAIR USE OF UNPUBLISHED RESEARCH

CRITICAL SUCCESS FACTORS FOR INTENTION TO FAMILY TAKAFUL ADOPTION IN MALAYSIA

I declare that the copyright holders of this thesis are jointly owned by the student and IIUM.

No part of this unpublished research may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise without prior written permission of the copyright holder except as provided below

1. Any material contained in or derived from this unpublished research may be used by others in their writing with due acknowledgement.

2. IIUM or its library will have the right to make and transmit copies (print or electronic) for institutional and academic purposes.

3. The IIUM library will have the right to make, store in a retrieved system and supply copies of this unpublished research if requested by other universities and research libraries.

By signing this form, I acknowledged that I have read and understand the IIUM Intellectual Property Right and Commercialization policy.

Affirmed by Nur Aqilah Zainordin

……..…….. ……..
Signature Date

ACKNOWLEDGEMENTS

All glory is due to Allah, the Almighty, whose Grace and Mercies have been with me throughout my program. Although it has been tasking, His Mercies and Blessings on me ease the arduous task of completing this thesis. I am most indebted to my supervisor, Prof Engku Adawiah Bt Engku Ali, whose enduring disposition, kindness, promptitude, thoroughness, and friendship have facilitated the successful completion of my work. I put on record and appreciate her detailed comments, valuable suggestions, and inspiring queries, which have considerably improved the thesis. Her brilliant grasp of the aim and content of this work led to her insightful comments, suggestions, and queries, which helped me a great deal. Despite her commitments, she find the time to listen and attend to me whenever requested. The moral support she extended to me is, no doubt, a boost that helped me build and write the draft of this research work. I am also grateful to my co-supervisor, Prof. Dr Razali Haron, whose support and cooperation contributed to the outcome of this work. Lastly, my gratitude goes to my beloved husband, Muhammad Firdaus bin Md Yusof, and my son, Dihyah Al-Qalbi, for their prayers, understanding, and endurance while away. My gratitude also goes to my parents, my parents-in-law, my siblings, and all my families who supported me in finishing this journey. Once again, we glorify Allah for His endless mercy on us, enabling us to successfully round off the efforts of writing this thesis.

Alhamdulillah

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

1.1.1 Overview of Takaful Market Around the World

Takaful is a form of Islamic insurance that adheres to Sharia principles. The Takaful sector is still relatively new, and it was inspired by the desire of Malaysian Muslims to obtain the benefits of insurance protection while adhering to Sharia compliance rules (Sherif & Azlina Shaairi, 2013; Maduku & Mbeya, 2023).

Islamic financial institutions in today's modern finance industry comprises including *sukuk, takaful,* and Islamic banking and funds. Among various markets, banking and *sukuk* play pivotal roles in driving the substantial growth of the Islamic finance sector. Thomson Reuters 2021 report indicated that the industry's asset has grown 6% from US$3.3 trillion (2020) to US$3.9 trillion (2021) (refer to Figure 1.1). In addition to that, global Islamic banking assets and *sukuk* consists 70% and 18% from the total share of Islamic finance assets, respectively (refer to Table 1.1).

Nevertheless, the takaful market is still small compared to other markets, which constituted 2% of the global Islamic finance assets in 2021. The takaful assets contributed US$73 billion, from 335 takaful operators (IFDR, 2022).

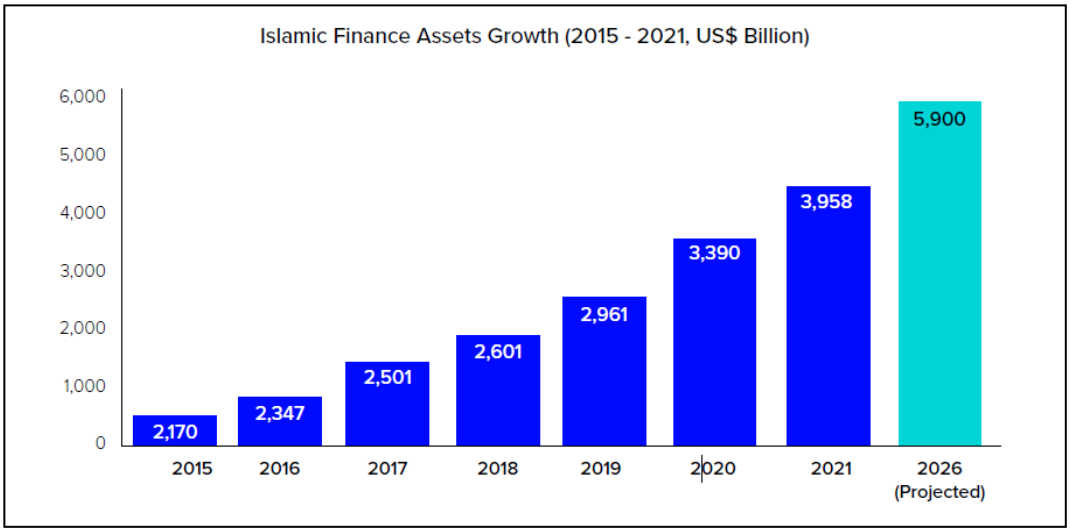

Figure 1.1 The Global Islamic Finance Assets Growth
Source: Islamic Finance Development Report (IFDR) (2022)

Table 1.1 The Distribution of Global Islamic Finance Assets including Windows

Sector/Asset Class	**Total Assets (US$ Billion)**	**Share (%)**	**Number of Institutions/ Instruments**
Islamic banking	2,765	70%	566
Takaful	73	2%	335
OIFIs	169	4%	778
Sukuk	713	18%	4,426
Islamic funds	238	6%	1,903

Source: Islamic Finance Development Report (2022)

Table 1.2 Top Countries in Takaful Assets 2021

Countries	**Total assets (US$ Billion)**
Iran	30
Saudi Arabia	18
Malaysia	12
UAE	3
Indonesia	3
Turkey	2
Pakistan	1
Qatar	1
Bangladesh	1
Oman	0.5

Source: Adapted from Islamic finance (2022)

Taking into consideration the performance of each country in relation to takaful assets, Islamic Finance Development Report (IFDR) (2022) stated that takaful assets in Malaysia only consist of US$12 billion compared to Saudi Arabia and Iran (refer Table 1.2). Although it is relatively small compared to the other markets in the Islamic finance industry, the takaful market has gained significant momentum. The global takaful market still has room for further enhancement. Several factors facilitated the remarkable growth of the takaful industry, such as improvement in regulatory requirements, enhancement in the distribution channel and increasing number of industry players (Ansar & Malik, 2016; Milliman, 2017; Malaysian Takaful Association, 2022)

1.1.2 Takaful Market in Malaysia

The Assistant Governor of BNM, Encik Adnan Zaylani, in his keynote address on 8 October 2019 pointed out that many countries including Malaysia are experiencing imminent ageing population issue and will be affected by demographic changes now and in the years to comes (BNM, 2019). He further explained that:

> "Declining proportions of the working age population and higher numbers of old-age dependents would strain the healthcare systems and bring upward pressure on pension scheme costs. The financial security architecture has to change and financial protection has become much more urgent for many underserved segments. Therefore, Islamic finance and takaful industry should embrace its transformative role, responding to these evolving needs and not merely responding to past and existing demand. Therefore, it is imperative that takaful industry be agile and adapt to those changes."

From the keynote of Encik Adnan Zaylani, it is clear that the takaful industry needs to adopt new ways and strategies to cater to the changing needs of the consumers as well as increased number of old-age dependents. Not many people are covered by takaful when their become older. Hence, it is essential for the takaful industry to take a big step to ensure that each person participate in takaful, especially to cater for longevity risk. When the number of aging populations increase, healthcare access is very important and takaful can play a big role in allowing such access.

Moreover, Malaysia has nearly three-quarters share (76%) of total gross takaful contributions in the ASEAN region (Ernst & Young, 2015). According to BNM Report (2021), nearly half of the Malaysian population (45.8%) have yet to obtain protection in 2021. To reduce this lack of awareness, takaful operators, as an industry, have to collectively promote the prominence of takaful and its capabilities to be a choice for Malaysians.

In relation to family takaful, Malaysian Takaful Association (2021), reported that the protection value has increased by 18.6 % in 2020 from 16.9% in the previous year (MTA, 2021). Furthermore, the net contribution income for family takaful has shown a moderate increase from RM8.9 billion in 2020 to RM10.8 billion in 2021, while general takaful has experienced a marginal growth from RM2.8 billion in 2020 to RM2.9 billion in 2021 (Bank Negara Malaysia, 2021). Notably, family takaful has contributed significantly more at approximately RM10.8 billion in 2021 compared to the contribution of RM2.9 billion from general takaful during the same period (Bank Negara Malaysia, 2021). The statistics showed that the takaful market has the potential to penetrate further into the larger market and bigger audience. Moreover, the changes in the regulation also contributes to the growth in the number of takaful operators. Section 16 (1) of Islamic Financial Services Act, 2013 (IFSA) provides that a licensed takaful operator, other than a licensed professional takaful operator, shall not carry on both family takaful business and general takaful business. This means that all takaful operators with a composite business must convert their single licenses into two separate licenses if they want to keep both the general and family takaful businesses. Otherwise, they must choose to operate only one type of takaful business only, either general or family. The statistics showed that the number of takaful operators has climbed from only two operators in 2003, to 15 operators in 2023 (Bank Negara Malaysia, 2023). The number of takaful operators increased in 2023, in line with the effective date of the new regulation with a total of 15 takaful operators (Bank Negara Malaysia, 2023).

As of 2023, there are fifteen takaful operators licensed by the BNM, as shown in Table 1.2.

Table 1.3 Number of Licensed Takaful Operators in Malaysia

No.	Name
1	AIA Public Takaful Berhad
2	AmMetlife Takaful Berhad
3	Etiqa Family Takaful Berhad
4	Etiqa General Takaful Berhad
5	FWD Takaful Berhad
6	Great Eastern Takaful Berhad
7	Hong Leong MSIG Takaful Berhad
8	Prudential BSN Takaful Berhad
9	Sun Life Malaysia Takaful Berhad
10	Syarikat Takaful Malaysia Am Berhad
11	Syarikat Takaful Malaysia Keluarga Berhad
12	Takaful Ikhlas Family Berhad
13	Takaful Ikhlas General Berhad
14	Zurich General Takaful Malaysia Berhad
15	Zurich Takaful Malaysia Berhad

Source: Bank Negara Malaysia (2023)

1.2 PROBLEM STATEMENT

The Takaful business can be seen as a reliable and aggressive financial player with tremendous growth and reliable performance (MTA Annual Report, 2022). The number of takaful operators working globally, including in Malaysia, has grown, in which the takaful market has become more diverse both outside Malaysia and domestically,

The number of takaful operators is expanding, thus allowing the market to expand as well. However, the takaful business continues to lag behind its traditional counterparts in terms of plans that offer several benefits like as risk coverage, fixed income return, safety, and tax benefits. Conventional insurance plans according to the Malaysia Takaful Association Report (2022) with a modest risk appetite and what happens is the risk appetite for Takaful.

The total new business contributions for family takaful businesses climbed from 18.3 percent in 2021 to 29.1 percent in 2022, totaling RM10.06 billion (MTA Annual Report 2022). Even if the number of family takaful policyholders has

increased, there is still an unexplored market in Malaysia (Abdou 2014; MTA 2022). It is critical for individuals to understand the significance of participating in a family takaful system that will safeguard them from harm (Abdou, 2014; Sukmaningrum et al., 2022).

As Malaysia's population ages, more people will be able to engage in family takaful, which enables long-term savings and investment while insuring against financial insecurity caused by critical sickness, death, disability, or unemployment, as well as paying for children's education. Malaysia's family takaful penetration rate, at roughly 15%, is still low.

Family takaful new business contributions ascended at a quicker rate of 20% to RM13.1 billion in 2021, but the sector's profitability was affected by soft investment conditions (RAM, 2021). Although the Malaysian takaful market is being dominated by the family takaful business, it was reported that there is a large untapped market that still exists. The family takaful penetration rate was about 20.1% of the Malaysian population compared to the 54% penetration rate for conventional life insurance in 2022 (MTA Annual Report, 2022). It can be concluded that there is a wide gap between family takaful penetration and that of the conventional life insurance, whereby family takaful has a great opportunity to tap underserved areas of the market to compete with the conventional peers (Yazid et al., 2017; Sahudin et al., 2022). Yazid et al. (2017) also argued that family takaful can become a form of savings instrument especially among Malaysian Muslims due to the Shariah-compliant attributes. In addition, it is alarming that the recent statistics showed by the Life Insurance Association of Malaysia (LIAM) that in 2022, only 54% of Malaysian population is insured, irrespective of life insurance or family takaful, leaving the other 46% of the population still uninsured, where they face a huge risk of being permanently stripped away from their future earnings (Zakaria et al., 2016).

The statistics showed that there is a low penetration rate or subscription of family takaful. This may be due to lack of awareness of the people about family takaful. The knowledge of the product is still very minimal in the society (Sang et al., 2023; Matsawali et al., 2012;). Furthermore, information about 'halal' products and

their awareness are still lacking in Malaysia especially for non-Muslim (Chua, Chia, Lau & Lee, 2017). Takaful products are a part of 'halal' products since they are compliant to Shariah principles. Hence, similar lack of awareness may also be inferred to takaful products. Along this line, the lack of information and awareness related to the product hinder consumers' participation in family takaful. Nevertheless, Muslims are perhaps more aware of family takaful due to their knowledge and awareness on Shariah compliance. Other studies like (Fauziah et al., 2008; Echchabi and Hassanuddeen, 2012b; Hanudin et al., 2011; Hanudin, 2012; Syed et al., 2012; Mehboob & Amin, 2023) supported this finding. However, limited studies have been conducted on non-Muslims participation in the takaful sector.

Despite the growing awareness of family takaful in Malaysia, the overall adoption rate remains relatively low compared to conventional insurance. While the Malaysian Takaful industry has shown steady growth, many families are still reluctant or indifferent towards subscribing to Family Takaful products. This underpenetration persists despite the industry's alignment with Islamic principles, a critical factor for the country's Muslim-majority population. However, the critical success factors that drive consumer intention to adopt family takaful products in Malaysia remain underexplored. Many consumers either lack trust in Takaful operators or perceive these products as too complex or unappealing compared to conventional offerings.

Therefore, it is essential to investigate and ascertain what drives a customer to take part in family takaful. Understanding why so few Malaysians have enrolled in the family takaful scheme is crucial. Family takaful products and services, including retirement savings, investments education, and life protection are abundant in today's now. However, they are unable to elicit significant consumer participation. This raises the question of what variables affect the likelihood that patrons will take part in a family takaful. Therefore, there is a need for a framework to give a thorough understanding of behaviors of consumers of family takaful schemes. Therefore, the objective of this study is to identify the key success factors that impact consumers' choices to participate in the family takaful program.

1.3 PURPOSE OF THE STUDY

Factors influence the penetration of family takaful in Malaysia among takaful and non-takaful participants will be identified in this study. It focuses on understanding why so few consumers participate in the family takaful plan. The study's goal is to investigate the relationship between customer behavior and numerous identified factors while deciding whether or not to participate in family takaful products factors, namely (i) effort expectancy; (ii) performance expectancy (iii) facilitating conditions (iv); social influence; (v) hedonic motivation; (vi) price value; (vii) habit and (viii) trust as a mediator.

1.4 RESEARCH OBJECTIVES

The objectives of the study are:

1. Investigate the critical success factors (CSFs) influencing the decision to participate or not in family takaful in Malaysia. The factors under examination are derived from the UTAUT2 model proposed by Venkatesh et al. (2012), including performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, and habit.

2. Explore trust as a mediator in the context of purchase intention, specifically its role in influencing individuals to participate in family takaful in Malaysia.

3. The analysis of these CSFs within the family takaful framework aims to provide insights for the formulation of a guiding framework beneficial for takaful operators in their operations and strategies.

1.5 RESEARCH QUESTIONS

This paper attempts to answer the following questions:

1. What are the critical success factors that affect the decision whether to participate in a family takaful scheme?

2. To what extend the following critical success factors (performance expectancy; effort expectancy; social influence; facilitation conditions; hedonic motivation; price value; and habit) influence behavioral intention for the decision whether or not to participate in a family takaful scheme?

3. How does trust, as mediator, influence behavioral intention towards penetration of family takaful in Malaysia?

1.6 LIMITATIONS OF THIS STUDY

This research examined factors affecting a family's decision to enroll in a takaful plan, such as price value, habit, social influence, facilitating conditions, performance expectancy, and effort expectancy. The goal of the study is to see if the variables will have an impact on the family takaful participants' decisions.

The small sample size is one of the study's significant flaws. Hence, future research may widen the variables excluded from this study due to a lack of data, allowing more factors determining consumers' engagement in a family takaful plan to be elucidated.

1.7 SIGNIFICANCE OF STUDY

This research has the potential to enhance comprehension regarding the factors that influence consumers' intentions to acquire family takaful. Therefore, the result can provide some important information to takaful operators, policy makers and future researchers.

1.7.1 Takaful Operators

Takaful operators will have a benefit and give them a clear picture about the reasons that would affect the intention of the public to purchase family Takaful. Takaful operators can make use of these inputs to design marketing campaigns to attract the public to recognize the takaful products and benefits that takaful can provide.

Moreover, takaful operators could also come out with ideas and strategies to retain their existing customers Through this study, Takaful operators can realize the importance of customer satisfaction in raising the demand for takaful.

1.7.2 Policy Maker

Besides, the results of this research will give the Malaysian government insights into the critical success factors driving higher takaful penetration among Malaysian consumers. This can assist as a reference to the government as the policymaker in Malaysia in achieving its goal to be an Islamic finance hub in the region. In addition, policy makers should consider the critical success factors as they design regulations for the takaful industry. The insights may also aid the supervisory authority in making regulatory decisions on takaful operation.

1.7.3 Future Researchers

Last but not least, the study will also give valuable insights to future researchers through benefits from the results on the critical success factors in consumer participation in family takaful scheme. Future studies may determine the social influence, educational attainment, income level, pricing rate, and human belief/perception that lead Malaysians to engage in family takaful.

1.8 STRUCTURE OF THE THESIS

This study comprises five chapters. Chapter 1, or the introductory chapter, offers an introduction to takaful, with a focus on family takaful, and includes the problem statement, research objectives, research questions, study hypothesis, scope, and limitations. Chapter One also provides discussions on various issues relating to Takaful industry starting from Takaful history, the Malaysian takaful industry, including regulatory aspects and product offerings; and current developments in the Takaful industry and studies related to the Takaful industry.

Chapter Two contains the literature review, which covers the definitions of all the variables used to develop the construct of this thesis and various studies on family takaful preferences. Also, chapter Two covers theoretical and conceptual framework development. “The Unified Theory of Acceptance and Use of Technology (UTAUT2)” is the extension theory from “Theory of Reasoned Action (TRA)”, “Theory of Planned Behavior (TPB)”, “Technology Acceptance Model” (TAM) and “the Unified Theory of Acceptance (UTAUT)” are discussed in the chapter. Through theoretical presumptions and discoveries from earlier research, associations between independent and dependent variables are established in a form that makes them amenable to empirical testing.

Chapter Three covers the methodology of the study, including operational definitions of variables, sample selection, and descriptions of a statistical test to be used are discussed in the chapter. The results and discussion chapter provides the results found through statistical analysis. The final chapter provides detailed analysis of the statistical results and findings. The final chapter concludes the study and provides limitations, contributions and suggestions for further research.

1.9 CHAPTER SUMMARY

This chapter introduces the background and problem statement of the study. The problem statement further delineates the evolution of the research objectives, specifically focusing on the identification of critical success factors and the mediating

role of trust in the relationship between behavioral intention and the acceptance of family takaful in Malaysia. Additionally, the chapter outlines the research objectives, research questions, and discusses the study's limitations and scope.

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The idea of behavioral intention in relation to the spread of family takaful in Malaysia is highlighted in this chapter. The chapter starts with a definition of behavioral intention from different perspectives. It focuses on seven crucial success factors—performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, habit, with trust acting as a mediator of behavioral intention. The research gaps are also discussed in this chapter.

2.2 BEHAVIORAL INTENTION

There are various definitions of behavioral intention. Thichini et al. (2016) state that behavioral intention is the direct precursor to usage behavior, signifying an individual's preparedness to employ in a specific action. Meanwhile, Moris (2019) characterized intention as a mental state characterized by the hope that a person's physical actions will result in a particular outcome.

Ajzen (1991) defined behavior intention as the overt, observable reaction to a specific target in every circumstance. Behavioral intention signifies a consumer’s desire to buy a particular product (Ajzen & Fishbein, 1980). According to Ajzen et al. (1980), behavioral intention refers to the probability that an individual will engage in a particular action. It shows how much work and determination someone is willing to put in to carry out the desired behavior. It might also act as a motivator and affect behavior. Customers might plan to act favorably or unfavorably.

Because behavioral intention can predict behavior, it has been used as a dependent construct, which is consistent with the aim of behavioral intention models. Azjen asserted that “the stronger the intention to engage in behavior, the more likely

should be its performance." (Ajzen et al., 1980). Prior studies by Wu et al. (2007), Merhi et al. (2019), Heerink et al. (2009), Alalwan et al. (2018), and Merhi et al. (2009) have demonstrated that an individual's intention to act also predicts their actual behavior. For example, in a study conducted by Alalwan et al. (2018), behavioral intention demonstrated significant correlations with performance expectancy, effort expectancy, hedonic motivation, price value, and perceived risk. Another study by Merhi et al. (2019) found that trust, habit, perceived security, and privacy played a role in influencing individuals' intentions to use mobile banking services. Additionally, Wu et al. (2007) revealed in their research on the acceptance of 3G services in Taiwan that behavioral intention was predicted by performance expectancy.

Behavioral intention is the user's intention to use the system continuously, assuming that they have access to the system. The intention of individual behavior in using new technologies is strongly influenced by symbolic and functional values (Talukder et al., 2020)

2.3 PERFORMANCE EXPECTANCY

According to Dwivedi et al. (2019) and Venkatesh et al. (2012), a person with a performance expectancy will embrace, participate in, and engage more in new systems that could carry out operations more effectively, produce more, and spare effort and time. Utilizing new technology or a new technology product to assist customers in carrying out specific tasks is another definition of performance expectancy (Venkatesh et al., 2012). In the UTAUT2 model, performance expectancy is a crucial construct for behavior intention.

In literature, performance expectancy stands out as a crucial factor influencing the intention to adopt and use information systems, especially in the context of internet banking (Alalwan et al., 2017; Alalwan et al., 2018). Numerous studies have explored the impact of performance expectancy on behavioral intention in the realms

of mobile payment and mobile banking (Rahi et al., 2019; Sarapudin et al., 2020; Abd Aziz et al., 2023).

Applying the "Unified Theory of Acceptance and Use of Technology (UTAUT)" alongside the evaluation of electronic services (e-services), researchers, including Rahi et al. (2019), investigated the factors impacting individuals' inclination to utilize online banking. Data collection for the study involved questionnaires, and the Structural Equation Modeling (SEM) analysis unveiled that the identified predictors explained nearly 80% of the variance in users' intentions to use online banking. The study hypothesized that assurance holds the greatest influence among all other aspects of technology and service quality. Additionally, performance expectancy and effort expectancy emerged as positive and significant mediating variables between website design, customer service, and customers' intention to use internet banking.

Examining the factors influencing a customer's inclination to adopt mobile banking, Sarapudin et al. (2020) conducted another study that explored the impact of trust on the UTAUT construct. Employing convenience sampling, the empirical study surveyed 243 participants in Jakarta to collect data. The results of the study revealed a robust correlation between behavioral intention and performance expectancy, effort expectancy, social influence, and trust. Another study from Wu et al. (2021) and Farzin et al. (2021) stated that performance expectancy influences mobile banking adoption with behavioral intention.

Moreover, Abd Aziz et al., 2023 stated that student satisfaction mediated the relationship between techno-complexity, techno-insecurity and performance expectancy. The data was collected using 234 surveys based online questionnaires from students Universiti Teknologi Mara (UITM). The results further showed reducing techno-complexity and techno insecurity could increase student satisfaction to achieve better academic performance.

According to this study, consumers who have confidence that family takaful will enhance their capacity to meet their needs and prepare for unforeseen risks are more likely to participate if performance expectations are high. When people feel that

family takaful products can effectively meet their needs and provide them with financial security, they are more likely to plan to purchase them. This is because they firmly believe that the product will help them achieve their financial goals and improve their overall well-being.

Performance expectancy, in the instance of Malaysia, where family takaful products are extensively distributed and promoted, substantially impact consumers' intentions to participate in family takaful. As a result, companies that offer family takaful in Malaysia often focus on the benefits and advantages of their products, such as the flexibility of the coverage, the potential returns, and how easy it is to get the benefits. In Malaysia, consumers are more likely to desire to purchase family takaful products if they believe they will be effective to them.

2.4 EFFORT EXPECTANCY

Venkatesh et al. (2003) describe effort expectancy as an indicator of the simplicity of a system. Additionally, Venkatesh et al. (2012) provide a definition of effort expectancy to the extent to which users can easily utilize a technology. In another study, effort expectancy is defined as consumers' intentions to use technology and their perception of its ease of use (Venkatesh et al., 2003).

Various studies showed that effort expectancy will influence behavioral intention in mobile learning (m-learning), predict in teachers' work engagement, e-learning systems and mobile banking. A study from Sang et al. (2023) stated effort expectancy significantly influenced teachers' work engagement from universities in China. The result from the study also showed effort expectancy as the mediator variable was found to mediate the relationship between teachers' digital competence and their work engagement (Sang et al., 2023). A different study by Utomo et al (2021) stated effort expectancy influences the user's intention when using a mobile healthcare application. In line with another result from Chao (2019) also indicated perceived enjoyment, performance expectancy and effort expectancy had positive associations with behavioral intention to use mobile learning.

In this study, takaful operators need to provide a certain technology for customers to access and participate in family takaful easily. To make it simple for customers who are interested in family takaful to engage, takaful operators can develop applications for smartphones or other easily accessible devices. The apps must have simple consumer communication methods and clear instructions. Customers will therefore be interested in participating if the application is simple to use.

Moreover, the inclination to buy family takaful may grow if the process is viewed as simple and comfortable. Customers may be more inclined to buy, for instance, if the application can be completed quickly and conveniently online or with the assistance of a sales representative. On the other hand, the intention to acquire may drop if the procedure is thought to be tough or complicated. For instance, if the consumer must submit a lot of paperwork or go through a lengthy approval procedure, they might be less likely to participate. Consumers may feel reluctant to participate in family takaful may decline they believe that the efforts to purchase family takaful outweighs the advantages or perceived worth of the goods.

Another important factor influencing Malaysian consumers' behavioral intention to engage in family takaful is effort expectancy. Takaful providers should concentrate on making the purchasing procedure as simple and convenient for consumers as feasible to enhance the possibility that they will make a purchase. This can be done by expediting the application procedure, giving clients clear and straightforward information about the product, and assisting them in their purchasing decisions.

2.5 SOCIAL INFLUENCE

According to Venkatesh et al. (2003), adopting a new technology can be impacted by an individual's personal beliefs about what other people think of it, particularly their close friends and relatives.

The role of social influence in the context of Jordanian banking customers' behavioral intention to use mobile banking was examined by Alalwan et al. (2019), but their findings failed to elucidate any statistical variance (Alalwan et al., 2019). Additionally, various studies indicated that behavioral intention remained largely uninfluenced by social factors (Abbad et al., 2021; Chen et al., 2019). Abbad et al.'s investigation in 2021 specifically focused on the Moodle e-learning system at Jordan's Hashemite University, revealing that social influence had no discernible impact on behavioral intention and actual usage (Abbad et al., 2021). Similarly, Chen et al. (2019) found no direct positive relationship between behavioral intention and metacognition or social influence in their study.

The results, however, are inconsistent when it comes to social influence on behavioral intention. Many prior studies (Giovanis et al., 2019; Singh et al., 2020; Daniali et al., 2022) attest to the strong direct influence of social influence on behavioral intentions. Potential customers will influence their behaviors. Giovanis et al.'s (2019) study uncovered results suggesting that the influence of perceived trust and social influence on the intention to adopt mobile banking is moderately affected by experience.

Singh et al. (2020) investigated the moderating effects of innovativeness, stress to use, and social influence on user satisfaction and recommendation to use mobile wallet services. Data from 206 responses to both online and paper surveys were collected and integrated into the research model. The results indicated that stress to use and social influence had a notable moderating impact on users' perceived satisfaction and recommendation of mobile wallet services.

Another study from Daniali et al. (2022) aimed to examine how social economic factors related to performance expectancy, cost, effort expectancy and social influence impact students’ intentions to use 4.5G mobile phones. To validate the moderating effects of gender among the underlying relationships in the model, the researchers used a multigroup study. The result of the structural model analysis also showed that social influence significantly contributes to students’ adoption of 4.5G

technologies. Therefore, it is reasonable to conclude that students' families and friends have a significant impact on their decision to utilize 4.5G mobile technol.

In the context of this study, the customers will join the family takaful from the word of mouth from the families and friends. If their families or friends participate in the family takaful, they will convince their family members to join for family takaful. The family members, especially parents and sibling can play a significant role in shaping an individual's beliefs and behaviors. If an individual's family members participate in family takaful, they may be more likely to do the same.

Moreover, the perception of social norms can influence an individual's decision to participate in family takaful. If an individual believes that their family and social circle values participation in family takaful, they may be more likely to participate themselves.

2.6 FACILITATING CONDITIONS

Venkatesh et al. (2012) defines facilitating conditions as the user's perception of the availability of institutional support and infrastructure to assist in the utilization of targeted technology. This concept encompasses the accessibility and availability of infrastructure, resources, and support that enable specific behavior.

The acceptance and usage intention of 3DP (3D printing) technology in the context of e-learning is influenced by critical determinants, including the do-it-yourself mentality, facilitating conditions, and hedonic motivation (Halassi et al., 2019; Sukendro et al., 2020). Specifically, facilitating conditions play a crucial role in the utilization of e-learning, contributing to the overall acceptance and intention to use 3DP technology in this domain. The study involved 196 3DP customers who took part in the online survey to empirically test the explanatory conceptual framework based on UTAUT. Sukendro et al. (2020) revealed similar results, indicating substantial correlations between the facilitating condition and perceived usability and between the facilitating condition and perceived ease of use.

According to several earlier studies (Sivathanu et al., 2019; Patil et al., 2020; Gunashinghe et al., 2020), facilitating conditions have been identified as a significant predictor of effort expectancy, supporting these findings. Sivathanu et al.'s (2019) study discovered that favorable environmental factors positively impact Indian consumers' behavioral intentions regarding digital payment systems. Similar with Patil et al. (2020) stated facilitating conditions had significant influence to use mobile payment in India. In other study from Gunashighe et al. (2020) also stated facilitating conditions was found to be significantly impacting both usage intention and e-learning use behavior (Kwateng et al., 2019).

Within the scope of this research, facilitating conditions may encompass the accessibility of details on takaful products and services, the simplicity of enrollment and payment processes, the availability of customer support, and the industry's general infrastructure. Suppose these facilitating conditions are perceived as favorable and adequate by potential participants. In that case, it is conceivable that they would develop a positive inclination toward engaging in family takaful and exhibit a heightened intention to participate. On the other hand, if the facilitating conditions are perceived as unfavorable or inadequate, potential participants may have negative perceptions of family takaful and may be less likely to participate.

2.7 HEDONIC MOTIVATION

Motivation is affected when the stimulus has relevance for the consumer and in turn, is influenced by each consumer’s specific values, objectives and needs. The customer's motivation process has begun when they identify a need, and it can be utilitarian (linked to the product’s function) or hedonic (related to multi- sensory aspects, emotions, fantasies or experiences) (Santo et al., 2022).

The desire for pleasure or enjoyment from engaging in an activity is referred to as hedonic motivation. Numerous studies provide diverse interpretations of hedonic motivation in a range of settings, including technology contexts, behavior research, and shopping motivation. Hedonistic shopping motivation refers to consumer behavior

that is motivated by aspects of consumption such as enjoyment, amusement, fantasy, and sensory stimuli (Babin et al., 1994). Consumer behavioral research defines hedonic motivation as a crucial factor influencing purchase intention. Recently, it has also been linked to customer loyalty and satisfaction (Vieira et al., 2018). In the realm of technology, hedonic motivation is characterized as the enjoyment or fun derived from using technology (Venkatesh et al., 2012).

Santo et al. (2022) a point out that the study of hedonic motivation has grown in importance as a result of the recognizable motives that cause customers to visit store windows or websites. Customers make purchases for both utilitarian and hedonistic reasons, including acquiring items as well as gratifying their emotional and experiential demands. Arnold and Reynolds (2003) presented six categories of hedonic motivations named adventure (shopping is stimulating), purchasing for self-gratification (shopping is a way to alleviate stress), purchasing for others (enjoying buying for others because when they feel happy, I also feel happy), purchasing value (enjoying buying at a discount) , social (I go shopping with my friends or family to socialize) and being at the forefront (enjoying buying to be up to date with what's new).

With relation to this study, hedonic motivation can influence behavior intention to participate in several ways. Participants in family takaful feel emotionally satisfied since it assures the safety and financial stability of their loved ones. This emotional satisfaction can be a hedonic motivation for individuals to participate in family takaful.

Moreover, participation in family takaful may provide individuals with opportunities for social interaction with like-minded individuals who share similar values and beliefs. This social interaction can also be a source of hedonic motivation to participate in family takaful. For those who subscribe family takaful may provide individuals with a sense of belonging to a larger community that shares similar values and beliefs. Individuals who participate in family takaful can be seen as a fun and enjoyable activity, especially when it involves group activities or events.

In general, behavior intention to engage in family takaful in Malaysia can be significantly influenced by hedonic motivation. Participants in family takaful may be driven to do so for reasons like emotional fulfilment, social engagement, a sense of belonging, and enjoyment in addition to financial security.

2.8 PRICE VALUE

Price value is frequently employed as the primary indicator of what consumers must give up receiving a good or service. (Rehman et al., 2020). Price value also represents the costs incurred by consumers to obtain products and/or services may be of a monetary nature (determined by the charged price for its acquisition) or non-monetary (involving the time spent, the physical and mental effort, psychological wear, transaction costs, among others) (Souki et al., 2020).

An extensive body of prior research has demonstrated that price value significantly influences behavioral intention (Raza et al., 2019; Khan et al., 2022; Boomer et al., 2022). Using a modified version of the unified theory of acceptance and use of technology (UTAUT) model, Raza et al. (2019) investigated the factors influencing the acceptance of mobile banking in Pakistani Islamic banks. The findings demonstrated that price value was positively and significantly correlated with the formation of intention, which will ultimately result in actual usage. The outcomes supported the findings of Bommer et al.'s research in 2022, which found that price value had the strongest correlations with e-wallet adoption intentions and accounted for almost all of the variances.

However, the results demonstrated that price value was an insignificant factor influencing Bangladeshi consumers' behavioral intention and actual use of mHealth services (Alam et al., 2020). The empirical results also consistent with study from Sun et al. (2020) suggested that attitude, subjective norms and perceived behavioral control positively affect purchase intentions, while price consciousness negatively affects purchase intentions. A study from Sun et al. (2020) observe consumers' attitudes towards and intentions to purchase green products on social media and to

explore the relationships among social media marketing, perceived consumer effectiveness, product knowledge, subjective norms, perceived behavioral control, price consciousness and attitudes towards and intentions to purchase green products.

In relation to this study, consumers' perception of the price value can significantly impact their decision to participate where family takaful is ubiquitous in Malaysia. Price value can influence behavioral intention towards participating in family takaful. Consumers consider the cost- effectiveness of family takaful when deciding to participate. If they perceived the reward as reasonable and the benefits to be significant, they are more likely to participate. If the perceived price value is low, consumers may perceive family takaful as too expensive, leading to a lower behavioral intention to participate.

Moreover, customers may perceive family takaful as a high-quality product if they perceive that the price reflects the value of the service provided. If the price is too low, consumers may question the quality of the service and may be less likely to participate. However, if the perceived price value is high, it may positively impact the perceived quality, leading to a higher behavioral intention to participate.

Consumers consider the value for money when deciding to participate. If they feel that the benefits provided justify the subscription paid, they are more likely to participate. If the perceived value for money is low, consumers may perceive family takaful as too expensive, leading to a lower behavioral intention to participate.

In conclusion, price value can significantly influence the behavioral intention toward participating in family takaful in Malaysia. When participating, customers consider the cost-effectiveness, perceived quality, competitive pricing, and value for money. Takaful providers should offer a reasonable price to subscribe that reflects the service's value and effectively communicates the benefits of participation to influence behavioral intention towards participation positively. Price value plays a critical role in influencing consumer behavior. If the cost of takaful is perceived as reasonable compared to the benefits offered, it will positively impact on the user's behavioral intention to participate.

Habit

Lay definitions are mainly descriptive, referring to habits as behaviors that are emitted frequently or in a persistent, automatic manner (Gardner, 2011; Houwer Jan, 2019). To illustrate, Gardner et al. (2011) define habits as "behavioral patterns learned through context dependent repetition, repeated performance in unvarying settings reinforces context behavior associations such that, subsequently, encountering the context is sufficient to automatically cue the habitual response".

Numerous studies have explored the impact of habit on behavioral intention across various contexts, such as mobile payments (Slade et al., 2015a), Wi-Fi via SMS (Astuti and Ariyanti, 2015), internet services (Moura et al., 2017), electronic devices (Albugami and Bellaaj, 2014), and fitness apps on smartphones (Dhiman et al., 2020). Furthermore, recent research has empirically validated habit as a highly dependable indicator of actual usage across diverse domains, including mobile television, mobile applications, mobile shopping applications, and electronic health records in hospitals (Wong et al., 2019; Hew et al., 2015; Miladinovic and Hong, 2016). Moreover, the habit has been reported as an insignificant driver of behavioral intention towards mobile banking services (Mahfuz et al., 2016).

In addition, habit is defined as the repeated use and regular checking of various advanced technologies and related product innovation features over an extended period to encourage people to build a positive intention toward the next model of technologies (Tamilmani et al., 2019). A habit is an automatic response to a specific context reinforced by previous experiences. In this study, habits are formed through repetition, and once established, they can significantly influence an individual's behavior toward participating in family takaful. Familiarity with family takaful can also lead to the formation of a habit. Individuals familiar with the concept of family takaful and its benefits may be more likely to participate regularly.

In addition, those who engage regularly are more likely to continue doing so even if their circumstances change once they have developed the habit. Individuals who have established a habit of participating in family takaful may do so

automatically without considering the decision. This automatic behavior may be due to previous positive experiences with the product or the influence of social norms that promote participation in family takaful.

2.9 TRUST AS A MEDIATOR

According to Mirza et al. (2017), trust is the conviction that one's trust partners are knowledgeable, trustworthy, and purposeful. They went on to say that trust develops when one party has faith in the honesty and dependability of an exchange partner.

Trust towards the banking industry is established when clients have some confidence that the bank will take care of them and make them feel secure (Jarvinen, 2014; Mirza Tabrani et al., 2017). According to Jarvinen (2014), customer trust is predicated on the consumer's experience, sense of security, and the banks' capacity to act honorably and adhere to laws and regulations. Building bank trust relationships requires banks to be dependable, sincere, and committed (Jarvinen, 2014; Mirza Tabrani et al., 2017).

Moreover, trust is defined as a customer's belief that a bank will perform its functions in accordance with their expectations (Haron et al., 2020). In the words of Sumaedi et al. (2015) "the higher the level of customer trust with the connection, the higher the customer conviction that Islamic banks operate appropriately, and vice versa." In the long run, satisfied customers will promote your business to others (Sumaedi et al). 2015). In summary, the bedrock of trust in Islamic banking services lies in a content and pleased customer base, strengthened by the bank's unwavering and reliable conduct.

Sumaedi et al. (2015) investigated the impact of trust on emotional commitment among individual clients of Islamic bank savings.They found no discernible correlation between affective commitment and trust. This result deviates from the findings of Fullerton (2011) and Sanchez-Franco (2009) regarding the relationship between affective commitment and trust. This discovery can be explained by the fact that customers of Islamic banks can choose to invest their money in several

different banks. The emotional connection that is essential to affective commitment is not possible in this case, even though the customer had faith in the bank.

Trust could also be essential in the context of takaful. Shukor (2020) made the observation that trust is a reflection of the client's faith in the honesty of the takaful agent. "A belief in takaful providers' honesty and their refusal to behave opportunistically" is the definition of trust, according to Aziz et al. (2019). Put differently, trust is a measure of a client's degree of confidence in the integrity of a Takaful agent.

Moreover, Aziz et al. (2019) demonstrated that trust plays a pivotal role in shaping behavioral intentions, highlighting a robust correlation between trust and customer satisfaction. It demonstrated the strong correlation between attitude and customer satisfaction and trust. Consumer trust is more important in the context of takaful because research indicates a strong correlation between trust and attitudinal beliefs. (Lee, 2009b in Aziz et al. 2019).

Trust is often regarded as a critical part of business relationship management, and it plays an important role in establishing long-term client connections (Sajid et al.,2019). Concern and kindness, shared values, honesty and consistency, experience and skills, and communications are all significant factors in determining trustworthiness in the financial services industry. Furthermore, one of the most important aspects of any financial goods is trust, and the skill of the financial service provider plays a critical role in changing client perception. Although takaful is concerned with the financial consultation of unforeseen risks, service provider experience in consultative capacities has a big impact on purchasers' trust in services (Sajid et al., 2019).

Online transactions require a high level of trust. In the context of online purchases, Stephen et al. (2015) said that trust is essential in exchange interactions containing unknown risks when there are no guarantees that vendors will not defraud consumers. The study by Razak et al. (2014) showed that the higher the degree of trust the customer has in a website, the higher the probability is for the customer to have

the intention of shopping on the website. It also showed that customer trust impacts directly on the willingness of customers to enter online websites, browse goods and repurchase online (Razak et al., 2014).

In addition, trust between individuals is the level of someone's belief in the truth, ability, and good intentions, as well as the belief that the cultural differences between them will not interfere with each other interests (Park et al., 2015). Trust is represented by the belief of the customer that he or she will find what they want from their exchange partners. Trust also involves the willingness to behave in specific conditions because the parties expect the exchange to deliver what they promised (Dimyati et al., 2018)

2.10 RESEARCH GAP

Reviews of the various conceptual and empirical studies on the critical success factors of family takaful reveal the importance of implementing a systematic approach to achieve the organizational objective. Previous studies have shown many of the studies related to takaful focus mainly on a comparative aspect, comparing conventional and Islamic insurance from various dimensions. These dimensions cover efficiency issues, marketing aspects of takaful products, demand side of takaful, legal aspects and policy issues.

Throughout the decades, the participants who are involved in takaful, particularly family takaful, have evolved since the Takaful Act 1984 was enacted in Malaysia. Customers in Malaysia prefer to participate if they believe can benefit to them when they participate in takaful.

Although the Malaysian government has already developed the legislation, the percentage of customers participating in family takaful is still low by 41.9% as compared to general takaful by 17.3% in 2022 (Fitch Ratings, 2022). In Malaysia, the family takaful market is yet underdeveloped compared to the goals set forth in the financial sector Blueprint for the years 2022 to 2026. Based on the statistic, A mere 42% of adults possess at least one life insurance policy or family takaful certificate

(Bank Negara Malaysia, 2022). As a result, there is a tremendous gap to investigate the key success criteria that can raise the proportion of participants in family takaful.

The quantity of empirical studies conducted on various aspects of takaful, especially family takaful, remains limited. Specifically, there is a deficiency in empirical research in Malaysia when it comes to the penetration of family takaful. Without a study on family takaful penetration, it is impossible to know to what extent the family takaful industry in Malaysia has improved penetration and met the Central Bank of Malaysia's aim.

The critical review of the literature also indicates limited evidence on family takaful in Malaysia. Most of the empirical studies discussed general takaful and takaful as a whole. Therefore, current evidence on family takaful adoption may not be generalizable for penetration in family takaful. In addition, the trust aspect has remained absent in past takaful studies. As such, this study plans to cover the critical success factors with the conceptual framework based on the combination of six theories. “Theory of Reasoned Action (TRA)”, “Theory of Planned Behavior (TPB)”, “Technology Acceptance Model (TAM)”, “Decomposed Theory of Planned Behavior (DTPB)”, “Unified Theory of Acceptance Model (UTAUT)”, and “Unified Theory of Acceptance Model 2(UTAUT2)”.

Moreover, there is limited integration of behavioral theories related to family takaful adoption in Malaysia. Most of the studies focused on economic and financial factors; there is limited research integrating behavioral theories, for instance, the Unified Theory of Acceptance and Use of Technology (UTAUT2), Theory of Planned Behaviour (TPB), or Theory of Reasoned Action (TRA) to explain adoption behaviour.

In the context of family takaful, trust in the Islamic financial system and transparency of takaful providers affect adoption decisions in Malaysia, which remains underexplored. Further studies focus on understating how trust-building mechanisms can alleviate perceived risk, especially when it comes to long-term commitments such as family takaful.

2.11 CHAPTER SUMMARY

This chapter bolsters the current study by thoroughly examining the relevant literature on the study topic. Consequently, it includes a comprehensive review of literature on behavioral intention and critical success factors influencing the penetration of family takaful in Malaysia, such as performance expectancy, facilitating conditions, hedonic motivation, effort expectancy, social influence, price value, habit, and trust as a mediator. The chapter is also well-defined by providing clear definitions of all dependent and independent variables. Lastly, the chapter addresses the research gap.

CHAPTER THREE

CONCEPTUAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

3.1 INTRODUCTION

This chapter describes the construction of the conceptual framework and the development of the hypothesis. First, it discusses the theories of human behavior, followed by the "extended unified theory of acceptance and use of technology model (UTAUT2)" to establish the main conceptual framework.

One of the most significant contributions of this research is the introduction of combination of six theories to identify the behavioral intention to participate in the family takaful in Malaysia. These theories are "Theory of Planned Behavior", "Theory of Reasoned Action", "Technology Acceptance Model", "Decomposed Theory of Planned Behavior" and "Unified Theory of Acceptance Model" and "Unified Theory of Acceptance Model 2".

The propositions of all the theories are combined to develop a research model for the behavioral intention towards the penetration of family takaful in Malaysia. The review proved that literature included is precise, accurate and reliable. The chapter's final sections focus on developing a hypothesis by drawing evidence from related literature.

Another term to introduce is subjective norm. Subjective norm refers to the social pressure or influences individuals perceive from people important to them such as family, friends, or religious leaders, regarding whether or not they should engage in a particular behavior.

3.2 RELEVANT THEORIES ON HUMAN BEHAVIOR

This section discusses the “theory of reasoned action (TRA)”, “the theory of planned behavior (TPB)” and “the decomposed theory of planned behavior (DTPB). In this regard, while there are numerous assumptions and discourses on the applications of these theories to financial products based on the literature reviews undertaken. It is crucial to emphasize, however, that each of these ideas has its own set of limitations.

3.2.1 Definition of TRA (“Theory of Reasoned Action”)

Since its conception by Fishbein and Ajzen in 1975, the “theory of reasoned action (TRA)” has become one of the most prominent theories on human behavior. It advocates a hypothesis that attitudes and subjective norms will influence intention, which in turn influences behavior. (Ajzen & Fishbein, 1980). In this regard, intention, denotes whether a person will act in a certain way (Fishbein & Ajzen, 1975). In the meantime, according to the theory, "attitude" reflects an individual's general sense of approval or disapproval toward the behavior in question. Furthermore, the reference group's agreement with a behavior is indicated by a subjective norm. Mei Ying Wu et al. (2011) argued that behavioral intention controls one’s actual behavior. In this regard, humans are fundamentally rational and would make systematic use of the knowledge at their disposal while making decisions. TRA also presupposes that the observed behavior is entirely voluntary on the part of the performer (Chang, 1998) and that as mentioned in Ajzen (1991), intentions constitute behavioral intentions (Ajzen, 1991).

One’s willingness to act reflects their intention (Ajzen, 1991) while Shao et al. (2004) describe purchase intention as customers’ willingness to pay for a product or service. In this regard earlier study by Morwitz et al. (2007) she mentioned that purchase intention is fundamental in consumer behavior models. As discussed in Karim et al (2011), purchase intention is intertwined with preparedness and desire to purchase goods. Thus, stronger intention often leads one to perform the actual

behavior. Based on these discussions, intention is the most suitable indicator to determine real behavior, according to Fishbein and Ajzen (1975).

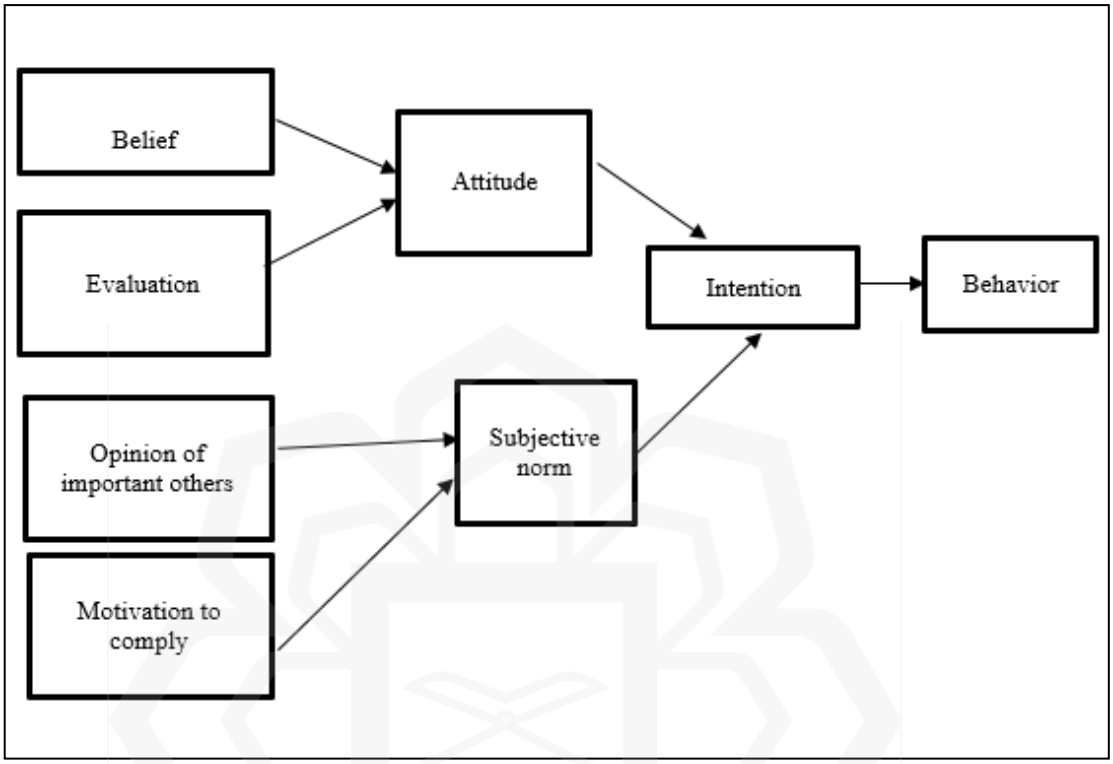

Figure 3.1 Theory of Reasoned Action (TRA)
Source: Ajzen and Fishbein (1980)

As depicted in Figure 3.1 above, according to Ajzen and Fishbein (1980) attitude and subjective norm could be used to explain consumers' behavior. Subjective norm is influenced by opinions of others and the motivation to comply while attitude sparks from one's belief and evaluation. According to Venkatesh et al. (2003), behavioral intention explains the desire to engage in a particular behavior. The TRA model further states that customers' behavioral intentions are shaped by their attitude and subjective norms. They declare that behavioral purpose is chargeable for a massive a part of behavior variance, making it viable to expect particular behaviors primarily based totally on the purpose to carry out the behavior (Puschel et al., 2010).

TRA retains the necessary theoretical elements to explain and predict moral behavior, behavioral belief, outcome evaluation, and attitudes toward the behavior.

3.2.2 Application of TRA

The TRA is widely used in numerous studies and disciplines, particularly to explain on human behavior. Summers and Xu (2006) discovered the usefulness of TRA in predicting consumers' intention to purchase luxury goods, while Lada et al. (2009) found that TRA explains why consumers select halal items. The TRA model has also been applied in earlier research (Omar & Frimpong, 2007; Omar, 2007; Fauziah et al., 2008; Amin & Chong, 2011; Amin et al., 2011; Echchabi & Olaniyi, 2012) to explain why consumers intend to subscribe to financial services products such as takaful products.

3.2.3 Limitation of TRA

There are certain limitations and criticisms under the TRA. According to Aiken (2002), the model does not take past behavior into account when forecasting future behavior. Furthermore, Ajzen and Fishbein (1980) noted that because individuals are free to choose whether to engage in a behavior, TRA is essentially voluntary. In this sense, circumstances in which a person lacks total or conscious control over a situation are not taken into account by TRA. In this regard, volitional control dictates the behavior that can be performed by an individual where he/she has the power to choose his or her own decision (Bagozzi, 1993). Furthermore, for behaviors influenced by willpower, abilities, and resources, TRA's explanatory power will decline when there is a shift in motives prior to executing the behavior (Ajzen 1985).

3.2.4 Definition of Theory of Planned Behavior (TPB)

One of the most widely used frameworks for analyzing human behavior is the "Theory of Planned Behavior (TPB)". It was created in 1985 by Ajzen as a TRA expansion. Both volitional and non-volitional facets of human behavior are taken into account by the TPB. It claims that consumers' perceived behavioral control determines their purchase intention and behavior (Ajzen, 1991).

TRA is distinct from TPB with the addition of perceived behavior control in the latter model. It describes that human action is driven by subjective norms (SN), behavioral intents (BI), attitude (Att), and perceived behavior control (PBC). In this light, as described in Ajzen and Madden, (1986) perceived behavior control can be influenced by how people perceive the ease of performing a behavior. One's behavior, which is influenced by PBC, subjective norms, and attitude, can be explained by their behavioral intention. An individual's attitude influences their assessment of a behavior, both positively and negatively. Concurrently, behavior is governed by subjective norms, which mold an individual's perspective depending on what matters to them—their friends and family, in particular. Additionally, PBC requires resources and opportunities to act on the individual's belief (Ajzen, 1992).

One's tendency to participate in a particular behavior is influenced by their perceived control. In this sense, one's beliefs about an action will lead one to carry it out. According to Bagozzi (1993), TPB offers a better understanding of situations in which a behavior has limitations, whereas TRA can predict behaviors under volatile control. This is because PBC considers an action's limitations as perceived by the individual and inhibits behavior when a personal challenge arises (Bagozzi, 1993).

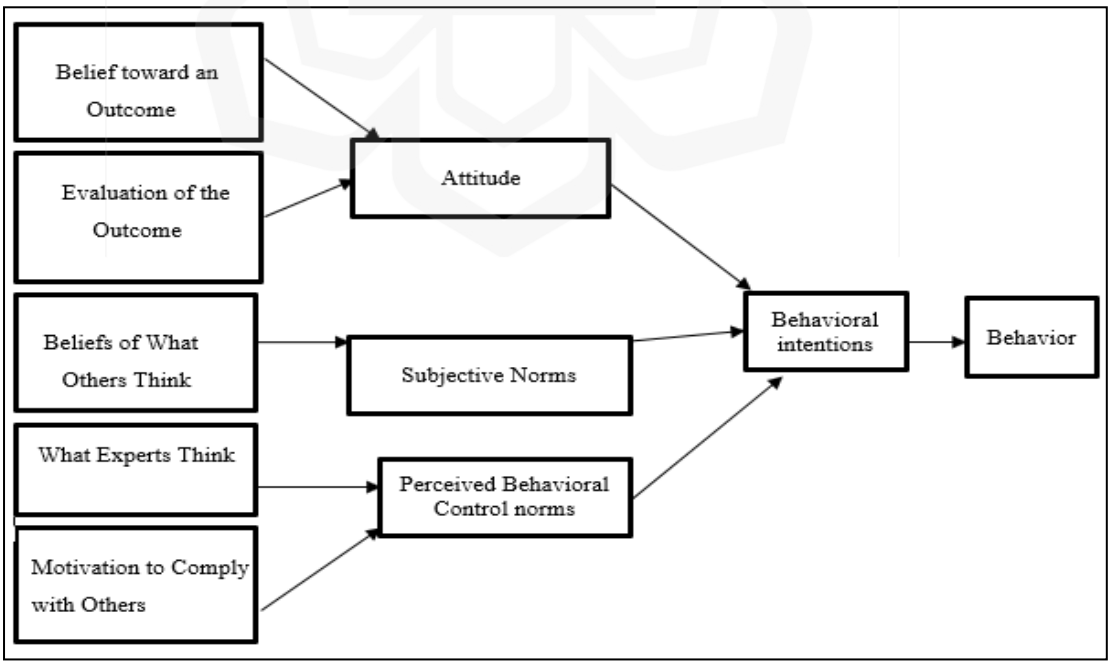

Figure 3.2 Theory of Planned Behavior (TPB)
Source: Ajzen and Fishbein (1980)

3.2.5 The Application on TPB

Numerous financial services research, including Islamic banking, alms, and insurance, have discussed the TPB. According to Hasnah Haron et al. (2011), attitude acts as a mediator in the relationship between supervisory influence, sales target, and role ambiguity and salaried insurance agents' intention to receive a commission. The subjective standards, attitude, and perceived behavioral control of non-Muslim Malaysian customers of Islamic banking products and services affected their intentions to buy Islamic goods and services, according to a study conducted on the subject. (Siang & Weng, 2011). According to Hanudin Amin et al. (2009), perceived behavioral control subjective norms and attitude are key drivers for purchasing Islamic products and services for clients who were not homeowners under the Islamic home finance or *Musharakah Mutanaqisah*.

The application of TPB can be shown under the zakat payment for Muslim academician in higher learning institutions. It stated that consumer's monthly obligation to comply with zakat is highly influenced by attitude behavior and perceived behavior (Raedah Sapingi et al., 2011). Similar to the study from Nurul Huda et al. (2012), attitudes and behavioral control are two factors that influence the intention of Muslims in Jakarta.

3.2.6 Limitation of TPB

Based on the reviews of previous and current financial services studies, there are certain limitations, and several criticisms found on TPB (Husin & Rahman, 2016; Amin et al., 2014). Besides the extensive application of TPB in several studies, however, according to several authors, this theory is criticized due to the fact that it does not incorporate emotions in the human behavior process (Conner & Armitage, 1998). To overcome this issue, several researchers have suggested specific objectives for instance, and Bhattacharjee (2000) was among of them who recommends including perceived usefulness and friendliness as determinants of attitude and behavior of consumers.

3.2.7 Definition of Technology Acceptance Model (TAM)

Fred D. Davis proposed the Technology Acceptance Model (TAM) in 1989 as a new model for testing and developing user acceptance of technology. The objective of the model is to explain a broad range of determinants involved in the acceptance of computer technologies and the end user behaviors towards computer technologies.

The TAM emphasizes the impact of perceived utility and perceived ease of use on attitude (Davis, 1989; Lee et al. 2003). In this sense, one's perception of how simple it is to use a specific system in an organizational setting is indicated by perceived usability. Next, Davis (1989) explained that perceived usefulness reflects "the degree to which a person believes that using a particular system would enhance his or her job performance, which directly influences intention to use while perceived ease of use has indirect effect through perceived usefulness and attitude on the behavioral intention. Figure 3.3 is the model for technology acceptance model (TAM)

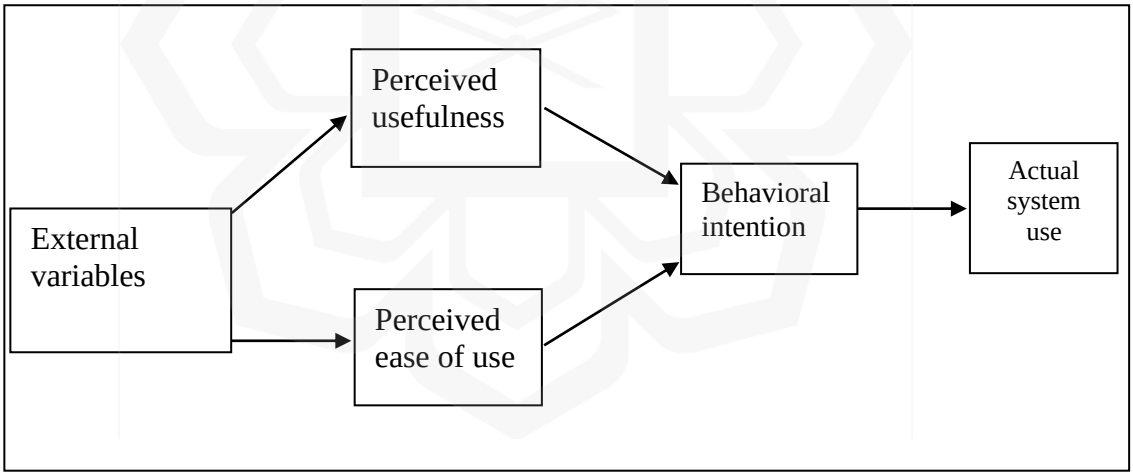

Figure 3.3 Technology Acceptance Model (TAM)
Source: Adopted D. Davis (1985)

3.2.8 Application of TAM

TAM has been used to examine Malaysian acceptance of online and mobile banking (Amin et al., 2007). According to the study, there is a substantial correlation between Malaysians' intentions to use mobile banking and their perceived ease of use. In this

light, perceived ease of use significantly increased behavioral intention to use online banking in Malaysia (Guriting & Ndubisi, 2006).

In a similar vein, an individual's initial preference to use online banking is greatly influenced by perceived ease of use (Ramayah, et al., 2003). Wang et al. (2003) and Adams et al. (1992) found that when users are more likely to use to use online banking when they believe that it is easier to use.

3.2.9 Limitation of TAM

The limitation of TAM model, which was designed to be used in an organizational context rather than in everyday life context making it not favorable to study for mobile based technology (Lule et al., 2012). Another criticism of TAM is the attitude factor that may have significant effects on system usage. Affective and cognitive also have a significant, positive relationship with attitude (Yang & Yoo, 2004).

Moreover, several researchers found out TAM model insufficient to exhibit influence on user's behavioral intention due to lack of substantial features (Taylor & Todd, 1995; Chitungo & Munongo, 2013).

Another limitation is that the TAM model is used to describe employee behavior in the organization to adopt new technology to improve work performance, where the users accept new technology based on personal expenses. The TAM model has insufficient information to discuss physicians' decisions to accept telemedicine technology in the health-care context. (Hu et al., 1999).

3.2.10 The Definition of Decomposed Theory of Planned Behavior (DTPB)

The "Decomposed Theory of Planned Behavior," or DTPB, is an expansion of the TPB developed by Todd and Taylor in 1995. The theory put forth three important factors that influence behavior in humans: attitude, subjective norms, and PBC. The "Technology Acceptance Model" (TAM) and TPB are combined to form the DTPB.

When assessing human behavior in the context of information technology, multidimensional constructs help to support attitude, subjective norms, and PBC. – Easy of use, perceived utility, and compatibility are the three components that make up attitude; peer and superior influence are the components that make up subjective norm; and self-efficacy, resource facilitation, and technological facilitation are the components that make up PBC. The DTPB, adopted from Taylor and Todd (1995) is shown in Figure 3.4.

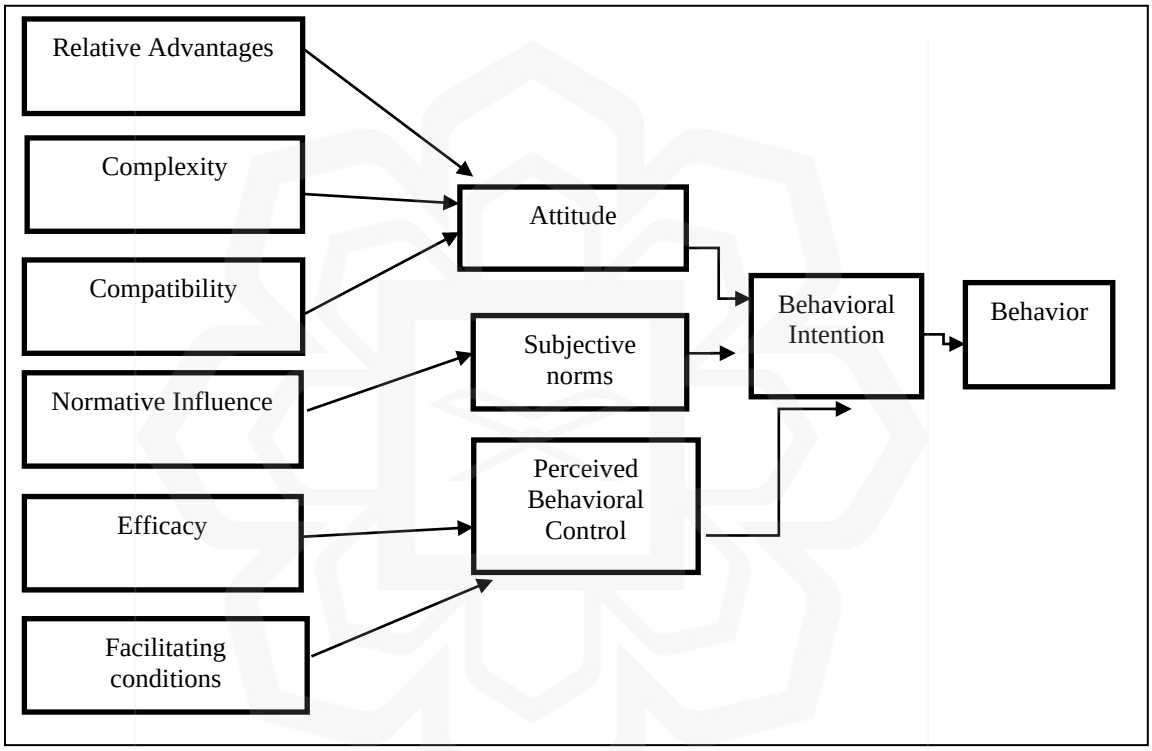

Figure 3.4 Decomposed Theory of Planned Behavior
Source: Adopted from Taylor and Todd (1995)

In order to comprehend the connections between belief structures and the antecedents of intention, studies have looked at methods for breaking beliefs down into multidimensional constructs (Bagozzi et al., 1993). DTPB breaks down attitude, subjective norm, and perceived behavioral control into multiple dimensions, as shown in Figure 3.3. Taylor and Todd (1995) further explained the characteristics of each of the dimensions. Attitude can be decomposed into three characteristics: relative advantages, complexity, and compatibility.

Next, DTPB also explains the second dimension related to the subjective norm. Subjective norm can be decomposed into one characteristic, which is normative influences. Furthermore, perceived behavioral control can be decomposed into efficacy and facilitating conditions.

Taylor and Todd (1995) deconstructed subjective norm into peer influence and superior influence. Nevertheless, this study only looks at how the decomposed subjective norm affects society. Social influences include word-of-mouth, or personal influence from friends and family, media, and peer-to-peer influence. In this regard, media influence describes how a person's decision-making process is impacted by mass media. (Lewis et al., 2003).

Decomposed PBC, according to Taylor and Todd (1995), are metrics based on three constructs, namely self-efficacy, resources facilitating condition, and technology facilitating condition. Only two components, self-efficacy which denotes a person's belief in his or her own abilities to execute a task and resource facilitation, were altered for the purposes of this study (Taylor & Todd, 1995). In other words, a person belief in the skills to complete a task has a substantial impact on their behavior (Ajzen, 1991). On the other hand, opinions regarding the availability of resources to support the desired behavior are referred to as resource enabling conditions. (Taylor & Todd, 1995). It is posited that one’s behavior will change when they believe that there are available resources.

3.2.11 The Definition of Unified Theory of Acceptance and Use of Technology (UTAUT)

The "Unified Theory of Adoption and Use of Technology (UTAUT)" was developed by Venkatesh et al. (2003) to integrate various viewpoints on user and innovation acceptance (Williams et al., 2015). The UTAUT hypothesis comprises eight distinct hypotheses regarding the factors that impact the adoption of technology. These include “Theory of Reasoned Action (TRA)”, “Technology Acceptance Model (TAM)”, Motivational Model, Theory of Planned Behavior (TPB), “PC Usage

Model", "Social Cognitive Theory", "TAM-TPB", And "Innovation Diffusion Theory"

Four basic constructs—performance expectancy, effort expectancy, social influence, and enabling conditions—are the direct drivers of behavioral intents in UTAUT. The variables (gender, age, experience, and voluntariness of use) are used to explain the effects of performance expectancy, effort expectancy, social influence, and facilitating conditions. The model UTAUT is shown in Figure 3.5.

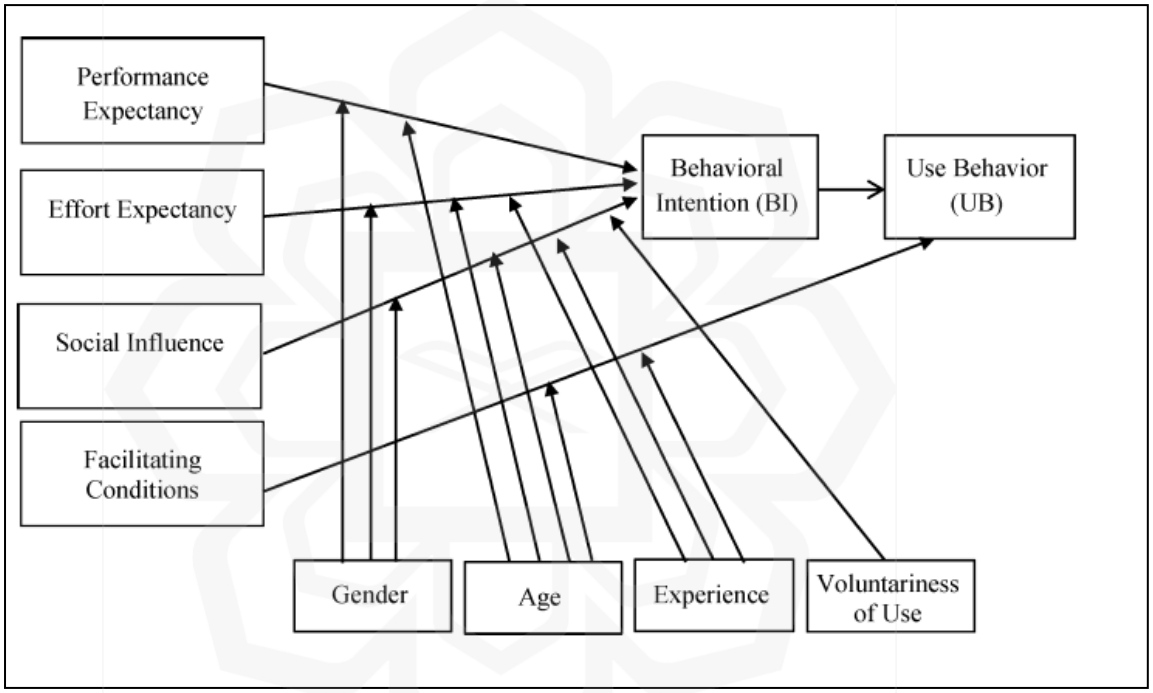

Figure 3.5 UTAUT model
Source: Adopted from Venkatesh et al. (2003)

Performance expectancy is how individual views that employing technology would improve performance (Venkatesh et al., 2003). An individual's expectations regarding the benefits they will receive from utilizing the system are referred to as performance expectancy. People will embrace technology, including mobile banking, if they think it will enable them to accomplish their objectives. (Compeau & Higgins, 1995). When customers perceive the benefits of technology, they build a positive purpose to apply mobile technology (Mazhar, 2014). Furthermore, performance

expectancy can be defined as an individual's belief that adopting Islamic banking services will assist him or her in doing bank activities more efficiently (Venkatesh et al., 2012). Effort expectancy (EE) can be defined as how easy it is for the individual to use a particular system (Venkatesh et al., 2003). In the context of mobile banking, the ease with which technology is adopted enhances its adoption rate (Koenig-Lewis et al., 2010). Mazhar et al. (2014) explained that it will help to foster a favorable attitude about technology of the customers perceived the technology easy. It has been found by the users that EE significantly influences users' behavioral intention in the context of Islamic banking. (Martins et al., 2014).

Social influence (SI) describes people's beliefs about how their relatives will feel if they accept technology. (Venkatesh et al., 2003). SI denotes the weight that an individual places on the views of others when it comes to the usage of technology. In a prior study, Riquelme and Rios (2010) discovered that social influence affects a person's inclination to use internet banking in Singapore. Echchabi and Olaniyi (2012) discovered in a different study that customer intentions towards subjective norms have an impact on Moroccan attitudes on Islamic finance. Reni and Ahmad (2016) claim that the intention of customers to adopt Islamic banking in Indonesia is significantly influenced by subjective standards.

The systems and resources that make using mobile banking apps easier are known as facilitating conditions (FC). As stated by Venkatesh et al. (2003), "the degree to which an individual believes that an organizational and technical infrastructure exists to support the use of the system" is another definition of fuzzy consciousness. According to Baptista and Oliveira (2015), people's willingness to accept technology will increase with the quality of FC that is available to them. Nisha (2016) found in another study that the FC has a major impact on a user's decision to use mobile banking.

3.2.12 Extended Unified Theory of Acceptance and Use of Technology Model (UTAUT2)

The first UTAUT model was developed to examine employee technology use and acceptance and deemed unsuitable to examine consumer technologies. Hnemce, UTAUT 2 was introduced as an extension of UTAUT to analyze consumer technologies further (Venkatesh et al., 2012). Using a different approach from the UTAUT model, the UTAUT 2 model integrated price value, habit, and hedonic motivation to better suit the specific use context of the consumer (Venkatesh et al., 2012). The addition of constructs in UTAUT helps increase UTAUT's consumer focus. The UTAUT 2 model is displayed in Figure 3.6 below.

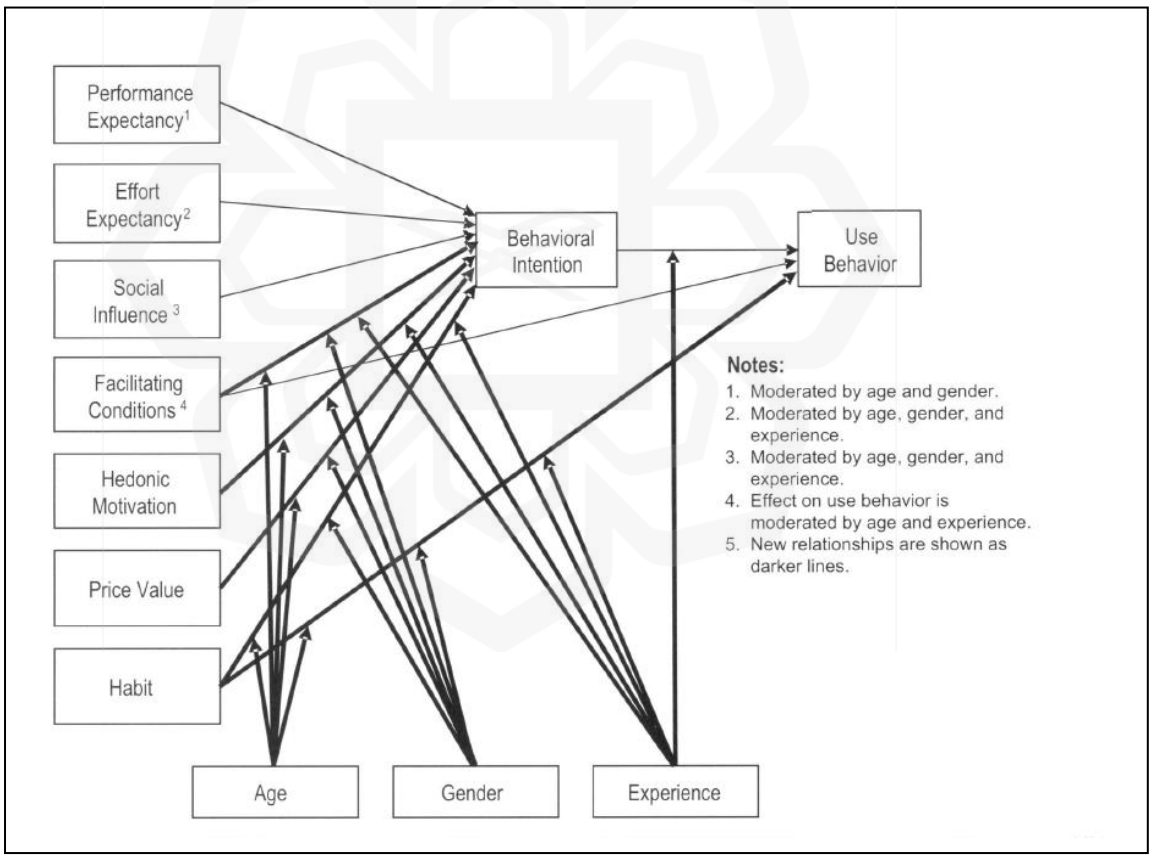

Figure 3.6 UTAUT2 Model
Source: Adopted from Venkatesh et al. (2012)

Hedonic Motivation

Hedonic motivation is defined "as the fun or pleasure derived from using a technology, and it has been shown to play an important role in determining technology acceptance and use" (Brown and Venkatesh, 2005). Other studies like Kim and Forsythe (2007) claimed that consumer's consumption attitude towards a hedonic motivation had a positive relationship than functional motivations with attitude using product virtualization technologies. Based on Brown and Venkatesh (2005), hedonic motivation has also been found as an important element in technology acceptance.

Price Value

Consumer attitudes regarding mobile marketing are significantly influenced by the product's price value (Venkatesh et al., 2012). The price is a determining factor in the consumer's purchase decision (Eneizan et al. 2019). According to their perceived value of the goods and services based on marketing research, the price is conceptualized along with the quality of the goods and services (Eneizan et al., 2019). The cost and price are structured in a way that encourages consumers to use technology. When the price value of new technology outweighs the financial cost, users are more likely to adopt it (Bakan, 1996; Deaux & Lewis, 1984). Previous studies by Hong et al. (2008) and Shin (2009) claimed that price value will have a favorable effect on behavioral intention. The price value has been shown in prior research to influence technology-related intention and behavior (Gerrard et al., 2006; Lee & Allaway, 2002; Alalwan, 2018).

Habit

According to Venkatesh et al. (2012), a habit is an action that is repeated based on an individual's experiences and knowledge. According to Venkatesh et al. (2003), there are two things preventing people from accepting technology: habit and experience. Additionally, habit has a positive impact on how teachers in the Philippines use ICTs for instruction (Kim et al., 2020).

Table 3.1 Summary of the Theories

Theories	**Findings on the constructs that affect behavioral intention**	**Author and year**
"Theory of reasoned action (TRA)"	Attitude and subjective norms	Ajzen and Fishbein (1980)
"Theory of perceived behavior (TPB)"	Attitude, subjective norms and perceived behavioral control	Ajzen and Fishbein (1980)
"Technology Accepted Model (TAM)"	Attitude, perceived usefulness and perceived ease of use	Davis (1985)
"Decomposed theory of planned behavior (DTPB)"	Relative advantages, complexity, compatibility, normative influence, efficacy, facilitating condition, attitude, perceived usefulness and perceived ease of use	Taylor and Todd (1995)
"Unified Theory of Acceptance and use of technology (UTAUT)"	Performance expectancy, effort expectancy, social influence and facilitating condition	Venkatesh (2003)
"Unified Theory of Acceptance and use of technology (UTAUT 2)"	Performance expectancy, effort expectancy, social influence and facilitating condition, hedonic motivation, price value and habit	Venkatesh (2012)

There are six theories related to behavioral intention. As shown in Table 3.1, the theories can be summarized based on the authors and their constructs. The behavioral intention theory was introduced by Ajzen and Fishbein in 1980, right after they established the TRA model. There are some limitations on the TRA model, and Ajzen (1985) expanded the model further to become the TPB model.

Davis (1985) later introduced the TAM model to overcome the TPB model's limitations by including the TAM perceived ease of use. Over the years, Taylor and Todd (1995) further improved the TPB model to become DTPB. Taylor and Todd (1995) added more determinants that affect behavioral intention, namely: relative advantages, complexity, compatibility, normative influence, efficacy, and facilitating condition.

Venkatesh et al. (2003)’s model highlights performance expectancy, effort expectancy, social influence, and facilitating condition.

The development of consumer electronics led to the extension of the UTAUT model to incorporate the consumer context. The UTAUT2 model, which added hedonic incentive, price value, and habit to the original UTAUT model.

3.3 THEORY EXTENSIONS AND MODIFICATIONS

After accounting for the original constructs, the theories are open to additional predictors that can capture a significant portion of the variance in both intentions and behavior, since TRA, TPB, TAM, a combination of TAM and TPB (TAM-TPB), and IDT do not account for all determinants of intentions and behavior.

As a result, numerous revisions to the initial theories have been found in more recent studies, including those conducted by Venkatesh (2003, 2012) and Kanilic et al. (2020). These adapted theories can be used to quantify the factors influencing Malaysians' intentions to engage in family takaful.

The Unified Theory of Acceptance and Use of Technology (UTAUT) was initially developed by Venkatesh et al. (2003) and later extended into UTAUT2 (Venkatesh et al., 2012) to address emerging trends and factors influencing technology acceptance in consumer contexts. Consumers often engage in technologies differently, motivated by personal benefits, enjoyment or social influences less critical to the environment.

In consumer behavior, enjoyment can be a significant motivator, particularly in technologies in other entertainment driven applications. Neglecting this would lead to an incomplete understanding of why consumers adopt certain technologies.

3.4 HYPOTHESIS DEVELOPMENT

3.4.1 Performance Expectancy and Its Relationship with Behavioral Intention

Multiple studies have been conducted to examine the significance of behavioral intention and performance expectancy. Performance expectancy has been identified as one of the significant variables influencing the behavioral intention to adopt internet banking (Alalwan et al. 2018, and Hassanudin et al., 2020).. Similarly, performance expectancy influenced mobile technology adoption (Samsudeen et al., 2022). Studies have found that performance expectancy has a significant impact towards behavioral intention. Moreover, a study by Lai et al. (2009) applies the extended model of UTAUT and reported that PE affects the individual intention while adopting mobile commerce. Hence, it is hypothesized that:

H1: Performance expectancy positively influences consumer intentions to participate in family takaful

3.4.2 Effort Expectancy and Its Relationship with Behavioral Intention

According to Venkatesh et al. (2012), effort expectancy (EE) is the level of ease that consumers associate with using technology. According to Samsudeen et al. (2022), easy-to-use technology will undoubtedly increase adoption rates. If mobile banking is shown to be simple to use, users will be more inclined to adopt technology for their banking needs (Samsudeen et al., 2022). According to a report on e-learning adoption, perceived ease of use plays a significant role in motivating individuals to adopt e-learning (Samsudeen et al., 2022). Moreover, EE has a significant impact on M-banking adoption among university students (Govender & Sihlali, 2014).

As a result, the following theory is put forth:

H2: Effort expectancy positively influences consumer intentions to participate in family takaful

3.4.3 Social Influence and Its Relationship with Behavioral Intention

The degree to which friends and family notice the results of utilizing new products or innovations is a direct indicator of social influence (SI) (Eneizan et al., 2019). Prospective users frequently look to their social circles for advice on new technologies, and they are susceptible to the opinions of influential people.

In e- commerce, social influence is essential in explaining the intention to use mobile technologies (Daniali et al., 2020). Moreover, social influence assumes that students are more likely to comply with the adoption of 4.5G technology when they receive the recommendation to use it by those important to them. The previous literature has shown that students' intentions to use technology have often been influences by their peers, instructors, parents, and others who are important to them (Daniali et al.,2020).

Furthermore, Echchabi and Olaniyi's (2012) findings indicated that social factors have an impact on Moroccan customers' intentions to use Islamic banking products. Another study by Reni and Ahmad (2016) that used TRA to look into Indonesia's adoption of Islamic banking and found that subjective norms have a big impact on customer intention also supports this. As a result, the following hypothesis is put forth:

H3: Social influence positively influences behavioral intention to participate in family takaful.

3.4.4 Facilitating Conditions and Its Relationship with Behavioral Intention

According to Venkatesh et al. (2003), beliefs regarding the availability of resources to support the intended behavior are referred to as facilitating conditions. Resources can generally include time, money, abilities, collaboration, and other things.

Numerous empirical studies (Nikolopoulou et al., 2020; Azizi et al., 2020; Raza et al., 2019) have indicated that facilitating conditions can be conceptualized as

the extent to which students perceive that there is adequate organizational and technical infrastructure to support the use of mobile phones as supportive tools in educational studies.

Using an adapted version of the TAM, a study discovered that action's purpose was the factor that most strongly predicted the behavioral intention to use a conditionally automated vehicle (Nordhoff et al., 2020).

Hence, it is hypothesized that:

H4: Facilitating conditions positively influence the behavioral intention to participate in family takaful.

3.4.5 Hedonic Motivation and Its Relationship with Behavioral Intention

Studies confirmed that hedonic motivation predicts behavioral intention in the mobile banking field. For instance, hedonic motivation influences secondary school teachers' behavioral intention to use mobile technology (Omar et al., 2019). Zoubi et al. (2019). also found that Jordanian students' perceived enjoyment significantly influences on their mobile learning acceptance intentions

Hedonic motivation was found to positively predict educators' and students' behavioral intention to adopt and use mobile banking internet (Wong et al., 2019). The hypothesis is stipulated that:

H5: Hedonic motivation influences the behavioral intention to participate in family takaful.

3.4.6 Price Value and Its Relationship with Behavioral Intention

The perceived difference between the monetary value of mobile shopping applications and the desired outcomes is known as price value. Customers are more likely to be drawn to using mobile shopping on mobile devices and gadgets if the benefits of the apps are deemed to be greater than their financial cost (Hanif et al., 2022).

Wong et al. (2019) confirmed the positive relationship between price value and participants behavioral intention in the context of using mobile internet. Hence, this study hypothesizes,

H6: Price value predicts the behavioral intention to participate in family takaful

3.4.7 Habit and Its Relationship with Behavioral Intention

Habit is referred to as behaviors that are emitted frequently, persistent, and automatic manner (Gardner, 2011). Another definition of habits refers as past experience such as the idea that habits are the result of the repetition of behaviors (Gardner, 2011).

Moreover, habit also is one of the interesting determinants introduced by Venkatesh in the development of UTAUT2 model (Venkatesh et al., 2012). Habit was observed as a determinant with a greatly significant effect on a person towards the utilization of online learning media (Herting et al., 2020) It is confirming that the behavioral intention of people towards the use of habit increases when they utilize new technologies (Yu et al., 2021).

Numerous research demonstrated a relationship between habit and behavioral intention in internet banking, halal food, mobile internet, micro lecture and residents' green purchasing intentions (Nikolopoulou et al., 2021; Wijaya & Weinhandi, 2022; Thaker et al., 2022).

The study from Wang et al. (2019) showed that habit had an independent influence on residents' intentions. Residents who have formed a habit continue to

maintain a higher purchase intention. Therefore, the residents' habits could affect their intentions to purchase green products (Wang et al., 2019).

Studies found that habit positively influences the intention to use and actual usage technology (Venkatesh et al., 2012; Thaker et al., 2022). The study is also supported by Amalia and Suhartanto (2020) when they demonstrated that habit and purchase intention can independently affect their purchasing behavior on halal food in Indonesia. Habit was also found to be significant in predicting teachers' intention of mobile internet use in educational purpose.

Thus, the following is hypothesized:

H7: Habit influences the behavioral intention to participate in family takaful

3.4.8 Trust as Mediator

According to Shukor (2020), trust is one of the most significant factors influencing the quality of relationships, loyalty intentions, and long-lasting buyer-seller relationships. Additionally, trust is a result of behavioral intentions that express a client's faith in a service provider (Sumaedi et al., 2015). Because services are intangible and are frequently marketed to customers by an organization, trust plays a crucial role in service relationships (Berry, 1995; Sumaedi et al., 2015).

Walter and Ritter (2003) stated that adoption, trust, and commitment are key drivers for value creation. Trust implies a level of anticipation, faith in others' conduct, and an inherent vulnerability to those actions (Murphy et al., 2007).

In the context of family takaful in Malaysia, trust serves as a critical mediator because it is the factor that bridges the gap between behavioral intention and actual behavior. Trust enhances the perceived behavioral control and mitigates uncertainties, making the transition from intention to participation in the family takaful. It plays a role in shaping attitudes and perceived social norms, for example, in trust in community endorsement, which ultimately impacts the people to participate.

Moreover, trust can be defined as the belief in the truthfulness of a service provider's statement or promise and their ability to fulfill their obligation. Trust is a critical mediating variable between the behavioral intention and penetration of family takaful in Malaysia. Thus, it leads to the hypothesis:

H8: Trust as a mediating variable positively influences behavioral intention to participate in family takaful

3.5 PROPOSED CONCEPTUAL FRAMEWORK

The research framework proposes to adopt the UTAUT2 model to analyze the behavioral intention towards the penetration of family takaful in Malaysia. UTAUT2 model by Venkatesh et al. (2012) is chosen because it incorporates all the determinants on the behavior intention in the previous models with additional determinants that take into consideration the consumer context. The UTAUT2 model integrates components from seven different models, including the "Technology Acceptance Model" (TAM), the motivational model, the "Theory of Planned Behavior (TPB)", the combination of TAM and TPB, a model of computer usage, the "Innovation Diffusion Theory", and the "Social Cognitive Theory". (Venkatesh et al. 2003).

According to the UTAUT2 model, behavioral intention is determined by seven determinants: performance expectancy, effort expectancy, social influence, enabling conditions, hedonic incentives, price value, and habit. Using the seven criteria, the current study aims to analyze customers' behavioral intention to participate in a family takaful scheme. The study specifically seeks to determine whether the seven drivers are critical success factors for Malaysia's family takaful plan's adoption.

The details of UTAUT2 model adopted for this study is illustrated in Figure 3.6 below. It should be noted that the UTAUT2 model adopted in the proposed research framework added trust as the mediating variable to replace the original mediating variables used by Venkatesh (2012). The original mediating variables used by Venkatesh (2012) namely age, gender and experience may not be suitable for this

research. Instead, trust is more suitable. The reason for choosing trust as the mediating variable is explained in Figure 3.6 below.

Critical Success Factors

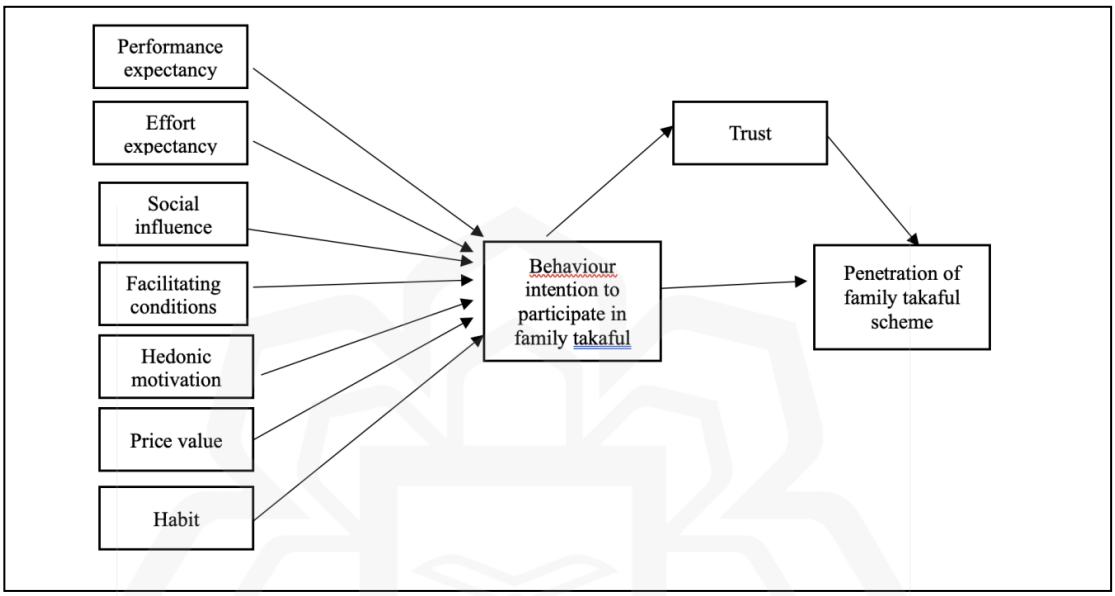

Figure 3.7 Proposed Research Framework
Source: Adopted from Venkatesh (2012)

3.6 CHAPTER SUMMARY

In conclusion, this chapter presents both theoretical and conceptual framework of this research. In the theoretical framework, a brief introduction on theories used in this study was provided and the framework of this study is summarized in Figure 3.7: Proposed Research Framework. It illustrated how the ideas are organized, with the theories and variables held together to achieve the research objectives and justified seven essential success criteria that will affect how Malaysians intend to behave when family takaful becomes more widespread. The chapter was concluded with a discussion of trust as a mediating factor between behavioral intention and the penetration of family takaful in Malaysia.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1 INTRODUCTION

The researcher has identified several potential research gaps based on the literature reviews. The elements pertaining to consumer intention are the main concern which piqued the researcher’s interest in conceptualizing and operationalizing the factors influencing consumer intention has been piqued. The research techniques, protocols, and data analysis employed throughout the study are covered in this chapter.

4.2 RESEARCH METHOD

4.2.1 Qualitative versus Quantitative

Research methods can be classified into mixed, qualitative, and quantitative. In this regard, data generated by qualitative and quantitative research primarily differs. Quantitative research emphasizes deriving numerical scores to analyze the scenario under study. In contrast, qualitative research places a stronger emphasis on the researcher's observations and insights regarding the specific scenario. As a result, qualitative research results are often in the form of narrative reports that describe and interpret the participants based on close observations which provide very detailed descriptions of the phenomenon. In the interim, quantitative research centers on statistical analysis and the interpretation of hypotheses concerning relationships between constructs (Gravetter et al., 2012). In this context, quantitative research is typically perceived as more formalized and structured compared to qualitative research. Creswell (2004) defines a quantitative research approach as an investigation into a social or human problem based on testing a theory comprised of constructs, measuring it using numerical data, and analyzing the results through statistical procedures to assess the validity of the theory's predictive generalizations. The final category of research methods is the mixed method approach, where the investigator

integrates both qualitative and quantitative data sources.

A number of factors should be taken into account when choosing which of these methods, if any, to use. Budget and time constraints, research questions, the applicability of the results, the method's level of problem understanding, and the resources available at the time of the study are a few of them (Hall, 2008).

The quantitative approach is the most appropriate method to use for this study. It aligns with the study's aim to investigate the potential relationships between the constructs, and hypotheses were developed to test those relationships. The study aims to investigate specific constructs such as performance expectancy, effort expectancy, price value, habit, social influence, facilitating conditions, and trust, which can be quantitively measured.

The quantitative approach excels in testing predefined hypotheses. It allows for rigorous testing of these hypotheses to determine if they can be measured for the whole population.

4.2.2 Inductive versus Deductive

The goal of research is to discover new things. Researchers typically begin their work with preconceived notions about what they hope to learn and how they will conduct and learn during the project. Meanwhile according to Creswell (2003), a paradigm is characterized by the researcher's beliefs, worldview, and method of understanding the world.

While there are a variety of paradigms employed in research with constructivism and positivism are two prominent paradigms. Positivism focuses on identify and validate a set of probable causal laws to forecast broad patterns of human behavior. It is defined by Neuman as "an organized method for combining deductive logic with precise empirical observations of individual behavior." Thus, positivist researchers typically believe that theoretical models should be the foundation of research. Subsequently, the researcher employs quantitative techniques like

experiments and surveys to design his research. Conversely, a constructivist researcher holds the belief that knowledge emerges as a result of individuals interacting with one another. His understandings, which may be shaped by his upbringing, experiences, culture, and prior knowledge, shape the way he perceives the world. (Gray, 2004). Therefore, an inductive approach is typically used by constructivist researchers, who also employ qualitative techniques like interviews. Furthermore, according to Sekaran (2003), researchers can also employ mixed induction and deduction processes. Given the nature of the study, which included proposed model extension, previously established hypotheses on relationships between the constructs, and the use of surveys to gather data, the researchers chose to employ the deductive approach in this investigation. The reason for choosing the deductive approach is to test the existing theories to be tested in the research. Deductive reasoning is also hypothesis driven. It allows the researchers to develop a hypothesis based on the existing knowledge and use the research as a tool to confirm these hypotheses.

4.3 QUESTIONNAIRE PROCEDURE

There are several data collection techniques, including questionnaires, focus groups, interviews, observation, and documented studies and each has pros and cons specifically in its ease of use, time, cost, reach, and response rate (Sekaran, 2003). The researcher decided to employ a questionnaire for data collection as it provides convenience to obtain data from a large sample size quickly (Mitchell et al., 2007).

The questionnaire is an effective data collection tool when researchers are clear about the criteria and how to measure the construct of interest. Hence, the questionnaire is thought to be the most suitable method for this study as it can objectively measure the relationships between the research constructs. Sekaran (2003) also advocated that questionnaires can be distributed in person, mailed to respondents, or distributed electronically.

In this case, the researcher preferred to personally administer the questionnaire to ensure a higher response rate compared to the other two questionnaire distribution methods (Sekaran, 2003). Personally administered questionnaires can ensure anonymity and cost effective particularly when working with groups of respondents. Moreover, this approach can increase respondents' motivation as it allows the researcher to build a rapport with the respondents and answer any questions they may have about the questionnaire promptly.

4.3.1 Sampling

Three aspects of the sampling process are covered in this section: establishing the sample size, the sampling process, and the target population.

4.3.2 (a) Target Population and Sample Characteristics

Determining the population of interest marks the initial step in the sampling process. It is crucial that the samples be carefully selected out of the relatively large population. This has made surveys difficult, time-consuming, and expensive to conduct.

The study chose Malay Muslims as the target sample for three reasons. First, Muslims make up the bulk of Malaysia's population. The Statista Research Department reports that 63.5% of Malaysians identify as Muslims, with Buddhism coming in at 18.7%, Christianity at 9.1%, Hinduism at 6.1%, and other religions at 0.9%. Second, because Muslims are the primary target of takaful, and third, it is worthwhile to take Malays into consideration as the sample because the Malay has been reported to have a low contribution to the family takaful scheme (Husin et al., 2016a; Hassan et al., 2018).

Klang Valley was selected as it comprises Malaysia's federal capital and home to the most significant number of Malaysians from all socioeconomic classes. Klang Valley is also an ideal place for sampling as it is the most developed area in Peninsular Malaysia and has the second-highest gross household income in the

country, behind Putrajaya. Islam is the main religion In the Klang Valley with Muslims making up 46.4% of the population in 2010. This was followed by Buddhists (35.7%), Hindus (8.5%) and Christians (5.8%) (Statistic of Malaysia,2020)

The age group that is insured was taken into consideration when choosing the study's subject. First, people between 18 and 55 were determined to be insurable because they were employed, earning a living, and providing financial support for others. Nonetheless, for a variety of reasons, the age ranges from 25 to 60 is the most significant insurable age in certain nations, including Malaysia. Second, because of the unemployment issue, real earning for salaried individuals begins at age 25, and it begins even earlier for traders, business owners, and entrepreneurs. Third, individuals over 50 hardly ever apply for new insurance and the average retirement age in Malaysia is about 60. It is therefore feasible for this study to consider those aged between 25 to 50 use as the insurable group. Omar (2007) used the same justifications to set a starting age of 25 for his respondents when evaluating life insurance attitudes among Nigerians.

The study participants encompassed individuals without life insurance and those lacking a family takaful plan. The principal aim of this study was to evaluate the intention of potential participants to participate in the family takaful scheme and understand the motivating factors behind their involvement. Therefore, it is crucial to exclude those who do not currently participate in both schemes. There is a probability for a potential participant with insurance not to participate in a family takaful plan because they already have purchased a substitute product (life insurance). Table 4.1 presents an overview of the characteristics of the study's respondents.

Table 4.1 Respondents' Characteristics

Religion	Muslim
Age	25 to 54 years old (insurable age group)
Control factor	Not a participant of family takaful scheme Not a participant of life insurance scheme

Source: Madigan et al. 2000

4.3.3 (b) Sample Size

A sample refers to a group of subjects selected from the population. In research, multiple samples are drawn from the population to comprehend the characteristics of the population under investigation. This process enables the researcher to make generalizations about the sample's characteristics and evaluate the degree of proximity between the sample and the population.

Typically, practical considerations, statistical precision, and available resources like time and funds are considered before selecting the sample size. The researcher assessed the total Muslim population in Malaysia to determine the appropriate sampling size for the study. The Malaysian Department of Statistics estimates that there were 10 million people living in the Klang Valley, with 63.5% of them being Muslims (Worldpopulation.com).

The suitable sample size for this study was determined following the guidelines of Krejcie and Morgan (1970), as outlined in Table 4.2, which provides sample size recommendations based on specific conditions. Opting for a minimum required sample size of 384 respondents was considered appropriate for the following reasons:

1. 100 to 500 is the minimum acceptable sample size in SEM (Ding et al., 1995)

2. Hair et al. (1998) recommend that a minimum sample size should consist of 200 subjects.

3. Hatcher and Stepanski (1994) propose that the sample size should be five times the number of constructs. In this study, with 8 constructs, the suggested minimum sample size is 40 respondents. Therefore, 384 respondents were set as the minimum sample size.

4. According to Chin (1998) and Hair et al. (2006), the sample size should be in the ratio of 10:1, for example, 10 respondents for each construct.

Table 4.2 Required sample size, given a finite population

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	100000-----384

Source: Krejcie and Morgan (1970)
*where N= population size and n= sample size required

4.3.4 (c) Sample Selection

Typically, samples are classified as either non-probability or probability (also called random sample). Convenience sampling, judgmental sampling, and quota sampling are examples of nonprobability sampling procedures. In contrast, stratified sampling, area sampling, cluster sampling, stratified random sampling, double sampling, and simple random sampling are examples of probability sampling techniques. Another sampling called Purposive sampling**,** also known as judgmental sampling or selective sampling**,** is a non-probability sampling technique where the researcher intentionally selects specific individuals or groups based on particular characteristics or criteria that are most relevant to the research objectives (Zikmund, 2000).

According to Gravetter and Forzano (2012), the most often used sample method in behavioural science research is convenience sampling. Respondents are chosen by convenience sampling in accordance with their availability and desire to participate. It has several advantages over other sampling techniques. Convenience sampling has several benefits, such as allowing the researcher to quickly obtain comprehensive responses, which are less costly, and simple to obtain responses.

As a result, any questions or classifications needed when completing the questionnaire can be answered right away. Nevertheless, an accurate population generalization is not possible using the sample from the sampling type that was used. (Neuman,2004).

It should be mentioned that the study's population comprises people in Malaysia's Klang Valley with no life insurance or family takaful. Convenience sampling is the most suitable sampling technique because there is no census or easily accessible list of this respondent base, and because the respondents are dispersed throughout the country.

The survey was conducted in Malaysia's Klang Valley from September 2022 to November 2022. The survey was distributed in person and via online sites like Facebook, LinkedIn, and WhatsApp. In addition, a variety of public and private spaces, including restaurants and supermarkets, were chosen as survey distribution locations.

4.3.5 Questionnaire Design

Simple language was used in the questionnaire writing for this study because complex and confusing language demanded a higher reading level and was difficult to understand (Velez & Ashworth, 2007). More letters and syllables per word are two additional factors associated with higher reading grades (Velez & Ashworth, 2007). Furthermore, higher reading grade questions frequently elicit "no opinion" responses, which could compromise the questionnaire's validity and reliability (Velez & Ashworth, 2007). Therefore, straightforward, intelligible, and uncomplicated

questions were used in the questionnaire to decrease the likelihood of a "no opinion" response., Netemeyer et al. (2003) also advised making items as brief as feasible to minimize ambiguity.

The instrument utilized for this study is a questionnaire comprising several sections: Section A through C. Section A focused on gathering information about the demographic and socioeconomic status of the respondents, including gender, age, occupation, marital status, education level, sources of religious knowledge, and monthly savings. Section B employed a five-point Likert scale to measure performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value, habit, and trust. Finally, Section C utilized a five-point Likert scale, ranging from "strongly disagree" to "strongly agree," to assess the respondents' family takaful penetration."

The demographic factor in this study did not include nationality as a question because the population of Malaysia is predominantly of Malaysian descent. The questionnaire sample is attached in Appendix 1.

4.3.6 Questionnaire Format

The scale deviations or number of points used are significant when using a Likert scale. Some researchers favor a Likert scale with even numbers, while others prefer one without neutral or midpoint points because it allows respondents to select clearly rather than selecting neutral or intermediate points. On the otherhand Champney and Marshall (1939) asserted, that rating scales with five or seven points can yield more exact and accurate results. Meanwhile, according to Kulas and Haynes (2008), compared to other scale points, 7-to-10-point scales have the highest reliability estimates.

The researcher used a Likert scale measurement in this study because it allows respondents to express their opinions about the topic at hand in both direction and a strength (Norman, 2010). Additionally, the Likert scale measurement allowed the respondents to indicate whether they strongly disagreed with the given items,

disagreed, agreed, were neutral, or disagreed. The Likert scale was also selected because it is a more effective means of understanding, explaining, and forecasting respondents' behavior (Croasmun & Ostrom, 2011).

Furthermore, the Likert scale has been assessed in both marketing and social science literature and is widely used in research related to marketing (Garland, 1991). The ability to perform item-level factor analysis for exploratory factor analysis is the primary factor that drives the selection of the Likert scale (Goldberg, 1981).

The middle point of a 5-point Likert scale can be used to represent a range of viewpoints. Responses from midpoints can mean a variety of things. The meaning of the middle categories should be obvious, according to Kulas et al. (2008), because the neutral category is occasionally used as a "dumping ground" for answers that are unsure or inappropriate because of the complexity of the questions or other related issues.

Despite the different opinions on the midpoint scale's applicability, Cronbach (1950) contended that providing a midpoint allows respondents to express neutrality or ambivalence, which increases the scale's reliability and appeal to respondents. Furthermore, Hui and Triandis (1989) found that the midpoint scale is significant in Asian cultures because it represents a cautious and modest response.

There are two (2) types of questionnaires, namely open ended and closed ended question. The most feasible way to conduct a survey is by having a close-ended questions as it assists the respondents to make a decision (Sekaran, 2016). The data collected in this research via online survey and social media for example Google Form, WhatsApp, Instagram, and Facebook page. They are tools that consist of many questions that must be answered by the respondents. Once respondents answer those questions, researchers can analyze and understand what respondents feel or think about a certain problem or issue. The questions are developed based on the research objectives and model developed in this study. Answers in questionnaires are mostly in a scaled format called the Likert scale (Allen & Seaman, 2007).

This study employed Husin's (2016a) demographic analysis method for calculating nominal scale, specifically for obtaining a range of values related to respondents' ages. The questions were assessed using a five-point Likert scale, adapted from the work of Bhatti and Qureshi (2007). A score of 1 indicates strong disagreement, a score of 2 represents disagreement, 3 neutrality, 4 agreement, and 5 strong agreement. Different responses reflecting the respondents' opinions about the statement were given to them.

This study incorporated survey questions from Venkatesh et al. (2003), Venkatesh et al. (2012), and Nawaz et al. (2020), utilizing a five-point Likert scale for question measurement. For the validation of the original UTAUT framework, items proposed by Venkatesh et al. (2003) and Hasanuddin et al. (2020) were adopted for performance expectancy, effort expectancy, social influence, facilitating conditions, and behavioral intention.

To align with the UTAUT2 framework, this study incorporated additional items to the ones listed above. Items on hedonic motivation, price value, and habit were adapted from Venkatesh et al. (2012) and Hasanuddin et al. (2020). Additionally, seven trust-related items were modified from Poan et al. (2021) to suit the context of this study.

All of the items were derived and adapted from previously validated instruments to put more emphasis on family takaful participation.

Table 4.3 lists items adapted from previous questionnaires, the items were included and adapted based on the needs of the present study while some were removed accordingly to suit the research context.

Table 4.3 Scales used in the questionnaires

CONSTRUCTS	**ITEM (S)**	**ADAPT (WITH MODIFICATION)**	**AUTHORS**
Performance expectancy (PE)	PE1. Family takaful apps are highly beneficial for performing takaful activities. PE2. The use of family takaful apps enhances the quality of takaful activities. PE3. Family takaful apps increase my likelihood of achieving important goals in takaful activities. PE4: Utilizing family takaful apps enhances my productivity. PE5: Family takaful apps enable me to accomplish tasks more swiftly. PE6: The use of family takaful apps allows me to save time in takaful activities.	Yes	Venkatesh et al. (2012); Hasanuddin et al. (2020); Nawaz et al. (2020)
Effort Expectancy (EE)	EE1. Learning to use family takaful apps is straightforward for me. EE2: The use of family takaful apps doesn't demand a significant mental effort from me. EE3: My interaction with family takaful apps is clear and easily understandable. EE4: I find family takaful apps user-friendly. EE5: Becoming proficient at using family takaful apps is easy for me.	Yes	Venkatesh et al.(2012); Hasanuddin et al. (2020); Nawaz et al. (2020)

CONSTRUCTS	ITEM (S)	ADAPT (WITH MODIFICATION)	AUTHORS
Social influence (SI)	SI 1. Individuals important to me endorse the use of family takaful apps for takaful activities. SI 2. People who have an impact on my behavior believe I should use family takaful apps. SI 3. More experienced individuals assist me in using family takaful apps for takaful activities. SI 4. People whose opinions I value prefer that I utilize family takaful apps for takaful activities.	Yes	Venkatesh et al. (2012); Hasanuddin et al. (2020); Nawaz et al. (2020)
Facilitating conditions (FC)	FC1. I possess the required resources to engage in family takaful apps. FC2. I have the knowledge needed to operate family takaful apps. FC3. I am at ease using family takaful apps for takaful activities. FC4: I can seek assistance from others when encountering challenges with family takaful apps.	Yes	Venkatesh et al.(2012); Hasanuddin et al. (2020); Nawaz et al. (2020)
Hedonic motivation (HM)	HM1. Utilizing family takaful apps is enjoyable. HM2. The experience of using family takaful apps is enjoyable. HM3. Utilizing family takaful apps is highly entertaining. HM4. The use of family takaful apps is more exciting.	Yes	Venkatesh et al.(2012); Hasanuddin et al. (2020); Nawaz et al.(2020)

CONSTRUCTS	ITEM (S)	ADAPT (WITH MODIFICATION)	AUTHORS
Price Value (PV)	PV1. The family takaful product is reasonably priced. PV2. Family takaful offers good value for the money. PV3. At the current price, family takaful provides good value.	Yes	Venkatesh et al.,(2012); Hasanuddin et al.(2020); Nawaz et al. (2020)
Habit (HT)	HB1. Using the family takaful app has become a habit for me. HB2. I feel addicted to using the family takaful app. HB3. I feel a compulsion to use the family takaful app. HB4. Using the family takaful app is something I do without thinking. HB5. Using the family takaful app is a part of my daily routine.	Yes	Venkatesh et al. (2012); Hasanuddin et al.(2020); Nawaz et al. (2020)
Behavioral intention (BI)	BI1. I will always strive to use family takaful apps for takaful activities. BI2. I have the intention to use family takaful apps for takaful activities in the future. BI3. I plan to continue using family takaful apps for carrying out family takaful activities. BI4. I intend to use family takaful apps for family takaful activities next month.	Yes	Venkatesh et al.(2012); Md Husin et al. (2016); Poan et al. (2021)

CONSTRUCTS	ITEM (S)	ADAPT (WITH MODIFICATION)	AUTHORS
Trust (TT)	TT1: Based on my belief about family takaful, I consider it honest. TT2: Based on my belief about family takaful, I find it trustworthy. TT3: The established financial and business records of family takaful operators assure me to invest my money in family takaful services. TT4: My confidence and trust in the family takaful operation are very high.	Yes	Poan et al. (2021)

4.3.7 Diagram of Constructs

The seven primary constructs illustrated in Figure 4.1 encompass facilitating conditions, social influence, effort expectancy, habit, hedonic motivation, performance expectancy, and price value. Trust is incorporated as a mediator between behavioral intention and the penetration of family takaful in Malaysia. The diagram indicates the number of items employed to test the hypothesis within each construct.

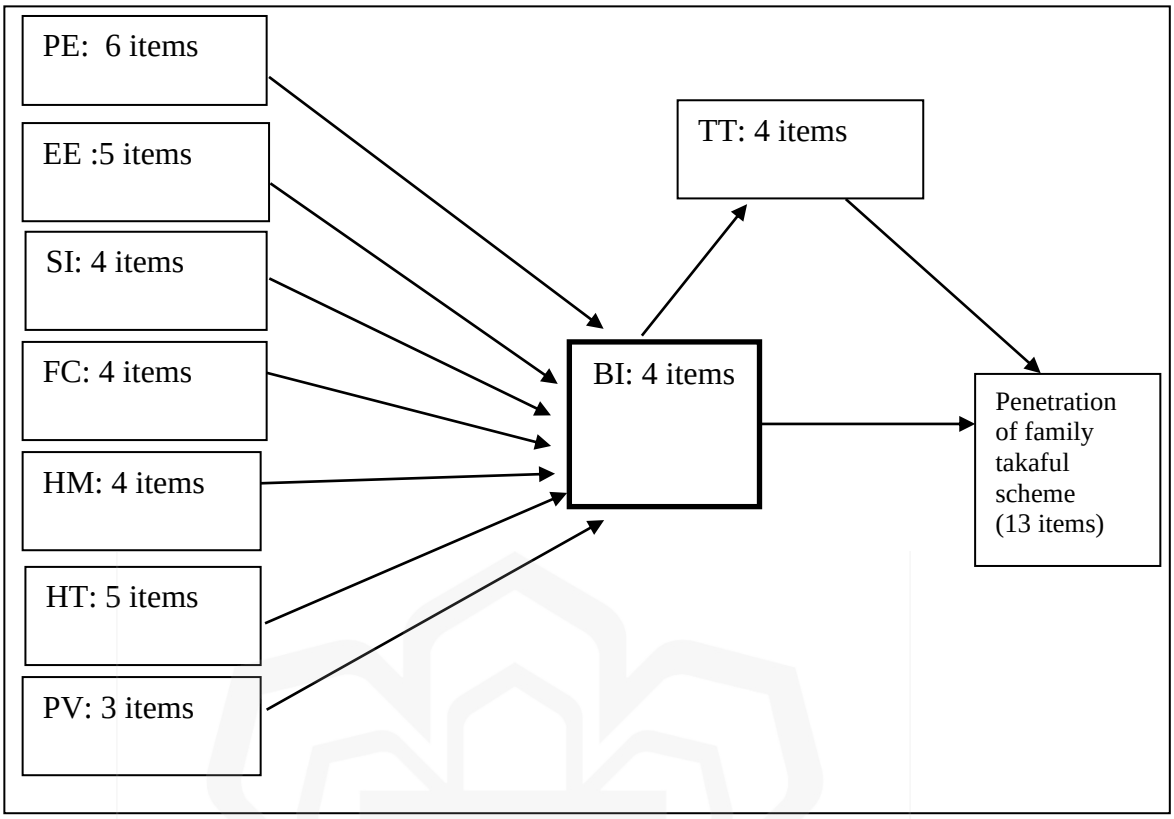

Figure 4.1 Number of Items in the Constructs. Source: (Author's own illustration)

4.3.8 Questionnaire Translation and Instrument Revisions

Using language that is familiar to the target population is crucial in survey research (Netemeyer et al., 2003). Since Muslims are the intended respondents, the researcher opted to prepare the questionnaire in Malay. The fact that not everyone in the population speaks English well also played a role in the decision. Furthermore, most Malays speak Malay as their native tongue and Malay is widely spoken and comprehended by the general population.

Direct translation, back translation, and parallel translation are the three methods of translation. The back translation method, which is the most widely used translation technique in marketing research, was used in this study (Douglas & Craig, 2007). To minimize translation errors between the original and retranslated questionnaires, the researcher used the back translation method to look for potential phrasing inconsistencies.

Back-to-back translation involves the first translator translating the questionnaire into Malay, and the second translator translating it back into English. The effectiveness of the translation process and the degree to which the original English version and the translated version coincided were then assessed by comparing the two versions.

4.3.9 Assessing Content (Face) Validity

The representativeness and comprehensiveness of the items used to construct a scale are referred to as content validity (also known as face validity). In order to ensure content validity, a scale's items must be qualitatively evaluated in order to accurately reflect the construct's true nature as it exists in the real world. For this reason, using expert judgement and a pre-test, the degree of similarity between the a priori planned and the actual indication should be determined. (Vinzi et al., 2010).

Two experts evaluated the content validity of the study's instrument. The two educators are currently working in academia and have experience in Islamic finance (see table 4.4). The target population of the instrument and the conceptual framework (UTAUT2 model) were also communicated to all the experts. The clarity of the item used, including the format for answers and the scoring system, as well as the item's correspondence to the theoretical definition, were the other two criteria on which the experts were asked to assess each question. Following the experts' feedback, structural adjustments were made, which included condensing and paraphrasing multiple questions to cut down on redundancy. Modifications were also made by clarifying the item and removing unclear statements from the instructions and items.

Table 4.4 List of Experts for Content Validity

Name and Designation	Institution	Expertise	Qualification
Dr Nurfaradilla Haron	Academy of Contemporary Islamic Studies, UITM Shah Alam	Publication and questionnaire construction relating to UTAUT2 model	PHD
Assoc. Prof.Dr. Maizaitulaidawati Md Husin	Azman Hashim International Business School	Publication and questionnaire construction relating to UTAUT2 model	PHD

4.3.10 Pre-testing

The next step after validating the questionnaire was pre-testing. Pre-testing serves four main goals: (1) ensuring quality, correct translation, appropriate format, terminology, and content; (2) assessing appropriateness and clarity; (3) investigating question reliability; and (4) guaranteeing questionnaire understandability, ease of use, and speed of completion. In summary, pretests were employed to enhance the face validity of the instruments by identifying discrepancies early in the process. According to Hunt et al. (1982), pre-testing focuses on three areas: (1) aspects related to the questionnaire, such as its length, format, and sequence; (2) aspects related to specific questions, including the terminology used; and (3) aspects related to data analysis, such as tabulation and coding processes.

42 questionnaires were distributed to respondents, and they were asked to answer, evaluate and comments on the clarity of the questionnaire thoroughly. The respondents were instructed to give their response not only on the survey, but also to highlight issues for instance misspelled words, ambiguous items, double-barreled questions, or any item that is hard to be understood by laymen. The feedback received from the respondents were then used to better improve the clarity of the survey. At the pre-test phase, verbal feedback was also gathered. Despite a minor concern about the typo error, most respondents thought the questionnaire was understandable and straightforward. The questionnaire's length was deemed appropriate given that

answering all the questions took only 15 to 20 minutes, Overall, the questionnaire did not undergo any significant modifications.

4.3.11 Distribution and Collection of Questionnaires

Self-administrated questionnaires can be delivered online, via post or through personal delivery and collection (Gray, 2004). This study utilized a combination of methods for distribution. The researcher employed Facebook, Instagram, WhatsApp, email, and other social media platforms to distribute the Google Form to respondents for the online survey.

The researcher approached the respondents to collect data through delivery and collection of the questionnaire. Prior to giving the respondents the questionnaire, the researcher explained the goal of the study. The researcher then gave the respondents the appropriate questionnaire after they gave their consent to participate. To mitigate potential biases, such as respondents feeling intimidated, threatened, or influenced by the researcher, the researcher allowed them to complete the questionnaire alone without any interference. Additionally, no names were used to preserve the anonymity of the respondents.

4.3.12 Errors (Missing Data) in Data Entry

The statistical problem known as "missing data" is defined here as an incomplete data matrix resulting from one or more people in a sample frame not responding to one or more survey items (Newman, 2014). Missing data can also result from technical errors on the part of the researcher or equipment (online survey programming errors or computer malfunction). Most missing data are caused by survey nonresponse, which can range from an intentional decision (discarding a survey or skipping sensitive items) to a rather unintentional act.

4.4 QUESTIONNAIRE DATA ANALYSIS

Two statistical analysis tools were used by the study to examine the survey data. Initially, information was imported into SPSS from paper-based surveys in an effort to review preliminary data through general descriptive analysis and reliability assessments. In addition, the validity and reliability of the measurement model were assessed, and hypothesis testing in line with the evaluation of the structural model was investigated using exploratory factor analysis with SmartPLS 4.0 for Windows. The structural model was evaluated using SmartPLS (Vinci et al., 2010). These analysis techniques are elaborated below.

4.4.1 SPSS

For this study, descriptive analysis and reliability tests were performed on the initial data using SPSS. Parametric and non-parametric statistical techniques are the two main categories into which they are divided. In comparison to parametric techniques, non-parametric techniques make fewer strict assumptions. Unlike parametric techniques, nonparametric techniques do not require scores to be normally distributed.

Pallant (2020) mentioned that parametric techniques involve the use of interval or ratio data, probability sampling or random sampling, homogenous variance, and continuous scale data instead of discrete categories and independent variables. The researcher used non-parametric techniques to analyze the data as the data for this study were collected using a non-probability sampling technique.

4.4.2 (a) Descriptive Analysis

Data about the respondent's demographics and the variables being examined can be gathered through descriptive analysis. It is crucial to conduct descriptive analysis during the initial phase of data analysis since to provide understanding of the data distribution, the sample, and every variable under investigation. The mean, standard

deviation, range of scores, skewness, kurtosis, and frequency and percentage distributions comprise descriptive analysis.

4.4.3 SEM

The primary statistical method used in this investigation is structural equation modeling, or SEM. According to Maiyaki and Mokhtar (2011), it is a crucial statistical tool in the fields of consumer psychology and the social and behavioral sciences. SEM can be used to investigate the impact of multiple independent constructs on a single dependent construct (Haenlein & Kaplan, 2004). This makes it possible to resolve potential analytical problems with establishing the causal relationships between constructs. A causality network between the constructs, sometimes referred to as latent variables or unobserved variables, can be taken into consideration in examining the complexity of the relationship (Vinzi et al., 2010).

SEM can be categorized into variance-based, such as PLS, and covariance-based (EQS, AMOS, SEPATH, COSAN, LISREL, and MPLU) (Hair & Sarstedt, 2011). PLS was selected for this study's structural model testing due to:

1. According to Hair et al. (2011) and Henseler et al. (2009), PLS is advantageous for exploratory structural relationship analysis (prediction and theory development) rather than confirmatory structural relationship analysis (theory testing and confirmation).

2. As endorsed by Hair et al. (2011), Henseler and Chin (2011), and Tenenhaus et al. (2005), PLS can be applied to complex structural equation models with many constructs and intricate models involving reflective and formative computations. Consequently, it facilitates the estimation of several separate regression equations simultaneously, unlike regression, which can only examine a single relationship at a time.

3. PLS supports both formative and reflective indicators (Fornell & Bookstein, 1982).

4. Hair et al. (2011) demonstrated that large sample sizes, independence, and normally distributed data are not prerequisites for PLS-SEM.

5. Henseler et al. (2009) emphasized that for skewed data results, PLS estimates are superior to CBS-SEM estimates in terms of both bias and precision.

6. PLS-SEM produces comparable results for large sample sizes and typical data conditions (Hair et al., 2011).

7. Research on marketing, consumer behavior, and other business-related topics has established PLS as a reliable method (Hair et al., 2011) and Henseler et al. (2009).

4.4.4 (a) PLS- SEM Path Diagram

PLS path modeling is a component-based methodology that can generate construct scores for forecasting and correlate proposed or causal relationships. One way to display the correlation and construct scores is as a path diagram. PLS-SEM diagrams, as shown in Figure 4.1, use arrows to demonstrate the relationships between the constructs.

The two types of constructs measured are random independent (exogenous) and random dependent (endogenous), which can be directly observed or unobserved hypothetical or latent variables.

The diagram's single-headed arrows represent linear dependencies, or how much one construct or variable depends on another. Linear dependencies are also known as causal pathways or relationships. The possible direct relationship between two constructs is symbolized by the arrow that connects social influence to behavioral purpose.

PLS-SEM comprises two sets of linear equations, referred to as the inner and outer models. The inner model, also known as the structural model and illustrated in Figure 4.2, signifies the relationships between constructs. Simultaneously, the outer model, or the measurement model, denotes the relationships between indicators and their corresponding constructs. Additionally, according to Vinzi and Wang (2010), PLS-SEM has the capability to estimate the path coefficients in the structural model and independently solve the blocks of the measurement model.

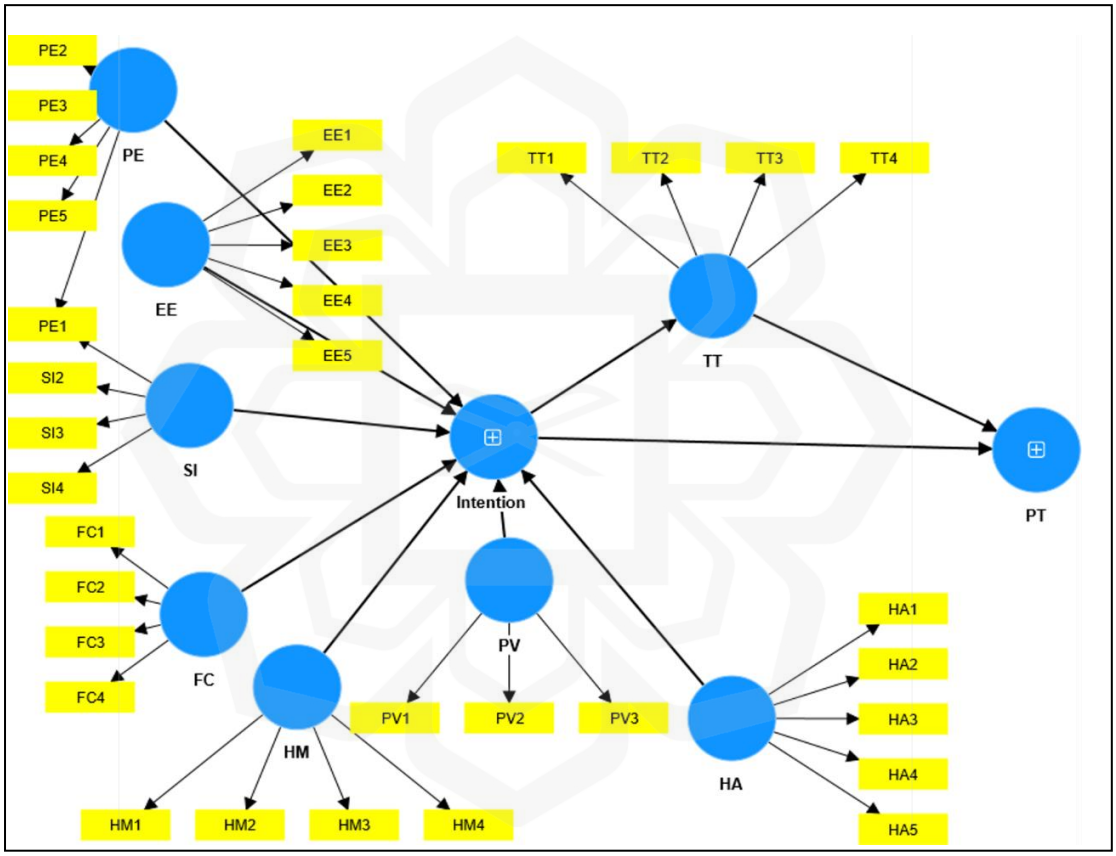

Figure 4.2 The Path Diagram of the Thesis

4.4.5 (b) Steps in PLS-SEM Assessment

PLS-SEM assessment involves a two-step process: the assessment of the structural model and the evaluation of the measurement models, as outlined by Hair et al. (2011). The outer model, also called the measurement model result, aims to illustrate

the paths or relationships between the latent constructs at the observation level. This step assesses the validity and reliability of the measurement items. Additionally, the evaluation of the structural model, known as the inner model, seeks to test the theoretical relationships among latent constructs.

4.4.6 (b1) Assessment of Measurement Models

The PLS algorithm is used to statistically validate the measurement model. There are two stages to the PLS algorithm: an initial phase and a final phase. The preliminary phase consists of two main procedures. First, calculating the model's latent constructs to provide estimate of the constructs as weighted aggregates (Urbach & Ahlemann, 2010). According to Henseler and Sinkovics (2009), the estimation is obtained by giving each outer substitution indicator the same weight. Subsequently, the scores are computed as liner combinations for every scenario. The standard deviation is one and the standardized mean is zero for all the outer substitutions. (Henseler & Sinkovics, 2009).

The second procedure is known as inside approximation. Its function is to generate substitutes for each endogenous latent construct by utilizing the relationships between the other latent constructs in the model (Henseler & Sinkovics, 2009). The goal is to quantify the degree to which it is related to the other latent constructs.

In the final stage of the algorithm, factor loadings, path coefficients, and validation measures are calculated. PLS is considered partial only after the user receives loadings for each reflective indicator, weights for each formative indicator, and standardized regression coefficients for each path connecting latent constructs, following the completion of the algorithm's procedural stages (Henseler & Sinkovics, 2009).

4.4.7 (b1.a) Formative and Reflective Indicator

According to Vinzi et al. (2010), a measurement model may include either or both formative and reflective indicators. Hence, it is crucial to distinguish between formative and reflective measurements when assessing measurement models.

The existence of the latent constructs in the supporting theoretical and structural model is established using formative measurement indicators (Cenfetelli & Bassellier, 2009). Conversely, the reflective measurement indicator, which can be divided into a random and systematic part, represents a measurement that is tainted by error. Stated differently, formative indicators have the potential to induce variance in the construct, whereas reflective indicators cause the variance in the construct (Cenfetelli and Bassellier, 2009), as shown in Figure 4.3.

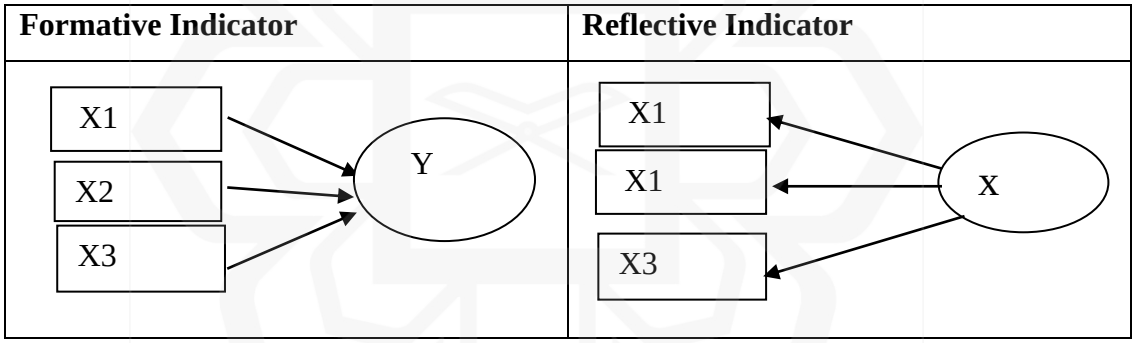

Figure 4.3 Formative and Reflective Indicator

It is assumed that every block of reflective indicators is homogenous and unidimensional, as shown in Figure 4.3. As a result, adjustments to one indicator may also affect adjustments to the others. On the other hand, since each formative indicator represents a distinct dimension of the underlying concept, the indicators do not assume homogeneity or one-dimensionality of the block.

According to Urbach and Ahlemann (2010), the measurement model's result evaluation through reflective measurement entails looking at the following: discriminant validity (Fornell Locker criterion and cross loadings), internal

consistency reliability (also known as composite reliability), and convergent validity through individual indicator reliability or squared standardized outer loadings. Additionally, average variance extracted (AVE) is also examined.

Additionally, determining the indicators' weight is a necessary step in evaluating the measurement model using formative measurement (Hair et al., 2012). In this light, estimating weight is crucial for formative indicators because it can lead to unstable indicator weights. In summary, the most crucial factor in obtaining formative measures is multicollinearity among indicators (Cenfetelli & Bassellier, 2009).

4.4.8 (b1.2) Assessment of Measurement Model with Reflective Indicator

Estimating the convergent and discriminant validity is the initial stage of assessing a reflective indicator measurement model.

Convergent Validity

Convergent validity determines the extent to which items strongly agree in their representation of the underlying construct that they were intended to measure (Chin, 2010). The assessment of convergent validity involves examining loadings (indicator reliability), average variance extracted (AVE), and composite reliability (internal consistency reliability).

Loading, illustrates the straightforward correlation between an indicator and the corresponding construct (Hair et al., 2011). In general, loading values greater than 0.70 are preferred because they suggest that more variance is shared by the construct and its measures than by error variance. However, loading values of 0.40 are suitable for exploratory research.

AVE includes the measurement error variance as well as the variance of the indicators that the construct captures with respect to the overall variance. According to this, an indicator has error variance if its AVE is less than 0.5 (Chin, 2010).

Composite reliability is a tool used in PLS-SEM to assess an item's internal consistency reliability. Stated differently, it establishes the extent to which a construct or group of constructs aligns with the measurement's goals. It is preferable to have composite reliability with a value greater than 0.70. Nonetheless, a value of 0.60 is regarded as appropriate in exploratory research (Bagozzi & Yi, 1988).

Discriminant Validity

The degree to which one construct in a model differs from others is measured using the discriminant validity. The primary goal is to prevent constructs from overlapping (Ramayah et al., 2018). For a measure to be considered discriminant valid, it must demonstrate a stronger correlation with other items belonging to the same construct than with items belonging to other constructs in the model.

Additionally, to ascertain discriminant validity, item loadings and cross loadings of the indicators within the construct as well as other constructs were assessed. Consequently, for each construct in the model, the correlation scores should be less than the square root of the AVE, and the average variance (item loadings) should be higher for that construct than for the other constructs (Hair and Sarstedt, 2011).

Table 4.5 Summary of Measurement Model Evaluation for Reflective Indicator

Validity type	Name of the Index	Level of acceptance	Description
Convergent validity	Loading	Exceeds 0.70	Demonstrates how an indicator and its corresponding construct are correlated.
	AVE	Exceeds 0.50	Calculates the difference between the variation a construct gets from its indicators and the variation caused by measurement error.
	Composite reliability	Exceeds 0.70	Determine the degree to which a construct or collection of constructs is consistent with the objectives of the measurement.
Discriminant validity	Fornell-Larcker criterion	0.70	Shows how much a particular construct is different from other constructs.

4.4.9 (b1.3) Assessment of Model of Measurement Using Formative Indicator

To evaluate its importance, a bootstrapping procedure is required for the measurement model with formative indicator. When employing bootstrapping, each indicator is evaluated for its loading (absolute importance) and weight (relative importance) (Hair et al. 2017). If all of the indicators' weights are significant, then every indicator should be retained for structural analysis. On the other hand, the model's theoretical applicability should be measured, and non-significant indicators should be eliminated if both the loading and the indicator weight are nonsignificant.

Assessment of multicollinearity is necessary for models containing formative indicators (Cenfetelli & Bassellier, 2009). Multicollinearity can increase the standard error of the estimated coefficients and shows the degree of linear dependency of the weak indicators. Moreover, multicollinearity can be recognized when there are significantly different findings from the bivariate correlation between the formative indicator and its concept and the indicator weights in terms of sign, magnitude, or significance (Cenfetelli & Bassellier, 2009).

The variance inflation factor (VIF), which offers a helpful signal to determine whether conceptual redundancy exists among the selected indicators, is the appropriate method for determining the presence of multicollinearity (Sarstedt et al., 2021). The variance explained by other indicators that are part of the same construct can be displayed using VIF. According to Hair and Sarstedt (2011), each indicator's VIF value should generally be less than 5. A critical degree of multicollinearity is indicated by values greater than 10, which should be eliminated. (Ramayah et al., 2018). To test multicollinearity issues, tolerance values and condition index statistics can be used in place of VIF; tolerance values above 0.3 and condition indices less than 3.3 indicate no multicollinearity issues (Ramayah et al., 2018).

4.4.10 (b2) Assessment of Structural Models

The evaluation of the structural model follows the successful validation of the measurement models. The structural model illustrates the connections between theoretical constructs, and latent constructs in a structural model come in two

varieties. According to Vinzi et al. (2010), a latent construct that functions as an independent construct in the model and only predicts other latent constructs is referred to as an exogenous construct, whereas an endogenous construct is a latent construct that is dependent and theoretically determined by elements in the model.

Moreover, the bootstrapping procedure was utilized to statistically validate the structural model through resampling. To estimate the model parameters, the number of cases in a bootstrap sample had to align with the number of observations in the original sample, adhering to a minimum requirement of 5,000. According to Heseler and Sinkovics (2009), non-parametric presumptions that the observed sample accurately represents the population form the basis of bootstrapping. In this regard, the R-squares, path coefficient, and effect size are important element in the boot strapping procedure.

R- square (R^2)

As an essential measure of predictive power and the extent to which the variance in a dependent construct is elucidated by its antecedent constructs in the model, the determination of the coefficient (R2) level is crucial. R2 values span from 0 to 1, where an increase in R2 indicates a higher percentage of explained variance. In the realm of marketing research studies, R2 values of 0.75, 0.50, and 0.25 are considered substantial, moderate, and weak, respectively (Hair et al., 2011).

Path Coefficients

The structural model's ability to interpret each path coefficient independently is another measure of its capability. The relevance of the structural equation path is quantified using a suitable resampling technique, and the path coefficients are then utilized to evaluate the hypotheses. In accordance with Vinzi et al. (2010), paths that are deemed insignificant contradict the suggested causal relationship, whereas significant paths that empirically demonstrate the hypothesized direction provide empirical support for the respective hypothesis. It is crucial to determine the algebraic

sign, magnitude, and significance of the path coefficient, as it directly explains the statistical testing of the hypothesis (Hair et al., 2011). According to Urbach and Ahlemann (2010), a path coefficient is considered substantial if it attains a value of at least 0.50.

Table 4.6 Summary of Structural Model Estimation

Validity type	Name of the Index	Level of Acceptance	Description
Model Validity	Coefficient of determination (R^2)	Between 0 and 1	R^2 value of 0.75 is considered substantial, 0.50 is considered moderate, and 0.25 is considered weak
	Path coefficients	Exceed 0.1	Considered significant if value of at least 0.50 is generated

4.5 CHAPTER SUMMARY

Data was collected using a questionnaire. The questionnaire was selected because its suitability in assessing consumers' intentions regarding family takaful in Malaysia's Klang Valley. In this study, quantitative research methods were used. Primary and secondary data were the two types of data used in the study. In brief, questionnaires were used to gather primary data, while documentation techniques, libraries, and internet searches were used to obtain secondary data. The data were then combined and evaluated in the thesis' analysis section.

This chapter has offered in-depth details on the data collection process, the development of research instruments, the study's conceptual framework, and the various analysis techniques used to arrive at the conclusions. The results of data analysis will be presented covered in the upcoming chapter to address the research questions and hypotheses.

CHAPTER FIVE

RESULTS AND DISCUSSION

5.1 INTRODUCTION

The results from the data gathered by the participants are discussed in this chapter. Besides data from the participants, this chapter examined the outliers and missing data to ascertain the data distribution. The researcher also conducted descriptive analysis on the respondents' demographic profile to analyze the participants' responses in light of their demographic backgrounds. Lastly, the conceptual model was predicted using PLS-SEM.

The assessment measurement model and the structural model serve as the two validation stages in the PL-SEM model. Meanwhile, the two criteria utilized in the measurement model encompass construct reliability and validity. R2, F2, VIF, path coefficient, and predictive analysis were employed to validate the structural model concerning the collected data. Simultaneously, the researcher introduced a mediator to ascertain its significance in the relationship between the variables. In this context, mediators denote the introduction of a third variable to comprehend how two variables are interlinked.

5.2 RESPONSE ANALYSIS

5.2.1 Response Rate

As described by Barrios et al. (2011), the calculation of the response rate entails dividing the total number of dispatched questionnaires by the quantity of questionnaires that were returned. A total of 550 questionnaires were sent to Klang Valley residents who might be interested in purchasing takaful products. Seventy-five percent of the 410 forms were completed and returned while 21 forms were incomplete. The response rate is 95% with 389 forms completed. The response rate is summarized in Table 5.1.

Table 5.1 Summary of Questionnaire Response Rate

Initial questionnaires distributed	550
Number of forms not returned	140
Number of forms returned (achievable sample size)	410
Response rate (%)	75
Incomplete forms	21
Number of usable forms	389
Gross response rate (%)	95

An adequate response rate is at least 50%, a response rate of 60% is deemed good, and a response rate exceeding 70% is regarded as very good. (Babbie. 2007). This study's response rate is satisfactory as reflected in the high percentage of responses.

The high percentage could be due to several factors, for instance, the respondents received incentives to boost the response rate. In this regard, incentives reduce the likelihood of response bias in all surveys. Apart from that, the high percentage can also be attributed to the self-administrated data collection and the survey's simple question structure. (Groves et al., 2006).

5.3 DEMOGRAPHIC PROFILE

The following results demonstrate the demographic profile of the samples in terms of gender, age, education, occupation, work sector, annual income and annual saving.

Table 5.2 Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	128	32.9	32.9	32.9
	Female	261	67.1	67.1	100.0
	Total	389	100.0	100.0	

Table 5.3 Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	25-29	9	2.3	2.3	2.3
	30-34	180	46.3	46.3	48.6
	35-39	46	11.8	11.8	60.4
	40-44	50	12.9	12.9	73.3
	45-50	40	10.3	10.3	83.5
	51-54	64	16.5	16.5	100.0
	Total	389	100.0	100.0	

Table 5.4 Occupation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Professional	155	39.8	39.8	39.8
	Non Professional	51	13.1	13.1	53.0
	Self Employed	183	47.0	47.0	100.0
	Total	389	100.0	100.0	

Table 5.5 Marital Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	189	48.6	48.6	48.6
	Married	189	48.6	48.6	97.2
	Divorced	11	2.8	2.8	100.0
	Total	389	100.0	100.0	

Table 5.6 Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High School	93	23.9	23.9	23.9
	Degree	219	56.3	56.3	80.2
	Master	59	15.2	15.2	95.4
	PhD	18	4.6	4.6	100.0
	Total	389	100.0	100.0	

Table 5.7 Monthly Income

Monthly1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than RM1000	48	12.3	12.3	12.3
	RM1000-RM1999	118	30.3	30.3	42.7
	RM2000-RM2999	111	28.5	28.5	71.2
	RM3000-RM3999	63	16.2	16.2	87.4
	More than RM4000	49	12.6	12.6	100.0
	Total	389	100.0	100.0	

Table 5.8 Monthly Savings

Savings1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No saving	38	9.8	9.8	9.8
	Less than RM100	73	18.8	18.8	28.5
	RM100-RM199	92	23.7	23.7	52.2
	RM200-RM299	71	18.3	18.3	70.4
	RM300-RM399	51	13.1	13.1	83.5
	RM400-RM499	36	9.3	9.3	92.8
	more than RM500	28	7.2	7.2	100.0
	Total	389	100.0	100.0	

5.4 MISSING AND CLEANING DATA

The researcher analyzed the missing data using computational cases for each variable with missing data. In this light, Hair et al. (2010) stated that missing data with a percentage of less than 10% for a particular case can be disregarded. This study also evaluated the patterns of missing data using the Little's Missing Completely At Random (MCAR) test (Howel, 2007). If the p-value is higher than 0.05, the result is deemed significant and there is no systematic error in the data. Furthermore, as recommended in Tabachnick and Fidell (2007) and Hair et al. (2010), the mean substitution method was used to compute the missing data can track low levels of missing data.

5.5 OUTLIERS

An outlier is a situation where one variable has an extreme value (Tabachnick & Fidell, 2007). Hair et al. (2010) described an outliner as an observation that stands out from other observations because of its extremely high or low scores. According to Tabachnick and Fidell (2007), outliers can have an impact on statistical results and the normality of data.

Outliers in the dataset can be attributed to four factors, which are as follows: 1) Incorrect data entry; 2) failure to specify codes for missing data that may be preserved as genuine data; 3) inclusion of observations from the population but the variable's distribution has extreme values instead of normal values; 4) entering cases that are not part of the target population from which the sample is collected.

An outlier occurs when the standard Z score is as high as ± 3.5 for a large sample size and 2.5 or higher for a small sample size (i.e., 80 or fewer) (Hair et al., 2010). In the current study, items were grouped together to represent a single variable to identify the outliers. The values of each observation were converted into standardized z-scores by the researcher using SPSS to obtain the z-score for descriptive statistics (Tabachnick & Fidell, 2007). The report's findings showed that there were no outliers because all values fell within the cutoff values of ± 3.5 (see

table 5.7). Notably, Cohen, West, and Aiken (2003) claimed that an outlier can be ignored if it represents less than 2% or 1% of n and is not thought to be extreme.

Table 5.7 Result of Univariate Outliers Based on Standardized Values

	N	Minimum	Maximum
Zscore(PE1)	410	-1.46	1.37
Zscore(HA4)	410	-1.65	1.36
Zscore(FC4)	410	-1.77	0.87
Zscore(EE2)	410	-1.83	1.25
Zscore(EE5)	410	-1.84	0.89
Zscore(SI3)	410	-1.92	1.11
Zscore(INT3)	410	-1.93	0.97
Zscore(TT1)	410	-1.95	1.34
Zscore(HM3)	410	-1.95	1.34
Zscore(HA3)	410	-1.97	1.53
Zscore(EE3)	410	-2.04	0.91
Zscore(SI2)	410	-2.05	1.25
Zscore(EE1)	410	-2.07	1.13
Zscore(SI4)	410	-2.07	1.28
Zscore(FC1)	410	-2.08	1.62
Zscore(SI1)	410	-2.08	1.43
Zscore(HM2)	410	-2.11	1.44
Zscore(HA5)	410	-2.13	1.64
Zscore(FC2)	410	-2.13	0.91
Zscore(EE4)	410	-2.19	1.28
Zscore(HA2)	410	-2.20	1.66
Zscore(FC3)	410	-2.21	1.46
Zscore(HM4)	410	-2.31	1.11
Zscore(HA1)	410	-2.34	1.65
Zscore(HM1)	393	-2.38	1.37
Zscore(PE2)	410	-2.39	1.08

	N	Minimum	Maximum
Zscore(PE4)	410	-2.39	1.10
Zscore(PT5)	410	-2.42	1.10
Zscore(PT3)	410	-2.45	1.03
Zscore(PT8)	410	-2.48	1.01
Zscore(PT4)	410	-2.48	0.99
Zscore(INT2)	410	-2.49	1.01
Zscore(PE3)	410	-2.49	1.00
Zscore(PV3)	410	-2.52	1.05
Zscore(PE5)	410	-2.53	1.05
Zscore(PT6)	410	-2.59	1.01
Zscore(TT2)	410	-2.60	1.29
Zscore(PV1)	410	-2.60	1.19
Zscore(INT4)	410	-2.62	1.03
Zscore(PT1)	410	-2.64	1.14
Zscore(PV2)	410	-2.70	1.32
Zscore(INT1)	410	-2.74	1.03
Zscore(TT3)	410	-2.76	1.21
Zscore(PT2)	410	-2.79	1.00
Zscore(TT4)	410	-2.90	1.27
Zscore(PT17)	410	-3.08	0.78
Zscore(PE6)	410	-3.11	1.18
Zscore(PT9)	410	-3.19	1.13
Zscore(PT10)	410	-3.26	1.08
Zscore(PT11)	410	-3.27	1.13
Zscore(PT12)	410	-3.46	1.01
Zscore(PT7)	410	-3.48	0.89
Zscore(PT13)	410	-3.70	1.10

5.6 ASSESSMENT OF DATA NORMALITY

Before choosing an appropriate statistical analysis, a significant amount of prior research was conducted on the importance of normal distribution (Lantz, 2013). Additionally, Lantz (2013) noted that a significant body of literature has advocated the importance of a regular distribution when employing analytical tools in the analysis. However, the data showed a non-normal distribution in many of the cases. Numerous statistical analysis techniques, including skewness and kurtosis, Kolmogorov-Smirnov, and histogram, can be used for testing the data normality.

Most real-world data is not normal despite being the subject of numerous earlier studies. Skewness and kurtosis are the other measurements that are used to determine the distribution's shape (Hair et al., 2010). Kurtosis for a workable sample size of 389 denotes "peakedness" or "flatness" of the data distribution, in relation of normality. while skewness depicts the symmetry of the distribution. Positive skewness indicates a distribution moving to the left and tails off to the right, whereas negative skewness indicates the opposite. In this regard, the skewness value for the normal distribution should be zero, indicating a symmetric shape.

Furthermore, a peaked distribution is indicated by a positive kurtosis value, whereas a flatter distribution is indicated by a negative value. According to Holmes-Smith, Cunningham, and Coote (2006), kurtosis indicates a negligible non-normality when it is less than 1, moderate when it is between 1 and 10 while kurtosis more than 10 10 indicate severe non-normality. As indicated in Table 5.8, none of the variables fall within the normal range for skewness and kurtosis (Hair et al., 2010). Nevertheless, the scores exhibit both positive and negative skewness as well as kurtosis values. Pallant (2007) explained that while the presence of negative or positive skewness and kurtosis values reflects the inherent characteristics of the measured construct, they do not pose a concern as long as they remain within the normal range.

The sample size also influences how severe normality is (Hair et al., 2010). The negative effects of non-normality are mitigated by the larger sample size (Pallant, 2007; Hair et al., 2010). Furthermore, in comparison to large sample sizes (more than 200 cases), small sample sizes (less than 50 cases) have a more significant impact on normality. A workable sample size of 389 was chosen for the current study (Krejcie and Morgan, 1970). It was discovered that the data was not normally distributed because some items had skewness values greater than ± 2, which is not in accordance with Hair (2010). Smart-PLS was used instead of AMOS as the data set to handle the non-normal data set.

Table 5.8 Assessment of Data Normality

	N	**Skewness**		**Kurtosis**	
	Statistic	**Statistic**	**Std. Error**	**Statistic**	**Std. Error**
PE1	389	-0.08	0.12	-1.27	0.25
PE2	389	-0.92	0.12	0.20	0.25
PE3	389	-1.00	0.12	0.32	0.25
PE4	389	-0.94	0.12	0.26	0.25
PE5	389	-0.82	0.12	-0.12	0.25
PE6	389	-0.52	0.12	-0.22	0.25
EE1	389	-0.68	0.12	-0.51	0.25
EE2	389	-0.59	0.12	-0.68	0.25
EE3	389	-0.66	0.12	-0.96	0.25
EE4	389	-0.56	0.12	-0.62	0.25
EE5	389	-0.78	0.12	-0.81	0.25
SI1	389	-0.51	0.12	-0.29	0.25
SI2	389	-0.66	0.12	-0.41	0.25
SI3	389	-0.45	0.12	-0.91	0.25
SI4	389	-0.65	0.12	-0.42	0.25
FC1	389	-0.98	0.12	-0.24	0.25
FC2	389	-0.44	0.12	-1.49	0.25
FC3	389	-1.35	0.12	0.30	0.25

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
FC4	389	-0.65	0.12	-1.09	0.25
HM1	389	-0.18	0.13	-0.67	0.25
HM2	389	-0.43	0.12	-0.42	0.25
HM3	389	-0.71	0.12	-0.31	0.25
HM4	389	-0.43	0.12	-1.03	0.25
PV1	389	-0.84	0.12	0.38	0.25
PV2	389	-0.91	0.12	0.81	0.25
PV3	389	-0.74	0.12	-0.09	0.25
HA1	389	0.10	0.12	-0.71	0.25
HA2	389	0.05	0.12	-0.84	0.25
HA3	389	-0.58	0.12	-0.41	0.25
HA4	389	-0.30	0.12	-0.96	0.25
HA5	389	0.11	0.12	-0.83	0.25
TT1	389	-0.28	0.12	-0.86	0.25
TT2	389	-0.30	0.12	-0.62	0.25
TT3	389	-0.50	0.12	-0.36	0.25
TT4	389	-0.39	0.12	-0.44	0.25
INT1	389	-0.60	0.12	-0.46	0.25
INT2	389	-0.60	0.12	-0.84	0.25
INT3	389	-0.89	0.12	-0.37	0.25
INT4	389	-0.63	0.12	-0.43	0.25
PT1	389	-0.59	0.12	-0.24	0.25
PT2	389	-0.58	0.12	-0.74	0.25
PT3	389	-0.95	0.12	0.54	0.25
PT4	389	-0.96	0.12	0.47	0.25
PT5	389	-0.83	0.12	0.36	0.25
PT6	389	-1.30	0.12	1.62	0.25
PT7	389	-0.75	0.12	-0.22	0.25
PT8	389	-0.99	0.12	0.69	0.25
PT9	389	-0.33	0.12	-0.69	0.25

	N	Skewness		Kurtosis	
	Statistic	**Statistic**	**Std. Error**	**Statistic**	**Std. Error**
PT10	389	-0.43	0.12	-0.38	0.25
PT11	389	-0.41	0.12	-0.40	0.25
PT12	389	-0.67	0.12	0.37	0.25
PT13	389	-0.57	0.12	0.35	0.25

5.7 DESCRIPTIVE ANALYSIS BASED ON CONSTRUCT

Table 5.9 shows the mean scores for the participant's agreement with statements on each construct. The means obtained are relatively high as shown below. It described the situation where the average values of the data set or specific variables are high in relation to the specific benchmark.

Table 5.9 The Mean of Each Construct

	N	Mean	Std. Deviation
Mean_PE	389	3.72	0.79
Mean_EE	389	3.63	1.20
Mean_SI	389	3.50	1.12
Mean_FC	389	3.58	1.16
Mean_HM	389	3.53	0.91
Mean_PV	389	3.78	0.95
Mean_HA	389	3.29	1.01
Mean_TT	389	3.69	0.88
Mean_INT	389	3.87	1.05
Mean_PT	389	4.13	0.65

Notes:PE:performance expectancy, EE: Effort expectancy, SI: Social influence, FC: Facilitating condition, HM: Hedonic Motivation, PV: Price value, HA: Habit, TT: Trust, INT: Behavioural intention, PT: Penetration

5.8 ASSESSMENT OF STRUCTURAL EQUATION MODELING (SEM)

Structural Equation Modeling (SEM) is commonly used in fields of social science, psychology, and strategic management over the past ten years. SEM has been used to explain vast amounts of empirical data to assess the viability of basic theories underlying statistical models (Chin et al., 2008). The SEM technique is also used by researchers to estimate a particular theoretical model. Additionally, SEM enables the testing of hypotheses regarding the association between latent variables and observed variables. It is employed for its combined features of factor analysis and multiple regression, allowing the examination of the structural properties of both theoretical and measurement models. According to Weston et al. (2006), structural equation modeling differs from other data analysis techniques in that it can estimate and test associations for interactions between factors and latent variables.

An increasing number of researchers are adopting SEM as an alternative due to the limitations of first-generation data analysis techniques, such as regression analysis, in adequately describing complex relationships among dependent and independent variables simultaneously (Hair et al., 2010). SEM is a crucial technique for evaluating the relationships between concepts, verifying the validity of the tool, and determining whether a given model empirically supports or contradicts the theoretical hypotheses.

SEM allows the evaluation of measurements and structural models in one method. Additionally, it allows the relationship between several dependent and independent variables to be modeled concurrently (Legate et al., 2023). SEM is qualified to incorporate factor analysis into hypothesis testing in addition to assimilating measurement errors of experiential variables into the proposed model (Gefen et al., 2000). It is essential to have a thorough understanding of SEM before using it. PLS-SEM and CB-SEM are the two methods that are available for use. Each approach is appropriate for a specific research setting (Legate et al., 2023).

Using the Smart-PLS simulation software, the conceptual measurement model was developed to evaluate the impact of manifest variables. To simulate the model using PLS, a number of parameters are computed and evaluated, such as item loading,

validity tests, and reliability tests. Henseler et al. (2009) introduced a two-step procedure involving the estimation of path coefficients in a structural model and the independent computation of PLS model parameters by addressing the blocks within the measurement model separately.

5.9 (A) ASSESSMENT OF THE MEASUREMENT MODEL

The initial stage in evaluating the model involves analyzing the measurement model. Subsequently, discriminant validity and composite reliability undergo assessment through convergent and discriminant methods, and construct reliability is appraised using Cronbach's α and composite reliability. As per Chin (1998), factor analysis utilizes the outer model, also known as the measurement model, to determine the extent of loading of observable variables on their underlying construct. The measurements do not need to be reevaluated in light of the theoretical model that was developed from reputable and well-established theoretical study streams in management as presented in Chapter 3. (Hair et al., 2006). Nevertheless, to confirm the inherent relationship between latent components and observable variables, it is advisable to utilize an outer model and CFA (Byrne, 2001). Table 5.10 displays the measuring model criteria for model fit. The criteria necessary for stepwise analysis are described below;

5.10 (B) CONSTRUCT VALIDITY AND RELIABILITY

The initial criteria for evaluating a measurement model is internal consistency, which is determined by comparing the items or observed variables with one another. Notably, Gotz et al. (2009) found that the underlying latent variable explains the variance of the items that indicate item-reliability. Chin (1998) states that the latent construct represents the absolute correlation (standardized outer loadings), which need to be greater than 50%.

As stated by Henseler et al. (2009), the value should exceed 0.70. The outcomes of the PLS measurement analysis are presented in Table 5.10. The fact that the factor loadings were higher than the minimal threshold criterion is indicated by the absolute correlation between the measuring items and the construct (0.571 to 0.850) (Chin, 1998).

Gotz et al. (2009) stipulate that even in cases where the reliability of each individual item is deemed sufficient, It is recommended to examine the reliability of the construct to evaluate the reliability of the set of items falling under the same construct. Items assigned to the same constructs demonstrate a stronger relationship among themselves, which is confirmed by construct-level reliability. In this study, construct-level reliability was assessed using Cronbach's α and composite reliability. Cronbach's α measures the internal consistency of the multi-item scale on a unidimensional basis, while composite reliability evaluates how well each assigned item reflects the constructs of the scale (Fornell and Larcker, 1981; Gotz et al., 2009). (1951, Cronhach). Table 5.10 displays the composite reliability and Cronbach's α values for the study. It demonstrates that all item values are within the allowable range for composite reliability and Cronbach's α.

5.11 CONVERGENT VALIDITY

As per the definition provided by Hair et al. (2006), convergent validity refers to the ability of a set of observing items to accurately capture the underlying theoretical concept. Convergent validity, in particular, demonstrates that responses from various measures that correlate represent the same construct. The fact that the objects are one-dimensional further supports the idea that the group of them should all represent the same underlying concept (Henseler, 2009). The "Average Variance Extracted" (AVE) technique was employed to assess the convergent validity in the current study, following the methods outlined by Hair et al. (2006), Henseler (2009), and Tabachnick and Fidell (2007).

As per Table 5.10, the Average Variance Extracted (AVE) value for each latent variable exceeds the recommended threshold of 0.5 (50%). This indicates that, on average, each construct can explain more than half of the variance in its measuring items (Fornell and Larcker, 1981).

Table 5.10 Internal Consistency and Convergence Validity Results

CONSTRUCT	ITEM	Loading	CA	CR	AVE
EFFORT EXPECTANCY	EE1	0.882	0.963	0.971	0.87
	EE2	0.953			
	EE3	0.936			
	EE4	0.947			
	EE5	0.945			
FACILITATING CONDITION	FC1	0.947	0.959	0.97	0.889
	FC2	0.943			
	FC3	0.936			
	FC4	0.945			
HABIT	HA1	0.876	0.948	0.96	0.829
	HA2	0.923			
	HA3	0.894			
	HA4	0.942			
	HA5	0.916			
HEDONIC MOTIVATION	HM2	0.925	0.924	0.952	0.868
	HM3	0.944			
	HM4	0.926			
BEHAVIORAL INTENTION	INT1	0.916	0.946	0.961	0.862
	INT2	0.95			
	INT3	0.94			
	INT4	0.907			
PERFORMANCE EXPECTANCY	PE1	DELETED	0.91	0.937	0.757
	PE2	0.937			
	PE3	0.941			
	PE4	0.946			
	PE5	0.929			
	PE6	0.511			

CONSTRUCT	ITEM	Loading	CA	CR	AVE
PENETRATION	PT1	0.888	0.962	0.966	0.69
	PT2	0.875			
	PT3	0.877			
	PT4	0.883			
	PT5	0.908			
	PT6	0.857			
	PT7	0.64			
	PT8	0.901			
	PT9	0.79			
	PT10	0.801			
	PT11	0.779			
	PT12	0.79			
	PT13	0.768			
PRICE VALUE	PV1	0.93	0.908	0.942	0.844
	PV2	0.905			
	PV3	0.921			
SOCIAL INFLUENCE	SI1	0.929	0.955	0.967	0.88
	SI2	0.943			
	SI3	0.935			
	SI4	0.945			
TRUST	TT1	0.743	0.879	0.913	0.726
	TT2	0.855			
	TT3	0.909			
	TT4	0.892			

Notes: CR: Composite Reliability; AVE: Average Variance Extracted; CA: Cronbach's Alpha

5.12 MEASUREMENT OF DISCRIMINANT VALIDITY

Discriminant validity underscores the authentic distinctions between a construct and another. Various methods exist for assessing discriminant validity, including cross loadings, HTMT, and Fornell Lacker. Fornell Lacker stands as the initial benchmark for validating discriminant validity. It necessitates that a construct captures a greater portion of variance with its items compared to other constructs in the model.

According to Table 5.11, the square roots of the AVE for all constructs surpass the respective inter-correlations. Consequently, the assessment of the measurement model affirms its reliability and validity.

Table 5.11 Discriminant Validity – Fornell and Lacker Criterion

Constructs	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
EE (Y1)	**0.93**									
FC (Y2)	0.58	**0.94**								
HM (Y3)	0.70	0.71	**0.93**							
HA (Y4)	0.32	0.27	0.35	**0.91**						
INT (Y5)	0.69	0.60	0.67	0.35	**0.93**					
PE (Y6)	0.66	0.63	0.65	0.39	0.70	**0.87**				
PV (Y7)	0.32	0.19	0.36	0.43	0.46	0.36	**0.92**			
PT (Y8)	0.35	0.24	0.27	0.32	0.36	0.36	0.27	**0.83**		
SI (Y9)	0.76	0.52	0.62	0.26	0.59	0.56	0.35	0.25	**0.94**	
TT(Y10)	0.47	0.21	0.39	0.51	0.33	0.48	0.48	0.39	0.49	**0.85**

Note: EE (Effort Expectancy), FC (Facilitating condition), HM (Hedonic Motivation), HA (Habit), INT (Intention), PE (Performance expectancy), PV (Price Value), PT (Penetration), SI (Social Influence), TT (Trust)

HTMT serves as the second method for gauging discriminant validity, believed to be markedly superior to Fornell Larcker. As outlined by Henseler et al. (2015), HTMT values should not exceed 0.90. In the present study, the upper threshold value, indicated in Table 5.12, remains below 0.90, aligning with discriminant validity criteria as the value is under the specified threshold.

Table 5.12 Results of Hetrotait-Monotrait Ratio (HTMT)

Constructs	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
EE (Y1)										
FC (Y2)	0.6									
HM (Y3)	0.739	0.748								
HA(Y4)	0.33	0.284	0.375							
Int (Y5)	0.715	0.619	0.713	0.368						
PE (Y6)	0.715	0.653	0.706	0.434	0.743					
PV (Y7)	0.332	0.193	0.392	0.467	0.49	0.427				
PT (Y8)	0.359	0.248	0.282	0.332	0.377	0.399	0.29			
SI (Y9)	0.785	0.539	0.659	0.27	0.617	0.614	0.372	0.261		
TT (Y10)	0.508	0.207	0.419	0.544	0.332	0.569	0.51	0.388	0.54	

Note: EE (Effort Expectancy), FC (Facilitating condition), HM (Hedonic Motivation), HA (Habit), INT (Intention), PE (Performance expectancy), PV (Price Value), PT (Penetration), SI (Social Influence), TT (Trust)

Three approaches, including the cross-loading matrix, were employed to examine discriminant validity. It is necessary for the item loading of one construct to be higher than that of other constructs. It demonstrates how the construct's constituents are assessing the desired construct. Table 5.13's discriminant validity is affirmed through the cross-loading method in this study. The table indicates that each item is loaded with the highest probable values for the corresponding constructs.

Table 5.13 Discriminant Validity- Cross Loadings

	EE	**FC**	**HM**	**Habit**	**Int**	**PE**	**PV**	**PENT**	**SI**	**Trust**
EE1	**0.88**	0.56	0.63	0.30	0.73	0.67	0.29	0.32	0.70	0.43
EE2	**0.95**	0.56	0.67	0.28	0.63	0.64	0.29	0.29	0.74	0.47
EE3	**0.94**	0.52	0.64	0.31	0.61	0.56	0.30	0.36	0.67	0.45
EE4	**0.95**	0.53	0.65	0.33	0.60	0.61	0.32	0.34	0.70	0.46
EE5	**0.95**	0.54	0.66	0.25	0.62	0.56	0.27	0.31	0.71	0.40
FC1	0.59	**0.95**	0.72	0.24	0.53	0.60	0.20	0.24	0.53	0.23
FC2	0.48	**0.94**	0.62	0.24	0.53	0.55	0.13	0.20	0.43	0.14
FC3	0.63	**0.94**	0.73	0.27	0.65	0.66	0.22	0.26	0.56	0.25
FC4	0.48	**0.95**	0.60	0.27	0.53	0.55	0.14	0.21	0.43	0.15

	EE	FC	HM	Habit	Int	PE	PV	PENT	SI	Trust
HA1	0.31	0.28	**0.36**	0.88	0.29	0.36	0.43	0.26	0.25	0.49
HA2	0.27	0.19	**0.28**	0.92	0.31	0.34	0.38	0.29	0.24	0.46
HA3	0.26	0.26	**0.30**	0.89	0.30	0.33	0.37	0.32	0.20	0.43
HA4	0.30	0.25	**0.32**	0.94	0.35	0.36	0.38	0.29	0.25	0.47
HA5	0.29	0.26	**0.34**	0.92	0.33	0.36	0.41	0.29	0.24	0.45
HM2	0.66	0.71	0.93	**0.34**	0.68	0.64	0.35	0.27	0.59	0.33
HM3	0.68	0.64	0.94	**0.32**	0.61	0.60	0.31	0.23	0.61	0.40
HM4	0.61	0.63	0.93	**0.32**	0.59	0.58	0.36	0.24	0.53	0.35
INT1	0.65	0.48	0.60	0.38	**0.92**	0.64	0.39	0.38	0.48	0.31
INT2	0.67	0.59	0.64	0.26	**0.95**	0.65	0.38	0.33	0.64	0.30
INT3	0.72	0.70	0.74	0.29	**0.94**	0.71	0.35	0.31	0.63	0.30
INT4	0.52	0.44	0.51	0.37	**0.91**	0.59	0.60	0.32	0.45	0.30
PE2	0.62	0.59	0.61	0.35	0.68	**0.94**	0.32	0.32	0.54	0.42
PE3	0.58	0.61	0.61	0.34	0.67	**0.94**	0.33	0.30	0.49	0.37
PE4	0.62	0.62	0.61	0.36	0.66	**0.95**	0.31	0.35	0.52	0.45
PE5	0.57	0.60	0.61	0.33	0.64	**0.93**	0.29	0.29	0.49	0.38
PE6	0.51	0.22	0.34	0.36	0.31	**0.51**	0.43	0.35	0.43	0.60
PT1	0.33	0.26	0.28	0.22	0.33	0.34	0.20	**0.89**	0.24	0.33
PT10	0.27	0.20	0.20	0.20	0.28	0.26	0.22	**0.80**	0.22	0.27
PT11	0.30	0.22	0.22	0.17	0.28	0.25	0.17	**0.78**	0.27	0.24
PT12	0.22	0.14	0.19	0.26	0.26	0.25	0.29	**0.79**	0.16	0.31
PT13	0.25	0.15	0.21	0.26	0.31	0.27	0.30	**0.77**	0.20	0.27
PT2	0.29	0.22	0.22	0.29	0.33	0.31	0.23	0.88	0.20	0.34
PT3	0.33	0.25	0.25	0.28	0.34	0.34	0.23	0.88	0.23	0.35
PT4	0.31	0.24	0.25	0.28	0.33	0.33	0.21	0.88	0.20	0.36
PT5	0.35	0.22	0.25	0.28	0.34	0.33	0.20	0.91	0.27	0.38
PT6	0.26	0.17	0.20	0.35	0.28	0.29	0.23	0.86	0.16	0.36
PT7	0.20	0.08	0.20	0.31	0.22	0.26	0.29	0.64	0.12	0.30
PT8	0.34	0.21	0.22	0.31	0.33	0.33	0.23	0.90	0.23	0.38
PT9	0.27	0.22	0.20	0.22	0.26	0.26	0.21	0.79	0.20	0.26
PV1	0.34	0.20	0.39	0.39	0.48	0.37	**0.93**	0.31	0.34	0.45
PV2	0.27	0.13	0.31	0.38	0.37	0.30	**0.91**	0.18	0.32	0.42
PV3	0.25	0.17	0.29	0.43	0.40	0.33	**0.92**	0.24	0.29	0.44
SI1	0.73	0.52	0.64	0.23	0.60	0.58	0.32	0.23	**0.93**	0.46
SI2	0.70	0.47	0.55	0.21	0.51	0.50	0.32	0.21	**0.94**	0.46
SI3	0.71	0.50	0.60	0.31	0.58	0.52	0.34	0.28	**0.94**	0.44
SI4	0.70	0.47	0.54	0.21	0.52	0.50	0.32	0.22	**0.95**	0.46

	EE	FC	HM	Habit	Int	PE	PV	PENT	SI	Trust
TT1	0.36	0.10	0.28	0.38	0.16	0.34	0.26	0.21	0.41	**0.74**
TT2	0.38	0.13	0.29	0.41	0.22	0.39	0.37	0.24	0.47	**0.86**
TT3	0.44	0.23	0.38	0.51	0.36	0.46	0.47	0.44	0.43	**0.91**
TT4	0.42	0.20	0.35	0.40	0.31	0.41	0.47	0.34	0.39	**0.89**

Note: EE (Effort Expectancy), FC (Facilitating condition), HM (Hedonic Motivation), HA (Habit), INT (Intention), PE (Performance expectancy), PV (Price Value), PT (Penetration), SI (Social Influence), TT (Trust)

Assessment of the Structural Model

After evaluating the fit of the measurement model, the subsequent phase involved assessing the validity of the structural model. Various statistical measures, such as path coefficient (β), predictive relevance (Q2), effect size (f2), and coefficient of determination (R2), were utilized for this validation. To establish a linear covariance relationship, the following step entailed establishing the causal path between the independent (exogenous) and dependent (endogenous) variables. According to Chin (2010), the inner path model can be theoretically evaluated using a set of structural equations represented by the structural model.

The key evaluation criteria for the structural model in this study encompass the path coefficient (β), coefficient of determination (R2) for the endogenous variable, effect size (f2), prediction relevance (Q2), and multicollinearity (inner VIF), as outlined by Henseler et al. (2009), Chin (2010), Tenenhaus et al. (2005), and Gotz et al. (2009). Presented below is a stepwise test of the structural model, providing the threshold values and descriptions for each benchmark.

5.13 COEFFICIENT OF DETERMINATION (R^2)

The R^2 signifies the variance elucidated by the endogenous construct. As per Hair et al. (2011), the assessment of the structural model is heavily reliant on the coefficient of determination (R2). Referring to Hair et al. (2011), Table 5.14 reveals that the R2 value for behavioral intention is 0.644, surpassing 25%, thus indicating a highly commendable predictive level in empirical research. Trust has an R^2 value of 0.105 while the R^2 of penetration is 0.211. This value indicates a high, acceptable prediction level in empirical research (Hair et al., 2011). It showed that 10.5% of the variance in the trust is explained by the penetration to participate in the family takaful.

Table 5.14 R-square Result

Construct	R Square
Int	0.644
Penetration	0.211
Trust	0.105

5.14 EFFECT SIZE (F^2)

f^2 was used to measure the effect size. A small effect size is indicated by a value between 0.00 and 0.15, a medium effect is shown by a value between more than 0.15 and 0.35, and a large effect is indicated by a value above 0.35. (Sarstedt et al., 2021). All f^2 presented in Table 5.15 are between 0.00 to 015, indicating that all constructs have a small effect size.

Table 5.15 F-square Results

Construct	Int	Penetration	Trust
EE	0.063		
FC	0.020		
HM	0.017		
Habit	0.001		
Int		0.079	0.118
PE	0.098		
PV	0.078		
Penetration			
SI	0.000		
Trust		0.103	

5.15 RESULT OF MULTICOLLINEARITY (INNER VIF)

Multicollinearity occurs when two or more independent constructs that exhibit strong correlations are considered. The problem is deemed multicollinearity if there are shared indicators between the different constructs (Hair et al., 2011). Prior to testing the model, a researcher should determine whether multicollinearity exists. This can be accomplished by computing the correlation coefficient. If the correlation coefficient values exceed 0.9,it is assumed that the variables have collinearity issues. When identifying collinearity issues, Variance Inflant Tolerance (VIF) can be used in place of the correlation coefficient. The VIF value for Smart-PLS is expected to be below 5, indicating the absence of collinearity issues among the variables in the model. In this study, multicollinearity did not pose a concern as the inner VIF values are below 5. According to Pallant's (2007) theory, multicollinearity becomes evident at VIF values below 0.1 and above 10. Table 5.16 demonstrates the absence of multicollinearity among the independent variables in this study, with the highest VIF value being 3.166 and the lowest being 1.345.

Table 5.16 Result of Multicollinearity – Inner VIF Values

Construct	Int	Penetration	Trust
EE	3.166		
FC	2.339		
HM	2.96		
Habit	1.345		
Int		1.118	1
PE	2.315		
PV	1.407		
Penetration			
SI	2.507		
Trust		1.118	

5.16 PREDICTIVE RELEVANCE (Q^2 VALUE)

The Q2 test, a sample reprocessing method employed for evaluating the cross-validation of the model (Hair et al., 2011), was utilized to assess the predictive capabilities of the structural model, as advised by Hair et al. (2010). This process involved replicating the manifest values and estimating parameters to observe the model's predictive performance. In this context, the model must demonstrate its ability to predict dependent variables.

A blindfolding test was conducted to calculate the Q2 value, determining the predictive relevance of the model. A Q2 value greater than zero signifies the model's predictive relevance, while an insufficient predictive relevance is indicated by a Q2 value of zero (Hair et al., 2011). As per Chin (1998), the model's predictive relevance can only be confirmed if the Q2 value is greater than zero. The study identified Q2 values greater than zero, suggesting that the model exhibits a good fit and high predictive relevance, as illustrated in Table 5.17).

Table 5.17 Result of Predictive Relevance

	SSO	SSE	Q^2 (=1-SSE/SSO)
Int	1556	702.926	0.548
Penetration	5057	4332.952	0.143
Trust	1556	1449.927	0.068

5.17 DIRECT AND MEDIATING EFFECT ANALYSIS

The standardized β from multiple regression analysis aligns with Smart-PLS's path coefficient, as noted by Chin (1998). As PLS doesn't rely on distribution assumptions, the bootstrapping process was employed to estimate t statistics and confidence intervals. The observation of a significant relationship in the inner path model occurred through path estimation or hypothetical relations. The analysis utilized regression coefficients (β) to examine each hypothetical path within the framework. Additionally, the study scrutinized suggested hypotheses in the structural model, calculating the β values through PLS Bootstrap. As per Hair et al. (2011), for a specific effect in the model to be deemed significant, the path coefficient should be at least 0.1. The results of the path coefficient assessment are presented in Table 5.18. The study identified a significant impact of hedonic motivation on behavioral intention ($t=2.333$, $p<0.05$), effort expectancy on behavioral intention ($t=4.561$, $p<0.05$), facilitating condition on behavioral intention ($t=2.993$), behavioral intention on penetration ($t=5.376$, $p<0.05$), behavioral intention on trust ($t=6.506$, $p<0.05$), performance expectancy on behavioral intention ($t=6.169$, $p<0.05$), price value on behavioral intention ($t=4.518$, $p<0.05$), and the mediator of trust on penetration ($t=6.062$, $p<0.05$).

In contrast, there are instances of path coefficient results where the impact of habit on behavioral intention ($t=0.493$, $p<0.05$) and social influence on behavioral intention ($t=0.348$, $p<0.05$) is not deemed significant. Moreover, the structural model is depicted in Table 5.18, illustrating the path coefficients derived from PLS-SEM.

Table 5.18 Path Coefficient Result

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
EE -> Int	0.267	0.267	0.059	4.561	0.000
FC -> Int	0.129	0.128	0.043	2.993	0.003
HM -> Int	0.132	0.13	0.057	2.333	0.020
Habit -> Int	-0.017	-0.017	0.035	0.493	0.622
Int -> Penetration	0.263	0.264	0.049	5.376	0.000
Int -> Trust	0.325	0.326	0.05	6.506	0.000
PE -> Int	0.284	0.287	0.046	6.169	0.000
PV -> Int	0.198	0.196	0.044	4.518	0.000
SI -> Int	0.017	0.017	0.05	0.348	0.728
Trust -> Penetration	0.301	0.303	0.05	6.062	0.000

5.18 TESTS OF HYPOTHESES

Eight (8) hypotheses were posited in this study to comprehend the essential success factors influencing the penetration of family takaful in Malaysia. Out of these, six hypotheses garnered support. A detailed breakdown of the hypotheses testing results is presented in Table 5.20, elucidated further below.

5.19 (A) HYPOTHESIS 1

The hypothesis asserting that performance expectancy significantly influences consumers' intention to participate in family takaful was substantiated through PLS analysis. This finding aligns with similar studies conducted by Hassanudin et al. (2020) and Alalwan et al. (2018), which also observed a positive and significant impact on the adoption of internet banking. The result also been supported from the study stated that the performance expectancy has influences mobile technology (Samsudeen et al., 2022).

5.20 (B) HYPOTHESIS 2

In this investigation, hypothesis 2, which examined the path coefficient of effort expectancy to behavioral intention, found that participants' intentions to engage in family takaful were indeed significantly influenced by their expectations of effort. Therefore, hypothesis 2, positing that effort expectancy has a significant impact on the behavioral intention to participate in family takaful, was validated. These outcomes are consistent with the findings of Utomo et al. (2021), whose earlier research on mobile health apps suggested that a user's intention to use a mobile healthcare application is influenced by their expectations of effort. This aligns with conclusions drawn from other empirical research in the banking sector, such as the study by Samsudeen et al. (2022).

5.21 (C) HYPOTHESIS 3

Table 5.20 displays the path coefficient of social influence on behavioral intention. This examination was conducted to assess Hypothesis 3, positing that social influence significantly impacts the behavioral intention to participate in family takaful.Thus, it is possible that this study cannot indicate that social influence played a role in takaful. Moreover, respondents' intention to engage in family takaful is not supported by Hypothesis 3. The study's findings suggested that the normative influence is not especially prominent when it came to participating in family takaful, as evidenced by the nonsignificant effect of social influence. This finding is consistent with earlier research (Shah Alam et al., 2012; Kaabachi and Obeid, 2014) that found a negative relationship between behavioral intention and social influence.

5.22 (D) HYPOTHESIS 4

In this investigation, the path coefficient of facilitating conditions to behavioral intention was scrutinized to assess Hypothesis 4. The study found that participants' behavioral intention to engage in family takaful was significantly influenced by facilitating conditions.

Hypothesis 4 was affirmed; therefore, it can be concluded that the behavioral intention to participate in family takaful is strongly influenced by facilitating conditions. According to the findings, people are more likely to take part in family takaful when they have access to the necessary resources, like a cell phone and an internet connection. This finding is in line with other empirical studies (Alalwan et al., 2018; Kwateng et al., 2019; Samsudeen et al., 2022)

5.23 (E) HYPOTHESIS 5

Hypothesis 5 states that thw behavioral intention toward family takaful is significantly influenced by hedonic motivation. Hypothesis 5, postulating that hedonic motivation significantly influences family takaful participation, was validated. These results are consistent with previous research conducted by Vieira et al. (2018), Wong et al. (2019), Omar et al. (2019), and Santo et al. (2022). The findings from the empirical studies consistent with the result from this study showed that hedonic motivation can influence to participate in family takaful.

5.24 (F) HYPOTHESIS 6

The path coefficient corresponding to Hypothesis 6, asserting that price value significantly influences the behavioral intention to engage in family takaful, is presented in Table 5.20. The confirmation of the sixth hypothesis suggests that price value indeed impacts an individual's behavioral intention to participate in family takaful. These findings align with earlier empirical research highlighting the significance of price values in e-wallet adoption, as demonstrated by Raza et al. (2019), Kahn et al. (2022), and Boomer et al. (2022).

5.25 (G) HYPOTHESIS 7

The seventh hypothesis, proposing that habit has a substantial impact on the behavioral intention to engage in family takaful, was not substantiated. The outcomes indicated that habit did not have a noticeable effect on the participants' decision to participate in family takaful. These findings are in line with earlier empirical research conducted by Kwateng et al. (2019) and Mahfuz et al. (2016). Mahfuz et al. (2016) discovered that in Bangladesh, the adoption of m-banking services was not significantly influenced by habit.

5.26 (H) HYPOTHESIS 8

Table 5.20 elucidates the path coefficient for Hypothesis 8, indicating a significant mediating impact between behavioural intention and the penetration of family takaful. Since H8 was accepted, it can be inferred that in Malaysia, consumer behavioural intention and family takaful penetration are significantly influenced by trust. This discovery aligns with earlier empirical research by Hanif et al. (2021), Kalinic et al. (2020), and Sumaedi et al. (2015), which demonstrated that trust has a substantial impact on behavioral intentions concerning mobile banking.

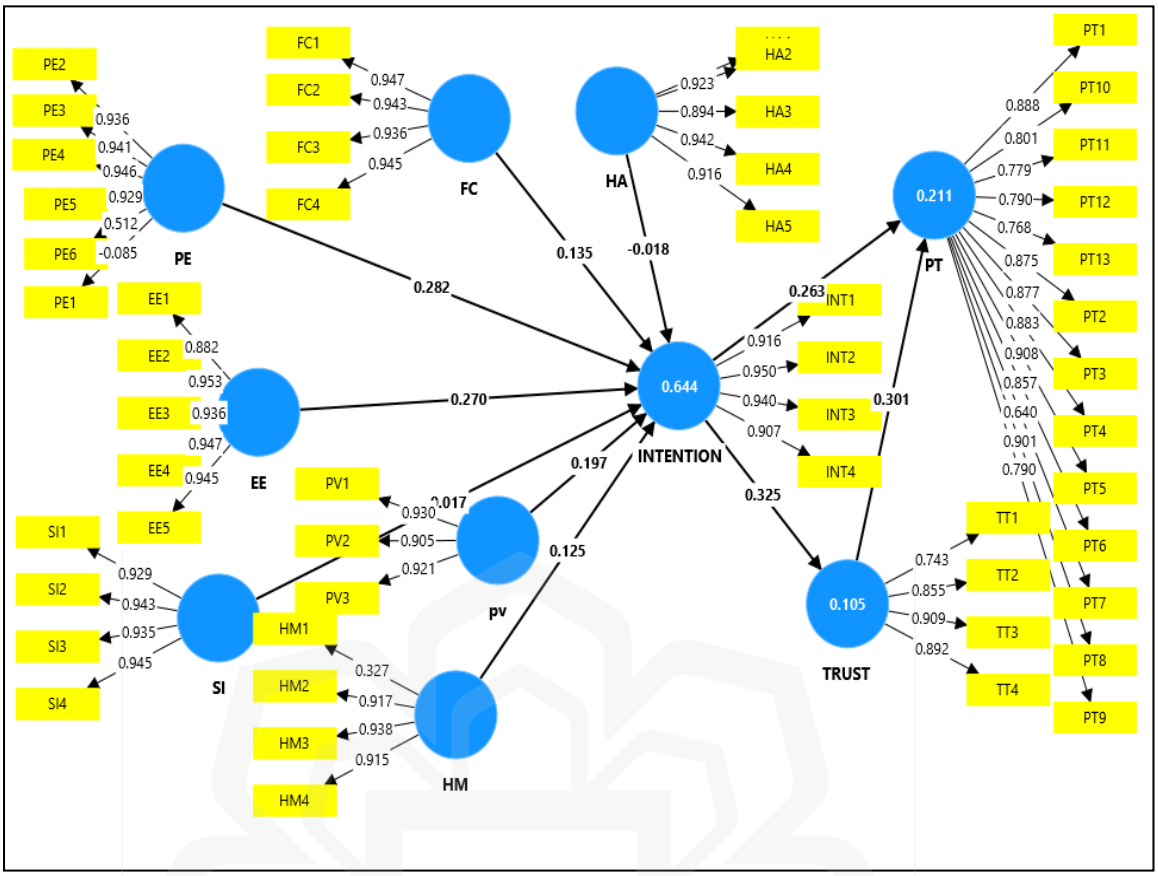

Figure 5.1 Structural Model

Table 5.19 Summary of the Hypotheses Testing

Hypotheses	**Results**
1. Performance expectancy significantly influences consumer behavioral intentions to participate in family takaful.	Accepted
2. Effort expectancy has a notable impact on consumer behavioral intentions to engage in family takaful.	Accepted
3. Social influence significantly affects consumer behavioral intentions to participate in family takaful.	Rejected
4. Facilitating conditions play a significant role in shaping consumer behavioral intentions to participate in family takaful.	Accepted
5. Hedonic motivation significantly shapes consumer behavioral intentions to participate in family takaful.	Accepted

Hypotheses	Results
6. Price value significantly influences consumer behavioral intentions to participate in family takaful.	Accepted
7. Habit is a significant factor in shaping consumer behavioral intentions to participate in family takaful.	Rejected
8. Trust, acting as a mediator, influences consumer behavioral intentions to participate in family takaful.	Accepted

5.27 CHAPTER SUMMARY

This chapter presents a summary of the PLS-SEM analysis results. The findings reveal that six (6) out of the eight (8) hypotheses were confirmed. The results indicate that behavioral intention towards the adoption of family takaful in Malaysia is significantly influenced by price value, trust, hedonic motivation, facilitating conditions, performance expectancy, and effort expectancy. However, social influence and habit do not exhibit a significant impact on the behavioral intention to participate in family takaful. The subsequent chapter delves into the study's conclusions and provides recommendations for further research, takaful operators, and regulatory bodies.

CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.1 INTRODUCTION

The preceding chapter offered a comprehensive analysis of the research findings. This chapter summarizes the research's contributions to theory and practice, discusses its limitations and possible recommendations for upcoming research, and presents a closing of the research.

6.2 RESEARCH IMPLICATION

6.2.1 Theoretical Contribution

By focusing on the "why" behind customers' participation in family takaful, this study has significant implications to takaful operator and advances theoretical understanding, particularly in the services marketing literature related to customer behavior. The study’s significant contributions are detailed below:

Constructing a Conceptual Framework

The examination of recent literature reveals a scarcity of studies conducted on the intention to participate in financial services, highlighting the need for this study. Since UTAUT2 is a popular model for technology adoption, the study's findings support the robustness of UTAUT2's ability to predict intention in various contexts and, in turn, indirectly add to the body of knowledge. The study also demonstrates UTAUT2’s usefulness in explaining behavior and intention in the field of information systems. The findings implicitly highlighted the efforts made by earlier researchers and well-founded theory from other domains has been pertained to the fields of Islamic financial services.

Assessing a Theoretical Connection between the Constructs that Previously Not Tested

Additionally, this study highlighted an array of dimensions, elements, and relationships that are helpful in comprehending the variables affecting intention. In this context, the study proposes that behavioral intention is influenced by factors such as price value, effort expectancy, performance expectancy, hedonic motivation, social influence, and facilitating conditions. Moreover, the exploration of trust as a mediator between behavioral intention and familial takaful penetration in this study contributes to the advancement of knowledge in the field. Thus, more theoretical understanding of how these antecedents have influenced the construct has been obtained from this research. It also offers a tool that other researchers can use to verify, modify, and adapt to it.

6.2.2 Methodological Contribution

The suggested methodology that has been used in this study aims to validate the proposed research framework. Related contributions made during the corroboration process included the following:

Verification of the Organisation and Linkages Between the Framework Dimensions' Elements

This study is the initial effort to examine behavioral intention, particularly among Muslims in a takaful setting, using SmartPLS version 4. A new paradigm for the study of consumer behavior has been introduced by the construct's measurement development and the exploratory analysis methodology employed in this investigation.

New Dimension of Framework Validation

The literature review indicates that to date, the majority of behavioral intention studies on financial services rely on multiple regression analyses and confirmatory factor analysis with AMOS. Hence, the application of PLS to exploratory analysis provides a new perspective for the existing literature.

6.2.3 Practical Contribution

Research on consumer behavior can have several real-world applications, particularly for marketers. Hence, this study has acknowledged several contributions.

Clear Dimension of Consumer Behavioral Intention

Takaful operators can improve the factors that lead to potential customers' negative perceptions of family takaful participation by utilizing the indication regarding the segregation of behavioral intention. For example, recognizing that potential clients have constrained financial resources and require a comprehensive understanding of the goods and services offered provides takaful operators with a clear and informative insight into the clients' situations.

Assisting Takaful Operators in Improving Marketing Strategies

This study can help takaful operators set up effective segmentation and targeting-related promotional strategies. Additionally, this study can help managers identify the areas that require attention and improvement. It is therefore possible for practitioners to gain a clear perception of the relationships between the various factors that can effect behavioral intention by dissecting the specific factors that affect Habit, Price Value, Hedonic Motivation, Facilitating Conditions, Social Influence, Effort Expectancy, Performance Expectancy.

The findings of the study reveal that trust, behavioral intentions, facilitating conditions, hedonic motivation, performance expectancy, effort expectancy, and price value collectively exert significant influence on an individual's intention to participate in family takaful. As a result, various marketing strategies or tactics ought to be employed to encourage family takaful participation. One effective strategy to get the attention of potential customers is to use an appropriate slogan and an appealing message.

6.3 RECOMMENDATIONS

6.3.1 Recommendation for Future Research

Several potential avenues for future research could contribute to the existing limited body of knowledge on this subject. The recommendations for further research include:

Implementation of Longitudinal Study

Longitudinal studies can be applied in future research studies with the same or a comparable scope. To instance, a similar study could be carried out with the same population and respondents sometime after the takaful business has been heavily marketed, publicized, and promoted to see how the relationships between the constructs alter. Furthermore, a study of consumer behavior could be conducted with the help of longitudinal research, rather than just behavioral intention. Implementing a longitudinal study required careful planning, robust data collection and strategies and thoughtful analysis to address the complexities of data that are collected over the period.

Comprehending the Conceptual Framework into Other Settings

This study's conceptual framework is replicable in different contexts. Future research, for example, could apply the conceptual framework to other Islamic contexts, like Malaysian Islamic co-ops and Islamic banks, as such an endeavor might produce different outcomes and conclusions. Moreover, this framework can be replicated to explore consumer intention to participate in general takaful and to comprehend the factors influencing customers in making zakat payments, thereby offering a more comprehensive understanding within the context of this study.

6.3.2 Suggestions for Regulatory Organisations

1. **Implementing Proper Educational Course**

   The importance of takaful and insurance in daily life must be understood and raised to the level of awareness through early exposure to takaful, as the results of the study suggest limited facilitating conditions, effort expectancy, individual performance expectancy, social influence, hedonic motivation, price value, habit, and trust toward family takaful. In this regard, such problems could be resolved by introducing takaful education into elementary and secondary classrooms.

2. **Focusing on User Demand**

   Regulatory bodies are advised to place additional emphasis on user demand to better comprehend their needs and expectations.

3. **Enhancing Customer Learning**

   Additional efforts should be made to improve customer awareness about the significance of takaful in their daily lives.

6.3.3 Suggestions for Takaful Operators

1. **Focus on education and awareness**

   Takaful operators can make an investment in educational and awareness campaigns to enable Malaysian families realize the value of prudent financial management. These can include talks, classes and websites that enlighten people about the advantages of family takaful and how it can safeguard their financial future.

2. **Leverage technology**

   Takaful operators can leverage technology to make easier for Malaysian families to access and participate in family takaful products. This can include online portals and mobile apps that allow customers to compare products, obtain quotes and make payments.

3. **Provide excellent customer service**

   Takaful operators may concentrate on offering top-notch customer care to their clients by utilizing their takaful agents. One of the measures that takaful operators can take to increase consumer confidence in participating in family takaful is the self-approach involving agents and the provision of step-by-step instructions in the process.

6.4 CONCLUDING REMARKS

This study presents a thorough analysis of the essential success factors influencing the adoption of family takaful in Malaysia. The findings of the study affirm the UTAUT2 model's validity as a reliable predictor of the intention to participate in a family takaful plan. The adopted decomposition method of the theory contributes to a clearer understanding and insights into the pivotal elements affecting the goal. Moreover, this research addresses a gap in the existing literature by incorporating behavioral

intention into the context of family takaful and examining its antecedents. The study contributes to the existing body of literature by providing a framework that can guide marketing educators, takaful operators, and policymakers.

REFERENCES

Abbad, M. M. M. (2021). Using the UTAUT model to understand students' usage of e-learning systems in developing countries. *Education and Information Technologies*, *26*, 7205–7224. https://doi.org/10.1007/s10639-021-10573-5

Abd Aziz, N. N., Aziz, M. A., & Abd Rahman, N. A. S. (2023). The mediating effects of student satisfaction on technostress–performance expectancy relationship in university students. *Journal of Applied Research in Higher Education*, *15*(1), 113–129. https://doi.org/10.1108/JARHE-03-2021-0117

Abdou, H. A., Ali, K., & Lister, R. J. (2014). A comparative study of Takaful and conventional insurance: Empirical evidence from the Malaysian market. *Insurance Markets and Companies: Analyses and Actuarial Computations*, *5*(1), 23–35.

Adams, D. A., Nelson, R. R., & Todd, P. A. (1992). Perceived usefulness, ease of use, and usage of information technology: A replication. *MIS Quarterly*, *16*(2), 227. https://doi.org/10.2307/249577

Aiken, L. (2002). Attitudes and related psychosocial constructs: Theories assessment and research. Thousand Oaks, CA: Sage.

Ajzen, I. (1985). From intentions to action: A theory of planned behavior. In J. Kuhl and J. Beckmann (eds.), *Action-control: From cognition to behavior* (pp. 11–39). Heidelberg, Germany: Springer-Verlag. http://dx.doi.org/10.1007/978-3-642-69746-3_2

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211. https://doi.org/10.1016/0749-5978(91)90020-T

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood Cliffs, NJ: Prentice-Hall.

Ajzen, I., & Madden, T. J. (1986). Prediction of goal-directed behavior: Attitudes, intentions and perceived behavioral control. *Journal of Experimental Social Psychology*, 22, 453–474. http://dx.doi.org/10.1016/0022-1031(86)90045-4

Alalwan, A. A. (2018). Investigating the impact of social media advertising features on customer purchase intention. *International Journal of Information Management*, *42*(4), 65–77. DOI: 10.1016/j.ijinfomgt.2018.06.001.

Alalwan, A. A., Dwivedi, Y. K., & Rana, N. P. (2017a). Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust. *International Journal of Information Management*, *37*(3), 99–110. DOI: 10.1016/j.ijinfomgt.2017.01.002.

Alalwan, A. A., Dwivedi, Y. K., Rana, N. P., & Algharabat, R. S. (2018). Examining factors influencing Jordanian customers' intentions and adoption of internet banking: Extending UTAUT2 with risk. *Journal of Retailing and Consumer Services, 40*, 125–138. https://doi.org/10.1016/j.jretconser.2017.08.026

Alalwan, A. A., Rana, N. P., Dwivedi, Y. K., & Algharabat, R. S. (2017b). Social media in marketing: A review and analysis of the existing literature. *Telematics and Informatics, 34*(7). DOI: 10.1016/j.tele.2017.05.008.

Alam, M. Z., Hu, W., Hoque, M. R., & Kaium, M.A. (2020). Adoption intention and usage behavior of mHealth services in Bangladesh and China: A cross-country analysis. *International Journal of Pharmaceutical and Healthcare Marketing*, *14*(1), 37–60. https://doi.org/10.1108/IJPHM-03-2019-0023

Alam, S. S., Janor, H., Zanariah, Che Wel, C. A., & Ahsan, M. N. (2012). Is religiosity an important factor in influencing the intention to undertake Islamic home financing in Klang Valley? *World Applied Sciences Journal*, *19*(7), 1030–1041. 10.5829/idosi.wasj.2012.19.07.392.

Albugami, M., & Bellaaj, M. (2014). The continued use of internet banking: combining UTAUT2 theory and service quality model. *Journal of Global Management Research*, 13–14.

Allen, I. E., & Seaman, C. A. (2007). Likert scales and data analyses. *Quality progress*, *40*(7), 64-65.

Al-Zoubi, S. I., & Ali, M. (2019). E-mobile acceptance using Unified Theory of Acceptance and Use of Technology (UTAUT): Research on universities in Jordan. *Annals of Emerging Technologies in Computing*, *3*(4), 28–36.

Amalia, F.A., Sosianika, A. and Suhartanto, D. (2020), "Indonesian Millennials' Halal food purchasing: merely a habit?", *British Food Journal*, Vol. 122 No. 4, pp. 1185-1198. https://doi.org/10.1108/BFJ-10-2019-0748

Amin, H. (2007). Extending TAM to SMS banking: Analyzing the gender gap among students. *International Journal of Business and Society*, *8*(1), 24–45.

Amin, H. (2012). Explaining intention to use the Islamic credit card: An extension of the TRA model. *Munich Personal RePEc Archive (MPRA)*, 36957. http://mpra.ub.uni-muenchen.de/36957/

Amin, H., & Chong, R. (2011). Is the theory of reasoned action valid for Ar-Rahnu? An empirical investigation. *Australian Journal of Basic & Applied Sciences*, *5*(10), 716–726.

Amin, H., Rahman, A. R. A., & Razak, D. A. (2009). Is the theory of planned behavior valid for Islamic home financing? *Munich Personal RePEc Archive (MPRA)*, 43179. http://mpra.ub.uni-muenchen.de/43179/

Amin, H., Rahman, A. R. A., Sondoh Jr., S. L., & Ang, M. C. H. (2011). Determinants of customers' intention to use Islamic personal financing: The case of Malaysian Islamic banks. *Journal of Islamic Accounting and Business Research*, *2*(1), 22–42. DOI: 10.1108/17590811111129490.

Amin, M., Isa, Z., & Fontaine, R. (2013). Islamic banks: Contrasting the drivers of customer satisfaction on image, trust, and loyalty of Muslim and Non-Muslim customers in Malaysia. *International Journal of Bank Marketing*, *31*, 79–97. https://doi.org/10.1108/02652321311298627

Ansari, M., & Malik, S. (2016). *Insuring success: Saudi Arabia insurance sector*. EFG Hermes, Saudi Arabia. https://www.efghermesresearch.com/OpenDownloads/Saudi%20Arabia%20Insurance%20Sector.pdf

Arnold, M. J., & Reynolds, K. E. (2003). Hedonic shopping motivations. *Journal of Retailing*, *79*(2), 77–95.

Astuti, M., & Ariyanti, M. (2015). *Analysis on voucher WIFI via SMS adoption by mobile phone subscriber in Indonesia utilising modified model of UTAUT2*. Proceedings of the IRES 18th International Conference, Bali, Indonesia (pp. 33–37).

Azizi, S. M., Roozbahani, N., & Khatony, A. (2020). Factors affecting the acceptance of blended learning in medical education: application of UTAUT2 model. *BMC Medical Education*, *20*, 367. https://doi.org/10.1186/s12909-020-02302-2

Aziz, S., Md Husin, M., Hussin, N. and Afaq, Z. (2019), "Factors that influence individuals' intentions to purchase family takaful mediating role of perceived trust", *Asia Pacific Journal of Marketing and Logistics*, Vol. 31 No. 1, pp. 81-104. https://doi.org/10.1108/APJML-12-2017-0311

Babin, B. J., Darden, W. R., & Griffin, M. (1994). Work and/or fun: Measuring Hedonic and utilitarian shopping value. *Journal of Consumer Research*, *20*, 644–656.
https://doi.org/10.1086/209376

Bakan, D. (1966). Behaviorism and American urbanization. *Journal of the History of the Behavioral Sciences*, *2*(1), 5–28. https://doi.org/10.1002/1520-6696(196601)2:1%3C5::AID-JHBS2300020103%3E3.0.CO;2-8

Bank Negara Malaysia (2019). Retrieved October 1, 2019. https://www.bnm.gov.my/documents/20124/2724769/ar2019_en_full.pdf

Bank Negara Malaysia (2021) Retrieved October 1, 2019 https://www.bnm.gov.my/documents/20124/6458991/ar2021_en_box2.pdf

Bank Negara Malaysia, 2023. Retrieved October 1, 2023. https://www.bnm.gov.my/regulations/fsp-directory?p_p_id=com_liferay_asset_publisher_web_portlet_AssetPublisherPortlet_INSTANCE_jXC730NRlqU0&p_p_lifecycle=0&p_p_state=normal&p_p_mode=view&p_r_p_tag=takaful-operator

Baptista, G., & Oliveira, T. (2015). Understanding mobile banking: The unified theory of acceptance and use of technology combined with cultural moderators. *Computers in Human Behavior*, *50*, 418–430. DOI: 10.1016/j.chb.2015.04.024.

Barrios, M., Villarroya, A., Borrego, A., & Castellà, C. O. (2011). Response rates and data quality in web and mail surveys administered to PhD holders. *Social Science Computer Review*, *29*(2), 208–220. 10.1177/0894439310368031.

Bagozzi, R.P., Yi, Y. On the evaluation of structural equation models. *JAMS* **16**, 74–94 (1988). https://doi.org/10.1007/BF02723327

Bagozzi, R. P. (1993). On the neglect of volition in consumer research: A Critique and proposal. *Psychology & Marketing*, *10*(3), 215–237. https://doi.org/10.1002/mar.4220100305

Berry, L. L. (1995). Relationship marketing of services – Growing interest, emerging perspectives. *Journal of the Academy of Marketing Science*, *23*, 236–245. https://doi.org/10.1177/009207039502300402

Bhattacherjee, A. (2000, August). Acceptance of e-commerce services: The case of electronic brokerages. *IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans*, *30*(4), 411–420. DOI: 10.1109/3468.852435.

Bhatti, K. K., & Qureshi, T. M. (2007). Impact of employee participation on job satisfaction, employee commitment and employee productivity. *International Review of Business Research Papers*, *3*(2), 54–68.

Bommer, W. H., Rana, S., & Milevoj, E. (2022). A meta-analysis of eWallet adoption using the UTAUT model. *International Journal of Bank Marketing*, *40*(4), 791–819. https://doi.org/10.1108/IJBM-06-2021-0258

Brown and Venkatesh. (2005). Model of adoption of technology in households: A baseline model test and extension incorporating household life cycle. *MIS Quarterly*, *29*(3), 399. https://doi.org/10.2307/25148690

Byrne, B. M. (2001). Structural Equation Modeling with AMOS, EQS, and LISREL: Comparative approaches to testing for the factorial validity of a measuring instrument. *International Journal of Testing*, *1*. 55–86. 10.1207/S15327574IJT0101_4.

Cenfetelli, R. T., & Bassellier, G. (2009). Interpretation of formative measurement in information systems research. *MIS Quarterly*, *33*(4), 689–707. https://doi.org/10.2307/20650323

Champney, H., & Marshall, H. (1939). Optimal refinement of the rating scale. *Journal of Applied Psychology, 23*(3), 323–331. https://doi.org/10.1037/h0054522

Chavez, D., & Cladellas, R., & Castelló, A. (2020). Habit and social influence as determinants of PowerPoint use in higher education: A study from a technology acceptance approach. *Interactive Learning Environments*, *31*(1), 1–17. 10.1080/10494820.2020.1799021.

Chao, C.-M. (2019). Factors determining the behavioral intention to use mobile learning: An application and extension of the UTAUT model. *Frontiers in Psychology, 10*. https://doi.org/10.3389/fpsyg.2019.01652

Chang, M. K. (1998). *Journal of Business Ethics, 17*(16), 1825–1834. https://doi.org/10.1023/a:1005721401993

Chen, P.-Y., & Hwang, G.-J. (2019). An empirical examination of the effect of self-regulation and the Unified Theory of Acceptance and Use of Technology (UTAUT) factors on the online learning behavioural intention of college students. *Asia Pacific Journal of Education*, *39*(1), 79–95. DOI: 10.1080/02188791.2019.1575184

Chia, W. S., Chua, X. Z., Lau, S. T., & Lee, S. L. (2017). *Determinants of halal food choice among local Non-Muslim tourists*. Unpublished research project, Universiti Tunku Abdul Rahman.

Chin, W. W. (1998). The partial least squares approach to structural equation modeling. In G. A. Marcoulides (Ed.). *Modern methods for business research* (pp. 295–358). Mahwah, NJ: Erlbaum.

Chin, W.W. (2010). How to write up and report PLS analyses. In V. E. Vinzi, W. Chin, J. Henseler, & H. Wang (Eds.). *Handbook of Partial Least Squares: Concepts, methods and applications*. Springer Handbooks of Computational Statistics. Heidelberg: Springer Berlin. https://doi.org/10.1007/978-3-540-32827-8_29

Chin, W. W., Peterson, R. A., & Brown, S. P. (2008). Structural Equation Modeling in marketing: Some practical reminders. *The Journal of Marketing Theory and Practice*, *16*(4), 287–298. 10.2753/MTP1069-6679160402.

Chitungo, S. K., & Munongo, S. (2013). Extending the technology acceptance model to mobile banking adoption in rural Zimbabwe. *Journal of business administration and education*, *3*(1).

Cho, J. E., & Hu, H. (2009). The effect of service quality on trust and commitment varying across generations. *International Journal of Consumer Studies*, *33*(4), 468–476. https://doi.org/10.1111/j.1470-6431.2009.00777.x

Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed method approaches* (2nd ed.). Thousand Oaks, London: SAGE Publication.

Croasmun, J. T., & Ostrom, L. (2011). Using Likert-type scales in the social sciences. *Journal of Adult Education*, *40*, 19–22.

Cronbach, L. J. (1950). Further evidence on response sets and test design. *Educational and Psychological Measurement*, *10*, 3–31. https://doi.org/10.1177/001316445001000101

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2013). *Applied multiple regression/correlation analysis for the behavioral sciences*. Routledge.

Compeau, D. R., & Higgins, C. A. (1995). Computer self-efficacy: Development of a measure and initial test. *MIS Quarterly*, *19*(2), 189–211.

Conner, M., & Armitage, C. J. (1998). Extending the theory of planned behavior: A review and avenues for further research. *Journal of Applied Social Psychology, 28*(15), 1429–1464.

Daniali, S. M., Barykin, S. E., Zendehdel, M., Kalinina, O. V., Kulibanova, V. V., Teor, T. R., Ilyina, I. A., Alekseeva, N. S., Lisin, A., Moiseev, N., & Senjyu, T. (2022). Exploring UTAUT model in mobile 4.5G service: Moderating social-economic effects of gender and awareness. *Social Sciences*, *11*(5), 187. https://doi.org/10.3390/socsci11050187

Davis, F. D. (1985). A technology acceptance model for empirically testing new end-user information systems: Theory and results (Doctoral dissertation, Massachusetts Institute of Technology).

Davis, F. D., & Davis, F. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, *13*(3), 319–339.

Davis, F. D., Bagozzi, R. P., Warshaw, P. R. (1989). User acceptance of computer technology: a comparison of two theoretical models. *Management Science*, *35*, 982–1002.

Deaux, K., & Lewis, L. L. (1984). Structure of gender stereotypes: Interrelationships among components and gender label. *Journal of Personality and Social Psychology*, *46*(5), 991–1004.

de Houwer, J. (2019). On how definitions of habits can complicate habit research. *Frontiers in Psychology*, *10*. https://doi.org/10.3389/fpsyg.2019.02642

de Moura, A. C., Gosling, M., Christino, J. M. M., & Macedo, S. B. (2017). Acceptance and use of technology by older adults for choosing a tour-ism destination: A study using UTAUT2. *Brazilian Journal of Tourism Research*, *11*(2), 239–269.

Dhiman, N., Arora, N., Dogra, N., & Gupta, A. (2019). Consumer adoption of smartphone fitness apps: an extended UTAUT2 perspective. *Journal of Indian Business Research*, *12*(3). DOI: 10.1108/JIBR-05-2018-0158.

Dimyati, M., & Subagio, N. A. (2018). Customer trust as mediator in the creation of customer relationship intention. *Management & Marketing*, *13*(1), 710-729.

Ding, L., Velicer, W. F., & Harlow, L. L. (1995). Effects of estimation methods, number of indicators per factor, and improper solutions on Structural Equation Modeling fit indices. *Structural Equation Modeling: A Multidisciplinary Journal*, *2*, 119–143.

Douglas, S. P., & Craig, C. S. (2007). Collaborative and iterative translation: An alternative approach to back translation. *Journal of International Marketing*, *15*(1), 30–43. 10.2139/ssrn.946274.

Dwivedi, Y. K., Rana, N. P., Jeyaraj, A., Clement, M. & Williams, M. D. (2019). Re-examining the Unified Theory of Acceptance and Use of Technology (UTAUT): Towards a revised theoretical model. *Information Systems Frontier*, *21*, 719–734. https://doi.org/10.1007/s10796-017-9774-y

Echchabi, A., & Hassanuddeen, A. A. (2012a). The relationship between religiosity and customers' adoption of Islamic banking services in Morocco. *Oman Chapter of Arabian Journal of Business and Management Review*, *1*(10), 89–94. DOI: 10.12816/0002190.

Echchabi, A., & Hassanuddeen, A. A. (2012b). Modeling the patronisation behavior of Islamic banks' customers in Morocco. *International Journal of Management and Strategy*, *3*(5), 1–14.

Echchabi, A., & Olaniyi, O. N. (2012a). Malaysian consumers' preferences for Islamic banking attributes. *International Journal of Social Economics*, *39*(11), 859–874. DOI: 10.1108/03068291211263907.

Echchabi, A., & Olaniyi, O. N. (2012b). Using theory of reasoned action to model the patronisation behaviour of Islamic banks' customers in Malaysia. *Research Journal of Business Management*, *6*(3), 70–82. DOI: 10.3923/rjbm.2012.70.82

Eneizan, B., Mohammed, A. G., Alnoor, A., Alabboodi, A. S., & Enaizan, O. (2019). Customer acceptance of Mobile Marketing in Jordan: An extended UTAUT2 model with trust and risk factors. *International Journal of Engineering Business Management*, *11*, 184797901988948. https://doi.org/10.1177/1847979019889484

Fauziah, T., Ramayah, T., & Razak, D. A. (2008). Factors influencing intention to use diminishing partnership home financing. *International Journal of Islamic and Middle Eastern Finance and Management*, *1*(3), 235–248. https://doi.org/10.1108/17538390810901168

Farzin, M., Sadeghi, M., Yahyayi Kharkeshi, F., Ruholahpur, H. and Fattahi, M. (2021), "Extending UTAUT2inM-bankingadoptionand actual use behavior: does WOM communication matter?", Asian Journal of EconomicsandBanking, Vol. 5 No.2,pp. 136-157.

Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention, and behavior: An introduction to theory and research. Reading, MA: Addison-Wesley.

Fitch Ratings, 2022. Retrieved October 1 https://www.fitchratings.com/research/insurance/malaysia-takaful-dashboard-2022-15-02-2022

Fornell, C., & Bookstein, F. L. (1982). Two structural equation models: LISREL and PLS applied to consumer exit-voice theory. *Journal of Marketing Research*, *19*(4), 440–452. https://doi.org/10.2307/3151718

Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of Marketing Research*, *18*(3), 382–388. https://doi.org/10.2307/3150980

Fullerton, G. (2011). Creating advocates: The roles of satisfaction, Trust and Commitment. *Journal of Retailing and Consumer Services*, *18*(1), 92–100. https://doi.org/10.1016/j.jretconser.2010.10.003

Gardner, B., de Bruijn, G. J., & Lally, P. (2011). A systematic review and meta-analysis of applications of the Self-Report Habit Index to nutrition and physical activity behaviours. *Annals of Behavioral Medicine: A Publication of the Society of Behavioral Medicine*, *42*(2), 174–187. https://doi.org/10.1007/s12160-011-9282-0

Gerrard, P., Cunningham, J. B., & Devlin, J. F. (2006). Why consumers are not using internet banking: A qualitative study. *Journal of Services Marketing*, *20*(3), 160–168.

Giovanis, A., Assimakopoulos, C., & Sarmaniotis, C. (2019). Adoption of mobile self-service retail banking technologies: The role of technology, social, channel and personal factors. *International Journal of Retail & Distribution Management*, *47*(9), 894–914. https://doi.org/10.1108/IJRDM-05-2018-0089

Garland, R. (1991). The mid-point on a rating scale: Is it desirable ? *Marketing Bulletin*, *2*, 66–70.

Gefen, D., Straub, D., & Boudreau, M. C. (2000). Structural Equation Modeling technique and regression: Guidelines for research practices. *Communications for the Association for Information Systems*, *7*, 1–78.

Goldberg, L. R. (1981). Unconfounding situational attributions from uncertain, neutral, and ambiguous ones: A psychometric analysis of descriptions of oneself and various types of others. *Journal of Personality and Social Psychology*, *41*, 517–552.

Götz, O., Liehr-Gobbers, K., & Krafft, M. (2010). Evaluation of Structural Equation Models using the Partial Least Squares (PLS) approach. *Handbook of Partial Least Squares* (pp. 691–711). Berlin: Springer. https://doi.org/10.1007/978-3-540-32827-8_30

Gray, D. E. (2004). *Doing research in the real world*. London: SAGE Publication.

Gravetter, F. J., & Forzano, L. B. (2012). *Research methods for the behavioral sciences* (4th ed.). Belmont, CA: Wadsworth.

Groves, R. M., Couper, M. P, Presser, S., Singer, E., Tourangeau, R., Acosta G. P., & Nelson, L. (2006). Experiments in producing nonresponse bias. *Public Opinion Quarterly*, *70*(5), 720–736.

Gunasinghe, A., Hamid, J. A., Khatibi, A., & Azam, S. M. F. (2020). The adequacy of UTAUT-3 in interpreting academician's adoption to e-Learning in higher education environments. *Interactive Technology and Smart Education*, *17*(1), 86–106. https://doi.org/10.1108/ITSE-05-2019-0020

Halassi, S., Semeijn, J., & Kiratli, N. (2019). From consumer to prosumer: a supply chain revolution in 3D printing. *International Journal of Physical Distribution & Logistics Management*, *49*(2), 200–216.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). New York: Pearson.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Hampshire, UK: Cengage.

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* (2nd ed.) Thousand Oaks: SAGE.

Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing Theory and Practice (JMTP)*, *19*(2), 139–152.

Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of Partial Least Squares Structural Equation Modeling in marketing research. *Journal of the Academy of Marketing Science (JAMS)*, *40*(3), 414–433.

Hair, J., Anderson, R., Tatham, R., & Black, W. (1998). *Multivariate data analysis* (5th ed.). New Jersey: Prentice Hall.

Hair, J., Black, W., Babin, B., Anderson, R., & Tatham, R. (2006). *Multivariate data analysis* (6th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.

Hall, R. (2008). Applied social research: Planning, designing and conducting real-world research. South Yarra: Palgrave Macmillan.

Hanif, M. S., Wang, M., Mumtaz, M. U., Ahmed, Z., & Zaki, W. (2022). What attracts me or prevents me from mobile shopping? An adapted UTAUT2 model empirical research on behavioral intentions of aspirant young consumers in Pakistan. *Asia Pacific Journal of Marketing and Logistics*, *34*(5), 1031–1059. https://doi.org/10.1108/APJML-09-2020-0659

Haenlein, M., & Kaplan, A. M. (2004). A beginner's guide to partial Least Squares Analysis. *Understanding Statistics*, *3*(4), 283–297. https://doi.org/10.1207/s15328031us0304_4

Haron, H., Ismail, I., & Razak, S. H. A. (2011). Factors influencing unethical behavior of insurance agents. *International Journal of Business and Social Science*, *2*(1), 84–100.

Haron, R., Abdul Subar, N. and Ibrahim, K. (2020), "Service quality of Islamic banks: satisfaction, loyalty and the mediating role of trust", *Islamic Economic Studies*, Vol. 28 No. 1, pp. 3-23. https://doi.org/10.1108/IES-12-2019-0041

Hatcher, L., & Stepanski, E. J. (1994). *A step-by-step approach to using the SAS system for univariate and multivariate statistics.* SAS Institute.

Hasanudin, H. (2020). The effect of ownership and financial performance on firm value of oil and gas mining companies in Indonesia.*International Journal of Energy Economics and Policy*,*10*(5), 103-109.

Heerink, M., Krose, B. J. A., Wielinga, B. J., & Evers, V. (2009, September). *Measuring the influence of social abilities on acceptance of an interface robot and a screen agent by elderly users*. Proceedings of the 2009 British Computer Society Conference on Human-Computer Interaction (pp. 430–439).

Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of Partial Least Squares path modeling in international marketing. In R. R. Sinkovics & P. N. Ghauri (Eds.), *New challenges to international marketing* (*Advances in international marketing*, Vol. 20, pp. 277–319). Bingley: Emerald Group Publishing Limited. https://doi.org/10.1108/S1474-7979(2009)0000020014

Henseler, J., & Chin, W. W. (2010). A comparison of approaches for the analysis of interaction effects between latent variables using Partial Least Squares path modelling. *Structural Equation Modeling: A Multidisciplinary Journal*, *17*(1), 82–109. DOI: 10.1080/10705510903439003

Henseler, J., Ringle, C.M. & Sarstedt, M. A new criterion for assessing discriminant validity in variance-based structural equation modeling. *J. of the Acad. Mark. Sci.* 43, 115–135 (2015). https://doi.org/10.1007/s11747-014-0403-8

Hew, J.J., Lee, V.H., Ooi, K.B. and Wei, J. (2015), "What catalyses mobile apps usage intention: an empirical analysis", Industrial Management and Data Systems, Vol. 115 No. 7, pp. 1269-1291, doi: 10.1108/IMDS-01-2015-0028.

Hidayat-ur-Rehman, I., Akram, M. S., Malik, A., Mokhtar, S. A., Bhatti, Z. A., & Khan, M. A. (2020). Exploring the determinants of digital content adoption by academics: The moderating role of environmental concerns and price value. *SAGE Open*, *10*(2). https://doi.org/10.1177/2158244020931856

Holmes-Smith, P., Coote, L., & Cunningham, E. (2006). *Structural equation modeling: From the fundamentals to advanced topics*. Melbourne: SREAMS.

Hong, S.-J., Thong, J. Y. L., Moon, J. Y., & Tam, K. Y. (2008). Understanding the behavior of mobile data services consumers. *Information Systems Frontiers*, *10*, 431–445. DOI: 10.1007/s10796-008-9096-1.

Howell, D. C. (2007). The analysis of missing data. In W. Outhwaite & S. Turner (Eds.), *Handbook of social science methodology*. London: SAGE. https://doi.org/10.4135/9781848607958.n11

Hu, P. J., Chau, P. Y. K., Sheng, O. R., & Tam, K. Y. (1999). Examining the technology acceptance model using physician acceptance of telemedicine technology. *Journal of Management Information Systems*, *16*(2), 91–112. https://doi.org/10.1080/07421222.1999.11518247

Huda, N., Rini, N., Mardoni, Y., & Putra, P. (2012). The analysis of attitudes, subjective norms, and behavioral control on muzakki's intention to pay zakah. *International Journal of Business and Social Science*, *3*(22), 271–279.

Hui, C. H., & Triandis, H. C. (1989). Effects of culture and response format on extreme response style. *Journal of Cross Cultural and Psychology*, *20*, 296–309.

Husin M. M., Ismail N., & Rahman A. A. (2016a). The roles of mass media, word of mouth and subjective norm in family Introduction. *Journal of Islamic Marketing*, *7*(1), 59–73.

Husin, M. M., & Rahman, A. A. (2013). What drives consumers to participate into family takaful schemes? A literature review. *Journal of Islamic Marketing*, *4*(3), 264–280. https://doi.org/10.1108/jima-04-2012-0019

Husin, M. M., & Rahman, A. A. (2016b). Predicting intention to participate in family takaful scheme using decomposed theory of planned behaviour. *International Journal of Social Economics*, *43*(12), 1351–1366. https://doi.org/10.1108/IJSE-03-2015-0074

Islamic Finance Development Report (2022). 2022 IFDR Report. https://icd-ps.org/uploads/files/ICD%20Refinitiv%20ifdi-report-20221669878247_1582.pdf

Jarvinen, R. A. (2014). Consumer trust in banking relationships in Europe. *International Journal of Bank Marketing* ,32(6), 551-566. https://doi.org/10.1108/IJBM-08-2013-0086

Kaabachi, S., & Obeid, H. (2014). The Islamic bank in Tunisia: brakes, motivations and expectation of the banking clientele. *Banque et Strategie*, *323*, 41-50.

Karim, J. A., Rahman, S. A., & Ariffin, Z. Z. (2011). *Do Muslims purchase Muslim products? Muslim centric ness: An exploratory study*. 2011 International Conference on E-business, Management and Economics (pp. 60–65).

Kalinić, Z., Marinković, V., Djordjevic, A., & Liebana-Cabanillas, F. (2020). What drives customer satisfaction and word of mouth in mobile commerce services? A UTAUT2-based analytical approach. *Journal of Enterprise Information Management*, *33*(1), 71-94.

Khan, I. U., Hameed, Z., Khan, S. N., Khan, S. U., & Khan, M. T. (2022). Exploring the effects of culture on acceptance of online banking: A comparative study of Pakistan and Turkey by using the Extended UTAUT model. *Journal of Internet Commerce*, *21*(2), 183–216. DOI: 10.1080/15332861.2021.1882749

Kim, J., & Forsythe, S. (2007). Hedonic usage of product virtualization technologies in online apparel shopping. *International Journal of Retail & Distribution Management*, *35*(6), 502–514. https://doi.org/10.1108/09590550710750368

Kim, Jinhee, & Lee, K. S.-S. (2020). Conceptual model to predict Filipino teachers' adoption of ICT-based instruction in class: Using the UTAUT model. *Asia Pacific Journal of Education*, *42*(4), 699–713. https://doi.org/10.1080/02188791.2020.1776213

Koenig-Lewis, N., Palmer, A. and Moll, A. (2010), "Predicting young consumers' take up of mobile banking services", *International Journal of Bank Marketing*, Vol. 28 No. 5, pp. 410-432. https://doi.org/10.1108/02652321011064917

Kulas, J. T., Stachowski, A. A., & Haynes, B. A. (2008). Middle response functioning in Likert-responses to personality items. *Journal of Business and Psychology*, *22*(3), 251–259. https://doi.org/10.1007/s10869-008-9064-2

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30*(3), 607–610. https://doi.org/10.1177/001316447003000308

Lada, S., Harvey Tanakinjal, G., and Amin, H. (2009). Predicting intention to choose *halal* products using theory of reasoned action. *International Journal of Islamic and Middle Eastern Finance and Management*, *2*(1), 66–76. https://doi.org/10.1108/17538390910946276

Lantz, B. (2013). The impact of sample non-normality on ANOVA and alternative methods. *The British Journal of Mathematical and Statistical Psychology*, *66*(2), 224–244. https://doi.org/10.1111/j.2044-8317.2012.02047.x

Lee, J., & Allaway, A. (2002). Effects of personal control on adoption of self-service technology innovations. *Journal of Services Marketing*, *16*(6), 553–572. DOI: 10.1108/08876040210443418.

Lee, Younghwa; Kozar, Kenneth A.; and Larsen, Kai R.T. (2003) "The Technology Acceptance Model: Past, Present, and Future," Communications of the Association for Information Systems: Vol. 12 , Article 50. DOI: 10.17705/1CAIS.01250 Available at: https://aisel.aisnet.org/cais/vol12/iss1/50

Lee, M.-C. (2009). Predicting and explaining the adoption of online trading: An empirical study in Taiwan. *Decision Support Systems*, *47*(2), 133–142. DOI: 10.1016/j.dss.2009.02.003.

Legate, A., Hair, J. F., Chretien, J. L., & Risher, J. (2021). PLS-SEM: Prediction-oriented solutions for HRD researchers. *Human Resource Development Quarterly*, *34*(4). 10.1002/hrdq.21466.

Lewis, Agarwal, & Sambamurthy. (2003). Sources of influence on beliefs about information technology use: An empirical study of knowledge workers. *MIS Quarterly*, *27*(4), 657. https://doi.org/10.2307/30036552

Lim, T. S., Mohidin, R., & Ag Budin, D. S. (2020). The role of financial knowledge on life insurance and family takaful awareness. *Malaysian Journal of Business and Economics (MJBE)*, *7*(1), 131. https://doi.org/10.51200/mjbe.vi.2838

Lule, Isaiah; Omwansa, Tonny Kerage and Prof. Waema, Timothy Mwololo. Application of Technology Acceptance Model (TAM) in M-Banking Adoption in Kenya. International Journal of Computing and ICT Research, Vol. 6 Issue 1, pp 31-43. http://www.ijcir.org/volume6-number1/article4.pdf

Madigan, M. P., Troisi, R., Potischman, N., Brogan, D., Gammon, M. D., Malone, K. E., & Brinton, L. A. (2000). Characteristics of respondents and non-respondents from a case-control study of breast cancer in younger women. *International Journal of Epidemiology*, *29*(5), 793–798. https://doi.org/10.1093/ije/29.5.793

Maduku, D.K., Mbeya, S. Understanding family takaful purchase behaviour: the roles of religious obligation and gender. *J Financ Serv Mark* (2023). https://doi.org/10.1057/s41264-023-00213-z

Maiyaki, A. A., & Mokhtar, S. S. M. (2012). Determinants of customer behavioural responses in the Nigerian retail banks: Structural equation modeling approach. *African Journal of Business Management*, *6*(4). DOI: 10.5897/AJBM11.2335.

Malaysian Takaful Association. (2021). *2021 Takaful Annual Report*. Kuala Lumpur.

https://takaful4all.org/wp-content/uploads/2023/02/AR-2021.pdf

Malaysian Takaful Association. (2022). *2022 Takaful Annual Report*. Kuala Lumpur. https://takaful4all.org/annual-reports/

Martins, C., Oliveira, T., & Popovič, A. (2014). Understanding the internet banking adoption: A unified theory of acceptance and use of technology and Perceived Risk Application. *International Journal of Information Management*, *34*(1), 1–13. https://doi.org/10.1016/j.ijinfomgt.2013.06.002

Matsawali, M. S., Abdullah, M. F., Ping, Y. C., Abidin, S. Y., Zaini, M. M., & Ali, H. M. (2012). A study on takaful and conventional insurance preferences: The case of Brunei. *International Journal of Business and Social Science*, *3*(22), 163–176.

Mazhar, F., Rizwan, M., Fiaz, U., & Ishrat, S., Razzaq, M. S., & Khan, T. N. (2014). An investigation of factors affecting usage and adoption of internet & mobile banking In Pakistan. *International Journal of Accounting and Financial Reporting*, *4*(2), 478–501.

Mahfuz, M.A., Khanam, L. and Hu, W. (2016), "Examine website quality on m-banking services adoption in Bangladesh", International Journal of Computer Science and Information Technology, Vol. 8 No.2, pp. 33-50.

Merhi, M., Hone, K., & Tarhini, A. (2019). A cross-cultural study of the intention to use mobile banking between Lebanese and British consumers: Extending UTAUT2 with security, privacy and trust. *Technology in Society*, *59*, 11–51.

Milliman. (2017). Global Takaful Report 2017: Market trends in family and general takaful. World Takaful Conference.

Miladinovic, J. and Hong, X. (2016), "A study on factors affecting the behavioral intention to use mobile shopping fashion apps in Sweden", International Journal of Research in Advent Technology, Vol. 2 No. 4.

Mitchell, R. K., Busenitz, L. W., Bird, B., Marie Gaglio, C., McMullen, J. S., Morse, E. A., & Smith, J. B. (2007). The central question in Entrepreneurial Cognition Research 2007. *Entrepreneurship Theory and Practice*, *31*(1), 1–27. https://doi.org/10.1111/j.1540-6520.2007.00161.x

Mohy-Ul-Din, S., Samad, S., Rehman, M. A., Ali, M.Z., & Ahmad, U. (2019). The mediating effect of service provider expertise on the relationship between institutional trust, dispositional trust and trust in takaful services: An empirical investigation from Pakistan. *International Journal of Islamic and Middle Eastern Finance and Management*, *12*(4), 509–522. https://doi.org/10.1108/IMEFM-02-2018-0072

Mohd Thas Thaker, H., Mohd Thas Thaker, M.A., Khaliq, A., Allah Pitchay, A. and Iqbal Hussain, H. (2022), "Behavioural intention and adoption of internet banking among clients' of Islamic banks in Malaysia: an analysis using UTAUT2", *Journal of Islamic Marketing*, Vol. 13 No. 5, pp. 1171-1197. https://doi.org/10.1108/JIMA-11-2019-0228

Moris, H. (1961). *Freedom and responsibility: Readings in philosophy and law* (Chapter 4). Canada: Stanford University Press.

Morwitz, V., Steckel, J., & Gupta, A. (2006). When do purchase intentions predict sales? International Journal of Forecasting, *23*(3), 347–364. 10.1016/j.ijforecast.2007.05.015.

Murphy, P. E., Lazniak, G. R., & Wood, G. (2007). An ethical basis for relationship marketing: A virtue ethics perspective. *European Journal of Marketing*, *41*(2), 37–57.

Nawaz, I. Y. (2020). Characteristics of millennials and technology adoption in the digital age. In *Handbook of research on innovations in technology and marketing for the connected consumer* (pp. 241-262). Pennsylvania: IGI Global.

Netemeyer, R. G., Bearden, W. O., & Sharma, S. (2003). *Scaling procedures: Issues and applications*. Thousand Oaks, CA: SAGE Publications. https://doi.org/10.4135/9781412985772

Neuman, W. L. (2004). Basics of social research: Qualitative and quantitative approaches. Boston, MA: Pearson Education.

Newman, D. A. (2014). Missing data. *Organizational Research Methods*, *17*(4), 372–411. https://doi.org/10.1177/1094428114548590

Nikolopoulou, K., Gialamas, V., & Lavidas, K. (2020). Acceptance of mobile phone by university students for their studies: an investigation applying UTAUT2 model. *Education and Information Technologies*, *25*, 4139–4155. https://doi.org/10.1007/s10639-020-10157-9

Nisha, N. (2016). Exploring the dimensions of mobile banking service quality: Implications for the banking sector. *International Journal of Business Analytics*, *3*(3), 60–76.

Norman, G. (2010). Likert scales, levels of measurement and the "laws" of statistics. *Advances in Health Sciences Education*, *15*, 625–632. https://doi.org/10.1007/s10459-010-9222-y

Nordhoff, S., Louw, T., Innamaa, S., Lehtonen, E., Beuster, A., Torrao, G., Bjorvatn, A., Kessel, T., Malin, F., Happee, R., & Merat, N. (2020). Using the UTAUT2 model to explain public acceptance of conditionally automated (L3) cars: A questionnaire study among 9,118 car drivers from eight European countries. *Transportation Research Part F: Traffic Psychology and Behaviour*, *74*, 280–297. https://doi.org/10.1016/j.trf.2020.07.015

Omar, M. N., & Noor, S., & Kasim, A. L. (2019). The influence of mobile technology adoption among secondary school teachers using the UTAUT2 model. *International Journal of Recent Technology and Engineering*, *8*(4), 3827–3831. 10.35940/ijrte.D8204.118419.

Omar, O. E. (2007). The retailing of life insurance in Nigeria: An assessment of consumers' attitudes. *Journal of Retail Marketing Research*, *1*, 41–47.

Omar, O. E., & Owusu-Frimpong, N. (2007). Life insurance in Nigeria: An application of the theory of reasoned action to consumers' attitudes and purchase intention. *The Service Industries Journal*, *27*(7), 963–976.

Pallant, J. (2007). SPSS survival manual: A step by step guide to data analysis using SPSS for windows (3rd ed.). Maidenhead: Open University Press.

Pallant, J. (2020). SPSS survival manual: A step by step guide to data analysis using IBM SPSS (7th ed.). London: Routledge.

Patil, P. P., Tamilmani, K., Rana, N., & Raghavan, V. (2020). Understanding consumer adoption of mobile payment in India: Extending Meta-UTAUT model with personal innovativeness, anxiety, trust, and grievance redressal. *International Journal of Information Management*, *54*(2), 102144. DOI: 10.1016/j.ijinfomgt.2020.102144.

Poan, R., Merizka, V. E., & Komalasari, F. (2022). The importance of trust factor in the intentions to purchase Islamic insurance (takaful) in Indonesia. *Journal of Islamic Marketing*, *13*(12), 2630–2648. https://doi.org/10.1108/JIMA-01-2021-0026

Püschel, J., Afonso Mazzon, J., and Mauro C. Hernandez, J. (2010). Mobile banking: Proposition of an integrated adoption intention framework. *International Journal of Bank Marketing*, *28*(5), 389–409. https://doi.org/10.1108/02652321011064908

Rahi, S., Mansour, M. M. O., Alghizzawi, M., & Alnaser, F. M. (2019). Integration of UTAUT model in internet banking adoption context: The mediating role of performance expectancy and effort expectancy. *Journal of Research in Interactive Marketing*, *13*(3), 411–435. https://doi.org/10.1108/JRIM-02-2018-0032

Ramayah, T., Jantan, M., Mohd Noor, M. N., Razak, R. C., & Koay, P. L. (2003). Receptiveness of internet banking by Malaysian consumers: The case of Penang. *Asian Academy of Management Journal*, *8*(2), 1-29.

Ramayah, T., Hwa, C. J., Chuah, F., Ting, H., & Memon, M. (2016). Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 3.0: An updated and practical guide to statistical analysis. Kuala Lumpur: Pearson Malaysia Sdn Bhd.

RAM Ratings, (2021). *RAM Ratings 2021*. https://islamicmarkets.com/articles/malaysia-s-insurance-and-takaful-sector-to-stay-resilient-ram-ratings

Raza, S. A., Shah, N., & Ali, M. (2019). Acceptance of mobile banking in Islamic banks: evidence from modified UTAUT model. *Journal of Islamic Marketing*, *10*(1), 357–376. https://doi.org/10.1108/JIMA-04-2017-0038

Razak, N. S., Marimuthu, M., Omar, A., & Mamat, M. (2014). Trust and repurchase intention on online tourism services among Malaysian consumers. *Procedia - Social and Behavioral Sciences*, *130*, 577–582. https://doi.org/10.1016/j.sbspro.2014.04.067

Reni, A., & Ahmad, N. H. (2016). Application of theory reasoned action in intention to use Islamic banking in Indonesia. *Al-Iqtishad: Journal of Islamic Economics*, *8*(1), 137–148.

Riquelme, H. E., & Rios, R. E. (2010). The moderating effect of gender in the adoption of mobile banking. *International Journal of Bank Marketing*, *28*(5), 328–341.

Sahudin, Zahariah et al. Determinants of Takaful Performance in Malaysia. Journal of Entrepreneurship, Business and Economics, [S.l.], v. 10, n. 2S2, p. 1-17, oct. 2022. ISSN 2345-4695. Available at: <http://scientificia.com/index.php/JEBE/article/view/186>. Date accessed: 29 oct. 2023.

Samsudeen, S.N., Selvaratnam, G., & Hayathu Mohamed, A.H. (2022). Intention to use mobile banking services: an Islamic banking customers' perspective from Sri Lanka. *Journal of Islamic Marketing*, *13*(2), pp. 410-433.

Sang, G., Wang, K., Li, S., Xi, J., & Yang, D. (2023). Effort expectancy mediate the relationship between instructors' digital competence and their work engagement: evidence from universities in China. *Education Technology Research Development*, *71*, 99–115. https://doi.org/10.1007/s11423-023-10205-4

Sanchez-Franco, M. J. (2009). The moderating effects of involvement on the relationships between satisfaction, trust and commitment in e-banking. *Journal of Interactive Marketing*, *23*(3), 247–258. https://doi.org/10.1016/j.intmar.2009.04.007

Santo, P. E., & Marques, A. M. A. (2022). Determinants of the online purchase intention: hedonic motivations, prices, information and trust. *Baltic Journal of Management*, *17*(1), 56–71. https://doi.org/10.1108/BJM-04-2021-0140

Saparudin, M., Agus, R., Ahmad, R. H., & Sultan, M. A. (2020). Exploring the role of trust in mobile-banking use by Indonesian customer using unified theory of acceptance and usage technology. *International Journal of Financial Research*, *11*(2), 51. DOI: 10.5430/ijfr.v11n2p51.

Sapingi, R., Ahmad, N., & Mohamad, M. (2011). *A study on Zakah of employment income: Factors that influence academics' intention to pay zakah*. The 2nd International Conference on Business and Economic Research (2nd ICBER 2011) Proceeding.

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2021). Partial Least Squares structural equation modeling. In C. Homburg, M. Klarmann, & A. E. Vomberg (Eds.), *Handbook of market research*. Springer, Cham. https://doi.org/10.1007/978-3-319-05542-8_15-2

Sekaran, U. (2003). *Research methods for business: A skill-building approach* (4th ed.)., New York: John Wiley & Sons.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill-building approach* (7th ed.). West Sussex: Wiley & Sons.

Shaikh, I. M., & Amin, H. (2023). Customers' willingness to choose family takaful: extending the theory of interpersonal behaviour. *Journal of Islamic Accounting and Business Research*, Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/JIABR-04-2022-0113

Shao, C. Y., Baker, J., & Wagner, J. A. (2004). The effects of appropriateness of service contact personnel dress on customer expectations of service quality and purchase intention: The moderating influences of involvement and gender. *Journal of Business Research*, *57*(10), 1164–1176. https://doi.org/10.1016/S0148-2963(02)00326-0

Sherif, M., & Shaairi, N. A. (2013). Determinants of demand on family Takaful in Malaysia. *Journal of Islamic Accounting and Business Research*, *4*(1). DOI: 10.1108/17590811311314276.

Shin, D. (2009). Understanding user acceptance of DMB in South Korea using the modified technology acceptance model. *International Journal of Human-Computer Interaction*, *25*(3), 173–198.

Shukor, S.A. (2020), "Trust in takaful agents: antecedents and consequences", *Journal of Islamic Accounting and Business Research*, Vol. 11 No. 6, pp. 1161-1174. https://doi.org/10.1108/JIABR-01-2018-0013

Siang, L. C., & Weng, L. K. (2011). *Factors affecting Non-Muslim consumers' towards intention to use Islamic banking products and services*. Paper presented at The 2011 Las Vegas International Academic Conference Las Vegas, Nevada, USA.

Singh, N., Sinha, N., & Liébana-Cabanillas, F. J. (2020). Determining factors in the adoption and recommendation of mobile wallet services in India: Analysis of the effect of innovativeness, stress to use and social influence. *International Journal of Information Management*, *50*, 191–205. https://doi.org/10.1016/j.ijinfomgt.2019.05.022.

Sivathanu, B. (2018). Adoption of digital payment systems in the era of demonetization in India: An empirical study. *Journal of Science and Technology Policy Management*, *10*(1). DOI: 10.1108/JSTPM-07-2017-0033.

Slade, E., Williams, M., Dwivedi, Y., & Piercy, N. (2015). Exploring consumer adoption of proximity mobile payments. *Journal of Strategic Marketing*, *23*(3), 209–223. DOI: 10.1080/0965254X.2014.914075

Souki, G. Q., Antonialli, L. M., Barbosa, Á. A. d. S., & Oliveira, A. S. (2020). Impacts of the perceived quality by consumers' of à la carte restaurants on their attitudes and behavioural intentions. *Asia Pacific Journal of Marketing and Logistics*, *32*(2), 301–321. https://doi.org/10.1108/APJML-11-2018-0491

Sukendro, S., Habibi, A., Khaeruddin, K., Indrayana, B., Syahruddin, S., Makadada, F. A., & Hakim, H. (2020). Using an extended Technology Acceptance Model to understand students' use of e-learning during Covid-19: Indonesian sport science education context. *Heliyon*, *6*(11), e05410. https://doi.org/10.1016/j.heliyon.2020.e05410

Sukmaningrum, P.S.,Hendratmi, A., Rusmita, S.A. and Abdul Shukor, S. (2022), "Productivity analysis of family takaful in Indonesia and Malaysia: Malmquist productivity index approach", *Journal of Islamic Accounting and Business Research*, Vol. 13 No. 4, pp. 649-665. https://doi.org/10.1108/JIABR-03-2021-0097

Sumaedi, S., Juniarti, R. P., & Bakti, I. G. M. Y. (2015). Understanding trust & commitment of individual saving customers in Islamic banking: The role of ego involvement. *Journal of Islamic Marketing*, *6*(3), 406–428.

Summers, T.A., Belleau, B.D. and Xu, Y. (2006), "Predicting purchase intention of a controversial luxury apparel product", *Journal of Fashion Marketing and Management*, Vol. 10 No. 4, pp. 405 419. https://doi.org/10.1108/13612020610701947

Sun, Y., & Wang, S. (2020). Understanding consumers' intentions to purchase green products in the social media marketing context. *Asia Pacific Journal of Marketing and Logistics*, *32*(4), 860–878. https://doi.org/10.1108/APJML-03-2019-0178

Stephen W. Wang, Waros Ngamsiriudom and Chia-Hung Hsieh (2015) Trust disposition, trust antecedents, trust, and behavioral intention, The Service Industries Journal, 35:10, 555-572, DOI: 10.1080/02642069.2015.1047827

Tabachnick, B. G., & Fidell, L. S. (2007). *Experimental designs using ANOVA*. Belmont, CA: Thomson/Brooks/Cole.

Tabrani, M., Amin, M., & Nizam, A. (2018). Trust, commitment, customer intimacy and customer loyalty in Islamic banking relationships. *International Journal of Bank Marketing*, *36*(6). DOI: 10.1108/IJBM-03-2017-0054.

Tarhini A.,El- Masri, M., Ali, M. and Serrano, A. (2016), "Extending the UTAUT model to understand the customers' acceptance and use of internet banking in Lebanon: A structural equation modeling approach", *Information Technology & People*, Vol. 29 No. 4, pp. 830-849. https://doi.org/10.1108/ITP-02-2014-0034

Talukder, M.S., Sorwar, G., Bao, Y., Ahmed, J.U., Palash, MAS. (2020), "Predicting antecedents of wearable healthcare technology acceptance by elderly: a combined SEM-Neural network approach", Technological Forecasting and Social Change, Vol. 150, p. 119793, doi: 10.1016/j. techfore.2019.119793.

Tamilmani, K., Rana, N.P. and Dwivedi, Y.K. (2019), Use of Habit Is Not a Habit in Understanding Individual Technology Adoption: A Review of UTAUT2 Based Empirical Studies, IFIP Advances in Information and Communication Technology, Vol. 533, pp. 277-294, Springer.

Taylor, S., & Todd, P. A. (1995). Understanding information technology usage: A test of competing models. *Information Systems Research*, *6*(2), 144–176.

Tenenhaus, M., Vinzi, V. E., Chatelin, Y. M., & Lauro, C. (2005). PLS path modelling. *Computational Statistics and Data Analysis*, *48*, 159–205. https://doi.org/10.1016/j.csda.2004.03.005

Urbach, N., & Ahlemann, F. (2010). Structural Equation Modeling in information systems research using Partial Least Squares. *Journal of Information Technology Theory and Application*, *11*, 5–40.

Utomo, P., Kurniasari, F., & Purnamaningsih, P. (2021). The effects of performance expectancy, effort expectancy, facilitating condition, and habit on behavior intention in using mobile healthcare application. *International Journal of Community Service & Engagement*, *2*(4), 183–197. https://doi.org/10.47747/ijcse.v2i4.529

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS Quarterly*, *27*(3), 425–478. https://doi.org/10.2307/30036540

Venkatesh, V., Thong, J. Y. L., & Xin, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. *MIS Quarterly*, *36*(1), 157–178. https://ssrn.com/abstract=2002388

Vinzi, V. E., Chin, W. W., Henseler, J., & Wang, H. (2010). *Handbook of Partial Least Squares: Concepts, methods and applications*. 10.1007/978-3-540-32827-8.

Walter, A. and Ritter, T. (2003), "The influence of adaptations, trust, and commitment on value-creating functions of customer relationships", *Journal of Business & Industrial Marketing*, Vol. 18 No. 4/5, pp. 353-365. https://doi.org/10.1108/08858620310480250

Wang, Y., Wang, Y., Lin, H. and Tang, T. (2003), "Determinants of user acceptance of Internet banking: an empirical study", *International Journal of Service Industry Management*, Vol. 14 No. 5, pp. 501-519. https://doi.org/10.1108/09564230310500192

Wang, B., Li, J., Sun, A., Wang, Y., & Wu, D. (2019). Residents' green purchasing intentions in a developing-country context: Integrating PLS-SEM and MGA methods. *Sustainability*, *12*(1), 30. https://doi.org/10.3390/su12010030

Weston, R., & Gore, P. (2006). A brief guide to Structural Equation Modeling. *The Counseling Psychologist*, *34*, 719–751. http://dx.doi.org/10.1177/0011000006286345

Wijaya, T. T., & Weinhandl, R. (2022). Factors influencing students' continuous intentions for using micro-lectures in the post-COVID-19 period: A modification of the UTAUT-2 approach. *Electronics*, *11*(13), 1924. https://doi.org/10.3390/electronics11131924.

Williams, M.D., Rana, N.P. and Dwivedi, Y.K. (2015), "The unified theory of acceptance and use of technology (UTAUT): a literature review", *Journal of Enterprise Information Management*, Vol. 28 No. 3, pp. 443-488. https://doi.org/10.1108/JEIM-09-2014-0088

World Population Review. (2023). *Kuala Lumpur population 2023*. https://worldpopulationreview.com/world-cities/kuala-lumpur-population

Wong, S.-M., Leong, C-M., & Puah, C-H. (2019). Mobile internet adoption in Malaysian suburbs: The moderating effect of gender. *Asian Journal of Business Research*, *9*(3), 90–114.

Wong, C.H., Wei-Han Tan, G., Loke, S.P. and Ooi, K.B. (2014), "Mobile TV: a new form of entertainment?", Industrial Management and Data Systems, Vol. 114 No. 7, pp. 1050-1067, doi: 10.1108/IMDS-052014-0146.

Wu, Y. L., Tao, Y. H., & Yang, P. C. (2007). *Using UTAUT to explore the behavior of 3G mobile communication users*. 2007 IEEE International Conference on Industrial Engineering and Engineering Management (pp. 199–203). http://doi.org/10.1109/IEEM.2007.4419179

Wu, M.-Y., & Liao, S.-C. (2011). Consumers' behavioral intention to use internet shopping: An integrated model of Tam and *Journal of Statistics and Management Systems*, *14*(2), 375–392. https://doi.org/10.1080/09720510.2011.10701561

Wu, R.Z., Lee, J.H. and Tian, X.F. (2021), "Determinants of the intention to use cross-border mobile payments in Korea among Chinese tourists: an integrated perspective of utaut2 with TTF and ITM", Journal of Theoretical and Applied Electronic Commerce Research, Vol. 16 No. 5, pp. 1537-1556.

Yang, H., & Yoo, Y. (2004). It's all about attitude: Revisiting the technology acceptance model. *Decision Support Systems*, *38*(1), 19–31. https://doi.org/10.1016/s0167-9236(03)00062-9

Yazid, A. S., Arifin, J., Husin, M. R., & Wan Daud, W. N. (2012). Determinants of Family Takaful (Islamic life insurance) demand: A conceptual framework for a Malaysian study. *International Journal of Business and Management*, *7*(6), 115–127. DOI: 10.5539/ijbm.v7n6p115

Yu, C. W., Chao, C. M., Chang, C. F., Chen, R. J., Chen, P. C., & Liu, Y. X. (2021). Exploring behavioral intention to use a mobile health education website: An extension of the UTAUT 2 model. *SAGE Open*, *11*(4).

Velez, P., & Ashworth, S. D. (2007). The impact of item readability on the endorsement of the midpoint response in surveys. *Survey Research Methods*, *1*(2), 69–74.

Vieira, V., Santini, F. O., & Araujo, C. F. (2018). A meta-analytic review of hedonic and utilitarian shopping values. *Journal of Consumer Marketing*, *35*(4), 426–437. https://doi.org/10.1108/JCM-08-2016-1914

Zakaria, Z., Azmi, N. M., Hassan, N. F., Salleh, W. A., Tajuddin, M. T., Sallem, N. R., & Noor, J. M. (2016). The intention to purchase Life Insurance: A case study of staff in public universities. *Procedia Economics and Finance*, *37*, 358–365. https://doi.org/10.1016/s2212-5671(16)30137-x

Zikmund, W.G. (2000). *Business research methods* (6th ed.). Fort Worth: The Dryden Press.

APPENDIX 1

SAMPLE OF QUESTIONNAIRE

Greetings,
This questionnaire aims to investigate critical success factors for penetration of family takaful in Malaysia

It will take 15-20 minutes to complete this questionnaire. You will be asked to respond to statements related to opinions associated with family takaful scheme and a little bit about yourself. Your answers to the questionnaire are confidential and only will be used for this study purpose.
Your cooperation is very much appreciated. Thank you.
For enquiries, please contact:
Nur Aqilah Zainordin
PhD Student
Institute of Islamic Banking and Finance
International Islamic University Malaysia
naqilaz30@gmail.com

A brief description of **Takaful**. Takaful is also known as Islamic insurance. There are two types of takaful schemes, namely general takaful and family takaful.

Family takaful, also known as life insurance in a conventional companies, offers variety of plans such as health plans, education plans, as well as retirement plans.

SECTION A: GENERAL INFORMATION

Question: Please tick relevant answers.

1 Gender

- Male ☐ 1
- Female ☐ 2

2 Age

- 25 to 29 years old ☐ 1
- 30 to 34 years old ☐ 2
- 35 to 39 years old ☐ 3
- 40 to 44 years old ☐ 4
- 45 to 50 years old ☐ 5

3 Occupation

- Clerk ☐ 1
- Officer ☐ 2
- Executive ☐ 3
- Director ☐ 4
- Others: Please state:_____ ☐ 5

4 Occupation Status

- Public sector ☐ 1
- Private sector ☐ 2
- Self employed ☐ 3
- Others: Please state:_____ ☐ 4

5 Marital status

- Single ☐ 1
- Married ☐ 2
- Divorced ☐ 3

6 Highest education level

- UPSR ☐ 1
- PMR ☐ 2
- SPM ☐ 3
- A-Level/ Matriculation/ STPM ☐ 4

7 Sources of religious knowledge (you may choose more than 1 answers)

a) Formal

- Islamic primary schools ☐ 1
- Islamic secondary schools ☐ 2
- Traditional Islamic Institute ☐ 3
- Islamic studies at college/university ☐ 4
- Certificate class/ diploma Islamic studies ☐ 5
- Others : Please state: _____ ☐ 6

b) Informal

- Internet (Blog, Youtube, Facebook) ☐ 7
- Mass Media (Radio, Television) ☐ 8
- Reading materials (Book) ☐ 9
- Electronic Device (CD, Cassette) ☐ 10
- Others : Please state: _____ ☐ 11

8 Monthly household income

- Less than RM 1000 ☐ 1
- RM 1000 – RM 1999 ☐ 2
- RM 2000 – RM 2999 ☐ 3
- RM 3000 – RM 3999 ☐ 4
- More than RM 4000 ☐ 5

9 Monthly Saving

- No saving ☐ 1
- Less than RM 100 ☐ 2
- RM 100 – RM 199 ☐ 3
- RM 200- RM299 ☐ 4
- RM 300- RM 399 ☐ 5
- RM 400-RM 499 ☐ 6
- More than RM500 ☐ 7

Bachelor degree		5
Master's degree		6
Doctorate		7

No	Question: The following statements measure performance expectancy related to family takaful scheme. Please circle your response to each statement.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	I find family takaful apps very useful to carrying out takaful activities	1	2	3	4	5
2	Using family takaful apps would improve the quality of takaful activities	1	2	3	4	5
3	Using family takaful apps increases my chances of achieving what is important to me in takaful activities	1	2	3	4	5
4	Using family takaful apps increases my productivity	1	2	3	4	5
5	Using family takaful apps helps me accomplish things more quickly	1	2	3	4	5
6	I can save time when I use family takaful apps in takaful activities	1	2	3	4	5

SECTION B

No	**Question:** The following statements measure effort expectancy related to family takaful scheme. Please circle your response to each statement.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	Learning how to use family takaful apps is easy for me	1	2	3	4	5
2	Using family takaful apps does not require a lot of mental effort	1	2	3	4	5
3	My interaction with family takaful apps is clear and understandable	1	2	3	4	5
4	I find family takaful apps easy to use	1	2	3	4	5
5	It is easy for me to become skilful at using family takaful apps	1	2	3	4	5

No	**Question:** The following statements measure social influence related to family takaful scheme. Please circle your response to each statement.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	People who are important to me think I should use family takaful apps for the takaful activities	1	2	3	4	5
2	People who influence my behaviour think that I should use family takaful apps	1	2	3	4	5
3	People who are more experience than me help me to use family takaful apps for takaful activities	1	2	3	4	5
4	People whose opinions that I value prefer that I use family takaful apps for takaful activities	1	2	3	4	5

No	**Question:** The following statements measure price value related to family takaful scheme. Please circle your response to each statement.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	Family takaful product is reasonably priced	1	2	3	4	5
2	Family takaful is a good value for the money	1	2	3	4	5
3	At the current price, family takaful provides a good value	1	2	3	4	5

No	**Question:** The following statements measure hedonic motivation related to family takaful scheme. Please circle your response to each statement.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	Using family takaful apps is fun	1	2	3	4	5
2	Using family takaful apps is enjoyable	1	2	3	4	5
3	Using family takaful apps is very entertaining	1	2	3	4	5
4	Using family takaful app is more exciting	1	2	3	4	5

No	**Question:** The following statements measure facilitating conditions related to family takaful scheme. Please circle your response to each statement.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	I have the resources necessary to participate in family takaful apps	1	2	3	4	5
2	I have the knowledge necessary to use family takaful apps	1	2	3	4	5
3	I feel comfortable using family takaful apps for doing takaful activities	1	2	3	4	5
4	I can get help from others when I have difficulties using family takaful apps	1	2	3	4	5

No	**Question:** The following statements measure habit related to family takaful scheme. Please circle your response to each statement.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	The use of family takaful apps has become a habit for me	1	2	3	4	5
2	I am addicted to use family takaful app	1	2	3	4	5
3	I must use family takaful app	1	2	3	4	5
4	Using family takaful app is something that I do without thinking	1	2	3	4	5
5	Using family takaful app is a part of my daily routing	1	2	3	4	5

No	**Question:** Please circle the response best reflecting your intention to participate in family takaful scheme	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	I will always try to use family takaful app for takaful activities	1	2	3	4	5
2	I intend to use family takaful apps for takaful activities in the future	1	2	3	4	5
3	I intend to continue to use family takaful apps for carrying out family takaful activities	1	2	3	4	5
4	I plan to use family takaful apps for family takaful activities next month	1	2	3	4	5

No	**Question:** Please circle the response best reflecting trust to participate in family takaful scheme	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	Based on my belief about family takaful, I think it is honest	1	2	3	4	5
2	Based on my belief about family takaful I think it is trustworthy	1	2	3	4	5
3	The established financial and business records of family takaful operators assure me to invest my money in family takaful services	1	2	3	4	5
4	My confidence and trust are very high on the family takaful operation	1	2	3	4	5

SECTION C

No	**Question:** Please circle your response to each statement.	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	If I were to participate in family takaful scheme, It would help me to save regularly for the future	1	2	3	4	5
2	If I were to participate in family takaful scheme, It would help me to make long term saving	1	2	3	4	5
3	If I were to participate in family takaful scheme, it encourage me for not relying on my pension for retirement	1	2	3	4	5
4	If I were to participate in family takaful scheme, It would help me to save consistently	1	2	3	4	5
5	If I were to participate in family takaful scheme, it would makes me have a reliable investment	1	2	3	4	5
6	If I were to participate in family takaful scheme, it would fulfil my hope to achieve high return	1	2	3	4	5
7	If I were to participate in family takaful scheme, it would enable me to enjoy tax free saving	1	2	3	4	5
8	If I were to participate in family takaful scheme, it would gives me opportunity to have future cash	1	2	3	4	5
9	If I were to participate in family takaful scheme, my dependents will have the same standard of living in case of my death	1	2	3	4	5
10	If I were to participate in family takaful scheme, it would protect my family from financial uncertainties in case of my death	1	2	3	4	5
11	If I were to participate in family takaful scheme, it would prevent my family from having financial hardship in case of my death	1	2	3	4	5
12	If I were to participate in family takaful scheme, it would enable me to receive lump sum money in case of critical illness	1	2	3	4	5
13	If I were to participate in family takaful scheme, my family will enjoy “fund death” in case of my death	1	2	3	4	5

APPENDIX 2

VALIDATION FROM EXPERT

1. Assoc. Prof. Dr. Maizaitulaidawati Md Husin

Scale: 5- Excellent 4- Very Good 3- Good 2- Fair 1- Poor

	1	2	3	4	5
Clarity and Direction of Items: The vocabulary level, language, structure and conceptual level of participants. The text directions and the items are written in a clear and understandable manner					/
Presentation & Organization of Items : The items are presented and organized in logical manner					/
Suitability of Items: The items appropriately presented the substance of the research. The questions are designed to answer the research questions and achieved the research objectives					/
Adequateness of the content: The number of the questions per area are sufficient as needed for the research					/
Attainment of purpose: The instrument as a whole fulfills the objectives needed for the research					/
Objective : The items are capable of generating data that will be a value and practical use to the concerned in this research					/
Remarks:					

Name of Validator: _____

Credential: _____

Organisation: _____

Signature : _____

2. Dr Nurfaradila binti Haron

Scale: 5- Excellent 4- Very Good 3- Good 2- Fair 1- Poor

	1	2	3	4	5
Clarity and Direction of Items: The vocabulary level, language, structure and conceptual level of participants. The text directions and the items are written in a clear and understandable manner				/	
Presentation & Organization of Items : The items are presented and organized in logical manner				/	
Suitability of Items: The items appropriately presented the substance of the research. The questions are designed to answer the research questions and achieved the research objectives					/
Adequateness of the content: The number of the questions per area are sufficient as needed for the research					/
Attainment of purpose: The instrument as a whole fulfills the objectives needed for the research					/
Objective : The items are capable of generating data that will be a value and practical use to the ssssssss concerned in this research					/
Remarks:					

Name of Validator: ___Dr.Nurfaradilla Haron_____

Credential: PhD of Islamic Civilization (Islamic Economics) _____