

THE DETERMINANTS OF ACCEPTANCE
TOWARDS TAKAFUL AMONG WORKING
ADULTS IN SMALL TOWN OF PERAK

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TAKAFUL AMONG WORKING ADULTS IN SMALL
TOWN OF PERAK

BY

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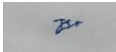
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DECLARATION

We hereby declare that:

- (1) This undergraduate FYP is the end result of our own work and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic or personal.
- (2) No portion of this FYP has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.
- (3) Equal contribution has been made by each group member in completing the FYP.
- (4) The word count of this research report is 18607.

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Moreover, our heartfelt appreciation goes out to the 394 respondents whose valuable contributions greatly enriched our survey. Additionally, we extend our sincere gratitude to the lecturers, Puan. Nabihah Binti Aminaddin and Dr. Nurul Afidah Binti Mohamad Yusof, who assisted us in conducting the Survey Pretest. We also wish to express our deep gratitude and admiration to the pioneering researchers in the field of Takaful whose groundbreaking efforts laid the foundation for our current investigation. Their dedication, expertise, and relentless pursuit of knowledge have significantly shaped the direction of our study.

Lastly, we would like to express our gratitude to all the members that took part in this final project. Every member' commitments and efforts has improved the research quality significantly. Our research could not have been done without their assistance. Thank you again to everyone who assisted us with our research.

DEDICATION

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LIST OF ABBREVIATIONS

AW	Awareness
SQ	Service Quality
HR	Human Resources
FIN	Fintech
ACC	The acceptance towards Takaful
SEM	Structural Equation Modelling
AVE	Average Variance Extracted
VIF	Variance Inflation Factors
HTMT	Heterotrait-Monotrait Ratio of Correlation
RBV	Resource-Based View Theory
VAF	Variance Accounted for

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PREFACE

The unexpected outbreak of COVID-19 has raised the consumer awareness of the people about the Takaful insurance market and the importance of Takaful insurance. According to Bank Negara Malaysia (2023), the market share of Takaful industry in Malaysia is only 23%. However, it is expected to have a larger contribution since 70.1% of the population are Bumiputera (Statista, 2023). It is also planned to conduct insurance and Takaful business through electronic or digital method (Anis, 2023). Hence, Digital technologies and Fintech act as a vital part of the growth driver in Malaysia insurance and Takaful market. Therefore, this study is aimed to investigate the Acceptance of Takaful among the working adults with the mediator effect of Fintech.

The title of this study research is “The Determinants of Acceptance Towards Takaful among Working Adults in Small Towns of Perak”. The Acceptance of Takaful is chosen for this study, while Awareness, Service Quality, and Human Resources is selected as the independent variables. Additionally, Fintech is the mediator in this study to connect the dependent variables and independent variables.

We genuinely hope that this study research could provide some beneficial facts and insights for the Malaysian Government, Regulators, Takaful Operators, and Consumers, so that they can improve the Takaful products and services, as well as related Fintech in the future. The future researchers can also utilize this study as a reference for their research.

ABSTRACT

This research aims to examine and evaluate the acceptance of Takaful among the working adults in small towns of Perak with the mediator effect of Fintech. The study employs a primary data collection method using Google Form questionnaire and survey to the targeted respondents aged between 21 to 64 years old. There are a total of five variables used in the study, including three independent variables (Awareness, Service Quality, Human Resources), one dependent variable (Acceptance of Takaful), and one mediator variable (Fintech). A total 384 questionnaires were collected for the data analysis. The responses collected were analysed using the SmartPLS 4 analysis software. The research found that only 5 out of 7 hypothesis developments were significant, while the remaining 2 were insignificant. The results shows that Awareness and Human Resources have significant impacts on the Acceptance of Takaful for both direct and indirect relationships with the mediator “Fintech”. Otherwise, Service Quality do not significantly impact the Acceptance of Takaful for both direct and indirect relationships with the mediator “Fintech”. Moreover, the research provides useful data on the implications, limitations, and recommendations, and useful reference for future research relating to this topic.

CHAPTER ONE: RESEARCH OVERVIEW

1.0 Introduction

Nowadays, people around the world will no longer solely demands for conventional insurance for their life, property, or liability protection. As they have an alternative insurance option to consider for their protection, known as Takaful insurance in the field of Islamic finance. Conventional insurance has governed by its laws and principles, while Takaful insurance has its own distinct framework, and it has achieved the significant growth throughout its journey and has emerged as one of the potential competitors to against with the commercial insurance. Malaysia, as an Islamic country, has played a vital role in driving the growth of Takaful insurance and dominating the Takaful market. There is a solidarity foundation established by the Malaysia to ensure the efficiency and enhance the acceptance level of the Malaysian towards Takaful products and services. However, there are some of the states of the Malaysia remained the low acceptance level of Takaful.

Hence, this study aims to investigate the acceptance level of Takaful in Malaysia and have an in-depth understanding about the Malaysian thoughts with the Takaful products and services by conducting a survey in the rural areas in Malaysia.

1.1 Research Background

According to Nazarov and Dhiraj (2019), the Congress of Islamic Research examined the legitimacy of conventional insurance in the Islamic world in 1965. Conventional insurance was deemed incompatible with Sharia standards during the inaugural International Conference on Islamic Economics in 1976. In 1985, the Organisation of Islamic Cooperation declared such insurance to be invalid and haram. Takaful, a mutual insurance idea, was approved as an alternative. Takaful is based on morals and emphasises cooperation and mutual assistance for the

advancement of society (Hassan & Salman., 2021). In 1979, Sudan became the first country to provide Takaful insurance (Qadri et al., 2022). The growing demand from Muslims for insurance that complies with Shariah has fuelled the sector. The Shari'ah board of the Faisal Islamic Bank in Sudan granted a fatwa on the Takaful programme after which the bank founded the first Takaful Company in accordance with the Company's Act of 1925, turning it into a publicly listed company (Nazarov & Dhiraj., 2019). The concept of Takaful subsequently spread to numerous other Islamic countries as a result.

The word "Takaful" is derived from the Arabic word "*kafal*," which denotes to take care of one's needs. In this scheme, members of a group agree to protect one another against potential losses or damages brought on by specified risks (Bambale & Yahaya., 2020). With the use of the established pooled funds, the whole group would provide support to the incumbent person, hoping to lessen their loss by making up for it or providing financial support (Puad, 2021). The Takaful concept is based on Islamic teachings, notably those found in the Quran and the Sunnah, which refers to the traditions of Prophet Muhammad (Seman, 2011). The Quran instructs: "Cooperate with one another in deeds of righteousness and piety but refrain from cooperating in sinful and harmful matters" (Nisar & Farooq., 2021). "Believers, in their compassion, mercy, and empathy for one another, are like a body; if one part experiences pain and distress, the entire body responds with restlessness and fever," said Prophet Muhammad (Abideen & Abbas., 2021). The Shariah Supervisory Board or Council is an independent body that regulates the way Takaful practices are operation. The Board provides guidance to Takaful operators on how to conduct their daily operational affairs with the goal of preventing the operators from include any aspects in their operations that are not approved by Shariah principles (Imron & Heradhyaksa., 2021). Setting up a Shariah Supervisory Board is a mandatory requirement prior to initiating Takaful operations.

Takaful consists of 5 different functions which are "*Tabarru, Wakalah, Mudarabah, Ju'alah, and Waqf*". The concept of *Tabarru* (mutual indemnity) is incorporated into the scheme when a contract is made between the operator of a Takaful life

programme and its members, all participants in the scheme agree in writing to compensate any member who suffers a loss that is specified in the Takaful certificate (policy) (Hassan, 2020). Furthermore, the Arabic term “*Wakalah*” refers to the concept of agency. Within this concept, two parties establish an agreed-upon relationship structure to carry out a specific business undertaking (Yusoff, 2018). Moreover, in a standard “*Mudarabah*” (partnership) agreement, one party contributes the capital, referred to as “*rab al-mal*” or capital provider, while the other party, known as the “*mudarib*” or entrepreneur, contributes their business management and investment expertise (Dinç, 2019). In addition, in Shariah law (Islamic law), “*Ju'alah*” essentially denotes a commission or reward. It performs the function of an incentive contract in Islamic Finance, distinct from a mere fee paid for a task (Mohamed et al., 2020). Besides, the “*Waqf*” (donation) fund was created with the contributions by participants and shareholders and invests in companies that adhere to Shariah law and Islamic insurance. Its goal is to offer protection from specified losses in a shariah compliant investment managed by an Islamic Takaful operator, with profits going to participants (Saeed, 2019).

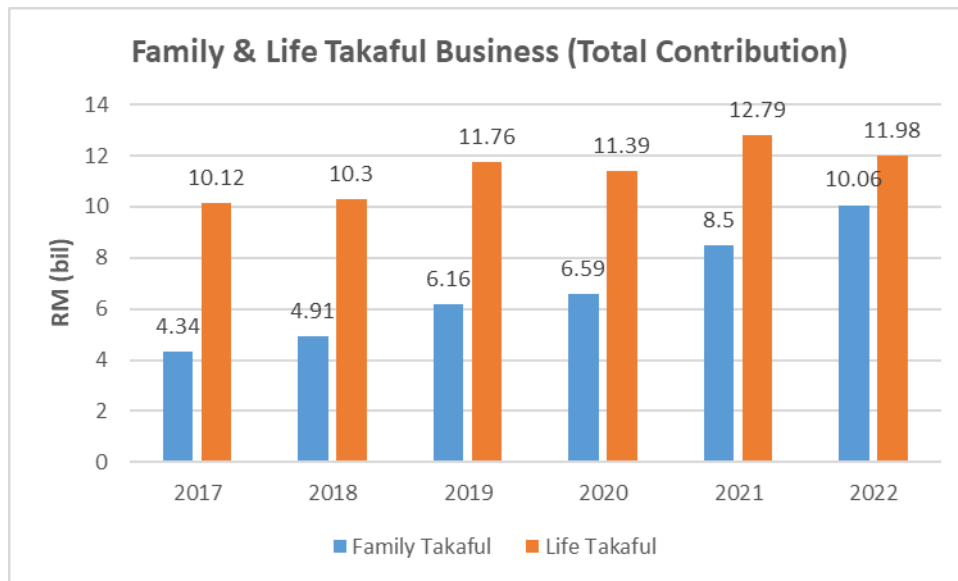
According to Nazarov and Dhiraj (2019), the issue of whether conventional insurance was acceptable in the Islamic world came up during the Congress of Islamic Research in Cairo in 1965. In 1976, following an interval of 11 years, the inaugural International Conference on Islamic Economics took place in Makkah, Saudi Arabia. At this important conference, attended by over 200 Islamic jurists and economists, it was unanimously decided that all conventional insurance products were prohibited (illegal) because they were incompatible with Shari'ah principles. After that, during a conference in Jeddah in 1985, this resolution was approved by the Organisation of Islamic Cooperation (OIC). The OIC affirmed that "The contract of commercial insurance with periodical fixed premium provided by the present-day insurance companies is a contract which is void and therefore haram in accordance with the requirements of the Shari'ah.". As an alternative for the conventional insurance system, the OIC authorised the mutual insurance or Takaful programme concept (Nazarov & Dhiraj., 2019). Takaful is based on moral and emphasises cooperation and mutual assistance for the advancement of society (Hassan & Salman., 2021). In 1979, Sudan became the first country to provide

Takaful insurance (Qadri et al., 2022). The growing demand from Muslims for insurance that complies with Shariah has fuelled the sector. The Shari'ah board of the Faisal Islamic Bank in Sudan granted a fatwa on the Takaful programme after which the bank founded the first Takaful Company in accordance with the Company's Act of 1925, turning it into a publicly listed company (Nazarov & Dhiraj., 2019). The concept of Takaful subsequently spread to numerous other Islamic countries as a result.

The market value of the worldwide Takaful market was showing US\$ 30.5 billion in 2022 and it is projected that the market will grow at a 10.29% CAGR from 2022 to 2028, reaching the total market value to US\$ 54.9 billion in 2028 ((IMARC, 2023). According to Amna (2023), approximately half of the Takaful market value was contributed by Saudi Arabia in 2019, while the remaining portion were contributed by Iran, Malaysia, the United Arab Emirates and Indonesia. The reason is these countries are Muslim majority countries; hence, it is relatively easy for the Takaful operators to expand their penetration within these markets with Muslim majority (Aarti et al., 2021). In recent year, the market for Takaful insurance has expanded significantly as there was a notable increase in Takaful offerings across a variety of geographies such as Southeast Asia and the Middle East where most of them are Muslim-majority countries or region with Muslim populations. (Aarti et al., 2021). Currently, the main contributing countries are Saudi Arabia, the United Arab Emirates, Bahrain, Kuwait, Qatar, Oman, Malaysia, Pakistan, Indonesia, Brunei, Iran, Jordan, Sudan, Egypt and Nigeria. The unexpected outbreak of COVID-19 has positively influenced the Takaful insurance market as it raised the consumer awareness of the importance of Takaful insurance (Aarti et al., 2021).

For the Malaysia Takaful Industry, it grew significantly in the last decade and currently there are 18 Takaful provider in Malaysia (MTA, 2023). In 2022, the Family Takaful industry showed a 18.3% growth, recorded RM10.06 billion of gross contributions compared with the previous RM8.5 billion in 2021 (MTA, 2023). The penetration rate of Family Takaful industry showed 20.1% in 2022 which is higher than 18.6% in 2021 (MTA, 2023).

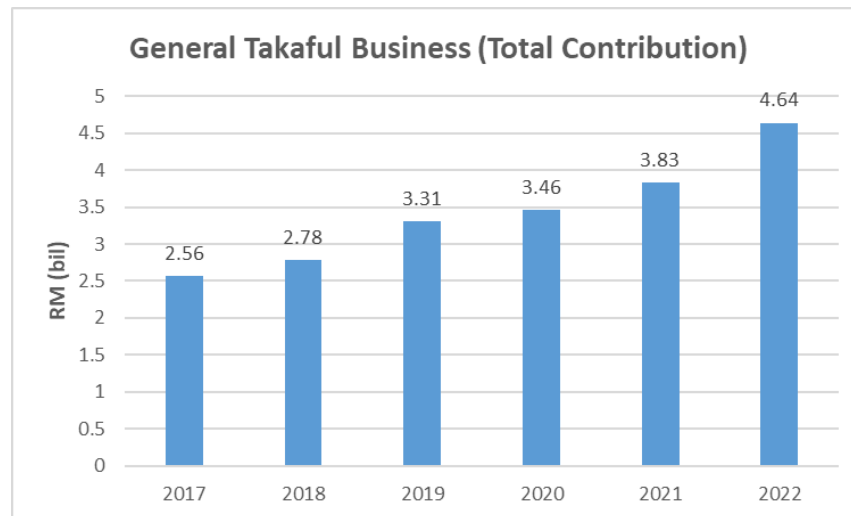
Figure 1.1: Family & Like Takaful Business (Total Contribution)



Note. From Malaysian Takaful Association Annual Report 2022

From the perspective of General Takaful business showed a better result in 2022, the total business gross contributions rose by 21.2%, amounting to RM4.64 billion compared to the previous year RM3.83 billion in 2021 (MTA, 2023). The General Takaful business consists of four different classes, which are Fire Takaful, Motor Takaful, Personal Accident Takaful, and Other Classes Takaful. Out of these four classes, Motor Takaful comprised the largest portion which is 66.2% of the General Takaful and followed by the Fire Takaful 18.2% in 2022.

Figure 1.2: General Takaful Business (Total Contribution)



Note. From Malaysian Takaful Association Annual Report 2022

Although the Takaful Malaysia industry grow significantly in recent years; however, the market share for Takaful industry in Malaysia is only 23% (BNM, 2023). It only contributed 1/5 of the total insurance market, as it is expected to have a larger contribution since 70.1% of the population are Bumiputera (Statista, 2023). On 25 November 2022, Bank Negara Malaysia launched a plan and declared its intention to invite the application for digital insurance and Takaful operators (DITO) licenses in 2023 (Anis, 2023). This is to echo with the Financial Sector Blueprint 2022 – 2026 which is also introduced by Bank Negara Malaysia. The five years blueprint determined the advance digitalization of financial sector as one of the five strategies (EY, 2022). It is also planned to conduct insurance or Takaful business entirely through electronic or digital method and inspire new sorts of business and operational model to satisfy the different consumer needs through a greater selection of products and higher-quality services (Anis, 2023). Digital technologies act as a significant part and become the growth driver in Malaysia insurance and Takaful market, which is also aligned with our study.

1.2 Problem Statement

The problem is that Takaful firms account for just 8.2% of Malaysia's overall insurance sector contributions (Eldaia et al., 2020). This needs an investigation of the issues limiting their overall financial effect, as well as innovative techniques for increasing their market importance (Eldaia et al., 2020). According to Hassan et al. (2018), there is a scarcity of understanding, with 29.8% unaware of Takaful's Shari'ah compliance and 33.2%, 38.8%, and 37.2% uninformed of its freedom from interest, uncertainty, and gambling, respectively, highlighting the importance of targeted educational initiatives. As the nascent Takaful insurance system grows year after year, it faces challenges such as regulatory gaps in specific regions, limited Takaful reinsurer presence, and a lack of diverse Shariah-compliant insurance products, highlighting the need for ongoing attention and time for its maturation within the context of Islamic finance (Mohellebi, 2019). According to Meskini et al. (2020), customers' dissatisfaction with insurance companies is due to issues with ambiguity, price, and transparency. These issues are exacerbated by a lack of understanding, as 47% of people are unaware of Islamic insurance and more than 58% have only rudimentary knowledge of blockchain technology.

According to an academic study conducted by Naim et al. (2018), another common issue is the misinterpretation of *qard al-hasan*, a concept that is frequently misunderstood. The borrower cannot be forced to return a benevolent loan, and if repayment becomes impossible, the lender must consider it a charitable act. This factor is important in takaful, and some shareholders are unwilling to provide *qard al-hasan* amid takaful fund shortages. Furthermore, the study found that takaful operators frequently prioritise their own self-interest by picking certain models, rather than concentrating on the best interests of the players (Naim et al., 2018). Naim et al. (2018) recognised many concerns within current practises, such as *wakalah* fee, *tabbaru'* matter, ownership of return, and underwriting excess challenges, all of which contribute to the degradation of mutuality's essential premise in takaful.

A sizable number of consumers frequently choose conventional insurance because they are unaware that Islamic insurance offers better advantages than conventional insurance. Consumers frequently ask for several insurance options, but when they compare the costs, they frequently find that Islamic insurance has higher premiums than other options (Ismail et al., 2022). In this context, the situation is such that consumers typically struggle to find strong reasons to prefer Takaful products over conventional ones, and they often lack the drive to learn more about the features of Takaful products. Furthermore, consumers perceive both conventional and Takaful products as being alike. This alignment is emphasized in the studies conducted by Rizwan and Al-Malkawi (2021) and Raza et al. (2019), which point out that there is a decreased intention to buy Takaful insurance when compared to conventional insurance.

According to Karim et al. (2023), one of the issues causing a lack of awareness about the importance of life insurance and family Takaful is the failure to comprehend the intended use of related products. The population in Malaysia might be a prevalent belief that a life insurance coverage is only important for individuals who need it. There are many misconceptions regarding this because they may mix up the function of life insurance with that of general insurance, notably vehicle insurance and homeowner's insurance. In Malaysia, a wide range of vehicles, from motorcycles to four-wheeled vehicles, are owned by a significant number of citizens, including those from the B40 demographic (Taman et al., 2023). As a result, they thus frequently engage with auto insurance, which mostly deals with obligations related to vehicle ownership. Hence, auto insurance is normally necessary for anybody who owns a vehicle, just as homeowners should think about getting house insurance coverage. It is therefore not unexpected that many people, especially those with limited financial knowledge, hold the belief that life insurance and family Takaful are pertain exclusively to those who are wealthy. Based on the evidence of Lim et al. (2020), this phenomenon is logical.

The fundamental reason behind the insufficient awareness of life insurance and family Takaful is a lack of financial knowledge (Lim et al. (2020). Even with the

introduction of a financial education initiative, the level of financial knowledge within the Malaysian community has not yet reached the desired standard (Karim et al., 2023). There are plans to introduce more targeted and well-organized initiatives for enhancing financial awareness and education in the future. It is feasible to establish financial education programmes that explicitly target women's issues and involve female participants, claim Goyal and Kumar (2021). These programmes can promote more impactful engagement and increased awareness by concentrating on topics that are more closely related to their interests and personal experiences. Education programmes geared towards rural areas and the B40 market may not always be appropriate for complex topics like bonds and the stock market (Lim et al., 2020). The intricacy of such issues might cause a quick loss of interest in these people. To put it another way, those in charge of planning and implementing financial education programmes should be careful about the backgrounds of the participants and create more accessible programmes to have a bigger influence on the participants. If there is without existence of awareness of the consumers, there would be no customer action to the products and services of Takaful which would lead to decrease the acceptance level of Takaful directly.

As mentioned by Jamaludin et al. (2020), superior service quality is able to encourage the customer satisfaction, generate customer loyalty, and boost the market shares. Hence, service quality is a crucial factor for a Takaful operator to maintain its competitiveness in the industry. However, there are a few problems arises which obstructed the delivery of high-quality service which will affect the customer acceptance. Hemed et al. (2021) stated that the communication process between the insurance agent and the clients consumes a substantial time. It is extremely inefficient for both parties which will cause the frustration and dissatisfaction to the client. Moreover, the second problem is the limited client service. Agents could only handle one client at a time (Hemed et al., 2021). This contributed to the inefficiency of client serving since the Takaful operators must hire a large number of agents to expand their market penetration and at the same time distributing 9% to 12% of the premiums to them (Loanstreet, 2019). This considered to be ineffective for the Takaful operators from the perspective of cost efficiency. Not only that, the agents are typically accessible only during the working

hours (Hemed et al., 2021). This is not friendly to the customers who needed an immediate response out of the working hours. Furthermore, the insurance agents do not always provide appropriate advice to the customer regarding the plan that most suitable for them (Loanstreet, 2019). Agents earn commissions. Therefore, they have the tendency to promoting the policies which they could earn more. This could significantly affect the service quality since the plan provided to the clients was not appropriate and caused a financial burden on them. When there is low acceptance of Takaful due to the low service quality, which means that the consumers are not satisfied with it, and once they are not satisfied with the Takaful's products and services, they may tend to switch to another service that more appropriate and prefer to.

Human resources, which pointed to Takaful agents in this study, has been suggested by Khamis et al., (2022) that it considers a important asset for any organization to attain competitive benefit in the era of globalization. According to Halim, (2021) stated that Takaful agents play role on executing an agency mechanism to control its distribution channel. It was found that Takaful agents play an important role to contribute the positive impacts on the acceptance level of Takaful (Shaladdin et al., 2018). Conversely, from the research conducted by Abdullah, (2018) mentioned that there are existence of negative behaviours acted by the Takaful agents when promoting Takaful products and services. For instance, providing false information to the consumers, misunderstanding consumer needs, unable to offer clear explanations of Takaful products and services. All these ethical behaviours by agents may bring negative impact to its acceptance level. The consumers have no intention to accept Takaful if there is without existence of human behaviour in adopting the Takaful, which may include the elements that built to no intention such as absence of individual's attitude and surrounding social influence.

According to Abraham et al. (2019), a significant problem of fintech, particularly robo-advisory, is the lack of human touch and emotional support in areas such as sharing emotions during market volatility, counselling, and assisting clients in coping with emotional aspects, which may affect customer acceptance. The current

legal system provides a solid foundation, but as technology continues to improve, it has eroded the regulatory and oversight mechanisms built into the system, leading to insufficient consumer protection (Hemed et al., 2021). In addition, the adoption of big data analytics in the insurance industry may raise unresolved ethical and legal questions, particularly regarding the privacy and security of personal data (Hemed et al., 2021). Rabbani et al. (2020) agreed that regulatory constraints and the dearth of thorough and reliable research in the Islamic FinTech industry are the main problems that face these firms. Although adoption of Fintech bring positive impacts to Takaful industry, it may also lead to negative impacts. For instance, one of the Fintech, Robo-Advisors uses automated algorithms to make suggestions on the financial decisions to the consumers. However, it assumes that all of the individuals are with similar financial backgrounds as well as risk-taking behaviors, which considers not a necessarily true answer for each individual. This could lead to lack of personalization of the consumers when adopting Fintech. Besides, there is no personal contact. For instance, Robo-advisors are programmed, and they tend to be objective without taking any emotional decision during market turmoil, or assisting consumers cope with grief. According to Rabbani et al.'s research in 2022, Table 1.1 presents an overview of the main challenges in Islamic Finance, along with the advantages and diverse applications of implementing Blockchain technology in Islamic Fintech.

Table 1.1: Major issues of Islamic Finance and advantages and some applications of using Blockchain in Islamic Fintech

Advantages
No single point of failure.
It can easily detect frauds.
Blockchain transactions are transparent and are traceable and visible to all the users of the blockchain.
It is almost impossible to make any changes to the transactions on blockchain or to the blockchain.
Smart contracts can be a useful mechanism in all financial transactions and the monitoring and regulation process can be reduced t mere writing a smart contract.

Financial contracts and services cost can be minimized by up to 95%.
Applications
Blockchain management system (BMS) as an accounting system.
Domain of crowdfunding etc.
Issues in Islamic Finance
Major issues which is to find out if the agent is working in the best interest of the stakeholders.
Agents seek to maximize their compensation and welfare.

Note. From FinTech, blockchain and Islamic finance: An extensive literature review (Rabbani et al., 2022)

According to the study of Radwan et al. (2020), they emphasize that in June 2016 the registers distributed on the network of blocks were hacked in this way violating the code and information present in the intelligent contracts. In addition to causing damage of 50 million dollars. And they mentioned that due to the primary use of technology in insurance, this may lead to failure and loss of investment. Meera (2018) conducted a critical analysis, recommending that "Islamic" money be asset-backed, a condition that cryptocurrency does not meet. The findings in Table 1.2 revealed that Bitcoin does not meet the criteria for classification as Islamic money. Ahmed et al. (2019), on the other hand, referenced Sheikh Imran Hussain, a notable modern Muslim scholar, who claimed that cryptocurrencies with no inherent value cannot be considered acceptable forms of money. These opposing perspectives highlight the lack of a cohesive opinion on the alignment of fintech with Shariah principles.

Table 1.2: Does Bitcoin fulfil the Islamic money criteria.

Criteria	Remarks	
Accepted	It is quite accepted by people on their own free will even though it has no intrinsic value.	×
Divisible	Being an electronic currency, it is easily divisible.	√

Homogenous	Being electronic it is effectively homogenous	√
Durable	Being stored as electronic bytes in a distributed ledger, it is highly durable	√
Mobile	Being electronic, it is highly mobile.	√
Rare	The issuance of bitcoin is through a mining process that makes bitcoin rare.	√
Stable Value	Lately the value of bitcoin has been fluctuating rather 'violently' i.e., depicting high volatility.	×

Note. From_Cryptocurrencies from Islamic Perspectives: The Case Of Bitcoin (Meera, 2018)

In conclusion, prior research (Qian et al., 2023) has shown conflicting results on the relationship between Takaful acceptability levels and independent factors such as awareness, service quality, human resources, and fintech. As a result, a thorough grasp of how the dependent and independent variables interact remains difficult. This void in established ties demands investigation. Acceptance of Takaful from consumers is very vital in this research, as an indicator to know which factors will influence the acceptance level of Takaful. In this research have included Fintech as moderating variables to link between awareness, service quality, human resources and acceptance level of Takaful. For instance, Kehinde and Sharofiddin (2021) adopted a new product adoption theory to aim to determine level of acceptability of Takaful in Nigeria.

The worldwide emphasis on fintech is growing due to the increasing instances of fintech adoption. By methodically accumulating substantial data, we want to alleviate the lack of empirical proof and dependence on anecdotal knowledge. Our purpose is to determine whether incorporating fintech improves client acceptance. We want to objectively analyse the actual impact of fintech on customer attitudes and behaviours by collecting and analysing extensive data.

1.3 Research Objectives

To provide a clear direction in study, the subsequent research questions are constructed.

- I. Is there any significant relationship between the awareness and acceptance level of Takaful?
- II. Is there any significant relationship between the service quality and acceptance level of Takaful?
- III. Is there any significant relationship between the human resources and acceptance level of Takaful?
- IV. Is there any significant relationship between the fintech (moderating variable) and acceptance level of Takaful?
- V. Is there any significant relationship between the awareness with linking to the fintech and acceptance level of Takaful?
- VI. Is there any significant relationship between the service quality with linking to the fintech and acceptance level of Takaful?
- VII. Is there any significant relationship between the human resources with linking to the fintech and acceptance level of Takaful?

1.4 Research Objectives

1.4.1 General Objective

The research's general objective is to examine the determinants of acceptance level of Takaful of working adult in small town in Perak.

1.4.2 Specific Objectives

The research's specific objectives are to examine each of the independent variables and with the existence of mediator including awareness, service quality, human resources, and involved with Fintech (mediator variable) to influence the acceptance level of Takaful of working adult in small town in Perak.

- I. To investigate the relationship between the awareness and acceptance level of Takaful of working adult in small town in Perak.
- II. To investigate the relationship between the service quality and acceptance level of Takaful of working adult in small town in Perak.
- III. To investigate the relationship between the human resources and acceptance level of Takaful of working adult in small town in Perak.
- IV. To investigate the relationship between the fintech and acceptance level of Takaful of working adult in small town in Perak.
- V. To investigate the relationship between the awareness linking with the fintech and acceptance level of Takaful of working adult in small town in Perak.
- VI. To investigate the relationship between the service quality linking with the fintech and acceptance level of Takaful of working adult in small town in Perak.
- VII. To investigate the relationship between the human resources linking with the fintech and acceptance level of Takaful of working adult in small town in Perak.

1.5 Hypotheses of the Study

Awareness, service quality, human resources, fintech are independent variables that carry in this study.

1.5.1 Awareness

To hypothesize whether there is significant relationship between awareness and acceptance level of Takaful.

H_0 : There is no significant relationship between awareness and acceptance level of Takaful.

H_1 : There is significant relationship between awareness and acceptance level of Takaful.

1.5.2 Service quality

To hypothesize whether there is significant relationship between service quality and acceptance level of Takaful.

H_0 : There is no significant relationship between service quality and acceptance level of Takaful.

H_1 : There is significant relationship between service quality and acceptance level of Takaful.

1.5.3 Human Resources

To hypothesize whether there is significant relationship between human resources and acceptance level of Takaful.

H_0 : There is no significant relationship between human resources and acceptance level of Takaful.

H_1 : There is significant relationship between human resources and acceptance level of Takaful.

1.5.4 Fintech

To hypothesize whether there is significant relationship between fintech and acceptance level of Takaful.

H_0 : There is no significant relationship between fintech and acceptance level of Takaful.

H_1 : There is significant relationship between fintech and acceptance level of Takaful.

1.5.5 Awareness linking with Fintech

To hypothesize whether there is significant relationship between awareness linking with fintech and acceptance level of Takaful.

H_0 : There is no significant relationship between awareness linking with fintech and acceptance level of Takaful.

H_1 : There is significant relationship between awareness linking with fintech and acceptance level of Takaful.

1.5.6 Service quality linking with Fintech

To hypothesize whether there is significant relationship between service quality linking with fintech and acceptance level of Takaful.

H_0 : There is no significant relationship between service quality linking with fintech and acceptance level of Takaful.

H_1 : There is significant relationship between service quality linking with fintech and acceptance level of Takaful.

1.5.7 Human resources linking with Fintech

To hypothesize whether there is significant relationship between human resources linking with fintech and acceptance level of Takaful.

H_0 : There is no significant relationship between human resources linking with fintech and acceptance level of Takaful.

H_1 : There is significant relationship between human resources linking with fintech and acceptance level of Takaful.

1.6 Significance of Study

Takaful insurance is one of the catalysts of economic growth of a country, especially the Islamic country, like Malaysia. With the steady growth of Takaful insurance in Malaysia, it will achieve well-established foundation to the economy with low cost to survive in the world. For the purpose to prevent critical consequences on insurance, understanding Takaful insurance is one of the essential ways for

Malaysian to do so as most of the citizens have the environment and resources to ensure the efficiency of Takaful.

In this study, it could declare the determinants that influence the acceptance level of Takaful clearly with providing a clear analysis, in terms of theoretical framework. By linking the dependent and some independent variables that we enter into fintech field to insure all of the participants who are willing to accept the Takaful products and services have the most appropriate package for them to choose. This study has taken the independent variables such as awareness, service quality, human resources as our key factors to study on the magnitude of the acceptance level of Takaful. After that, moderating variable, fintech was input to awareness and service quality to act as a catalyst for speeding the efficiency of Takaful.

Besides, this study could utilize the findings to inform the citizens about the important factors influence the acceptance level of Takaful. This may enhance the willingness of people to accept Takaful instead of conventional insurance. From this study, advantages or benefits of the Takaful products and services to more participants that the conventional insurance might not have offer to the public. Also, this may influence the authorities to focus more on those factors and take initiative on enhancing the elements to increase the acceptance level of Takaful. For instance, awareness of public towards Takaful should be raised, service quality enhanced, as well as the human resource (Takaful agents) should be focused. Furthermore, the fintech also played an important role to channel the acceptance level of Takaful.

1.7 Chapter layout

1.7.1 Chapter One

Chapter One contains the outline for this research, introduction, research background, problem statements, research questions, research objectives, hypotheses of study, chapter layout, significance of study and conclusion.

1.7.2 Chapter Two

Chapter Two include the comprehensive reviews of our dependent variable and independent variables. All the information and resources will gather from published journals, and any past research that done related in this area. In this chapter, there are several of theoretical framework, conceptual framework and hypothesis development to be created to support our research.

1.7.3 Chapter Three

Chapter three is related to the research methodology. The chapter explains the research design, data collection methods, sampling design, target population, sampling frame and sampling location, sampling elements, sampling technique, sampling size, research instrument, construct measurement, data processing, data analysis.

1.7.4 Chapter Four

Chapter four is used to present the research results. It aims for the attainment of the research objectives. In chapter four, there are major components including outcome of descriptive analysis, preliminary data screening and inferential analysis.

1.7.5 Chapter Five

Chapter five concludes the works and discussions of research results obtained from data analysis in detail. Then, provide some recommendations on how the policymakers can utilize these findings. Lastly, constraints of this study and also recommendations to overcome these constraints are discussed.

1.8 Conclusion

Chapter 1 has provided a comprehensive overview laying the groundwork for an in-depth exploration into the determinants of Takaful acceptance within small towns of Perak. The study background has been clarified, reviewing the development of Takaful and underlining the need for a more thorough comprehension of the variables impacting people's choices to use Takaful services. Takaful emphasises the values of morality, community solidarity, justice, transparency, and mutual aid since it is insurance that complies with Shariah. Takaful services have the potential to lower human error rates, increase productivity, improve transparency, and promote more affordable public access to financial advice, information, and goods by integrating Fintech.

Furthermore, a key research gap has been identified in the problem statement, highlighting the need for a comprehensive inquiry of the low penetration rate of Takaful in Malaysia. At the moment, just 8.2% of the insurance market is made up of takaful insurance, largely due to a lack of knowledge about the product. Because they are not aware of the higher benefits that Islamic insurance offers, customers frequently choose conventional insurance. As a result, customers become less inclined and motivated to get Takaful insurance, which feeds the cycle of underutilization of services. As a result, the research goal has been precisely defined to offer a guide for our analysis: to analyse the factors impacting the decision to buy Takaful and to look at the fintech relationship as a moderating factor.

This chapter also explores the significance of the research. It clarifies that a number of independent variables impact the degree of acceptance of Takaful, with awareness, service quality, and human resources (Takaful agents) receiving the most attention. Researchers voice concerns about the problems brought up by each of these independent factors that were the subject of this study. The next chapter will go into more detail about these variables and the related literature review.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

In this chapter, a comprehensive review of past literature related to the topic will be presented, delving into intricate details. The theoretical foundations applied in this study will be thoroughly examined and discussed. Additionally, the theoretical frameworks utilized by previous researchers will also be explored. Lastly, a conceptual framework, accompanied by proposed hypotheses, will be presented to guide the study's direction.

2.1 Review of the Literatures

The following section will provide a critical review of past research papers. Through an analysis of significant points, readers will gain a comprehensive understanding of the concept of Takaful. The independent variables under examination include awareness, service quality, human resources, fintech, and their combinations such as awareness and fintech, and service quality and fintech. These variables will be utilized to explain the relationship with the intention of Malaysians to choose Takaful, based on their perceptions.

2.1.1 Dependent Variables: Acceptance of Takaful

In Malaysia, despite challenges such as the Covid-19 pandemic and bank failures in the US, the Takaful industry has exhibited resilience, experiencing an upward trend in demand. Husin (2019) observed several challenges (independent variables) in the research, including a lack of

awareness, a low penetration rate, inadequate technological capabilities, and a talent deficit in the Takaful sector. Al-Amri et al. (2021) explores scope economies, efficiency, organisational form, and insolvency risk across takaful enterprises in 19 countries to acquire insights into their performance and larger industry consequences. According to the findings, the mudharaba (profit-sharing) model outperforms the wakala (fee-based) model in the takaful industry, with significantly higher efficiency, ROA, and ROE, and lower insolvency risk, indicating better alignment of managerial and policyholder incentives and implying agency costs associated with fee-based takafuls (Al-Amri et al., 2021). Nasir et al. (2021) reviews 149 documents published between 2000 and 2019 were evaluated, and takaful research was divided into four major themes: behavioural factors, conventional insurance, insurance demand, and products. Ansari (2022) conducted a bibliometric analysis on takaful literature, identifying unique topics such as consumer behaviour, financial and non-financial performance, takaful models, human resources, and governance.

Similarly, Eldaia et al. (2020) identified various difficulties confronting Malaysia's Takaful business. These difficulties include a lack of consumer awareness, a scarcity of human capital with insurance and Shari'ah expertise, a scarcity of Shari'ah scholars with sufficient practical experience, a lack of standardized industry practices due to differing Shari'ah interpretations, different legislative approaches, and the absence of centralized rules and solvency and capital requirements. Othman et al. (2018) researched to better understand Takaful acceptance through an examination of the Theory of Planned Behaviour (TPB). Their study discovered differences in individual intentions about involvement in family Takaful. Attitude, knowledge, perceived behavioral control, and behavioral intention were shown to impact this difference in purposes. Additionally, the Theory of Reasoned Action (TRA) was used in Wahab's (2018) study to investigate the level of consumer perceptions of performance and its relationship with their desire to take a medical Takaful card. According to the study's findings, one of the key elements affecting consumers' propensity to use the medical Takaful

card was their assessment of the performance of Takaful operators. Aziz et al. (2019) performed a study concentrating on the factors affecting consumers' intentions to acquire family takaful, with a particular emphasis in the function of perceived trust as a moderator. Knowledge and attitude, perceived usefulness and attitude, perceived trust and attitude, perceived religiosity and attitude were all investigated, with a focus on trust's mediating function in determining purchase intentions.

Alshammari et al. (2019) found that Takaful has lower cost efficiency than conventional insurance based on their study of 19 Malaysian firms from 2002 to 2011. The pure efficiency of a single Takaful operator was lower than the industry average, although the scale efficiency was comparable. Additionally evaluated the technical efficiency of the Takaful sector in Malaysia and the Gulf area between 2006 and 2009, utilising data from 12 businesses. Takaful operators in the Gulf area were found to be more efficient than their Malaysian counterparts. Alshammari et al. (2019) examines the influence of oil prices and the financial market on cost efficiency in the takaful industry (GCC insurance), speculating on potential implications on business demand, management efforts, and expenditures for insurers and Takaful providers. Salleh et al. (2018) conducted a study with an emphasis on awareness as an independent variable, focusing on Takaful awareness. A section of their research investigated flood victims' knowledge of Malaysia's Takaful flood insurance coverage on the country's east coast. The researchers examined several demographic characteristics to see how victims' degrees of awareness changed. When compared to other categories, younger people, single victims, and those with a higher degree of education indicated higher levels of awareness about Takaful and its importance for protection.

Karbhari et al. (2018) focuses on corporate governance studies by looking at its influence on technological and scale efficiency in global Takaful operators. According to the study, non-executive directors, audit committees,

and product diversity do not improve technical efficiency, rather product specialisation adds to Takaful inefficiency, meaning that economies of scope are underutilised (Karbhari et al., 2018). Sukmaningrum et al. (2023) explores the important internal and external factors impacting the productivity of Islamic life insurance firms in Indonesia, such as solvency, inflation, interest rate, production index, and currency rate. Hamzeh et al. (2023) explores the crucial variables for adopting Takaful inside an insurance firm in Iran, pointing to cost of insurance services, rules and instructions, statistical research, and transparency of information provided as significant features. Qian et al. (2023) performed a study on the adoption of takaful insurance products among Malaysian non-Muslims. The study identified variables such as awareness, service quality, relative advantages, and attitude, showing that attitude and relative advantage have a significant relationship with takaful insurance product acceptance, whereas awareness and service quality do not.

There is still a limited amount of study on the link between Fintech and Takaful. We address this gap in our research by using Fintech as a moderator. We investigate the influence and interaction of Fintech with key variables including 'awareness,' 'product and service quality,' and 'human resources' in the framework of Takaful. The independent variables will be covered in further detail in the following sections.

2.1.2 Independent Variables

The independent variables in this study are awareness, service quality, and human resources. Financial Technology (Fintech) will act as the moderator and examine its impact on the acceptance of Takaful from the perspective of awareness and service quality.

2.1.2.1 Awareness

There are several elements that affect the level of acceptance of Takaful, and one of the key elements is awareness. According to Drigas and Karyotaki (2022), being conscious or knowing about something is a state of being aware. It involves having the capacity to insight, comprehend, and discern the presence of certain information, events, objects, or situations. Malaysia has become the top worldwide Islamic financial centre because to its ongoing advancements in Islamic financial services (Wan Ahmad et al., 2019). In addition, the Takaful industry in Malaysia has grown significantly over the past few decades (Arifin et al., 2018). Nevertheless, the prevalence of Islamic insurance is still rather low compared to conventional insurance. Family Takaful made up 38% of the market for life insurance in the first half of 2020, while general Takaful made up 16% of the market for general insurance (Hassan et al., 2022). It's critical to know the elements impacting the public's decision to purchase Takaful products in order to increase the low prevalence rate of Takaful in Malaysia. Although Takaful protection is important to individuals of all ages, they often find excuses to avoid paying even when the monthly amount is affordable (Jusoh et al., 2022). This is because they don't aware that Takaful can bring them enough protection and mutual assistance. When determining the factor that affect of awareness on the acceptance of Takaful, it becomes essential to comprehend the concept of risk, which refers to the potential eventuality of a loss occurring. Takaful is a highly impeccable mechanism that effectively lower the risk associated with health and death as it involves the need to allocate a reserve of funds for unexpected situations (Ahmad & Zahid, 2022). Death is an unavoidable occurrence for everyone regardless of age, Takaful makes family members left behind aware of the importance that they should be prepared for it.

Previous researchers have highlighted awareness as a significant element affecting the acceptance of Takaful insurance products. According to Hassan and Salman (2021), assert that there is a positively relationship between customers' acceptance of particular products and their awareness about such

products. In light of this, raising customers awareness will result in a rise in the acceptance of Takaful products. Moreover, Salman et al. (2018) conducted research in India with 909 people from both Muslim and non-Muslim backgrounds to identify internal factors, which consist of product awareness, that affect the level of consumer accept the Takaful insurance. A linear regression model was used to analyse the data, which showed a strong correlation between awareness and readiness to accept in Takaful. Nonetheless, it was noted that non-Muslims appeared slightly less motivated compared to their Muslim counterparts. Furthermore, according to the Ibrahim et al. (2021), they performed two different studies of Bumiputera contractors in Malaysia, with 414 and 421 respondents, respectively. For the study, they used the Smart Partial Least Square Structural Equation Modelling (PLS-SEM) method to analysis data. The findings from both studies consistently showed a substantial positive correlation between Bumiputera contractors' awareness of and acceptance of Contractor's All Risks (CAR) Takaful insurance. SmartPLS was used to analyse the results of the first survey, whereas SPSS was used for the analysis of the second survey.

On the contrary, to better understand the Somali community's awareness of Takaful insurance and the factor affecting their adoption decisions, Qian and Darman (2023) performed research in Mogadishu. The researchers used convenient sampling to collect data from 179 respondents. The research's findings showed an insignificant relationship between awareness, and the respondents' intention to use Takaful insurance. Besides, based on the research by Karim et al. (2023), there is only a weak correlation between family Takaful knowledge and awareness among Malaysia's working community. The obtained correlation coefficient (r) was 0.125, and the statistical analysis showed that this correlation was significant at the $p < 0.05$, with a p -value of 0.000. The other two independent variables are service quality and social influence, and their correlation coefficient (r) are 0.394 and 0.475 respectively. Therefore, in comparison, awareness has little impact on family Takaful among the working community in Malaysia.

Besides, given that Muslims make up much of the population in Malaysia, Takaful services are widely common among locals. Notably, some Muslims continue to choose conventional insurance over Takaful for their individual life insurance requirements (Khairi et al., 2022).

In summary, awareness can indeed affect the level of acceptance of Takaful, as it is linked to individuals' perception, consciousness, and knowledge of Takaful Insurance. However, certain studies have presented conflicting results, indicating that awareness may also have a negative impact on the acceptance level of Takaful.

2.1.2.2 Service Quality

One of the determinants that influencing the level of acceptance among Malaysian is Service Quality. Service quality refers to the fulfillment of customers' expectations, which is the variance between customers' service expectations and the actual service experiences (Jamaludin et al., 2020). Ledikwe et al. (2019) and Haron et al. (2020) echoed with this definition as they introduced a similar definition about service quality. Corneliu (2021) suggested that a high-quality service occurs when the customer's perception after experiencing the service is higher than the expectations before using it. Another definition about service quality raised by Shaladdin et al. (2018), service quality is an overall assessment by customers, and it is the fundamental factor that influences customer acceptance and satisfaction. Corneliu (2021) stated that there are 5 dimensions for service quality which are tangibility, reliability, receptivity, safety, and empathy. According to Corneliu (2021), Tangibility is the existing available facilities; Reliability refers to the ability of the organization to precisely communicate with the clients; Receptivity involves the efforts of the organization to deliver timely services and support to the clients; Safety relates to the employees'

proficiency, courtesy and integrity; Empathy focuses on providing individualized attention and facilitating communication and interaction with each client. Jamaludin et al. (2020) mentioned that service with superior quality facilitates the customer satisfaction, fosters customer loyalty and the expansion of market shares through attracting new customers. Hence, the service quality plays a crucial position in the aspects of survival and long-term competitiveness within Takaful industry. The importance of service quality must be emphasized by Takaful providers because it could significantly influence the customer acceptance.

Jamaludin et al., (2020) had collected 400 questionnaires from Pahang employees and come out with a conclusion showed that the relationship between service quality and customer acceptance is positive ($p\text{-value} < 0.01$) and the relationship explains 72.1% of the variance. Next, the study conducted by Shaladdin et al. (2018) among Malay race in Malaysia has reported a significant positive relationship ($p\text{-value} = 0.035$) between service quality and customer acceptance. This means that customer acceptance will positively increase under the superior quality of service and promote the customer loyalty in Takaful (Shaladdin et al., 2018). Therefore, service quality holds significant since dissatisfied customers may opt to choose other services (Shaladdin et al., 2018). The research conducted by Hassan (2022) stated that the existence of positive relationship ($p\text{-value} = 0.006$) between service quality and Takaful acceptance for the Malaysian Youths with the age between 18 until 40. This statement supported by the study conducted by Saoula et al. (2023) where the $p\text{-value}$ showing 0.001 indicates that there is a positive relationship between service quality and customer satisfaction.

Referring the relationship between service quality and the acceptance in other countries as the observation. There is also study conducted by Kehinder & Sharofiddin (2021) in Nigeria found out that the relationship between service quality and the accept intention of Takaful products in

Nigeria is a significant positive ($p\text{-value} = 0.000$). This indicates that higher quality of service is pivotal in ensuring the acceptance of Takaful (Kehinder & Sharofiddin, 2021). Muntasin et al. (2021) has conducted research in Indonesia concluded that there is a significant relationship between service quality and customer satisfaction. These studies confirmed that service quality is essential in assuring the adoption of Takaful regardless of the geographical context.

The studies above strengthen the significant of service quality in raising the Takaful acceptance. However, there are also research having a different the findings as the above. Research conducted by Qian, Y. H., & Darman, H. (2023) focusing on the acceptance level of Takaful among non-Muslims in Malaysia highlighted that there is no significant relationship between service quality and acceptance of Takaful ($p\text{-value} > 0.05$). Ibrahim et al. (2021) supported that result above stated that there is no significant relationship ($p\text{-value} = 0.768$) between service quality and choosing intention of Takaful.

2.1.2.3 Human Resources

Human resources are one of the elements or determinants that affect the level of acceptance of takaful. According to Khamis et al., (2022) suggested that human resources consider a significant asset for any organization to attain competitive benefit in the era of globalization. Therefore, the human resources development has implemented a programme with the Islamic education-based for marketers at PT Asuransi Takaful Keluarga Jakarta in purpose of ensuring the marketers achieve a standardization on skills as well as knowledge and behaviour. Human resources, including takaful agent, who plays an important role to provide products and services to its customers to improve the satisfaction of customer on takaful products and

services (Lee et al., 2018). Also, it claimed that an agent is an individual legally authorized to act on behalf of another individual or entity (Daud, 2020). According to Musyahidah et al., (2020) mentioned that an agent in an insurance firm who is authorized or given right to carry out tasks on behalf of a company. Takaful agent, also known as insurance agent plays role on implementing an agency mechanism to regulate its distribution channel (Halim, 2021). According to Shukor (2020) pointed out that takaful agents are not only deal with selling takaful products but also along with its services. In Arabic term, agent means *wakeel*, shows in the Qur'an as the representation of an individual on behalf of another person in certain dispositions. Also, they are responsible for assisting their customers on financial well-being and on disseminating knowledge of takaful products to both Muslims and non-Muslims as well. Besides, transmission of information on takaful's product to customers, especially to those who have little curiosity and information about the product falls on the responsibility of Takaful agents (Abdullah, 2018).

There is a past research stated that agents play a significant role to ensure the maximum customer satisfaction after buying takaful products and services (Shaladdin et al., 2018). This is due to the reason that it help to ensure that the level of acceptance towards takaful could bring a positive impact in future. Also, agents should take on a good negotiations with their clients so that they can buy the products with highest satisfaction in comparing with other several takaful products in different prices (Daud, 2020). In other words to say, affordable takaful products and packages that suit the demands of consumers is the main responsibility of a takaful agents should perform. From the analysis investigated by Daud, 2020, it showed there is a vital positive effect of the agent role on the acceptance of takaful from the customers. Referring to Shaladdin et al., (2018) mentioned that the 'role of agents' variable obtained the highest Cronbach's Alpha value at 0.791, which indicates there is a reliable variable towards the customer satisfaction towards takaful products. Shukor (2020) has conducted a total of 400 survey in Selangor, Malaysia and finally received 374 completed

survey forms, to measuring the individual's opinions on takaful agents in terms of 5 abilities that will affect the acceptance level towards takaful products including communication, expertise, image, trust, intention as well as loyalty. Finally, results showed that all the variables determined were get supported to influence the acceptance level of takaful.

There was an agent staff name Mrs. Sri Putri Wahyuni at PT Asuransi Askirida Syariah has conducted an interview and declared that many individuals still believe that Islamic insurance requires complex procedures and misunderstanding that Islamic insurance cannot be used to handle its content or operational activities (Sembiring, 2023). According to Santri (2022), religious incentive, various type of knowledge and experience of an agent also may lead the people to choose takaful. From the research conducted by Makki (2021), it showed that there is a statistically positive correlation ($p\text{-value} = 0.001$) between Takaful agents' ethical behaviour and the customer willing to accept the takaful from the result of Pearson, bivariate correlation tests. In other words, if the agent takaful behave better, the customers are more willing to accept takaful products and services. Besides, there is a prove stated that the agent's knowledge and understand towards takaful is the most important thing to regulate. Giving this specific knowledge of product and service, it may offer the participants to choose the right and suitable insurance package to them (Sembiring, 2023).

As per Abdullah's (2018) research, an analysis was conducted on the behaviour of takaful agents towards consumers. The study identified at least 13 different behaviours exhibited by agents while promoting takaful products and services. Among these behaviours, providing consumers with false information about takaful products emerged as the most dominant and significant one. This behaviour was observed most frequently, with past studies reporting it occurring up to 5 times. Such unethical behaviour by agents hinders the establishment of a strong connection between takaful companies and consumers. Moreover, there are serious issues stemming

from agents not understanding consumers' needs and engaging in other unethical practices. Past studies indicated that both of these concerns were reported 4 times out of the total 13 instances. Consequently, these problems can tarnish the company's reputation, render services non-customer-friendly, and create inefficiencies in handling consumers' issues. Another important consideration is the inability of agents to offer clear explanations, which, when coupled with conflicts of interest between consumers and agents, can negatively impact the acceptance of takaful. For instance, the lack of knowledge among agents may result in an inadequate promotion of suitable takaful packages, ultimately leading to decreased customer satisfaction. Furthermore, competition among agents in the same industry sector can intensify conflicts of interest, as agents prioritize personal gains over providing quality takaful products and services. Lastly, some agents face hindrances due to a lack of understanding about the concept of takaful, leading them to withhold information about the products and services. Such situations could mislead consumers and result in unsatisfactory experiences when purchasing takaful products and services. According to the survey, the information gathered from the participants that the behavioural of Takaful agents will threaten the growth of the Takaful growth, including lack of qualified personnel, inadequate education, and inadequate training for them (Dinç et al., 2019). Also, they added that most of the employees or agents who are working in the Takaful sector not necessarily specialized in Takaful, but graduated in courses including banking, finance, accounting, or capital market sector.

In conclusion, human resources can be one of the factors that influence the acceptance level of takaful through the role of agents, their behavioural, as well as knowledge to promote the takaful products and services. However, some studies have conflicting results to prove that the takaful agents may also bring negative impacts to the acceptance level of takaful.

2.1.2.4 Fintech

Fianto et al. (2020) explored three theoretical models: the planned behaviour model, the acceptance model, and the use of technology models. Their findings indicated a positive and statistically significant relationship between these models and individuals' behavioural intentions regarding the adoption of Islamic FinTech. Thaker et al. (2018) performed a study that found FinTech improves the accessibility of financial services, specifically using mobile phone technology for banking transactions, hence positively improving consumers' intentions. Similarly, earlier research by Zhang et al. (2018) and Ryu (2018) supports the concept that FinTech increased flexibility for acquiring financial services. According to Chen (2018), Islamic financial institutions must be ready to accept change since Sharia-compliant Islamic FinTech has the potential to attract 150 million new consumers in the next three years.

Meskini et al. (2020) researched the degree of satisfaction among insurance company clients in their study. While some people viewed insurance as a possible fraud, others are dissatisfied with the industry's lack of transparency. The survey found a significantly low level of satisfaction. The authors, on the other hand, believe that adopting Islamic insurance based on blockchain technology potentially greatly increases clients. They emphasise the potential benefits of a blockchain-based smart insurance system that incorporates automated contracts and draws inspiration from Takaful ideals such as solidarity, mutual help, and profit sharing. Lacasse et al. (2018) proposed that, despite legal difficulties, a blockchain-based monitoring mechanism may be a useful tool in the context of Islamic Fintech. Furthermore, the literature study suggests that using smart contracts as alternatives for financial contracts and services might result in cost savings of up to 95%, potentially revolutionizing the Islamic banking scene (Lacasse et al. 2018).

Radwan et al. (2020) highlight the potential for improved effectiveness in Takaful through the adoption of Fintech. It emphasises how incorporating complaint analysis may successfully minimise fraud in insurance businesses, particularly in motor insurance. The use of IoT devices and sensors further reduces fraud and increases customer response time. Furthermore, the participation of professionals and police improves the trustworthiness of information. Implementing shared and immutable ledgers enables effective claims administration with intelligent contracts, saving time for Islamic businesses. The existence of shared public databases allows Takaful participants to analyse risk. Furthermore, real-time claim monitoring increases transparency, which is supported by legitimate documentation of policy issuance.

Hemed et al. (2021) focus their research on the benefits of Takaful-related Artificial Intelligence (AI), Robo-Advisory, and Big Data Analytics. They emphasise benefits including objectivity, convenience, accessibility, and efficiency. Unlike human agents, robo-advisors can undertake numerous jobs at the same time, increasing the efficiency of Takaful operations. Similarly, de Seguros et al. (2019) agree with the concept of creating and using big data analytics algorithms to help with routine analytical activities like spotting possibly fraudulent claims. However, they emphasise the need of maintaining ethical and regulatory compliance when employing big data analytics techniques, with human analysts checking all outputs as part of the claims processing system.

Siswantoro et al. (2020) studied the Islamic perspective on cryptocurrencies in their study; Adam (2018) argued that cryptocurrency and tokens are permissible as money because they meet the conditions of exchange transactions as well as other requirements such as *maal* (property), *manfa'ah* (usufruct), *haqq* (right), and *dayn* (liability). The studies of Oziev and Yandiev (2017) supported this viewpoint. Meanwhile, Asif (2018) gave a

neutral viewpoint, claiming that while the system is not intrinsically anti-Islamic teachings, it does not fully accord with the concept of derivatives.

Hasan et al. (2020) mentioned that there are six types of Islamic Fintech (table 2.1) : *Ethis Kapital* is a Shari'ah-compliant crowdfunding platform that focuses on housing projects in Indonesia and Malaysia. *As-Sidq* provides interest-free personal finance and credit cards and distributes billions of dollars in Shari'ah-compliant money through Islamic financial institutions. *Finterra* uses blockchain to provide cloud-based financial services in many countries. *Global Sadaqah* and *PayHalal* provide Islamic-compliant donation-based crowdsourcing for charitable activities. *Waqaful* employs blockchain to provide a fully digital solution based on waqf principles, aiming to improve community well-being and reduce inequities.

Table 2.1: Islamic fintech in Malaysia

No	Name of Islamic Fintech	Major Actives
1	Ethis Kapital	Peer-to-peer leading platform.
2	As-Sidq	As-Sidq provides a fundraising platform which is approved by twenty financial institutions in Malaysia.
3	Finterra	Finterra provides cloud-based financial services
4	Global Sadaqah	Donation-based crowdfunding platform
5	Payhalal	Payment gateway which follows Shari'ah standards.
6	Wakaful	Digital financial services following waqf principles.

Note. From Fintech and Islamic Finance: Literature Review and Research Agenda (Hassan et al., 2020)

2.1.2.5 Awareness and Fintech

Investment management services' use of FinTech is expanding quickly, and there are no indicators that this trend will slow down. Additionally, given the quick shift in customer requirements, Fintech is becoming a fundamental and common necessity. The Fintech sector places a heavy focus on robust digital interaction and communication, because of the potential it presents for increased convenience, greater service delivery, and improved efficiency. According to Abdullah et al. (2018), the majority of respondents indicated their awareness to use Islamic banking if it runs smoothly and offers better customer services. The report also advises Islamic banking institutions to concentrate on effective communication techniques to educate customers about the capabilities and services offered by Islamic banking. Investment management services have realised and embraced the disruptive role of FinTech sector as the field continues to expand. Collaboration between the two is becoming more and more necessary to improve and offer better services for investment management. Based on the research by Abbas and Batool (2021), result has shown that the Internet banking system may offer convenient and effective time management, enabling users to use it whenever and from anywhere. According to Oladapo et al. (2021), there is a significant positive relationship between customers' awareness of Islamic FinTech and them accept to use FinTech services. Baber (2020), who also endorsed the findings, claimed that providing enough information on Islamic principles might increase customer satisfaction. These studies emphasise the significance of banking practitioners and operators routinely participating in training, seminars, and conferences to improve their ability to increase awareness of FinTech to customer.

Takaful business providers must be aware of the value of understanding and utilising the opportunities presented by technology improvements to remain competitive in the market (Nugraheni & Muhammad, 2020). In the past, technology developments have slowly but dramatically impacted how insurance companies communicate with their customers, resulting in

changes to customers engagements and loyalty. The insurance sector is constantly changing and adopting to new technologies, from the integration of "insurtech" (the combine of insurance and technology) to electronic payments and mobile apps. These technology innovations are being aggressively adopted and incorporated by insurance companies as well as their customers (Hemed et al., 2021). Takaful business providers can increase the efforts of their social media marketing campaigns by utilising social media analytics (EIOPA, 2019). They may maintain an edge and enhance their connections with customers by taking a proactive approach. Insurance companies have been using social media as a Fintech tool for the purpose to increased awareness of people accepting Takaful. (Hemed et al., 2021). According to the study conducted by Dinç et al. (2019), customer awareness is of the biggest importance in the Turkish Takaful market. According to the survey, one of the most important elements of success in the Turkish Takaful market is teaching customers about the Takaful industry using a variety of marketing tactics, such as advertisements, promotions, lectures, and other activities.

Rusni and Salman (2019), two Malaysian experts, contend that Takaful operators should encourage innovation and create unique products by using Fintech tools to differentiate themselves from conventional products. This strategy may promote competition and differentiation in the Takaful market. It is crucial for Takaful products to be customer-friendly and easily comprehensible. Customers nowadays are knowledgeable, aware, and sophisticated, therefore, they should have no trouble using and understanding the Takatech and Insurtech products. An expert also pointed out that Takaful's growth in Malaysia has outpaced its conventional counterpart, indicating the increasing popularity and acceptance of Takaful products among customers in the country (Yusof, 2020). Although this is the case, the experts acknowledge the need for teaching the public about the Takaful market with Fintech trend (Rusni & Salman, 2019) and stress the need of beginning this education at the elementary school level and

continuing through college and university. A Saudi Arabian expert hold a similar perspective, calling for an emphasis on education and training to increase the competitiveness of the sector (Alghamdi, 2023). He believed that spending effort on education and training may considerably improve the awareness and acceptance of the Takaful sector.

2.1.2.6 Service Quality and Fintech

Financial Technology (Fintech) is a computer programs and other technology used to provide banking and financial services (Oxford Learner's Dictionaries, 2023). In the past few years, Fintech is the emerging innovations in financial industry, while it evolved rapidly and is currently widely used in the financial industry. According to study conducted by Loo (2018), found out that a positive relationship between fintech and the financial service industry. Hence, it is important to know how fintech could improve the service quality and drive the acceptance of Takaful among Malaysian.

Takaful industry is considered as a relatively young industry compared to conventional insurance. It is crucial for Takaful operators to be innovative and unique, in order to attract more customers, remain competitive in insurance industry and outperform than conventional insurance. For Takaful operators, minimising operating cost is more important than maximizing profit. A guidance paper by Baker & McKenzie (n.d.) on the insurance industry in Malaysia mentioned that the agent could receive a commission up to 10% of the premiums. Loanstreet (2019), also stated that the agents normally earn 9% to 12% of the premiums, and the operating cost for insurance operator includes fully paid vacations, agent recruitment bonus and policy renewal bonus. This factor could lead to a higher premium required to subscribe the policies and inadequate policies recommendation

by financial advisors may cause a negative impact on the service quality. Robo-advisory and big data are two major technologies that could facilitate the cost-efficiency for Takaful operators (Hemed, 2021).

Robo-advisor is an “automated financial advisor” (Renner and Meyll, 2020). Robo-Advisors possess ability to offer a higher quality and easily accessible financial advice to a larger audience at a lower cost than traditional human financial advisors (Hemed, 2021). Robo-advisory automates the process of financial advisory through the survey to simplify the process, more convenient and flexible due to its easy access, also cost-effective to the operators. Loanstreet (2019) mentioned that insurance agents do not always provide the advice for the customers on the policies that most suitable for them. However, robo-advisors could solve this issue since it does not have self-interest and desires same as human financial advisor, the recommendations by robo-advisors fulfill the customers’ needs and unbiased. Not only that, robo-advisors could provide the most suitable insurance policy after considering the customers’ risk tolerance level and financial background (Hemed, 2021). Robo-advisors are easily accessible through gadgets as long as the customers have an Internet connection, and also allowing the existing and potential customers to utilize its services 24 hours every day (Hemed, 2021). The efficient process and user-friendly accessibility as well as unbiased recommendation of Robo-advisory could enhance the service quality of Takaful. This could benefit the Takaful customers and attracting more customers willing to accept Takaful.

According to IBM (2023), big data is high volume, high velocity and high variety of data which more complex than traditional data, while big data analytics refers to the complex assessing process on big data to disclose the hidden information such as correlation, trends and customer preferences which could help firms to make business decisions (Wesley et al., n.d.).

Takaful operators could get all the data from various sources to analyze the data of the customers. The collection of personal data enables the organizations to offer personalized services which in line with the particular customer's preferences ((Miskam & Eksan, 2018). Also, big data application could easily analyse the customers' spending habits based on the age, gender, and social class (Miskam & Eksan, 2018). This enables Takaful operators to have the insights on its existing or potential customers and customize its policies to better meet the different needs of different target customers. Even for existing customers, Takaful operators are able to keep collecting their data and provide a brand-new personalized policies for them to fit their needs as the time change. The personalized policies for different customers to fulfil their needs could show a higher service quality. This will be welcomed by the customers and boost the acceptance of Takaful.

Takaful Industry has huge opportunities to further apply Fintech which can lead to the enhance of operational efficiency and result in the expansion of businesses. The commission paid to financial advisors could replace by the robo-advisors and save the cost for subscribing policies, an easier process could result in a higher service quality, together with a more reasonable and affordable price could also boost the customer acceptance. The two utilizations of mentioned above is expected to enhance the intermediaries' professionalism, not only concentrate on the sales but also focus on providing adequate advice to customers (Azwina & Norazuan, 2019). Fintech could positively contribute to the Islamic finance development (Azwina & Norazuan, 2019).

2.1.2.7 Human resources and Fintech

According to Wang et al, (2021) mentioned that the financial technology (Fintech), including digital platforms, the Internet of Things, big data, data

analytics, robo-advisors in finance has shown unprecedented growth with the possibility of replacing human resources in Takaful industry. Referring to the SWOT survey conducted by Dinç et al, (2019) declared that majority of the respondents in Malaysia, Saudi Arabia, and Turkey agreed that access to new insurance technology creates chance for the growth of the Takaful industry.

With adoption of fintech, the liaison between the Takaful agents and clients is more convenient and directly, enhancing the interaction and communication for better customer satisfaction and directly contribute the upward trend of acceptance level of Takaful. Also, the human effort and cost are reduced due to the adoption of fintech (Altwijry, 2023). In other word to say, the efficiency is achieved when the clients receive a payment within one or two days compare with the previous traditional black and white hard documents which need took more than 10 days to settle with substantial human effort. Besides, the human mistake error can be minimized as well. There is an existence of reduction in the bridge of Takaful agents between the Takaful company and clients, which assisted to minimize costs and easier connections. Adopting fintech in Takaful industry could bring a lot of advantageous. High costs incurred as well as low efficiency operations of the Takaful companies will be tackled and reduced by implementing digital solutions.

In fact, most of the products are exposed to the potential risk of not conforming to Shari'ah principles during the implementation stage due to lack of specific knowledge in Takaful and its unique modus operandi. By tackling this problem, fintech was inserted as a moderating variable to act as a catalyst to enhance the acceptance of Takaful. For instance, by adopting fintech into the Takaful industry, we could reduce this exposure risk with lower cost and human efforts via Robo advisors with specific Takaful knowledge (Dinç et al., 2019).

However, the adoption of fintech still in low progress, especially those clients aged above 50 years that no familiar with the technology. They prefer traditional transaction via face to face rather than online transaction (Yuspita et al.,2019). Hence, due to the low demand of clients, Islamic financial institutions face difficulties to enter IR4.0 in their banking system.

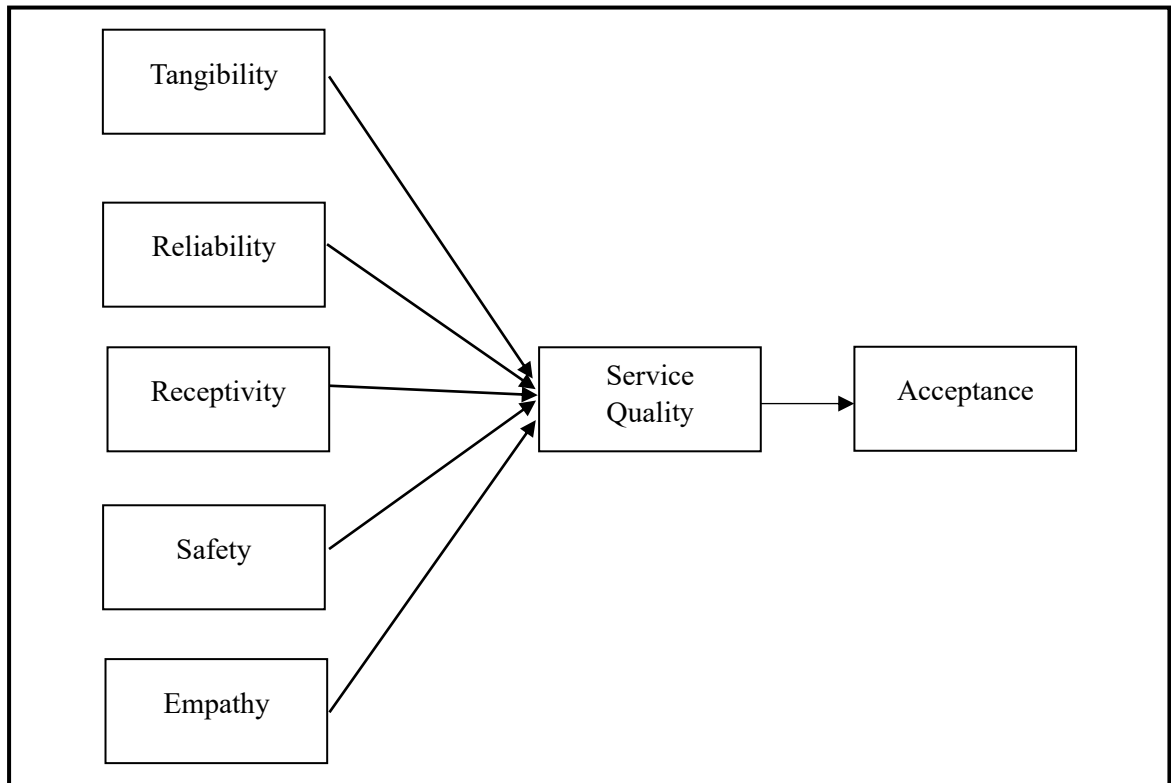
2.2 Review of Relevant Theoretical Methods

Acceptance of takaful refers to individuals' willingness to adopt and use Islamic insurance (Takaful) for their insurance needs. The first independent variable, Awareness is the condition of being conscious or knowing about something, in which one can observe, comprehend, and recognise information, events, objects, or circumstances (Drigas and Karyotaki 2022). Service quality, as the second independent variable, assesses the degree to which customers' expectations are fulfilled, indicated by the gap between their service expectations and real experiences (Jamaludin et al., 2020). Furthermore, human resources are recognized as a vital asset for organizations to achieve a competitive advantage (Khamis et al., 2022). FinTech is the fusion of Information Technology and Finance for providing the financial services at an affordable cost with a seamless user experience (Raza et al., 2020). Moreover, for awareness and fintech, Abdullah et al. (2018) found that respondents are aware of the potential of Islamic banking's better services, while investment management acknowledges the importance of FinTech collaboration to improve their offerings. Lastly, Fintech was incorporated into service quality, revealing a positive relationship between the two. This highlights the significance of understanding how fintech can enhance service quality and drive the acceptance of Takaful among Malaysians (Loo, 2018).

2.2.1 SERVQUAL Model

SERVQUAL model was initially introduced by Parasuraman, Zeithaml and Berry in 1988 *Journal of Retailing*. According to Corneliu (2021), SERVQUAL was the first approach created and used to assess the service quality. Initially, the first edition of SERVQUAL consist of 10 dimensions of service quality which are reliability, receptivity, credibility, kindness, security, competence accessibility, communication, understanding the client and tangibility (Corneliu, 2021). Parasuraman, Zeithaml and Berry revised the model and limit in five mentions rather than the previous ten dimensions after receiving a lot of criticisms about the number of dimensions. The revised SERVQUAL model consist of 5 dimensions for service quality, they are tangibility, reliability, receptivity, safety and empathy. In the words of Corneliu (2021), Tangibility is the existing available facilities; Reliability refers to the ability of the organization to precisely communicate with the clients; Receptivity involves the efforts of the organization to deliver timely services and support to the clients; Safety relates to the employees' proficiency, courtesy and integrity; Empathy focuses on providing individualized attention and facilitating communication and interaction with each client.

Figure 2.1: Theoretical Framework of SERVQUAL Model



Note. From Parasuraman, Zeithaml and Berry (1988).

SERVQUAL model is widely applied in the studies regarding to service industry. The study conducted by Corneliu (2021) adapted SERVQUAL model to examine the clients' satisfaction of insurance industry. Besides, Naik et al. (2010) utilized SERVQUAL model to assess the customer satisfaction in retail industry. Moreover, Pekkaya et al. (2019) and Behdioğlu (2019) applied SERVQUAL model to evaluate the healthcare service quality. Not only that, Sugiarto and Octaviana (2021) and employed SERVQUAL model in banking industry.

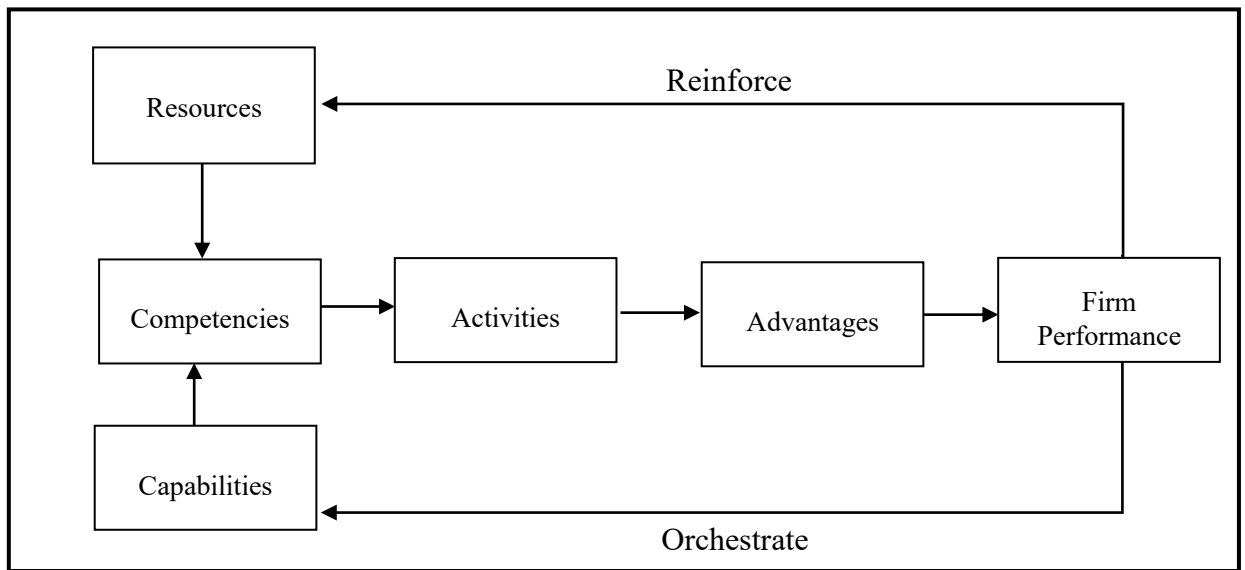
2.2.2 Resource-Based View Theory (RBV)

Jay B. Barney introduced the Resource-Based View Theory in 1980. According to Barney (1991), RBV posits that a firm's sustained competitive advantage is determined by the value, rarity, inimitability, and lack of substitutability of its resources. Barney (1991) also emphasized the two critical assumptions that must be fulfilled when applying the RBV theory, which are the heterogeneity and immobility of resources. For heterogeneity, organizations must differentiate themselves in terms of resources and core competencies to outperform other companies. As for immobility, resources or knowledge should not be able to freely move from one company to another, preventing the replication of resources and enabling better strategy implementation. Under RBV, a firm's resources encompass all assets, capabilities, organizational processes, firm attributes, knowledge, and the crucial role played by agents, among other factors that are under the firm's control and can be utilized to devise and execute strategies aimed at achieving a competitive advantage in the market. From an RBV perspective, the focus is inward, directed at the firm's resources, capabilities, and human capital to bolster its competitive advantage (Barney, 1991; Penrose, 1959; Peteraf, 1993). The RBV approach aids in comprehending how firms attain and sustain a competitive advantage by building and leveraging existing resources. According to Mao et al. (2022), RBV demonstrates direct effects on human resource practices, which in turn influence the qualifications and behavioral outcomes. The argument is that different resources will impact the competitive edge based on expertise and skills, thus necessitating the application of specific human resource management practices to achieve desired outcomes, such as practices related to human capital, training, and agent abilities (Guest, 1997).

The present study aims to assess the include pact of human resources, include in the roles of agents, on the acceptance level of takaful products and services. Hence, this theory suggests that the roles of agents are significant factors influencing the acceptance level of takaful in the research.

Through the application of the RBV theory, human resources can concentrate on nurturing and utilizing the distinctive abilities and skills of their workforce to gain a competitive edge for the takaful company, consequently enhancing the level of acceptance for takaful products and services.

Figure 2.2: Theoretical Framework of Resource-Based View Theory



Note. From Jay B. Barney (1991).

2.2.3 Unified Theory of Acceptance and Use of Technology (UTAUT) model

The Unified Theory of Acceptance and Use of Technology (UTAUT) model was specially designed to establish three direct impacts on behavioural intention from three factors. Performance expectancy, effort expectancy, and social influence are the factors (Momani, 2020). The UTAUT model was expanded by Venkatesh et al. to add predictive factors such as performance expectancy, social influence, effort expectancy, and facilitating conditions for behavioural intention and actual technology usage.

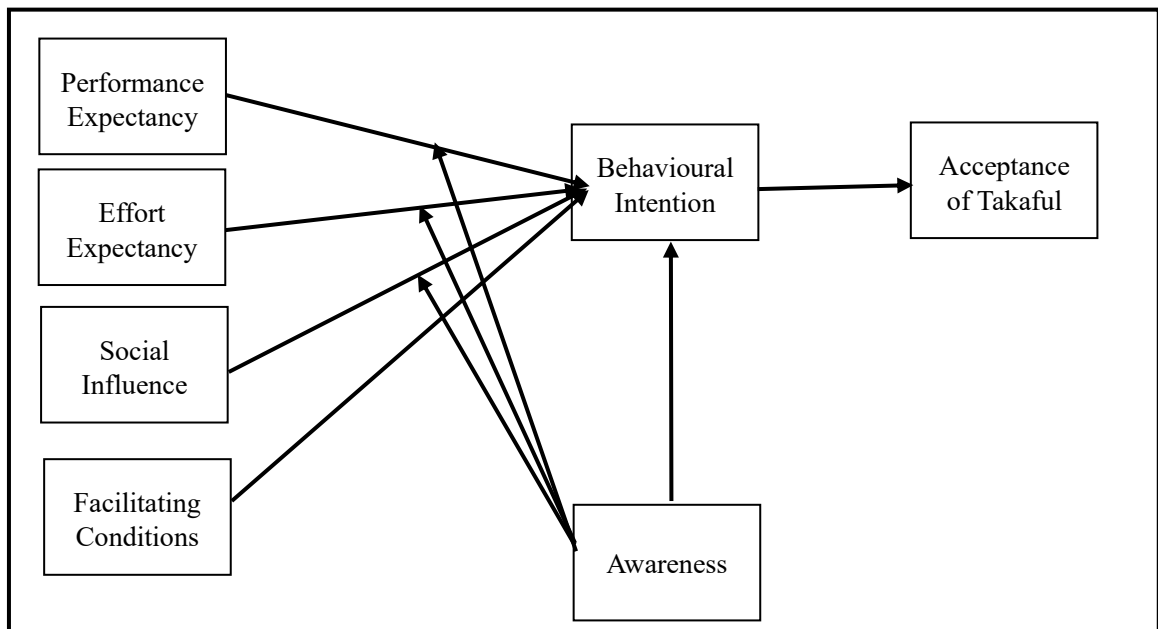
According to Dwivedi et al. research on FinTech adoption in the banking industry, performance expectancy is related to the convenience and simplicity of utilizing the new FinTech digital platform for financial transactions. Daka et al. (2019) examine that users' willingness to adopt and use technology hinges on the perception that it is easy to use with minimal effort, and effort expectancy is a clear measure of the ease of accessing the new technology platform. Social influence is important in FinTech adoption in the banking sector since it is related to how individuals perceive the direct impact of others and impacts their decision to utilise FinTech services (Kurniasari et al, 2023). Xie et al. (2021) discovered that social influence had a substantial impact on consumers' behavioural intention to utilise FinTech services in a study performed in China. They discovered that social elements had a beneficial impact on adoption intention in the setting of Internet wealth management.

Venkatesh et al. (2003) defined facilitating conditions as the users' belief in an organization's technical infrastructure supporting the use of a system or technology for better performance. Ali et al. (2018) found a weak relationship between FinTech services and facilitating conditions in developing countries, where organizations face challenges in helping users utilize FinTech services effectively for financial transactions. According to Xie et al. (2021), facilitating conditions have no substantial influence on adoption intention in the FinTech environment. This lack of a link between facilitating conditions and adoption intention has also been seen in the domains of mobile consumption and online banking (Xie et al.,2021).

Daniala et al. (2022) investigated how awareness affects the relationship between intention and intention to use. They identified notable moderation in the model's constructive variables, namely Performance Expectancy, Effort Expectancy, and Social Influence, notably in the case of social influence and intentions. Similar moderating effects were also observed in other components within the model. Akinnuwesi et al. (2022) modified the

UTAUT model through adding awareness, with the objective of determining its impact on persons' behavioural intention (BI) towards the adoption of COVID-19 digital contact tracking technologies (CDTT). The UTAUT model was expanded by Abdulkadir et al. (2021) to investigate the acceptance of general takaful among owner-managers of micro, small, and medium companies (MSMEs) in Nigeria's North-West area. Their findings revealed a favourable relationship between awareness and general takaful adoption in this specific environment.

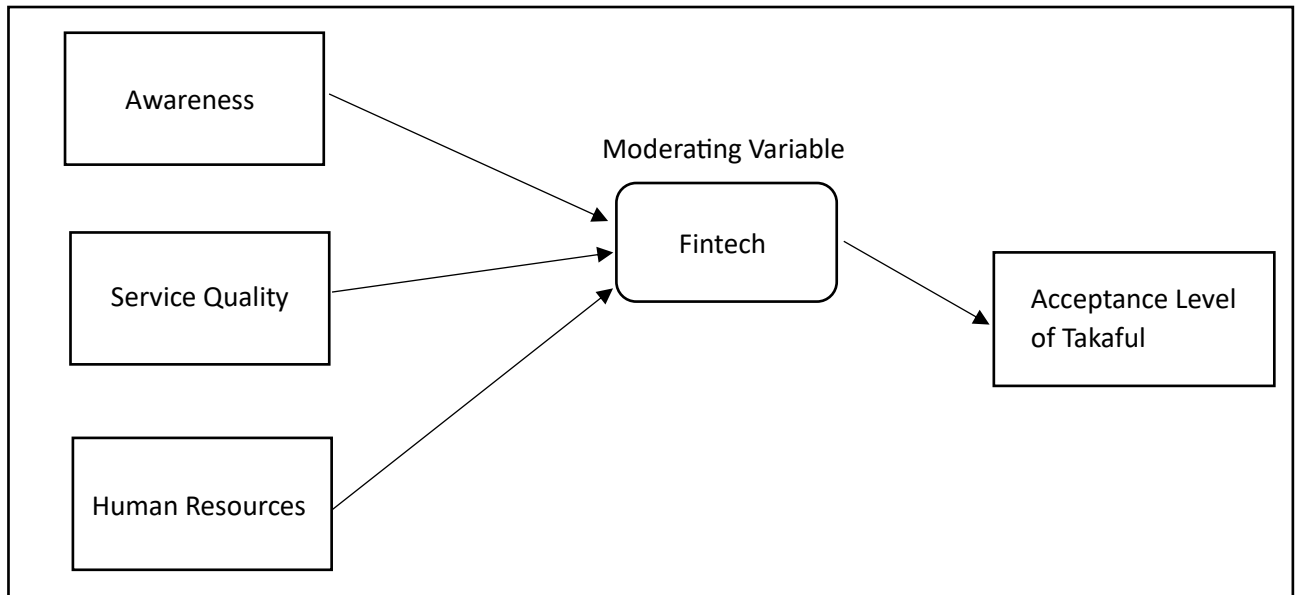
Figure 2.3: Theoretical Framework of Unified Theory of Acceptance and Use of Technology model



Note. From Momani (2020)

2.3 Conceptual Framework

Figure 2.4: Conceptual Framework



Note. Developed for study

Based on the previous theoretical model in the previous section 2.2, the conceptual framework in Figure 2.4 is introduced to study the acceptance of Takaful. The conceptual framework involves three independent variables, which are awareness, service quality, and human resources, and the moderating variable in our research is fintech which link to the independent variables including awareness and service quality. Through the previous study, most of the studies inferred that awareness, service quality, and human resources will significantly influence the acceptance of Takaful, while fintech as the moderating variable has not much studies on it, as fintech is still newly adopted in the world to influence the acceptance of Takaful. However, the studies also inferred that it will significantly influence the acceptance of Takaful. Therefore, this framework will be used to assess whether the inference is correct, the hypotheses will also create based on this framework in the following section.

2.4 Hypothesis Development

2.4.1 Awareness

Hassan et al. (2021) found a positive relationship between customers' acceptance of products and their awareness of those products. Moreover, Salman et al. (2018) studied 909 people from India, including both Muslims and non-Muslims, to explore factors affecting consumer acceptance of Takaful insurance. They found a strong correlation between product awareness and consumers' readiness to accept Takaful. Furthermore, Qian and Darman (2023) conducted research in Mogadishu by using convenient sampling with 179 respondents. Their findings revealed a significant positive relationship between all factors, including awareness, and the respondents' intention to use Takaful insurance. In addition, Ibrahim et al. (2021) conducted two studies with Bumiputera contractors in Malaysia. Both studies consistently revealed a strong positive correlation between the Bumiputera contractors' awareness of and acceptance of Contractor's All Risks (CAR) Takaful insurance.

H_0 : A significant relationship does not exist between Awareness and The Acceptance of Takaful.

H_1 : A significant relationship exists between Awareness and The Acceptance of Takaful

2.4.2 Service Quality

According to Shaladdin et al. (2018), service quality is an overall assessment by customers, and service quality is the fundamental factor that influences customer acceptance and satisfaction. Customers are expected to be more likely to accept a service if it is beyond the customers' expectation. This is highly supported by research conducted by Jamaludin et al. (2020), and Saoula et al. (2023). Both studies conducted by them showing that a positive relationship exist between service quality and customer satisfaction, as the results of p-value are all less than 0.01 ($p\text{-value} < 0.01$). Besides, the study conducted by Shaladdin et al. (2018) also shows a positive relationship with the $p\text{-value} = 0.035$ which is less than the $\alpha = 0.05$. A study by Hassan examined the relationship between service quality and Takaful acceptance for Malaysian Youths for the age 18 to 40, and the results end up with an existence of positive relationship ($p\text{-value} = 0.006$).

H_0 : A significant relationship does not exist between Service Quality and The Acceptance of Takaful.

H_1 : A significant relationship exists between Service Quality and The Acceptance of Takaful.

2.4.3 Human Resources (Takaful Agent)

The role played by human resources in influencing the acceptance level of Takaful is of great significance. Khamis et al. (2022) emphasize that human resources constitute a crucial element for any organization aiming to achieve a competitive advantage, both at present and in the foreseeable future. A study conducted by Shaladdin et al. (2018) revealed that the agent role exhibits the highest Cronbach's Alpha value, reaching an impressive 0.791. In simpler terms, this variable demonstrates high reliability as an

independent factor capable of exerting a positive influence on customer satisfaction regarding Takaful products. Additionally, Makki (2021) pointed out a statistically positive correlation with a p-value of 0.001 between the Takaful agents' ethical behavior and customers' willingness to embrace Takaful products and services. This correlation was established through Pearson's bivariate correlation tests conducted as part of the research study. Furthermore, Sembiring (2023) suggests that an agent's knowledge and understanding of Takaful are crucial elements. Such expertise enables participants to make informed decisions when selecting suitable insurance packages. A well-informed agent effectively disseminates information about Takaful products and services, empowering customers to choose the most fitting options for themselves.

H_0 : A significant relationship does not exist between Human Resources (Takaful Agents) and The Acceptance of Takaful.

H_1 : A significant relationship exists between Human Resources (Takaful Agents) and The Acceptance of Takaful.

2.4.4 Fintech

Radwan et al. (2020) highlight the potential for Fintech solutions to improve Takaful's efficacy. Hemed et al. (2021) focused their research on the benefits of AI, Robo-Advisory, and Big Data Analytics in Takaful. They highlight the benefits of modern technologies, including objectivity, ease, accessibility, and efficiency. Unlike human agents, robo-advisers may multitask, resulting in enhanced operational efficiency in Takaful operations. de Seguros et al. (2019) agree that using big data analytics algorithms to help with regular analytical activities, such as spotting possibly fraudulent claims, is a good concept. According to Adam, F. (2018), cryptocurrencies and tokens are allowed as money since they satisfy the prerequisites of

exchange transactions as well as other requirements such as maal (property), manfa'ah (usufruct), haqq (right), and dayn (responsibility). Meskini and colleagues (2020) feel that using blockchain technology to provide Islamic insurance has the potential to considerably expand the client base. According to Dwivedi et al.'s research on FinTech adoption in the banking sector, performance expectation is directly related to the ease and comfort of using the new FinTech digital platform for financial transactions.

H_0 : A significant relationship does not exist between Fintech and The Acceptance of Takaful.

H_1 : A significant relationship exists between Fintech and The Acceptance of Takaful.

2.4.5 Awareness and Fintech

Oladapo et al. (2021) found a significant positive correlation between customers' awareness of Islamic FinTech and their willingness to adopt FinTech services. Baber (2020) supported these findings, stating that providing sufficient information on Islamic principles could enhance customer satisfaction. According to Nugraheni (2020), Takaful business providers must recognize and leverage the opportunities offered by technology improvements to maintain competitiveness in the market. In addition, Hemed et al. (2021) highlight that insurance companies have been employing social media as a Fintech tool to enhance awareness and promote the acceptance of Takaful among people. Besides, Rasni and Salman (2019) contend that Takaful operators must utilize Fintech tools to encourage innovation and create distinctive products, differentiating themselves from conventional products. Moreover, Rasni and Salman (2019) and Alghamdi (2023), concur on the importance of educating the public about the Takaful market with the incorporation of Fintech trends. According to these experts,

investing in education and training will enhance the competitiveness of the Takaful sector by significantly improving awareness and acceptance among the public.

H_0 : A significant relationship does not exist between Awareness through Fintech to The Acceptance of Takaful.

H_1 : A significant relationship exists between Awareness through Fintech to The Acceptance of Takaful.

2.4.6 Service Quality and Fintech

Based on the research of Loo (2018), there is a positive relationship between fintech and the financial service industry. This indicates that it is significant for Takaful operators to venture the utilization of fintech in their services to boost the growth and acceptance of Takaful industry. Hemed (2021) mentioned that robo-advisory and big data are two major technologies which could facilitate the cost-efficiency for Takaful operators. The problem of high commission paid can be solved through these technologies. Robo-advisors could provide the most appropriate insurance policy according to the customers' risk tolerance level and financial background, at the same time it could reach more customers at a lower cost than human financial advisors (Hemed, 2021). For the perspective of big data, Miskam and Eksan (2018) stated that the big data enabled the organization to offer a personalized policy which fulfill the particular customer's needs. This technology can easily assist Takaful operators to better meet the different needs of various target customers, which could bring to a higher service quality and increase the acceptance.

H_0 : A significant relationship does not exist between Service Quality through Fintech to The Acceptance of Takaful.

H_1 : A significant relationship exists between Service Quality through Fintech to The Acceptance of Takaful.

2.4.7 Human Resource and Fintech

The role played by human resources in influencing the acceptance level of Takaful is of great significance. Khamis et al. (2022) emphasize that human resources constitute a crucial element for any organization aiming to achieve a competitive advantage, both at present and in the foreseeable future. A study conducted by Shaladdin et al. (2018) revealed that the agent role exhibits the highest Cronbach's Alpha value, reaching an impressive 0.791. In simpler terms, this variable demonstrates high reliability as an independent factor capable of exerting a positive influence on customer satisfaction regarding Takaful products. Additionally, Makki (2021) pointed out a statistically positive correlation with a p-value of 0.001 between the Takaful agents' ethical behavior and customers' willingness to embrace Takaful products and services. This correlation was established through Pearson's bivariate correlation tests conducted as part of the research study. Furthermore, Sembiring (2023) suggests that an agent's knowledge and understanding of Takaful are crucial elements. Such expertise enables participants to make informed decisions when selecting suitable insurance packages. A well-informed agent effectively disseminates information about Takaful products and services, empowering customers to choose the most fitting options for themselves.

H_0 : A significant relationship does not exist between the acceptance of Takaful and the Human Resources (Takaful Agents)

H_1 : A significant relationship exists between the acceptance of Takaful and the Human Resources (Takaful Agents)

2.5 Conclusion

In conclusion, Chapter 2 of this study has offered a comprehensive analysis of the theoretical framework, a review of the literature on the variables, and the creation of hypotheses. The first section of the chapter reviewed the literature and defined the dependent variable, which is Takaful acceptance, as well as the independent variables, which are Awareness, Service Quality, Human Resources, Fintech, and the links between Finance and Human Resources and Fintech. This study aimed to identify and elucidate the relationships between these variables, providing insights into the dynamics of Takaful acceptance within the context of the outlined frameworks.

Second, it reviewed the theoretical frameworks, such as the Unified Theory of Acceptance and Use of Technology (UTAUT) model, Resource-Based View Theory (RBV), and SERVQUAL Model, to provide a strong foundation. These frameworks served as the foundation for the conceptual framework, which consists of three main components: Awareness, Service Quality, Human Resources, and the mediator, Fintech.

This chapter places the research within the larger academic debate, thus laying the foundation for the empirical examination that will take place in later chapters. It gives the study context within previously released publications and theoretical frameworks. The research methodology, which outlines the strategy and methods used to address the research objectives and hypotheses outlined in Chapter 2, will be covered in the following chapter.

CHAPTER THREE: METHODOLOGY

3.0 Introduction

This chapter provides a detailed explanation of the methodology used in this investigation. It starts by exploring the research design and explaining the selected methodology. It then looks at the several methods that are used to gather data. This chapter also covers in detail the sample design, research tools, construct management, and data processing protocols that are relevant to this investigation. Lastly, it offers a precise description of the chosen data analysis methodology.

3.1 Research Design

Researchers use research design as a guide to help them carry out their studies efficiently (Sileyew, 2019). The selection of research methods is a crucial aspect of the study design since it influences the collection of pertinent and useful information, which in turn enhances the process's overall efficacy. This study uses primary quantitative research methodologies to measure the degree of satisfaction that Malaysians have with financial services. In particular, data will be gathered by questionnaires from a sample of 384 Malaysians from Kampar, Tapah, and Kampung Kepayang, ages 21 to 64.

Partial Least Squares Structural Equation Modelling (PLS-SEM) will be used to further analyse the data that has been gathered. Because it can estimate complex models without imposing strict distributional assumptions on the data, PLS-SEM is favoured by researchers (Hair, Risher, Sarstedt & Ringle, 2019). In survey research, respondents are given questionnaires with dependent and independent variables in an effort to collect relevant data that supports the study's goals.

3.1.1 Quantitative Research

Quantitative design entails the measurement and systematic processing of data presented in numerical format. It includes a thorough, scientific investigation of data with the goal of mathematically exploring the links between dependent and independent variables, frequently by creating a structured mathematical framework. Hence, simple random sampling is used for quantitative design for this study topic by determining acceptance towards Takaful among working adults in small town of Perak.

With the idea of "employing simple random sampling" as its core principle, this approach strives to provide impartial and truly representative conclusions, successfully representing the larger population being investigated. The benefits of using random sampling include Unbiased Representation, which eliminates any biases in selection, giving every individual an equal chance to be chosen; Generalizability, which is especially useful when studying large populations where surveying each individual is not feasible, allowing for broader and more applicable inferences; and Simplicity, which makes the overall process simple and manageable.

3.2 Data Collection Methods

To determine research questions and test hypotheses, data collection is a crucial stage in which researchers obtain relevant information from relevant sources (Parveen & Showkat, 2017). It functions as a tool for measuring and assessing data collected in order to test hypotheses and derive conclusions. Maintaining validity and accuracy requires that the data collected be as simple and clear as possible.

3.2.1 Primary Data

As noted by Ajayi (2017), obtaining primary data is the main goal of data collecting in this study. Primary data is information that is gathered especially for research and is also known as new and original. It is equivalent to information that is available right now. Furthermore, it is crucial that the information gathered supports the research questions (Hox & Bowije, 2005). Primary data can be collected using a variety of techniques, such as surveys, interviews, and measurements. Questionnaires are delivered to the target group as part of the surveys used in this study to gather primary data. These surveys are painstakingly crafted to correspond with the goals of the research, improving the calibre and precision of the information gathered.

Following collection, Partial Least Squares Structural Equation Modelling (PLS-SEM) will be used to analyse the data. Because it can successfully evaluate causal and linear models with theoretical support, this programme is considered suitable for the study (Wong, 2013). Furthermore, PLS-SEM is widely used in a number of domains, such as information systems research, business-related research, and strategic management (Henseler, Hubona & Ray, 2016). This study is particularly interested in aspects like compatibility, discrimination, and P-value, therefore these will be the main areas of focus for the investigation.

3.3 Sampling Design

A sampling design is a blueprint for gathering data from a group of people with similar interests. It includes determining who to gather data from, how to choose them, and how many to include in your study. Sampling design is a systematic approach or plan developed to select a sample from a specific population (Jawale, 2020) . In contrast, sampling describes the actual process of choosing a

representative subset from the population with the goal of identifying and comprehending the features of the population.

3.3.1 Target Population

Majid (2018) defines the target population as the particular group of people that the study intends to examine. Individuals who are specifically chosen to take part in the study are referred to as sample elements, and the study's intended participants must meet certain requirements. The study's goal is to determine the elements that affect the acceptance of takaful products among people living in small towns between the ages of 21 and 64 who are able or willing to buy insurance. It is also extremely important that to reduce bias in the results, it is essential to exclude respondents who do not fit these requirements. Furthermore, the study's primary target group is Malaysians, with the goal of offering insights particularly pertinent to the country's working adult population.

3.3.2 Sampling Frame and Sampling Location

A sample frame is a comprehensive list of all the people or things that are meant to be studied within a specific population. The state of Perak's small towns represent the study's chosen sampling areas. According to the most recent statistics, the percentage of the older generation in Perak is 8.9%, which is higher than the national average (DOSM, 2022). Expanding upon the findings of Rom & Rahman (2021), the study explores a number of Perak-related issues, such as the frequency of physical disabilities, the demographic groups that are most vulnerable to them, the underlying causes, and associated problems. In addition, Perak was selected as the target region

for a number of reasons, including accessibility and cost-effectiveness of the team, which made it easier to carry out in-person surveys (Physical Survey).

To guarantee unbiased findings, the study identified three distinct small towns in Perak as the main focus areas. These tiny towns are unique in their size, layout, and function within the larger urban system. In addition, they function as centres for a variety of activities like trade, transit, income transfer, and neighbourhood improvement. Perak's choice of small towns is consistent with their status since they provide a peaceful way of life, activities suitable for families, pedestrian-friendly areas, and easy access to natural areas (Saled et al., 2016).

According to the Malaysian Department of Statistics (2021), Kampar is officially categorized as a small town. Meanwhile, Tapah had been selected out as the key subject of Saled et al. (2016)'s investigation. Likewise, Azmi et al. (2015) described Kampung Kepayang as a small town. The close proximity of these locations also makes paper surveys easier to distribute. As a result of these considerations, we chose Kampar, Tapah, and Kampung Kepayang as our sample locations..

3.3.3 Sampling Technique

Sampling technique is a selecting process to a specified number of observations from a huge number of populations. The research will employ simple random sampling, a key approach in statistical analysis. This approach, which is frequently used to summarise data items, is both flexible and well accepted. It guarantees that every piece of data has an equal probability of being in the sample (Mahmud et al., 2020).

3.3.4 Sampling Size

The number of completed replies that must be gathered for a survey is indicated by the sample size. To provide statistically significant results and ensure the effective use of research resources, it is imperative to determine the sample size (Burmeister & Aitken, 2012). The Krejcie and Morgan table, developed in 1970, assists researchers in determining an acceptable participant count from a population. This guarantees that a representative sample size is used to make relevant findings while avoiding excessive over- or under-sampling (Krejcie & Morgan, 1970).

According to the Malaysian Department of Statistics (2021), the population of Kampar in 2020 was 104,000. Similarly, Tapah had a population of 79,093 that year. According to Azmi et al. (2015), the population of Kampung Kepayang is 1,492. According to the parameters supplied by the Krejcie and Morgan table, the research requires replies from 384 participants in order to get best findings.

Figure 3.1: Krejcie and Morgan Table

<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

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

Note. From Krejcie and Morgan (1970). *N* is population size, *S* is sample size.

3.4 Research Instrument

In this study, questionnaires will be used to collect the primary data from targeted respondents and the questionnaire will be distributed in the form of online questionnaire. The reason of utilizing this method is due to its efficiency to distribute and collect answers from large amounts of respondents in a short time. The online questionnaire will be developed and distributed to the targeted respondents through “Google Form” by using the form link and QR code.

3.4.1 Questionnaire Design

A questionnaire consists of a list of inquiries intended to be asked of interview subjects or respondents with the goal of obtaining data appropriate for examination (Acharya, 2010). To make sure that replies can be understood as reflections of variations in respondents' behaviour, the questionnaire must be standardised. A standardised questionnaire guarantees that all participants will experience the same questions and response coding scheme.

In this study, the questionnaire is divided into 10 components. First, a basic explanation of Takaful. Section A includes eight demographic questions (gender, age, income, education, job, owned insurances, future insurance intent, awareness of Takaful) to help you choose the right people. Sections B through H consists of questions related to the respondents' degree of interest in purchasing Takaful (dependent variables) and factors that influence respondents' acceptance of Takaful (independent variables). In this section, respondents are asked to answer the questions using a 5-point Likert scale. Scale 1 corresponds to "strongly disagree," Scale 2 to "disagree," Scale 3 to "neutral," Scale 4 to "agree," and Scale 5 to "strongly agree."

3.4.2 Pilot Test

Before real data collection, a pilot test is a small-scale study that acts as a trial to improve research protocols and techniques (Hassan, Schattner, & Mazza, 2006). It makes it possible to assess the quality, appropriateness, and usefulness of the suggested research methodology and data collection techniques. The possibility that the research project will be successful is increased by carrying out a pilot test (van Teijlingen & Hundley, 2001).

For this study, a pilot test of the questionnaire will be conducted with 40 respondents. The collected replies will then be subjected to PLS-SEM analysis in order to evaluate their validity and reliability. Appropriate changes will be made to improve the quality of the questionnaire in light of the respondents' input.

3.4.3 Process of Questionnaire Set up

Each variable in the questionnaire has five questions in section B. After then, forty responses in total are collected in order to carry out the pilot test.

3.4.4 Source of Questionnaire

All questionnaire is developed by referring the questionnaires used in past studies.

Table 3.1: Questions of variables in the Research Model

Variables	Questions		Source
Acceptance of Takaful (TA)	TA 1	I have intentions to seek information about the concept of sharia And life insurance products.	Djamil et al. (2018); Lee et al. (2018)
	TA 2	I have Intention to buy Islamic life insurance now or at least 3 years into the future.	
	TA 3	I have intentions of Islamic life insurance to others.	
	TA 4	The Takaful services meet my needs.	

	TA 5	There are insurance companies offering Takaful services near my staying place.	
Awareness (AW)	AW 1	I am aware that the banking operation of Takaful is based on Syariah law.	Lee et al. (2018)
	AW 2	I am aware that all the transactions of Takaful are interest prohibited.	
	AW 3	I am aware that the return of Takaful is based on profit sharing and gift.	
	AW 4	I am aware that all the Takaful business is freed from riba (interest) gharar (uncertainty), and maysir (gambling).	
	AW 5	I am aware that the products of Takaful are general and family insurance products.	
Service Quality (SQ)	SQ 1	The Takaful operator provides a high accessibility to the products and services information.	Ibrahim et al. (2021)
	SQ 2	The Takaful operator provides clear and sufficient about the products and services information.	
	SQ 3	The customer service representative is professional and friendly.	
	SQ 4	The claiming process is fast and efficient.	
	SQ 5	The Takaful operator put in effort to customize the products and services to fulfil the customers' needs.	
Human Resources (HR)	HR 1	The agent is a responsible person.	Lee et al. (2018)
	HR 2	The agent willing to maintain a long-term relationship.	
	HR 3	The agent is knowledgeable and able to provide exact information regarding the product.	
	HR 4	The agent is able to provide a suitable product regarding your situation.	
	HR 5	Agent is always available to give helps to customers.	
Fintech (FI)	FI 1	Using Fintech yields a more superior outcome quality than traditional financial services.	Ryu (2018)
	FI 2	I can use financial services very quickly when I use Fintech.	
	FI 3	I worry that someone can access my financial information when I use Fintech.	
	FI 4	Using Fintech is cheaper than using traditional financial services.	
	FI 5	I can use various financial services with a low cost when I use Fintech.	

Awareness linked with Fintech (AF)	AF 1	I think I get a lot of information about online Takaful through different sources including my friends, peer, family and media.	(Amri et al., 2023)
	AF 2	I am interested in taking online Takaful because many people around me already purchase it.	
	AF 3	I am easily influenced to adopt online Takaful by viewing the benefits people get after purchasing it.	
	AF 4	I need to listen and get advice from other before making decision to purchase online Takaful.	
	AF 5	I believe that social influence is a factor influencing my decision to adopt online Takaful.	
Service Quality linked with Fintech (SF)	SF 1	I think that Fintech provides professional services, and the service quality will improve.	Roh et al., (2022)
	SF 2	I think that with the assistance of Fintech, Takaful operator could provide a flexible and convenient accessibility to any information and advice.	
	SF 3	I think that Fintech could provide information and advice without any self-interest.	
	SF 4	I think that Fintech could provide personalized plan that fulfil my needs.	
	SF 5	I think that Fintech could provide dependable and prompt services.	
Human Resources linked with Fintech (HF)	HF 1	Rank the level of fintech readiness for human resources in the Takaful industry.	Ryu (2018); Tirayesh (2019); Hu et al. (2019)
	HF2	I feel that there are improving on efficiency of Takaful agents or employees after adopting fintech for Takaful operations.	
	HF 3	I could save a lot of time when using Fintech services in Takaful operations.	
	HF 4	I feel that training human resources and attracting high quality human resources for Fintech application, management, and development in Takaful industry.	
	HF 5	In the choice between Robo-advisors and human capital, I more prefer to Robo-advisors to assist me deal with the Takaful operations.	

Note. Developed for Study

3.5 Constructs Measurement (Scale and Operational Definitions)

The rating scale, a common instrument in surveys, assesses individuals' agreement or disagreement with statements, allowing for easy measurement and comparison of results. The questionnaire is divided into two sections: Part A, with eight questions, uses a nominal scale to obtain demographic information about respondents' religion. Part B, which includes 40 questions, uses a five-point Likert Scale to assess factors such as awareness, service quality, human resources, and fintech, as well as the dependent variable, takaful acceptability in Malaysia. The scale of responses runs from 1 (strongly disagree) to 5 (strongly agree).

3.5.1 Scale of measurement

The information or data obtained is classified and quantified using measurement scales. Scales of measurement provide numerical data that are essential for statistical analysis. Nominal, ordinal, interval, and ratio scales are the four different categories of measurement scales (Stevens, 1946). Every scale captures different degrees of information and is suitable for different scenarios. Nominal, ordinal, and interval scales of measurement are used in this investigation.

3.5.1.1 Nominal Scale

Stevens (1946) noted that the nominal scale does not compare or measure the different sorts of information; rather, it classifies them. It uses labels instead of categories to distinguish between various types of data. In Malaysia, the gender of an individual is indicated

by the last digit on their identity card. An odd number suggests a male identity, while an even number indicates a female identity. No gender is implied to be superior to another by these designations; they only serve to identify gender. Because of this, the nominal scale only addresses qualitative factors. The nominal scale of measurement is applied in this way in the questionnaire:

: Nominal Scale

Gender: <input type="checkbox"/> Male <input type="checkbox"/> Female

Note. Developed for Study

3.5.1.2 Ordinal Scale

The ordinal scale can be used to indicate the sequence of both quantitative and qualitative characteristics by arranging data in a certain order (Stevens, 1946). It does not, however, measure how different they are from one another. In a ranking system, for instance, rank 1 is better than rank 2, and rank 2 is better than rank 3. However, rank 1's superiority over rank 2 is not quantified by the ordinal scale. The questionnaire's use of ordinal scale measurement is seen in the following example.

Figure 3.3: Ordinal Scale

Income Level:	
() B40 (RM4,849 or below)	() T20 (RM10,960 or above)
() M40 (RM4,850 – RM10,959)	

Note. Developed for Study

3.5.1.3 Interval Scale

Information regarding the difference between two options is presented using the interval scale (Stevens, 1946). On the interval scale, zero, however, only serves as a reference point and does not actually represent a zero value. For instance, a temperature of 0 degrees Celsius only denotes a temperature point and does not imply the lack of temperature. The Likert scale's implementation in this study serves as evidence that the interval scale is included. The following example shows how the questionnaire uses it.

Figure 3.4: Interval Scale

<i>No</i>	<i>Item</i>	<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neutral</i>	<i>Agree</i>	<i>Strongly Agree</i>
AW 1	I am aware that the banking operation of Takaful is based on	1	2	3	4	5

	Syariah law.					
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Note. Developed for Study

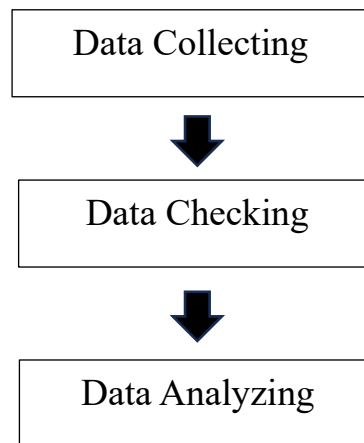
3.5.2 Scaling Technique

The Likert scale is a 5-point or 7-point ordinal scale developed by Rensis Likert in 1932 (Sullivan & Artino, 2013), which frequently utilized measurement when assessing the opinions or perceptions. A five-point Likert scale is used in this study to allow respondents to rate how strongly they agree or disagree with the statements supplied. The respondents' ratings range from 1 to 5, representing the extremes of agreement ('Strongly Disagree' to 'Strongly Agree'). In addition to quantifying the data on the qualitative components, it also makes ranking and comparing the data easier and speeds up processing.

3.6 Data Processing

Processes for data preparation are carried out prior to data analysis. Data processing involves the collecting, cleaning, and labelling data using a variety of methods into useful information. Data processing involves several processes, such as data verification, data editing, data coding, data transcription, and questionnaire checking. The data collection process includes the distribution of questionnaires to the targeted sample. After that, a data checking is put in place to verify the dataset's accuracy and availability.

Figure 3.5: Data Processing



Note. Developed for Study

3.6.1 Data Collecting

Data collection referred to the collecting and measurement of information concerning variables. With this methodical methodology, data collection enables researchers to answer the research questions, test the hypotheses, and evaluate the outcomes. By using a questionnaire survey, data on the dependent and independent variables was collected. Questionnaires were given out by the research team to respondents in Kampar, Tapah, and Kampung Kepayang. Collecting data from Online Survey and Physical Survey by providing the questionnaire to the working adults who are between 21 to 64 years old in Perak.

3.6.2 Data Checking

Data checking is the process of carefully reviewing collected data to ensure its accuracy and availability. This process entails reviewing the feedback of the questionnaires to confirm there are sufficient number of respondents

available for the survey. Additionally, the data is checked to ensure its acceptability following the respondents' completion of the questionnaires. Questionnaires with incomplete answers or missing data are eliminated. This process is crucial since it serves to guard against mistakes and guarantee the accuracy of the data before data analysis.

3.6.2.1 Data Editing

Data editing is an essential procedure carried out following the receipt of respondent surveys. It involves checking, analysing, and modifying the data to minimise any possible bias. Data editing is done to improve the overall quality of the data by correcting discrepancies and ensuring that the information provided by respondents is complete.

3.6.2.2 Data Coding

Sorting and summarising each questionnaire's responses is crucial once the surveys have been gathered. Data coding is required to make the most of survey data utilisation and improve analysis outcomes. Data coding is the process of giving distinct responses to a question numerical code that a computer can understand. Within a single question, every code expresses a different opinion. In order to facilitate statistical calculations, non-numeric responses are converted into numerical format by entering these numerical codes into a computer. Significant written material can be efficiently condensed into a brief data report using data coding, making the information easier to organise and analyse.

3.6.2.3 Data Transcribing

The procedure of data transcription include writing down all of the gathered data and running the PLS-SEM software for data analysis.

3.6.3 Data Analyzing

Data analysis is the next step of data processing once data cleansing is complete. Data analysis involves the process of analyzing, deciphering, and turning the data into useful information. The researchers employ PLS-SEM to generate the outcome after analyzing the edited data.

3.7 Data Analysis

In this research, the data is analyzed by a statistical software, PLS-SEM. This section includes descriptive analysis, reliability test, normality test and partial least square correlation test.

3.7.1 Descriptive Analysis

According to Sharma (2019), descriptive analysis offers a clear and succinct overview of the most extensive dataset obtained from respondents' responses. Through the use of tables, graphs, and general talks, it helps to convert the dataset into quantitative descriptions that facilitate understanding of the analysed data. To highlight the innate correlations between variables and offer basic details about the variables in the dataset,

this study uses descriptive analysis (Sharma, 2019). The demographic information in Section A, which describes the characteristics of the population, is based on the design of the questionnaire. Since demographic information is regarded as quantitative data, descriptive analysis will be employed to examine the characteristics of the study's respondents.

3.7.2 Reliability Test

The reliability test is carried out to identify whether the scale is reliable. This study is using Cronbach's alpha for reliability test. The reason of using Cronbach's alpha is because most of the questions in the questionnaire are five-point Likert scale, when there are Likert scale questions, the best formula to measure internal consistency is Cronbach's alpha.

Table 3.2: Rules of Thumb for Cronbach's Alpha Reliability Coefficient

Cronbach's Coefficient Alpha (α)	Level of Reliability
$\alpha < 0.6$	Poor
$0.6 \leq \alpha \leq 0.7$	Fair
$0.7 \leq \alpha \leq 0.8$	Good
$0.8 \leq \alpha \leq 0.95$	Excellent

Note. From Zikmund et al. (2010)

As shown in the table above, the level of reliability separated into four categories, which are poor, fair, good, and excellent. If the Cronbach's alpha value is less than 0.6, it is considered as poor reliability. Next, the level of reliability will appear as fair when the Cronbach's alpha value is more than or equal to 0.6 and less than 0.7. If the Cronbach's alpha value is more than, equal to 0.7 and less than 0.8, it is considered as good reliability. Lastly, if the Cronbach's alpha value falls between or equal to 0.8 and 0.95, it is in an

excellent reliability. Hence, the results will be reliable only when the Cronbach's alpha value is above 0.6.

3.7.3 Variance Inflation Factor

Regression analysis is hindered by the presence of collinearity, which can produce inconsistent and untrustworthy outcomes. Senthilnathan (2019) describes how the variance inflation factor (VIF), which measures the correlation between independent variables in a regression model, is one often used technique for identifying collinearity. The elimination of independent variables from the model is required when the high VIF value is greater than 5 or 10 since it shows severe collinearity (Marcoulides et al., 2019).

Hair et al. (2021) stated that the optimal range for the Variance Inflation Factors (VIF) value is between 0.20 and 5. Weak collinearity is indicated by values less than 0.20, and possible severe collinearity is indicated by values greater than 5. In these situations, addressing collinearity problems may involve deleting constructs, combining predictors into a single construct, or creating higher-order constructs.

3.7.4 Partial Least Square (PLS) Regression

Partial Least Square Regression is a statistical method used to illustrate the correlations between independent variables and the dependent variable. It is useful when handling a dataset with high degree of multicollinearity. PLS Regression create a model that best explain the variance in dependent variable and considering the relationship between independent variables.

3.7.4.1 Partial Least Square Correlation (PLSC)

Partial Least Square Correlation (PLSC) is a statistical method to analyse the relationships between independent variables, it helps to explain how the independent variables are linked. It is able to deal with a large amount of information and useful in findings the shared information between independent variables.

3.7.4.2 Average Variance Extracted (AVE)

Average Variance Extracted (AVE) is a common measurement of convergent validity. It is a composite measure of convergence generated from the variance of all items loading on a single construct (Hair, Matthews, Matthews, & Sarstedt, 2017). To provide adequate convergence validity, the outer loadings and AVE values should be at least 0.70 and 0.50, respectively. This ensures that at least half of the indicator variance contributes to the construct score.

3.7.4.3 Heterotrait-Monotrait Ratio of Correlation (HTMT)

According to Henseler et al. (2015), in variance-based SEM, researchers can evaluate HTMT by comparing it to a threshold or building a confidence interval. If the constructs are similar, any HTMT result larger than 0.90 in the first technique suggests a lack of discriminant validity. In contrast, if the constructs are distinct, Hair et al. (2019) advocate a 0.85 threshold. The second approach allows researchers to create a 95% confidence interval for HTMT to see if the upper limit significantly surpasses a predefined threshold, such as 1, 0.90, or 0.85. A HTMT value close to or greater than one indicates

a possible discriminant validity issue. According to Henseler et al. (2015), HTMT outperforms Fornell-Larcker and Cross loadings for measuring discriminant validity due to their lesser sensitivity in detecting discriminant validity issues.

3.7.5 Bootstrapping

PLS-SEM is a nonparametric technique, therefore bootstrapping is required to estimate standard errors and provide confidence intervals (Hair et al., 2021). A nonparametric method called bootstrapping is employed to evaluate process outputs like path coefficients and the statistical significance of path analysis (SmartPLS, n.d.). It entails pulling new samples from a large number of samples collected from the original dataset repeatedly. Although it shouldn't go over the total number of valid observations in the dataset, the number of bootstrap samples should be significant. For PLS-SEM applications, Streukens and Leroi-Werelds (2016) advise using a minimum of 10,000 bootstrap samples. The PLS path analysis and process model are then estimated 10,000 times using these bootstrap samples (Hair et al., 2021). Bootstrapping is recommended for small samples and those with unknown or nonnormal distributions since it makes assessing the precision and dependability of sample estimates easier (Egbert, J. & Plonsky, L., 2020).

3.7.5.1 Mediation Analysis

Mediation analysis identifies the indirect effect of the relationship between dependent variable and independent variables which acts as the intermediate to channel the variables. The mediation effect, also known as the indirect effect, arises when the independent variable influences the dependent variable via a mediator. Mediation focuses on the mechanism of change,

with a mediator acting as a third variable to mediate the interaction of two variables (Chondra et al., n.d. Several methods are routinely used to study mediation, including zero-order and partial correlation, hierarchical regression models, and structural equation modelling (SEM). Because of the importance of statistical tests in mediation studies, researchers are constantly on the lookout for new ones. The total effect value would be analysed by using Smart PLS 3 “PLS Bootstrapping” test with two-tails test and the significant level 0.1 considered as significant.

3.7.5.2 Coefficient of Determination- R square

The coefficient of determination, often known as R-square, is a simple statistic used by practitioners to evaluate goodness of fit and effectiveness in multiple linear regression. While not suggested as a primary model selection method, it does provide insight into the efficacy of specific explanatory elements in predicting outcomes (Renaud, O., & Victoria-Feser, M., 2010). A high R-square value indicates that the model is effective (Onyutha, C. 2020).

3.7.5.3 Path Coefficient

Hair et al. (2021) state that the path coefficient measures the amount that, while all other variables remain constant, a one-unit change in the standard deviation of the predictor construct will have an impact on the standard deviation of the endogenous construct. The intensity and direction of the association between the variables are essentially indicated by the route coefficient. If the route coefficient is outside of the typical range of -1 to 1, it may indicate a problem. A strong positive association is suggested when the value is close to +1, whilst a robust negative relationship is suggested

when the value is close to -1. P-value criteria are used to evaluate the importance of the link. Indicating a statistically significant relationship between the variables, a p-value of less than 0.1 permits the null hypothesis to be rejected. In contrast, the null hypothesis should not be rejected if the p-value is greater than 0.1 since it shows that there is no statistically significant relationship between the variables. This study will employ the significance value of 0.1 or confidence interval of 90%, which is supported by Tun-Pin C. et al., (2019) and Pertiwi et al., (2021) with the study on adoption of fintech services. The reason of choosing significance value of 0.1 in study is because this study involved fintech as the mediator, which is also a new emerge technology in Malaysia, it may be beneficial to allow for a slightly higher significance level to explore the potential relationships between the acceptance of Takaful and fintech, and ensure that important insights are not missed.

3.8 Conclusion

Chapter 3 introduces a range of study approaches and focuses on examining the relationship between working adults in small towns in Perak and their acceptance of Takaful. This entails investigating the correlation between a number of independent variables—Awareness, Service Quality, Human Resources, Fintech, Awareness Linked with Fintech, Service Quality Linked with Fintech, and Human Resources Linked with Fintech—and the dependent variable, Takaful Acceptance. The techniques and details used in this research will be covered in more detail and analysis in this chapter. The results and analysis will then be provided in the upcoming chapter.

CHAPTER FOUR: DATA ANALYSIS

4.0 Introduction

The importance of data analysis lies in the examination and interpretation of data and graphs using SmartPLS 4.0. In this study, 384 respondents from three small towns in Perak were surveyed. This chapter will introduce and explain a range of analyzes using numerical data or tables, including descriptive analysis and findings about significant relationships between independent and dependent variables.

4.1 Result of Pilot Study

The method of measuring reliability is through pilot testing to ensure that the questionnaire results are reliable among the variables. In this study, reliability and robustness were of paramount importance, therefore, for further analysis, 52 respondents from three small towns in Perak were selected to participate in this specific test.

Table 4.1: Result for pilot test

Construct	Item	Outer Loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
Acceptance of Takaful	ACC1	0.751	0.860	0.899	0.643
	ACC2	0.838			
	ACC3	0.826			
	ACC4	0.875			
	ACC5	0.707			

Awareness	A1	0.830	0.857	0.898	0.639
	A2	0.884			
	A3	0.761			
	A4	0.749			
	A5	0.765			
Fintech	F1	0.805	0.858	0.899	0.640
	F2	0.811			
	F3	0.718			
	F4	0.815			
	F5	0.844			
Human Resources	H1	0.944	0.927	0.945	0.775
	H2	0.884			
	H3	0.910			
	H4	0.843			
	H5	0.815			
Service Quality	S1	0.841	0.882	0.914	0.679
	S2	0.830			
	S3	0.794			
	S4	0.805			
	S5	0.849			

Note. Developed for study.

According to the data in Table 4.1, when the number of five items is 52 each, the corresponding Cronbach's Alpha values are 0.860, 0.857, 0.882, 0.927 and 0.858 respectively. According to Zikmund et al. (2010) in Chapter 3, if the value is greater than 0.7, it can be considered an acceptable level. Therefore, it can be concluded that the questionnaire used in this study is acceptable in terms of reliability.

4.2 Data Collection

On February 22, 2024, data was collected with a carefully planned field survey in Perak, Malaysia, covering three small towns in the state, namely Kampar, Tapah and Kampung Kepayang. This is to engage in in-depth interactions with residents to obtain their views and feedback on Takaful. By selecting these three representative towns is to aim to ensure that the survey results had broad geographical coverage, thereby providing a more comprehensive understanding of the views of residents in different towns of Perak. This field research providing a result with a deeper understanding into feedback from residents in Kampar, Tapah and Kampung Kepayang, helping to shed light on the determinants of acceptance towards Takaful among working adults in these specific towns.

4.3 Descriptive Analysis

4.3.1 Respondent Demographic Profile

In this section, detailed information of the respondents is provided including gender, age, income level, education level, employment status, types of insurance, intention, and awareness. Review the frequency of each item are using the table. In addition, a total of 384 respondents came from three small towns in Perak.

4.3.1.1 Gender

Table 4.2: Gender's frequency table

Gender's Frequency Table				
Gender				
	Frequency	Percent (%)	Valid Percent	Cumulative Percent
Valid Female	170	44.4	44.4	44.4
Male	214	55.6	55.6	100
Total	384	100	100	

Note. Developed for study.

As shown in Table 4.2, among the 384 respondents, it can be observed that there are more males than females. The total number of males is 214 accounting for 55.6% of the total number; while the number of females is 170, accounting for 44.4% of the total number.

4.3.1.2 Age

Table 4.3: Age's frequency table

Age's Frequency table					
Age					
		Frequency	Percent (%)	Valid Percent	Cumulative Percent
Valid	21-28	153	39.8	39.8	39.8
years old					
	29-35	36	9.4	9.4	49.2
years old					

36-42 years old	87	22.6	22.6	71.8
43-49 years old	43	11.2	11.2	83
50-56 years old	37	9.6	9.6	92.6
57-63 years old	28	7.4	7.4	100
Total	384	100	100	

Note. Developed for study

According to Table 4.3, the frequency of age is shown. Among the 394 respondents, the main age group in the study was 21-28 years old, accounted for the highest proportion, reaching 39.8%; while the respondents aged 57-63 years old accounted for the lowest proportion, accounting for 7.4%. Furthermore, the differences between 29-35 years old and 50-56 years old were not significant, with 36 respondents and 37 respondents respectively.

4.3.1.3 Income Level

Table 4.4: Income Level's frequency table

Income Level's Frequency Table				
Income Level				
	Frequency	Percent (%)	Valid Percent	Cumulative Percent
Valid B40	193	50.3	50.3	50.3
M40	167	43.4	43.4	93.7
T20	24	6.3	6.3	100
Total	384	100	100	

Note. Developed for study

According to Table 4.4, the table shows the frequency distribution of 384 respondents by income level (B40, M40 and T20). The B40 income group accounts for 50.3%, the M40 income group accounts for 43.4%, and the T20 income group accounts for 6.3%. It is important to note that the combined proportion of the B40 and M40 categories reached 93.7%, highlighting the predominant representation of these two income groups in the study.

4.3.1.4 Education Level

Table 4.5: Education Level’s frequency table

Education Level’s Frequency table				
Education Level				
	Frequency	Percent (%)	Valid Percent	Cumulative Percent
Valid				
No schooling completed	14	3.6	3.6	3.6
Secondary school graduate, SPM, STPM	79	20.6	20.6	24.2
High school graduate, diploma, or the equivalent	54	14	14	38.2
Bachelor's degree	218	56.9	56.9	95.1
Master’s degree	12	3.1	3.1	98.2
Doctor of Philosophy (PhD)	7	1.8	1.8	100
Total	384	100	100	

Note. Developed for study

According to Table 4.5, the table shows the frequency distribution of 384 respondents by educational level. Educational level includes various

categories such as “No Schooling Completed”, “Secondary School Graduate, SPM, STPM”, “High School Graduate, Diploma or Equivalent”, “Bachelor’s Degree”, “Master’s Degree” and “Doctor of Philosophy (PhD)”. Most respondents had at least a bachelor's degree or above, accounting for 62% of the total respondents.

4.3.1.5 Employment Status

Table 4.6: Employment Status’s frequency table

Employment Status’s Frequency table				
Employment Status				
	Frequency	Percent (%)	Valid Percent	Cumulative Percent
Valid				
Employed for wages	96	25.1	25.1	25.1
Self-employed	131	34	34	59.1
Student	132	34.3	34.3	93.4
Retired	25	6.6	6.6	100
Total	384	100	100	

Note. Developed for study

The Table 4.6 shows the frequency distribution of employment status among the 384 respondents. A significant proportion of respondents were employed for wages (25.1%) or self-employed (34%), totaling 59.1%. The remaining 40.9% of the respondents are unemployed, including 34.3% students and 6.6% retirees.

4.3.1.6 Types of Insurance

Table 4.7: Types of Insurance's frequency table

Types of Insurance's Frequency table				
Types of Insurance				
	Frequency	Percent (%)	Valid Percent	Cumulative Percent
Valid				
Life & Health Insurance	117	30.5	30.5	30.5
Non-Life Insurance (such as car insurance)	64	16.7	16.7	47.2
Both	156	40.6	40.6	87.8
I don't have any insurance	47	12.2	12.2	100
Total	384	100	100	

Note. Developed for study.

Table 4.7 shows that what types of insurance(s)/ takaful(s) respondents have. The results showed that 40.6% of the respondents had both life & health insurance and non-life insurance, 30.5% of the respondents had only life and health insurance while 16.7% of the respondents had only non-life insurance, and 12.2% of the respondents said they did not have any insurance.

4.3.1.7 Intention

Table 4.8: Intention’s frequency table

Intention’s Frequency Table				
Intention				
	Frequency	Percent (%)	Valid Percent	Cumulative Percent
Valid Yes	291	75.9	75.9	75.9
No	93	24.1	24.1	100
Total	384	100	100	

Note. Developed for study.

Table 4.8 surveyed 384 respondents whether they intend to purchase any insurance(s) in the future. It can be observed that the answer of “Yes” is more than the answer of “No”. The total number of “Yes” is 291, accounting for 75.9% of the total number; while the number of “No” is 93, accounting for 24.1% of the total number.

4.3.1.8 Awareness

Table 4.9: Awareness’s frequency table

Awareness’s Frequency Table				
Awareness				
	Frequency	Percent (%)	Valid Percent	Cumulative Percent
Valid Yes	300	78.2	78.2	78.2
No	84	21.8	21.8	100
Total	384	100	100	

Note. Developed for study.

Table 4.9 surveyed 384 respondents have they heard or understood Takaful before. The majority, accounting for 78.2%, indicated “Yes”, while 21.8% responded with “No”.

4.3.2 Central Tendencies Measurement of Constructs

This section will furnish details on the mean, median, and standard deviation for each variable's items, along with an overall result with the respective measurement.

Table 4.10: Mean, median, mode, and standard deviation of variables.

Items	Mean	Median	Standard Deviation
<u>Acceptance of Takaful (Dependent Variables – ACC)</u>			
1. I have intentions to seek information about the concept of Shariah and life insurance products.	3.917	4.000	1.228
2. I have Intention to buy Islamic life insurance now or at least 3 years into the future.	3.932	4.000	1.046
3. I have intentions to introduce Islamic life insurance to others.	3.898	4.000	1.030
4. The Takaful services meet my needs.	3.896	4.000	1.078
5. There are insurance companies offering Takaful services near my staying place.	3.927	4.000	1.116
<u>Awareness (Independent Variable 1 – AW)</u>			
1. I am aware that the banking operation of Takaful is based on Syariah law.	3.758	4.000	1.36
2. I am aware that all the transactions of Takaful are interest prohibited (Riba).	3.755	4.000	1.232

3. I am aware that the return of Takaful is based on profit sharing and gift.	3.711	4.000	1.249
4. I am aware that all the Takaful business is free from riba (interest) gharar (uncertainty), and maysir (gambling).	3.810	4.000	1.376
5. I am aware that the products of Takaful are general and family insurance products.	3.789	4.000	1.342
<u>Service Quality (Independent Variable 2 – SQ)</u>			
1. The Takaful operator provides a high accessibility to the products and services information.	3.690	4.000	1.405
2. The Takaful operator provides clear and sufficient about the products and services information.	3.656	4.000	1.298
3. The customer service representative is professional and friendly.	3.688	4.000	1.343
4. The claiming process is fast and efficient.	3.659	4.000	1.313
5. The Takaful operator put in effort to customize the products and services to fulfil the customers' needs.	3.716	4.000	1.333
<u>Human Resources (Independent Variable 3 – HR)</u>			
1. The agent is a responsible person.	3.727	4.000	1.402
2. The agent willing to maintain a long-term relationship.	3.714	4.000	1.356
3. The agent is knowledgeable and able to provide exact information regarding the product.	3.706	4.000	1.375
4. The agent is able to provide/recommend a suitable product regarding your situation.	3.688	4.000	1.313
5. Agent is always available to give helps to customers.	3.677	4.000	1.293
<u>Fintech (Mediator – FIN)</u>			
1. Using Fintech yields a more superior outcome quality than traditional financial services.	3.583	4.000	1.395
2. I can use financial services very quickly when I use Fintech.	3.638	4.000	1.269

3. I worry that someone can access my financial information when I use Fintech.	3.625	4.000	1.248
4. Using Fintech is cheaper than using traditional financial services.	3.714	4.000	1.279
5. I can use various financial services with a low cost when I use Fintech.	3.500	4.000	1.256
<u>Overall</u>			
DV – ACC	3.914	4.000	1.100
IV1 – AW	3.765	4.000	1.312
IV2 – SQ	3.682	4.000	1.339
IV3 – HR	3.702	4.000	1.348
MEDIATOR – FIN	3.612	4.000	1.289

Note. Developed for study.

In this study, a comprehensive analysis of various variables reveals that the dependent variable (ACC) has the highest mean, while the mediator variable (FIN) has the lowest mean. Additionally, all other variables surpass a mean value of 3.7, except for the independent variable 2 (SQ), which falls below this threshold. Moreover, the median value of 4 is consistent across the dependent variable, independent variables, and the mediator.

Furthermore, the standard deviations provide insights into the variability within the data. The highest standard deviation is associated with independent variable 3 (HR), with a value of 1.348, while the lowest standard deviation is observed for the dependent variable (ACC) with a value of 1.100. The remaining variables exhibit standard deviations close to 1.3.

4.4 Measurement Model Analysis

4.4.1 Indicator Reliability

Outer Loadings, Cronbach's Alpha, Composite Reliability, and Average Variance Extracted will be included in the table below (Table 4.11). The results for Outer Loadings need to be greater than 0.5, Cronbach's Alpha should be greater than 0.7, Composite Reliability also should be greater than 0.7, and Average Variance Extracted need to be greater than 0.5.

Table 4.11: Reliability Statistics and Validity

Construct	Item	Outer Loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
Acceptance of Takaful	ACC1	0.919	0.953	0.964	0.841
	ACC2	0.902			
	ACC3	0.911			
	ACC4	0.929			
	ACC5	0.924			
Awareness	A1	0.753	0.847	0.888	0.615
	A2	0.860			
	A3	0.834			
	A4	0.683			
	A5	0.778			
Fintech	F1	0.916	0.943	0.956	0.815
	F2	0.897			
	F3	0.906			
	F4	0.895			
	F5	0.898			

Human	H1	0.827	0.849	0.891	0.620
Resources	H2	0.770			
	H3	0.816			
	H4	0.779			
	H5	0.742			
Service	S1	0.775	0.873	0.904	0.653
Quality	S2	0.853			
	S3	0.818			
	S4	0.814			
	S5	0.779			

Note. Developed for study

4.4.2 Outer Loadings

Table 4.11 shows the outer loadings results when it was running at the confidence interval 90% or significance level 0.10. Overall, the figures were ranges from 0.683 to 0.929, which meet the acceptable level of 0.6, proposed by Yana et al. (2015). According to Henseler et al. (2012), the value of outer loadings stands at 0.7 or higher is considered as highly satisfactory, while 0.5 is still acceptable. From the results above, all the outer loadings figures are above 0.7 which is considered as highly satisfactory, except IV 1 Awareness question 4 (0.683) but still higher than the acceptable value of 0.5. Therefore, the results are considered as valid, and all items will be included in the model for estimation.

4.4.3 Internal Consistency Reliability

Table 4.11 indicates the Cronbach's Alpha results via SmartPLS 4 with the confidence interval 90% or significance level 0.10. Cronbach's Alpha is a measurement of internal consistency, used to determine the degree to which items are intercorrelated with each other and produce a reliable and consistent results. According to the result in Table 4.11, the Cronbach's Alpha values range from 0.847 to 0.954, indicates that all the variables are considered as reliable since all the figures are greater than the acceptable value of 0.7 (Cronbach, 1951). Among the variables, Acceptance of Takaful shows the largest figure (0.953), followed by Fintech (0.943), Service Quality (0.873), Human Resources (0.849), while Awareness (0.847) holds the lowest value.

Moreover, Table 4.11 demonstrates the composite reliability outcome with confidence interval 90% or significance level 0.10. Composite reliability can act as the alternative option to substitute Cronbach's Alpha if Cronbach's Alpha does not perform reliably (Bagozzi and Yi (1988). According to Hair et al., (2011), the value of Composite Reliability should be greater than 0.7. From Table 4.11, the composite reliability values range from 0.888 to 0.964, indicates that a strong internal consistency is achieved. Among the variables, Acceptance of Takaful has the largest figure (0.964), followed by Fintech (0.956), Service Quality (0.904), Human Resources (0.891), and Awareness (0.888). All the figures are greater than 0.7, thus all the items are reliable for estimation.

4.4.4 Convergent Validity

Besides, Table 4.11 shows the result of Average Variance Extracted (AVE) with confidence interval 90% or significance level 0.10. AVE is typically

utilized to identify the degree of variance by a construct related to the variance attributed to measurement error (Garson, 2016). AVE should be greater than the value of 0.5 to be considered as acceptable. From the results above, all the Average Variance Extracted (AVE) values lies between 0.615 and 0.841, which is greater than 0.5 and this indicates that all variables have good convergent validity, Among the variables, Acceptance of Takaful has the largest figure (0.841), followed by Fintech (0.815), Service Quality (0.653), Human Resources (0.620), and Awareness (0.615).

4.4.5 Discriminant Validity

Table 4.12 below shows the result of HTMT.

Table 4.12: Discrimination Validity Test

	Acceptance of Takaful	Awareness	Fintech	Human Resources	Service Quality
Acceptance of Takaful					
Awareness	0.254				
Fintech	0.793	0.270			
Human Resources	0.226	0.918	0.238		
Service Quality	0.196	0.869	0.171	0.949	

Note. Developed for study.

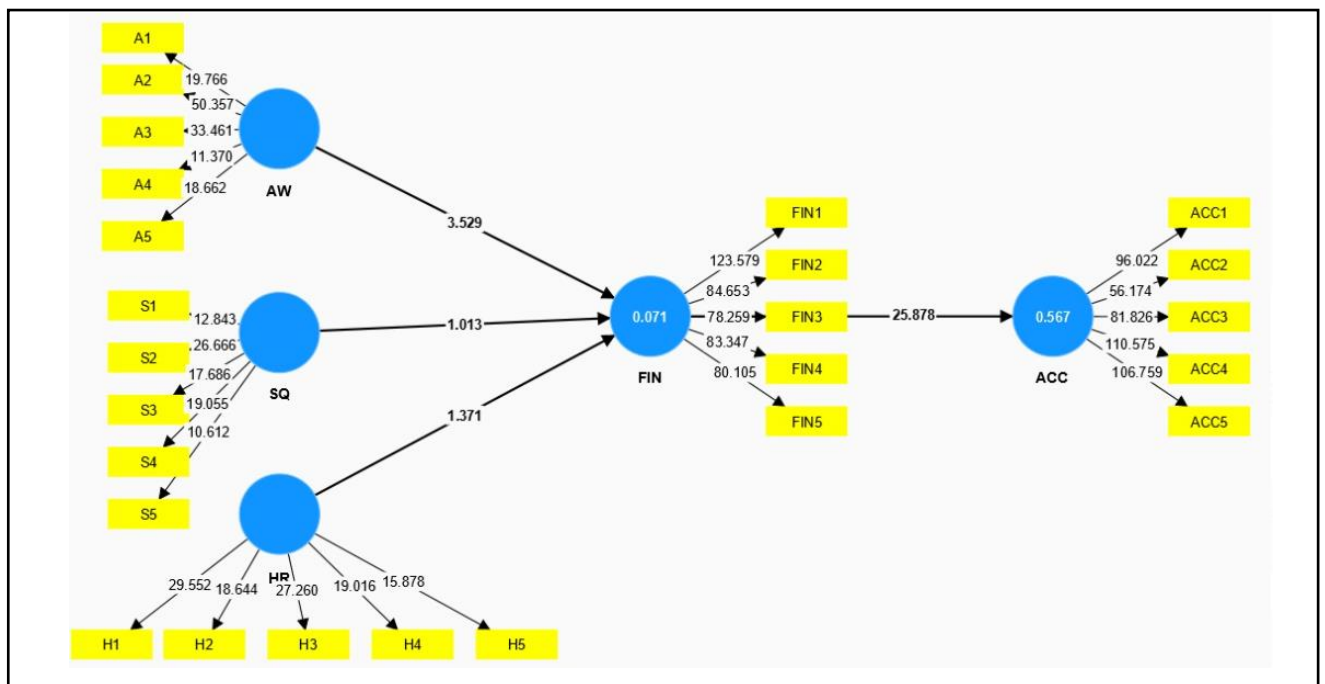
The Heterotrait-monotrait ratio of correlations (HTMT) is the latest discriminant validity measurement proposed by Henseler et al. (2015). Table 4.12 shows the result of Heterotrait-monotrait ratio of correlations (HTMT) with confidence interval 90% or significance level 0.10. According to

Henseler et al. (2015), the value of HTMT should be less than 0.9. Based on Table 4.12, the correlation between service quality and fintech is 0.171, which suggests the weakest relationship possible. While the correlation between service quality and human resources is 0.949, indicating that they have the strongest relationship. Throughout the whole results, awareness-human resources (0.918), and human resources-service quality (0.949) tend to appear the issue of multicollinearity between the latent variable.

4.5 Structural Model Analysis

Figure 4.1 provides the PLS-SEM with t-values results.

Figure 4.1: Partial least square (SMART-PLS 4.0) t-value results



Note. Developed for study.

4.5.1 Collinearity (Variance Inflation Factors)

The collinearity problem in this research is measured by Variance Inflation Factors (VIF). Table ---- illustrates no severe multicollinearity problem exist among the independent variables, mediating variable, as well as dependent variable. As evidence proved that Variance Inflation Factors (VIF) < 5 considers low multicollinearity (Akinwande et al., 2015).

Table 4.13: Collinearity Test (VIF)

Construct	Variance Inflation Factors (VIF)
AW > FIN	2.485
SQ > FIN	3.047
HR > FIN	3.455
FIN > ACC	1.000

Note. Developed for study.

4.5.2 Bootstrapping Test

Bootstrapping, a non-parametric resampling procedure, has been known as a thorough and precise ways for testing the mediating effect (Hayes, 2009; Shrout & Bolger, 2002; Zhao et al., 2010).

Table 4.14 & 4.15 provides an overview of the structural model. This table shows the summary of structural model. The significance level used in this research is 10% or 0.1, which do not reject the hypothesis whenever the p-value is greater than 0.1, showing that the relationship between the variables is statistically insignificant. There are two bootstrapping tests with mediator and without mediator. To observe differences, two tables were identifying direct effect and indirect effect among the variables. Although it is not

mandatory to report t-value and p-value when drawing on the bootstrap confidence intervals for significance testing, however, it purposely for the completeness of analysis.

Table 4.14: Bootstrapping test with direct effect:

	Direct Effect	90% Confidence Interval for the Direct Effect (BC)	t-value	p-value	Significance (p < 0.1)
AW > FIN	0.227	[0.149, 0.310]	3.529	0.000	Supported
SQ > FIN	-0.083	[-0.211, 0.002]	1.013	0.155	Rejected
HR > FIN	0.119	[0.012, 0.235]	1.371	0.000	Supported
FIN > ACC	0.753	[0.713, 0.788]	25.878	0.000	Supported

Note. Developed for study.

In table ---, all variables are significant at 10% significance level, except SQ > FIN. For p-value of SQ, it showed 0.155, which is greater than 0.1, indicating do not reject the hypothesis testing, therefore there is insufficient evidence to prove that the SQ is statistically significant to the variables. It also showed that there is negative relationship between SQ and FIN. The empirical t-value of the direct effect (-0.083) for the SQ > FIN relationship is 1.013. Similarly, direct effects of other variables that including AW > FIN, HR > FIN and FIN > ACC are 0.227, 0.119, 0.753 respectively, indicating all are positive relationship and yielding p-value 0.000.

Table 4.15: Bootstrapping test with indirect effect:

	Indirect Effect	90% Confidence Interval for the Indirect Effect (BC)	t-value	p-value	Significance (p < 0.1)
AW > FIN > ACC	0.171	[0.112, 0.236]	3.481	0.000	Supported
SQ > FIN > ACC	-0.062	[-0.158, -0.001]	1.041	0.155	Rejected
HR > FIN > ACC	0.090	[0.010, 0.177]	1.370	0.085	Supported

Note. Developed for study.

In table, it showed indirect effect with existing mediator variable. Two out of three variables are positive relationship and p-values are less than 0.1, indicating significant to the dependent variable in this research, while SQ is negative relationship to the ACC and p-value is greater than 0.1, resulting statistically insignificant. In conclusion, AW and HR is complementary mediation, which the indirect and direct effect both are significant and point in the same direction, while SQ is no-effect non-mediation, which mediation may not exist at all. In term of 90% confidence interval with bias-corrected: [0.112, 0.236], [-0.158, -0.001], [0.010, 0.177], do not straddle a 0 in between suggesting there is mediating effect (Preacher & Hayes, 2008), which once again proved that SQ has no mediating effect in this research. According to Hayes and Scharkow (2013), the bias-corrected bootstrap confidence interval is the best method for identifying mediating effects when there is presence of mediation.

4.5.2.1 VAF Approach

VAF is the ratio of the indirect-to-total effect. It defines the level to which the mediation process explains dependent variable's variance. The formula was shown below:

$$VAF = \frac{\text{Indirect effect}}{\text{Total effect}}$$

According to the rule of thumb, the VAF value should larger than 20 percent and less than 80 percent to categorize as a typical partial mediation (Hair et al., 2017). In SQ case, it is considered inconsistent mediation as yielding a negative VAF (Hayes, 2009). Therefore, the past researchers advised that when there is absolute value of the standardized total effect is at least 0.20, VAF only can be functionable (Hair et al., 2017). For instance, in table 4.16, the total effect only -0.145, which not fulfil absolute value and at least 0.20 requirements. Thus, mediation analysis for SQ variable is inconsistent mediation, which 42.76% cannot taken as evidence to prove SQ will improve ACC if there is presence of FIN.

Table 4.16: Mediation analysis:

	Effect			VAF (%)
	Direct effect	Indirect effect	Total effect	
AW > FIN > ACC	0.227	0.171	0.398	42.96
SQ > FIN > ACC	-0.083	-0.062	-0.145	42.76 (NA)
HR > FIN > ACC	0.119	0.090	0.209	43.06

Note. Developed for study.

4.5.3 R^2 Measures

Table 4.17: R^2 results

	R-square	R-square adjusted
FIN	0.071	0.063
ACC	0.567	0.566

Note. Developed for study.

R^2 measures how extent the variation of dependent variable is explained by all independent variables (Ramayah et al., 2018). High R^2 value represents the independent variables fit the model. Furthermore, R-square adjusted was utilized for better controlling the model complexity when comparing with different models (Wherry, 1931). In table 4.17, R-square adjusted of ACC (0.566) and FIN (0.063) indicated that they have moderate and weak predictive model respectively.

4.6 Conclusion

This chapter covered the details of questionnaire-based data collection, involving 384 respondents from three small towns in Perak. The focus here includes reliability analysis, descriptive analysis, and scale measurement. The results of these tests are presented in tabular format.

Moving on to the structural model analysis, this study utilized PLS-SEM and statistical tests to gain valuable insights into variable relationships. The model proves to be robust, showing no severe multicollinearity issues, as indicated by low VIF values. Bootstrapping tests reveal significant direct effects for most relationships, with the exception of $SQ > FIN$, which lacks statistical significance.

Indirect effects, particularly $AW > FIN > ACC$ and $HR > FIN > ACC$, are significant, while $SQ > FIN > ACC$ remains insignificant. The VAF approach categorizes SQ as inconsistent mediation, and R-square measures suggest moderate and weak predictive models for ACC and FIN, respectively.

Additionally, the measurement model analysis ensures the reliability and validity of constructs. Outer loadings consistently exceed acceptable thresholds, confirming the model's reliability. Internal consistency evaluated through Cronbach's Alpha and composite reliability, demonstrates strong reliability for all variables. Convergent validity is supported by AVE values surpassing the recommended threshold of 0.5. Although discriminant validity, assessed by HTMT, generally meets criteria, some correlations suggest potential multicollinearity issues.

CHAPTER FIVE: DISCUSSION, CONCLUSION, AND IMPLICATION

5.0 Introduction

This chapter includes the overall research project. The result of making decision is based on the data including indicator reliability, outer loadings, internal consistency reliability, convergent validity, discriminant validity, collinearity, bootstrapping test, VAF approach, and R^2 measures from Chapter 4 and have a further analyst by statistical analysis summary and discussion. It provides a comprehensive justification and clear understanding in each of the variables. In this chapter, involves summary of descriptive and statistical analysis, discussion on major findings, implication, limitation, recommendation, and conclusion.

5.1 Summary of Descriptive and Statistical Analysis

In this section, it provides a summary of the descriptive and statistical analysis that was conducted on the research data in Chapter 4. Based on the data collected from 394 respondents, this research dedicated on the working adult's individual between aged 21 to 64 in the small town of Perak such as Kampar, Tapah and Kampung Kepayang. After filtering the data, there are 384 set of questionnaires via google form and physical field trip were used for analysis. This analysis provides valuable insights into the dataset, discovering variables' features and identifying key leanings and relationships.

5.1.1 Summary of Descriptive Analysis

The survey covered diverse demographics. Participants were evenly distributed across Kampar (39.3%), Tapah (32.1%), and Kampung Kepayang (28.5%). Gender ratio was 55.6% male and 44.4% female. Most were aged 21-28 (39.85%), with income mainly fall in B40 class (50.3%). Bachelor's degree holders were predominant (56.9%). Students made up of 34.3% of respondents, followed by self-employed (34%), employed for wages (25.1%), and retired (6.6%). Takaful preferences leaned towards life & health insurance with non-life insurance (40.6%).

5.1.2 Summary Statistical Analysis

An initial pilot test was conducted with 52 samples utilizing Cronbach's Alpha. The findings confirmed that the variables in this study are reliable and internally consistent. As a result, this indicates that the study model is reliable and valid, enabling the use of the 384 questionnaire responses via physical field trip and online google forms.

The study model demonstrates discriminant validity, confirmed by HTMT results, and Cross Loading. In terms of path coefficients, AW, HR, FIN significantly impact ACC, while SQ showing insignificant relationship towards ACC. The p-value and path coefficient approach mutually indicate that AW, HR, and FIN hold statistical significance for ACC, while SQ's p-value is 0.155, which higher than the significance level of 10%, which indicated its influence is negligible.

Table 5.1: Summary of Bootstrapping Tests (indirect effect):

Subtopic Hypothesis	Hypothesis	p-value (0.1)	Significance of correlation	Decision
5.1.1 Hypothesis I	H_1 : there is a significant relationship between Awareness and Acceptance of Takaful with mediator Fintech	0.000 (< 0.1)	Significant	Reject H_0
5.1.2 Hypothesis II	H_0 : there is insignificant relationship between Service Quality and Acceptance of Takaful with mediator Fintech	0.155 (> 0.1)	Insignificant	Do not reject H_0
5.1.3 Hypothesis III	H_1 : there is significant relationship between Human Resources and Acceptance of Takaful with mediator Fintech	0.085 (< 0.1)	Significant	Reject H_0

Note. Developed for Study

5.2 Discussion on Major Findings

5.2.1 Awareness

Hypothesis 1:

H_1 : there is significant relationship between Awareness and Acceptance of Takaful with mediator Fintech.

The result provided by Smart-PLS suggest that the relationship between awareness and acceptance of Takaful with involving mediator Fintech is significant, since p-value (0.000) was less than 0.1. therefore, the null hypothesis (H_0) is rejected in this study.

Furthermore, the parameter estimates (indirect effect) of 0.171 indicates that awareness is positively related to Acceptance of Takaful. According to the previous research studied by Hassan and Salman (2021), also had a similar conclusion on asserting that consumer's acceptance of product is related to their level of awareness towards this product positively. In other word, the acceptance of Takaful could be enhanced by increasing customers' awareness. In the research conducted by Salman et al., 2018, sampling size with 909 people from both Muslim and non-Muslim, the result showed that there is a strong correlation between awareness and the readiness to accept Takaful, which again proved that awareness is one of the dominant determinants to affect the acceptance level of Takaful.

5.2.2 Service Quality

Hypothesis 2:

H_0 : there is insignificant relationship between Service Quality and Acceptance of Takaful with mediator Fintech.

The Smart-PLS results suggested that the relationship between service quality and acceptance of Takaful with involving mediator Fintech is insignificant, since p-value (0.155) was greater than 0.1. Therefore, do not reject the null hypothesis (H_0) in this study.

Besides, the parameter estimates (indirect effect) of -0.062 reveals that service quality is negatively related to Acceptance of Takaful when considering the mediating effect of Fintech. This indicates that according to the findings from the survey forms, small towns such as Kampar, Tapah, Kampung Kepayang, believe that service quality, such as customer service and customized products are not playing a critical role to promote the acceptance of Takaful. Different from the journals that founded in Chapter 2 which holds that there is a significant relationship between service quality and acceptance of Takaful. This study has provided a different point of view which found that the relationship between service quality and acceptance is insignificant. This result is backed by Qian & Darman (2023) and Ibrahim et al., (2021), who got the same results as this study.

5.2.3 Human Resources

Hypothesis 3:

H_1 : there is significant relationship between Human Resources and Acceptance of Takaful with mediator Fintech.

The result provided by Smart-PLS suggest that the relationship between human resources and acceptance of Takaful with involving mediator Fintech is significant, since p-value (0.085) was less than 0.1. Therefore, the null hypothesis (H_0) is rejected in this study.

Furthermore, the parameter estimates (indirect effect) of 0.090 reveals that human resources are positively related to Acceptance of Takaful. According to the findings from the survey forms, small towns such as Kampar, Tapah, Kampung Kepayang who firmly assume human resources, such as Takaful agents act as important roles to promote Takaful is more efficiency and effectively on promoting Takaful. Furthermore, described in literature review in Chapter 2 of prior research findings with the same conclusion, stated that agents play a meaning role to maintain the maximum customer satisfaction after buying takaful products and services (Shaladdin et al., 2018). There is a study showed positive correlation (p-value = 0.001) between Takaful agents' ethical behaviour and customer willing to accept the Takaful (Makki, 2021).

5.2.4 Fintech

Hypothesis 4:

H_1 : A significant relationship exists between Fintech and The Acceptance of Takaful.

The result shows that Fintech has a significant relationship with the Acceptance of Takaful. It is also consistent with the prior studies (Radwan et al., 2020; Hemed et al., 2021; de Seguros et al., 2019) and other studies (Meskini et al., 2020; Lacasse et al., 2018; Chen, 2018) that discussed the usage of Fintech in Islamic Finance. This suggests that Takaful services could become more efficient with the integration of Fintech. Additionally, customers are more likely to accept Fintech if it offers increased transparency and convenience, particularly if it complies with Shariah regulations. Remarkably, a sizeable segment of the populace is ignorant of Blockchain technology (more than 58%) and Islamic insurance (47%)—essential components of Fintech adoption (Meskini et al., 2020). Thus, raising awareness of these developments may be facilitated by the use of Fintech tools like Big Data.

5.3 Research Implication

Results in this study have implications for academia, the policy makers and stakeholders which includes takaful operators.

5.3.1 Academia

In Malaysia, there has been a dearth of research on the factors influencing acceptance of takaful. Using a combination of the SERVQUAL Model, the

Unified Theory of Acceptance and Use of Technology (UTAUT), and the Resource-Based View Theory (RBV), this study provides insightful information about important elements, particularly during the transformative stage of Takaful in Malaysia. This research provides a solid basis for future studies in Malaysia that build upon its findings, with 5 out of 7 factors consistently showing significant results when compared to earlier studies.

Even if this study's analysis of the association between Service Quality and acceptance revealed it to be insignificant, it still leaves room for more research and raises some questions. Future research endeavours may also explore the personality characteristics of investors and other pertinent aspects to comprehend their motivation to utilise Takaful in Malaysia. These variables could include Relative Advantage, Complexity, Observability, Trialability, and Compatibility, all of which have the potential to have a big impact on whether or not Takaful services are accepted.

5.3.2 Regulators & Government

The study's findings should be used by regulators who are in charge of monitoring companies that provide Takaful services to better understand the issues raised by customers. The significance of human resources in determining Takaful acceptability has led regulators to create explicit criteria that forbid behaviours that are harmful to customers, including deceptive advertising, unethical behaviour, and dishonesty. It is possible to guarantee the competency of Takaful agents by requiring regular quarterly training. Furthermore, for better efficiency and transparency, regulators should encourage Takaful operators to adopt Fintech in order to improve the user experience.

As organisations supported by the government, regulators can work with the Malaysian government to solve the low level of financial literacy among people, as this study has shown. Even though the survey was performed in a cutting-edge area, more than 20% of participants had never heard of takaful before. The next generation needs to be educated on financial matters immediately in order to promote economic growth and challenge the dominance of conventional insurance. Public awareness initiatives and standardised education can greatly increase the understanding of Takaful in Malaysia.

Additionally, regulators may facilitate when educational institutions and Takaful operators collaborate to incorporate financial literacy into the curriculum, creating a more financially aware public and encouraging the use of Takaful.

5.2.3 Stakeholders (Takaful Operators and Consumers)

Businesses who provide takaful services and are eager to incorporate fintech into their business are known as takaful operators. In light of Malaysia's consistently low takaful adoption rate, Takaful Operators seeking to increase takaful acceptance among persons in small towns between the ages of 21 and 63 may find this study to be an invaluable tool. Operators could improve their services by using fintech tools like blockchain, big data analysis, AI, and robo-advisory, as they are aware that fintech plays a crucial role in takaful acceptability. This calculated action would improve the takaful services' usability, accessibility, and transparency while encouraging potential customers' trust and participation.

According to the study results, 84 out of 384 respondents, or 21.8%, had never heard of takaful before. This highlights the low level of financial

understanding within the targeted working adult population, providing a chance for takaful to provide unique benefits above traditional insurance. With the help of this study's structured educational endeavours, consumers can have a thorough understanding of takaful and how it works with fintech.

Furthermore, consumers will also benefit from fewer human errors, cheaper insurance rates, increased efficiency, less fraud threats, and more transparency if fintech is incorporated into takaful services. In the end, this helps customers and the financial market by promoting competition against traditional insurers and accelerating the development of takaful. As a result of the study's potential cost-effectiveness when compared to standard takaful services, more research on the topic should be conducted in Malaysia, empowering consumers with knowledge and trust in takaful.

5.4 Limitation

One of the limitations of this study is that only included 384 respondents. In research methods, it is generally accepted that larger sample sizes generally lead to more reliable and robust results (Kim, 2009). Due to the limited number of respondents, there is an increased risk of sampling bias that may distort representation of the larger population. This limitation also reduces the statistical power of the study, making it more difficult to detect true effects or relationships between variables and increasing the likelihood of unreliable conclusions (Pritha, 2023).

Although the various factors influencing Takaful acceptance through the mediator of Fintech have been studied, an obvious limitation is absence of a specific inquiry into the role of race within the study. By not incorporating a descriptive question about race, this study may have overlooked potentially significant differences in

how individuals of different racial backgrounds perceive and engage with Takaful and Fintech services.

Another aspect to consider concerns the classification of insurance types in the research questionnaire. Although current options include a range of conventional insurance types such as life insurance, non-life insurance and a combination of the two. Neglecting to include Takaful as a stand-alone option risk ignoring the unique perspectives and preferences of individuals who have subscribed to Takaful.

Besides, limitation of the concerns the inclusion of service quality as an independent variable within this study. While service quality undoubtedly holds significance in the realm of insurance acceptance, however, its incorporation in this study presents a correlation issue that mentioned an insignificant relationship, particularly with regards to the acceptance of Takaful with Fintech as a mediator.

5.5 Recommendation

Based on the limitations mentioned above, there are several recommendations available for the future researchers who studying the determinants of acceptance towards Takaful among the working adults with fintech as the mediator, so this topic can be explored and understood more comprehensively.

Firstly, future research could consider increasing the sample size to improve the robustness and reliability of research findings. This study employed the sampling size developed by Krejcie and Morgan. The future research could consider using other sample size method such as the sample size introduced by ST.Olaf College (n.d.) populations greater than 10,000 should use 10% of the population to ensure the representativeness of the sample.

Moreover, the future research is suggested to add in a descriptive question about race in the study. This could provide insights about how different races react to the acceptance of Takaful through the mediating effect of Fintech and improve the comprehensiveness of study.

Besides, for the question about what types of insurance that the respondents have, other than the options that already have in this study which are “Life insurance, non-life insurance, Both, Don’t Have”, it is suggested to add in Takaful as one of the choices. This is to capture the attitude for those who has subscribed to Takaful towards the acceptance of Takaful with the mediating effect of Fintech.

Furthermore, future research could practice a double data collection method, which combining google forms and site visitation interview, this is also the method that practiced in this study. By utilizing these two methods, researchers can capture a wide range of perspectives since google forms provide an efficient way to reach a large audience, while site visitation interview enable for in-depth clarification of responses, results in a more comprehensive understanding of the topic.

Lastly, the future research could expand their scope of study by including other relevant variables that could better explain the relationship between the variables and Fintech-mediated Takaful acceptance. For example, pricing, perceived benefits of Takaful and level of trust in Takaful provider. This enables the study to be more comprehensive about the determinants of acceptance towards Takaful among the working adults with fintech as the mediator.

5.6 Conclusion

This research project purpose is to analyse the Acceptance of Takaful and its determinants among the working adults lived in small town of Perak. There are 3 determinants being adopted, which are awareness, service quality, and human resources.

As the result that stated above, it found out that 2 out of 3 variables, which are awareness, and human resources are statistically significant influence on the dependent variable (acceptance of Takaful). However, service quality is not statistically significant affect the acceptance of Takaful. It is surprisingly finding in this study is that even though the previous studies proposed there is an existence of positive relationship between service quality and acceptance of Takaful, however, in this study, shows that service quality could not satisfy the requirements of proving the relationship is significant to the acceptance of Takaful. Therefore, inserting a mediator – Fintech to observe the relationship between exogeneous and endogenous variables, as Fintech has become a new trend that more and more countries try to adapt it into their policy implementation, as well as nature of business, in purpose of ensuring the effectiveness and efficiency of the operational process, and avoid incurred high costs and times to manage the same manners. However, through the result observed in this study, awareness and human resources are treated as significant variables while service quality that provided by the Takaful agents, customer service, as well as companies itself that available information about Takaful.

In conclusion, acceptance level of Takaful plays an essential role to everyone especially the working adults, which the targeted respondents being investigated in this study. It can provide assurance of self-insurance to both Muslims and non-Muslims as well. Furthermore, this study can deliver to the working adults, government, related authorities to have an in-depth understanding about the Takaful knowledge instead of just knowing the conventional insurance. Besides, after

completing this study, some issues had been discovered and recommendations also been provided in Section 5.4 as a guidance for future researchers who are going to investigate deeply in the field of Takaful.

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APPENDICES

Appendix 3.1: Permission to Conduct Survey



UNIVERSITI TUNKU ABDUL RAHMAN DUJ012(A)
Wholly owned by UTAR Education Foundation (200201010564(578227-M))
Faculty of Business and Finance
Jalan Universiti, Bandar Barat, 31900 Kampar, Perak
Phone: 05-468-8888
<https://fbf.utar.edu.my/>

29th August 2023

To Whom It May Concern

Dear Sir/Madam,

Permission to Conduct Survey

This is to confirm that the following students are currently pursuing their *Bachelor of Finance (Honours)* program at the Faculty of Business and Finance, Universiti Tunku Abdul Rahman (UTAR) Perak Campus.

I would be most grateful if you could assist them by allowing the student to conduct his research at your institution. All information collected will be kept confidential and used only for academic purposes.

The student are as follows:

<u>Name of Student</u>	<u>Student ID</u>
Aaron Ng Jia Wei	21ABB01677
Lee Heng Xue	20ABB01309
Ling Leong Wei	20ABB02920
Tan Jit Tao	20ABB02694

If you need further verification, please do not hesitate to contact me.

Thank you.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Lee Chee Loong', is written over a dotted line.

Dr Lee Chee Loong
Head of Department
Faculty of Business and Finance
Email: lcloong@utar.edu.my

Administrative Address: Jalan Sg. Long, Bandar Sg. Long, Cheras, 43000 Kajang, Selangor D.E.
Tel: (603) 9086 0288 Homepage: <https://utar.edu.my/>

Appendix 3.2: Survey Questionnaire

3/18/24, 3:17 PM Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

Dear Respondents,
As UTAR undergraduate students studying for a Bachelor of Finance (Hons), we are currently enrolled in a Research Project course that includes a project. Our project involves designing a research questionnaire to investigate the factors that influence the determinants of acceptance towards Takaful among Malaysian.

Instructions:
This questionnaire consist of NINE sections which are Section A to Section I. Please answer all the questions. It should take around 15 minutes to complete this survey. All the answers will be kept strictly private and confidential. Thank you for your kind co-operation.

If you have any enquiries, please do not hesitate to contact us via :
saronng0423@utar.my (Mr. Aaron Ng Jia Wei)

Prepared By
Aaron Ng Jia Wei 2101677
Lee Heng Xue 2001039
Ling Leong Wei 2002920
Tan Jit Tao 2002694

Malay Version

Kepada Responden yang Dihormati,

Sebagai pelajar sarjana muda UTAR yang sedang mengikuti program Ijazah Sarjana Muda dalam Bidang Kewangan (Kepujian), kami kini sedang mengikuti kursus Projek Penyelidikan yang merangkumi satu projek. Projek kami melibatkan penyediaan borang soal selidik penyelidikan untuk mengkaji faktor-faktor yang mempengaruhi penentu-penentu penerimaan terhadap Takaful di kalangan rakyat Malaysia.

Arahan:
Borang soal selidik ini terdiri daripada SEMBILAN bahagian iaitu Bahagian A hingga Bahagian I. Sila jawab semua soalan. Ia sepatutnya mengambil masa sekitar 15 minit untuk melengkapkan soal selidik ini. Semua jawapan akan dikekalkan sebagai maklumat sulit dan sulit. Terima kasih atas kerjasama anda yang baik.

Jika anda mempunyai sebarang pertanyaan, jangan segan untuk menghubungi kami melalui:
saronng0423@utar.my (Encik Aaron Ng Jia Wei)

Disediakan Oleh
Aaron Ng Jia Wei 2101677
Lee Heng Xue 2001039

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Ling Leong Wei 2002920
Tan Jit Tao 2002694

* Indicates required question

1. Email *

PERSONAL DATA PROTECTION STATEMENT

PERSONAL DATA PROTECTION STATEMENT

Please be informed that in accordance with Personal Data Protection Act 2010 ("PDPA") which came into force on 15 November 2013, Universiti Tunku Abdul Rahman ("UTAR") is hereby bound to make notice and require consent in relation to collection, recording, storage, usage and retention of personal information.

Notice:

1. The purposes for which your personal data may be used are inclusive but not limited to:-

- For assessment of any application to UTAR
- For processing any benefits and services
- For communication purposes
- For advertorial and news
- For general administration and record purposes
- For enhancing the value of education
- For educational and related purposes consequential to UTAR
- For the purpose of our corporate governance
- For consideration as a guarantor for UTAR staff/ student applying for his/her scholarship/ study loan

2. Your personal data may be transferred and/or disclosed to third party and/or UTAR collaborative partners including but not limited to the respective and appointed outsourcing agents for purpose of fulfilling our obligations to you in respect of the purposes and all such other purposes that are related to the purposes and also in providing integrated services, maintaining and storing records. Your data may be shared when required by laws and when disclosure is necessary to comply with applicable laws.

3. Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable for us in the event such information is no longer required.

4. UTAR is committed in ensuring the confidentiality, protection, security and accuracy of your personal information made available to us and it has been our ongoing strict policy to ensure that your personal information is accurate, complete, not misleading and updated.

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Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

UTAR would also ensure that your personal data shall not be used for political and commercial purposes.

Consent:

1. By submitting this form you hereby authorise and consent to us processing (including disclosing) your personal data and any updates of your information, for the purposes and/or for any other purposes related to the purpose.
2. If you do not consent or subsequently withdraw your consent to the processing and disclosure of your personal data, UTAR will not be able to fulfill our obligations or to contact you or to assist you in respect of the purposes and/or for any other purposes related to the purpose.

You may access and update your personal data by writing to us at

aaaronn0423@utar.my.

Malay Version

KENYATAAN PERLINDUNGAN DATA PERIBADI

Sila maklum bahawa mengikut Akta Perlindungan Data Peribadi 2010 ("PDPA") yang berkuat kuasa pada 15 November 2013, Universiti Tunku Abdul Rahman ("UTAR") di sini diwajibkan untuk memberi notis dan memerlukan persetujuan berkaitan dengan pengumpulan, rekod, penyimpanan, penggunaan, dan penyimpanan maklumat peribadi.

Notis:

1. Tujuan di mana data peribadi anda boleh digunakan termasuk tetapi tidak terhad kepada:-
 - Untuk penilaian sebarang permohonan kepada UTAR
 - Untuk memproses sebarang faedah dan perkhidmatan
 - Untuk tujuan komunikasi
 - Untuk tujuan advertorial dan berita
 - Untuk tujuan pentadbiran umum dan pencatatan
 - Untuk meningkatkan nilai pendidikan
 - Untuk tujuan pendidikan dan berkaitan dengan UTAR
 - Untuk tujuan tadbir urus korporat kami
 - Untuk pertimbangan sebagai penjamin bagi kakitangan pelajar UTAR yang memohon biasiswa/pinjaman pengajian
1. Data peribadi anda boleh dipindahkan dan/atau didedahkan kepada pihak ketiga dan/atau rakan kongsi kolaboratif UTAR termasuk tetapi tidak terhad kepada ejen luaran yang sesuai dan dilantik untuk tujuan memenuhi obligasi kami kepada anda berkenaan dengan tujuan dan semua tujuan lain yang berkaitan dengan tujuan dan

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juga dalam penyediaan perkhidmatan bersepadu, penyelenggaraan dan penyimpanan rekod. Data anda mungkin dikongsi apabila diperlukan oleh undang-undang dan apabila pendedahan adalah perlu untuk mematuhi undang-undang yang terpakai.

2. Sebarang maklumat peribadi yang disimpan oleh UTAR akan dimusnahkan dan/atau dipadamkan mengikut dasar penyimpanan kami yang berkenaan bagi kami jika maklumat tersebut tidak lagi diperlukan.
3. UTAR berkomitmen untuk memastikan kerahsiaan, perlindungan, keselamatan, dan ketepatan maklumat peribadi anda yang disediakan kepada kami dan ini adalah dasar ketat kami yang berterusan untuk memastikan bahawa maklumat peribadi anda adalah tepat, lengkap, tidak mengelirukan dan dikemaskini. UTAR juga akan memastikan bahawa data peribadi anda tidak digunakan untuk tujuan politik dan komersial.

Persetujuan:

1. Dengan mengemukakan borang ini, anda dengan ini memberi kuasa dan bersetuju kepada kami memproses (termasuk mendedahkan) data peribadi anda dan sebarang kemaskini maklumat anda, untuk tujuan dan/atau untuk tujuan lain yang berkaitan dengan tujuan tersebut.
2. Jika anda tidak memberikan persetujuan atau kemudian menarik balik persetujuan anda terhadap pemrosesan dan pendedahan data peribadi anda, UTAR tidak akan dapat memenuhi obligasi kami atau menghubungi anda atau membantu anda berkenaan dengan tujuan dan/atau untuk tujuan lain yang berkaitan dengan tujuan tersebut.

Anda boleh mengakses dan mengemaskini data peribadi anda dengan menulis kepada kami di aaronng0423@1utar.my*

2. Acknowledgment of Notice *

In Malay: Pengakuan Penerimaan Notis

Mark only one oval.

Mark *only one* oval.

- I have been notified by you and that I hereby understood, consented and agreed per UTAR notice. (Setuju)
- I disagree, my personal data will not be processed. (Tidak Setuju)

Shariah-Based Takaful Insurance Overview

English Version

Shariah-Based Takaful Insurance Overview

Takaful is a cooperative insurance concept rooted in Islamic finance principles, emphasizing mutual protection and shared responsibility among its participants. It operates on the basis of mutual cooperation, solidarity, and risk-sharing. In Takaful, individuals pool their resources together to protect against potential losses or damages. It distinguishes itself from conventional insurance by adhering to Shariah-compliant practices, ensuring that investments and operations comply with Islamic law. Takaful encourages a system based on fairness, where risks and rewards are distributed among the participants in accordance with Islamic ethics, promoting community welfare and financial security.

Malay Version

Tinjauan Insurans Takaful Berasaskan Syariah

Takaful adalah konsep insurans koperasi yang berakar dalam prinsip-prinsip kewangan Islam, menekankan perlindungan bersama dan tanggungjawab bersama di kalangan pesertanya. Ia beroperasi atas dasar kerjasama timbal balik, solidariti, dan perkongsian risiko. Dalam Takaful, individu mengumpulkan sumber daya bersama untuk melindungi daripada kerugian atau kerosakan berpotensi. Ia membezakan dirinya daripada insurans konvensional dengan mematuhi amalan yang patuh Syariah, memastikan pelaburan dan operasi mematuhi undang-undang Islam. Takaful mendorong sistem yang berdasarkan keadilan, di mana risiko dan ganjaran diedarkan di kalangan pesertanya mengikut etika Islam, mempromosikan kesejahteraan masyarakat dan keselamatan kewangan.



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Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

3. Where is your hometown? *

Mark only one oval.

- Kampar
 Tapah
 Kampung Kepayang

Section A: Demographic Question

In this section, we would like you to fill in some general information. Please tick for the most appropriate answer for each question, unless indicated otherwise. All answers will be kept strictly confidential.

4. 1. What is your gender? *

In Malay: Apakah jantina anda?

Mark only one oval

Mark only one oval.

- Male (Lelaki)
 Female (Perempuan)

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Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

5. 2. What is your age? *

In Malay: Berapakah umur anda?

Mark only one oval.

Mark only one oval.

- 21-28
- 29-35
- 36-42
- 43-50
- 51-57
- 58-64

6. 3. What is your income level? *

In Malay: Apakah tahap pendapatan anda?

Mark only one oval.

Mark only one oval.

- B40 (RM4,849.00 or below)
- M40 (RM4,850.00 - RM10,959.00)
- T20 (RM 10,960.00 or above)

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Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

7. 4. What is your highest educational level? *

In Malay: Apakah tahap pendidikan tertinggi anda?

Mark only one oval.

Mark only one oval.

- No schooling completed (Tiada pendidikan formal selesai)
- Secondary school graduate, SPM, STPM
- High school graduate, diploma or the equivalent (Tamat sekolah menengah, diploma atau yang setaraf)
- Bachelor's degree
- Master Degree
- Doctor of Philosophy (PhD)

8. 5. What is your employment status? *

In Malay: Apakah status pekerjaan anda?

Mark only one oval.

Mark only one oval.

- Employed for wages (Bekerja dengan gaji)
- Self-employed (Bekerja sendiri)
- Student (Pelajar)
- Retired (Bersara)

9. 6. What types of insurance(s)/ takaful(s) do you have? *

In Malay: Apakah jenis-jenis insurans/takaful yang anda miliki?

Mark only one oval.

Mark only one oval.

- Life & Health Insurance (Insurans Hayat & Kesihatan)
- Non-Life Insurance (such as car insurance) (Insurans bukan Hayat (contohnya, insurans kereta))
- Both (Kedua-duanya)
- I don't have any insurance (Saya tidak memiliki sebarang insurans)

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Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

10. 7. Do you intend to purchase any insurance(s) in future? *

In Malay: Adakah anda berniat untuk membeli sebarang insurans/takaful pada masa depan?

Mark only one oval.

Mark only one oval.

Yes

No

11. 8. Have you heard/ aware of Takaful before? *

In Malay: Adakah anda pernah mendengar/ sedar tentang Takaful sebelum ini?

Mark only one oval.

Mark only one oval.

Yes

No

Section B: Acceptance of Takaful

This section seeks for your opinion on each of the following statements. On a scale of 1 to 5 for each statement, indicate how much you agree with the statement provided.

Malay Version

Bahagian ini mencari pendapat anda tentang setiap kenyataan berikut. Pada skala 1 hingga 5 untuk setiap kenyataan, nyatakan sejauh mana anda bersetuju dengan kenyataan yang diberikan.

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Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

12. 9. I have intentions to seek information about the concept of Shariah and life insurance products. *

In Malay: Saya mempunyai niat untuk mencari maklumat tentang konsep Syariah dan produk insurans hayat.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

13. 10. I have Intention to buy Islamic life insurance now or at least 3 years into the future. *

In Malay: Saya mempunyai niat untuk membeli insurans hayat Islam sekarang atau sekurang-kurangnya 3 tahun ke depan.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

14. 11. I have intentions to introduce Islamic life insurance to others. *

In Malay: Saya mempunyai niat untuk memperkenalkan insurans hayat Islam kepada orang lain.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

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Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

15. 12. The Takaful services meet my needs. *

In Malay: Perkhidmatan Takaful memenuhi keperluan saya.

Mark only one oval.

Mark only one oval.

1 2 3 4 5
Strc Strongly Agree

16. 13. There are insurance companies offering Takaful services near my staying place. *

In Malay: Terdapat syarikat insurans yang menawarkan perkhidmatan Takaful berdekatan dengan tempat tinggal saya.

Mark only one oval.

Mark only one oval.

1 2 3 4 5
Strc Strongly Agree

Section C: Awareness as the determinants of acceptance towards Takaful among working adults in small town of Perak.

This section seeks for your opinion on each of the following statements. On a scale of 1 to 5 for each statement, indicate how much you agree with the statement provided.

Malay Version

Bahagian ini mencari pendapat anda tentang setiap kenyataan berikut. Pada skala 1 hingga 5 untuk setiap kenyataan, nyatakan sejauh mana anda bersetuju dengan kenyataan yang diberikan.

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Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

17. 14. I am aware that the banking operation of Takaful is based on Syariah law. *

In Malay: Saya sedar bahawa operasi perbankan Takaful berdasarkan undang-undang Syariah.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

18. 15. I am aware that all the transactions of Takaful are interest prohibited (Riba).

In Malay: Saya sedar bahawa semua transaksi Takaful adalah dilarang mengikut prinsip faedah (Riba).

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

19. 16. I am aware that the return of Takaful is based on profit sharing and gift. *

In Malay: Saya sedar bahawa pulangan Takaful adalah berdasarkan pembahagian keuntungan dan hadiah.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

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Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

20. 17. I am aware that all the Takaful business is free from riba (interest) gharar (uncertainty), and maysir (gambling). *

In Malay: Saya sedar bahawa semua perniagaan Takaful bebas dari riba (faedah), gharar (ketidakpastian), dan maysir (perjudian).

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

21. 18. I am aware that the products of Takaful are general and family insurance products. *

In Malay: Saya sedar bahawa produk-produk Takaful adalah produk insurans am dan keluarga.

General Takaful is a type of insurance that operates in accordance with Islamic principles, such as **Motor Takaful**, **Travel Takaful**, **Individual Medical Takaful**, **Individual Personal Accident Takaful**.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

Section D: Service Quality as the determinants of acceptance towards Takaful among working adults in small town of Perak.

This section seeks for your opinion on each of the following statements. On a scale of 1 to 5 for each statement, indicate how much you agree with the statement provided.

Malay Version

Bahagian ini mencari pendapat anda tentang setiap kenyataan berikut. Pada skala 1 hingga 5 untuk setiap kenyataan, nyatakan sejauh mana anda bersetuju dengan kenyataan yang diberikan.

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Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

22. 19. The Takaful operator provides a high accessibility to the products and services information. *

In Malay: Pengendali Takaful menyediakan aksesibiliti yang tinggi kepada maklumat produk dan perkhidmatan.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

23. 20. The Takaful operator provides clear and sufficient about the products and services information. *

In Malay: Pengendali Takaful menyediakan maklumat yang jelas dan mencukupi tentang produk dan perkhidmatan.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

24. 21. The customer service representative is professional and friendly. *

In Malay: Wakil perkhidmatan pelanggan adalah profesional dan mesra

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

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Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

25. 22. The claiming process is fast and efficient. *

In Malay: Proses tuntutan adalah cepat dan cekap.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

26. 23. The Takaful operator put in effort to customize the products and services to fulfil the customers' needs. *

In Malay: Pengendali Takaful berusaha untuk menyesuaikan produk dan perkhidmatan bagi memenuhi keperluan pelanggan.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

Section E: Human Resources as the determinants of acceptance towards Takaful among working adults in small town of Perak.

This section seeks for your opinion on each of the following statements. On a scale of 1 to 5 for each statement, indicate how much you agree with the statement provided.

Malay Version

Bahagian ini mencari pendapat anda tentang setiap kenyataan berikut. Pada skala 1 hingga 5 untuk setiap kenyataan, nyatakan sejauh mana anda bersetuju dengan kenyataan yang diberikan.

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Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

27. 24. The agent is a responsible person. *

In Malay: Ejen adalah seorang yang bertanggungjawab.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

28. 25. The agent willing to maintain a long-term relationship. *

In Malay: Ejen bersedia untuk mengekalkan hubungan jangka panjang.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

29. 26. The agent is knowledgeable and able to provide exact information regarding the product. *

In Malay: Ejen adalah berpengetahuan dan mampu memberikan maklumat yang tepat tentang produk.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

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Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

30. 27. The agent is able to provide/recommend a suitable product regarding your situation. *

In Malay: Ejen mampu menyediakan/mengesyorkan produk yang sesuai berdasarkan situasi anda.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

31. 28. Agent is always available to give helps to customers. *

In Malay: Ejen sentiasa tersedia untuk memberikan bantuan kepada pelanggan.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

Section F: Fintech as the determinants of acceptance towards Takaful among working adults in small town of Perak.

This section seeks for your opinion on each of the following statements. On a scale of 1 to 5 for each statement, indicate how much you agree with the statement provided.

Malay Version

Bahagian ini mencari pendapat anda tentang setiap kenyataan berikut. Pada skala 1 hingga 5 untuk setiap kenyataan, nyatakan sejauh mana anda bersetuju dengan kenyataan yang diberikan.

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Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

32. 29. Using Fintech yields a more superior outcome quality than traditional financial services. *

In Malay: Menggunakan Fintech menghasilkan kualiti hasil yang lebih unggul berbanding perkhidmatan kewangan tradisional.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

33. 30. I can use financial services very quickly when I use Fintech. *

In Malay: Saya boleh menggunakan perkhidmatan kewangan dengan sangat cepat apabila menggunakan Fintech.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

34. 31. I worry that someone can access my financial information when I use Fintech. *

In Malay: Saya bimbang bahawa seseorang boleh mengakses maklumat kewangan saya apabila saya menggunakan Fintech.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

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Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

35. 32. Using Fintech is cheaper than using traditional financial services. *

In Malay: Menggunakan Fintech lebih murah daripada menggunakan perkhidmatan kewangan tradisional.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Strongly Agree

36. 33. I can use various financial services with a low cost when I use Fintech. *

In Malay: Saya boleh menggunakan pelbagai perkhidmatan kewangan dengan kos yang rendah apabila menggunakan Fintech.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Strongly Agree

Section G: Awareness linked with Fintech as the determinants of acceptance towards Takaful among working adults in small town of Perak.

This section seeks for your opinion on each of the following statements. On a scale of 1 to 5 for each statement, indicate how much you agree with the statement provided.

Malay Version

Bahagian ini mencari pendapat anda tentang setiap kenyataan berikut. Pada skala 1 hingga 5 untuk setiap kenyataan, nyatakan sejauh mana anda bersetuju dengan kenyataan yang diberikan.

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Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

37. 34. I get a lot of information about online Takaful through different sources including my friends, peer, family and media. *

In Malay: Saya mendapatkan banyak maklumat tentang Takaful dalam talian melalui pelbagai sumber termasuk rakan, rakan sebaya, keluarga, dan media.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strc Strongly Agree

38. 35. I am interested in taking online Takaful because many people around me already purchased it. *

In Malay: Saya berminat untuk mengambil Takaful dalam talian kerana ramai orang di sekeliling saya sudah membelinya.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strc Strongly Agree

39. 36. I am easily influenced to adopt online Takaful by viewing the benefits people get after purchasing it. *

In Malay: Saya mudah terpengaruh untuk mengambil Takaful dalam talian apabila melihat faedah yang diperolehi oleh orang selepas membelinya.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strc Strongly Agree

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Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

40. 37. I need to listen and get advice from others before making decision to purchase online Takaful *

In Malay: Saya perlu mendengar dan mendapatkan nasihat dari orang lain sebelum membuat keputusan untuk membeli Takaful dalam talian.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

41. 38. I believe that social influence is a factor influencing my decision to adopt online Takaful. *

In Malay: Saya percaya bahawa pengaruh sosial adalah faktor yang mempengaruhi keputusan saya untuk mengambil Takaful dalam talian.

Social influence is how people's thoughts and actions are shaped by others around them. It's about how we are influenced by friends, family, and society in what we think, feel, and do.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

Section H: Service Quality linked with Fintech as the determinants of acceptance towards Takaful among working adults in small town of Perak.

This section seeks for your opinion on each of the following statements. On a scale of 1 to 5 for each statement, indicate how much you agree with the statement provided.

Malay Version

Bahagian ini mencari pendapat anda tentang setiap kenyataan berikut. Pada skala 1 hingga 5 untuk setiap kenyataan, nyatakan sejauh mana anda bersetuju dengan kenyataan yang diberikan.

3/18/24, 3:17 PM

Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

42. 39. I think that Fintech provides professional services, and the service quality will improve. *

In Malay: Saya fikir bahawa Fintech menyediakan perkhidmatan profesional, dan kualiti perkhidmatan akan meningkat.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Agree

43. 40. I think that with the assistance of Fintech, Takaful operator could provide a flexible and convenient accessibility to any information and advice. *

In Malay: Saya fikir bahawa dengan bantuan Fintech, pengendali Takaful boleh menyediakan aksesibiliti yang fleksibel dan mudah kepada maklumat dan nasihat.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Agree

44. 41. I think that Fintech (Big Data analysis/ AI) could provide information and advice without any self-interest. *

In Malay: Saya fikir bahawa Fintech (Analisis Big Data/Kepintaran Buatan) boleh menyediakan maklumat dan nasihat tanpa sebarang kepentingan diri.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Agree

3/18/24, 3:17 PM

Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

45. 42. I think that Fintech could provide a personalized takaful plan that fulfils my needs. *

In Malay: Saya fikir bahawa Fintech boleh menyediakan pelan takaful yang dipersonalisasi yang memenuhi keperluan saya.

Mark only one oval.

Mark only one oval.

1 2 3 4 5
Strongly Disagree Strongly Agree

46. 43. I think that Fintech could provide dependable and prompt takaful services. *

In Malay: Saya fikir bahawa Fintech boleh menyediakan perkhidmatan takaful yang boleh dipercayai dan cepat.

Mark only one oval.

Mark only one oval.

1 2 3 4 5
Strongly Disagree Strongly Agree

Section I: Human Resources linked with Fintech as the determinants of acceptance towards Takaful among working adults in small town of Perak.

This section seeks for your opinion on each of the following statements. On a scale of 1 to 5 for each statement, indicate how much you agree with the statement provided.

Malay Version

Bahagian ini mencari pendapat anda tentang setiap kenyataan berikut. Pada skala 1 hingga 5 untuk setiap kenyataan, nyatakan sejauh mana anda bersetuju dengan kenyataan yang diberikan.

3/18/24, 3:17 PM

Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

47. 44. Rank the level of fintech readiness for human resources in the Takaful industry. *

In Malay: Penarafan tahap kecekapan Fintech untuk sumber manusia dalam industri Takaful

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

48. 45. I feel that there are improvements on efficiency of Takaful agents or employees after adopting fintech for Takaful operations. *

In Malay: Saya rasa terdapat peningkatan dalam kecekapan ejen atau pekerja Takaful selepas mengadopsi Fintech untuk operasi Takaful.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

49. 46. I could save a lot of time when using Fintech services in Takaful operations. *

In Malay: Saya boleh menjimatkan banyak masa apabila menggunakan perkhidmatan Fintech dalam operasi Takaful.

Mark only one oval.

Mark only one oval.

1 2 3 4 5

Strongly Disagree Strongly Agree

3/18/24, 3:17 PM

Survey form of the determinants of acceptance towards Takaful among working adults in small towns of Perak

50. 47. I feel that training human resources and attracting high quality human resources for Fintech application, management, and development in Takaful industry. *

In Malay: Saya rasa bahawa melatih sumber manusia dan menarik sumber manusia berkualiti tinggi untuk aplikasi, pengurusan, dan pembangunan Fintech dalam industri Takaful.

Mark only one oval.

Mark only one oval.

1 2 3 4 5
Strongly Disagree Strongly Agree

51. 48. In the choice between Robo-advisors and human capital, I more prefer to Robo-advisors to assist me deal with the Takaful operations. *

In Malay: Dalam pemilihan antara Penasihat Robo dan modal insan, saya lebih cenderung kepada Penasihat Robo untuk membantu saya menguruskan operasi Takaful.

Mark only one oval.

Mark only one oval.

1 2 3 4 5
Strongly Disagree Strongly Agree

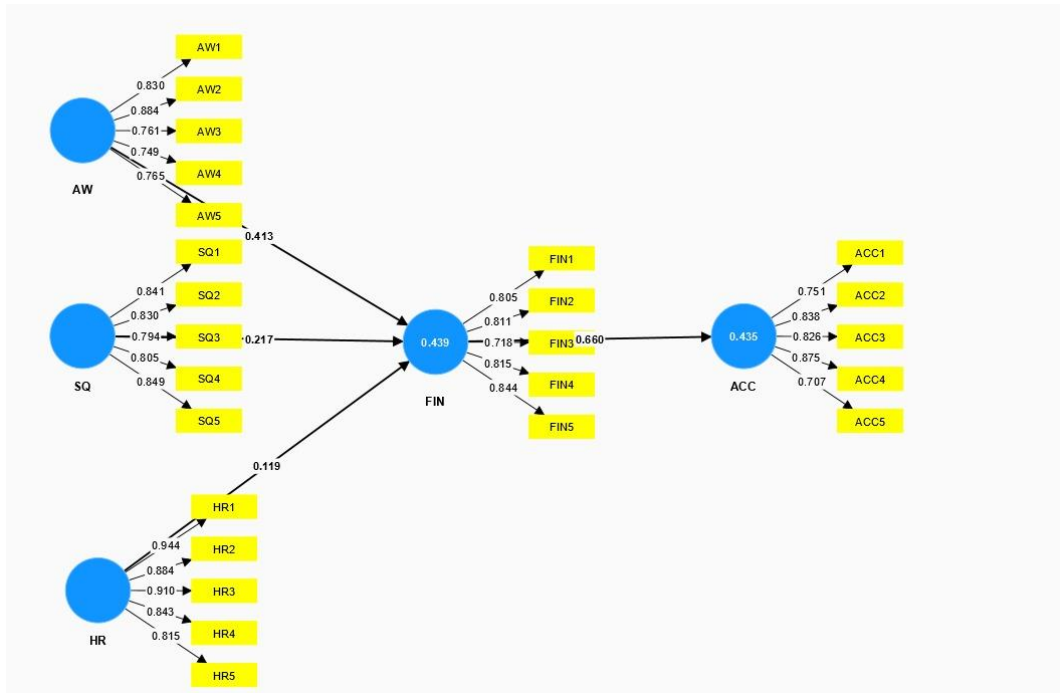
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Appendix 4.1: Bootstrapping test of Outer Loadings

Outer loadings - Matrix						
	ACC	AW	FIN	HR	SQ	
A1		0.753				
A2		0.860				
A3		0.834				
A4		0.683				
A5		0.778				
ACC1	0.919					
ACC2	0.902					
ACC3	0.911					
ACC4	0.929					
ACC5	0.924					
FIN1			0.916			
FIN2			0.897			
FIN3			0.906			
FIN4			0.895			
FIN5			0.898			
H1				0.827		
H2				0.770		
H3				0.816		
H4				0.779		
H5				0.742		
S1					0.775	
S2					0.853	
S3					0.818	
S4					0.814	
S5					0.779	

Appendix 4.2: Graphical output of Pilot Study



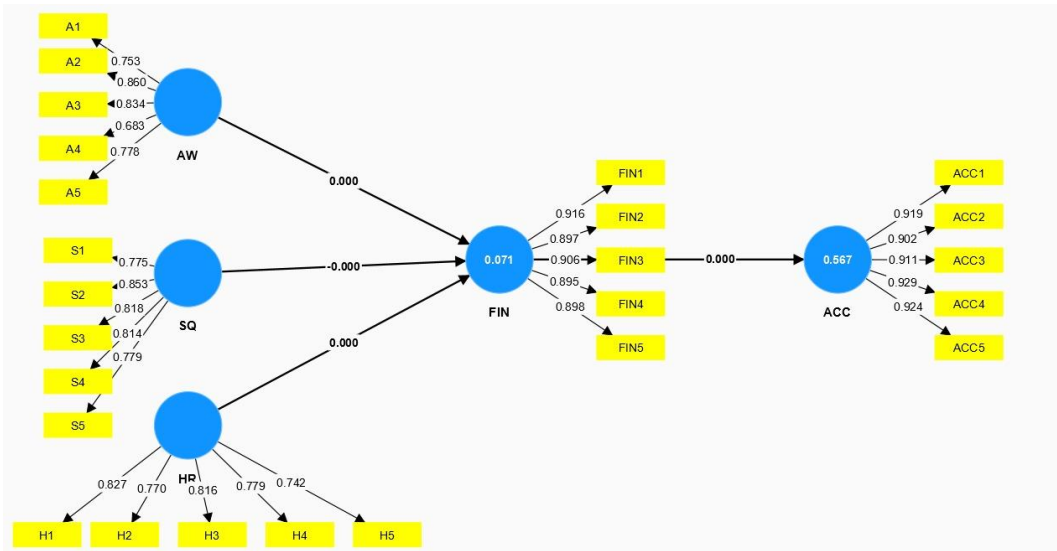
Appendix 4.3: Outer Loadings Result of Pilot Study

Outer loadings - List	
	Outer loadings
ACC1 <- ACC	0.751
ACC2 <- ACC	0.838
ACC3 <- ACC	0.826
ACC4 <- ACC	0.875
ACC5 <- ACC	0.707
AW1 <- AW	0.830
AW2 <- AW	0.884
AW3 <- AW	0.761
AW4 <- AW	0.749
AW5 <- AW	0.765
FIN1 <- FIN	0.805
FIN2 <- FIN	0.811
FIN3 <- FIN	0.718
FIN4 <- FIN	0.815
FIN5 <- FIN	0.844
HR1 <- HR	0.944
HR2 <- HR	0.884
HR3 <- HR	0.910
HR4 <- HR	0.843
HR5 <- HR	0.815
SQ1 <- SQ	0.841
SQ2 <- SQ	0.830
SQ3 <- SQ	0.794
SQ4 <- SQ	0.805
SQ5 <- SQ	0.849

Appendix 4.4: Construct Reliability and Validity Test of Pilot Study

Construct reliability and validity - Overview				
	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
ACC	0.860	0.860	0.899	0.643
AW	0.857	0.860	0.898	0.639
FIN	0.858	0.861	0.899	0.640
HR	0.927	0.943	0.945	0.775
SQ	0.882	0.885	0.914	0.679

Appendix 4.5: Graphical Output of Actual Study



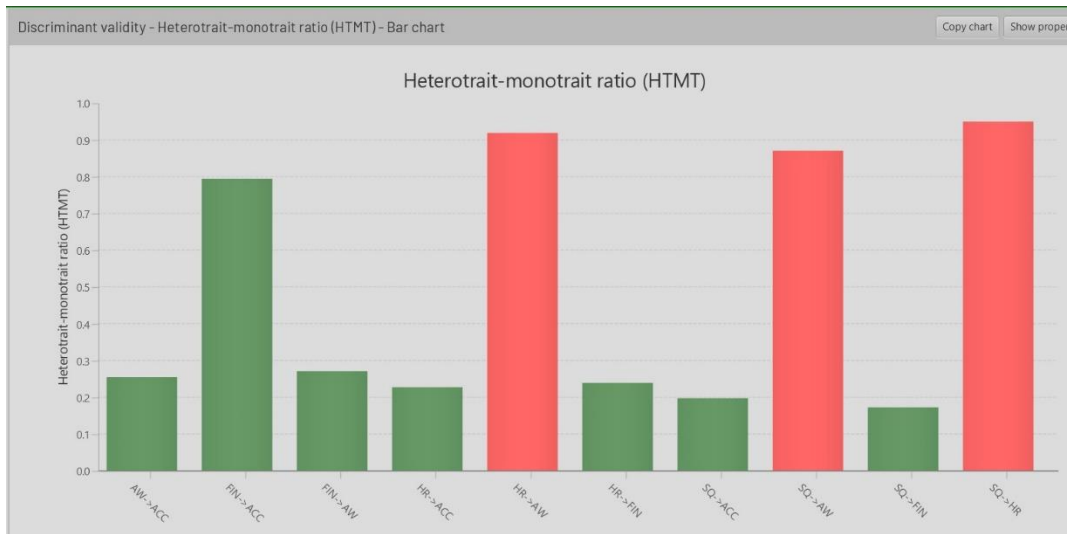
Appendix 4.6: Outer Loadings Result of Actual Study

Outer loadings - List	
	Outer loadings
A1 <- AW	0.753
A2 <- AW	0.860
A3 <- AW	0.834
A4 <- AW	0.683
A5 <- AW	0.778
ACC1 <- ACC	0.919
ACC2 <- ACC	0.902
ACC3 <- ACC	0.911
ACC4 <- ACC	0.929
ACC5 <- ACC	0.924
FIN1 <- FIN	0.916
FIN2 <- FIN	0.897
FIN3 <- FIN	0.906
FIN4 <- FIN	0.895
FIN5 <- FIN	0.898
H1 <- HR	0.827
H2 <- HR	0.770
H3 <- HR	0.816
H4 <- HR	0.779
H5 <- HR	0.742
S1 <- SQ	0.775
S2 <- SQ	0.853
S3 <- SQ	0.818
S4 <- SQ	0.814
S5 <- SQ	0.779

Appendix 4.7: Construct Reliability and Validity Test of Actual Study

Construct reliability and validity - Overview				
	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
ACC	0.953	0.953	0.964	0.841
AW	0.847	0.883	0.888	0.615
FIN	0.943	0.944	0.956	0.815
HR	0.849	0.881	0.891	0.620
SQ	0.873	0.910	0.904	0.653

Appendix 4.8: Discriminant Validity Test (HTMT) of Actual Study



Appendix 4.9: Discriminant Validity Test (Cross Loadings) of Actual Study

Discriminant validity - Cross loadings						
	ACC	AW	FIN	HR	SQ	
A1	0.200	0.753	0.212	0.486	0.412	
A2	0.223	0.860	0.263	0.580	0.546	
A3	0.200	0.834	0.215	0.624	0.598	
A4	0.133	0.683	0.112	0.660	0.689	
A5	0.140	0.778	0.149	0.712	0.689	
ACC1	0.919	0.205	0.702	0.170	0.170	
ACC2	0.902	0.245	0.661	0.206	0.183	
ACC3	0.911	0.210	0.678	0.181	0.207	
ACC4	0.929	0.235	0.692	0.216	0.204	
ACC5	0.924	0.195	0.718	0.202	0.170	
FIN1	0.717	0.214	0.916	0.208	0.151	
FIN2	0.661	0.234	0.897	0.207	0.158	
FIN3	0.673	0.222	0.906	0.183	0.139	
FIN4	0.687	0.260	0.895	0.209	0.174	
FIN5	0.657	0.232	0.898	0.199	0.165	
H1	0.230	0.621	0.235	0.827	0.607	
H2	0.122	0.611	0.134	0.770	0.699	
H3	0.147	0.586	0.186	0.816	0.665	
H4	0.172	0.573	0.153	0.779	0.652	
H5	0.132	0.577	0.134	0.742	0.570	
S1	0.085	0.551	0.095	0.641	0.775	
S2	0.213	0.589	0.180	0.682	0.853	
S3	0.147	0.604	0.135	0.662	0.818	
S4	0.210	0.568	0.165	0.616	0.814	
S5	0.072	0.592	0.058	0.699	0.779	

Appendix 4.10: Correlation Test (Variance Inflation Factors) of Actual Study

Collinearity statistics (VIF) - Outer model - List	
	VIF
A1	1.572
A2	2.027
A3	2.073
A4	1.749
A5	2.091
ACC1	4.455
ACC2	3.916
ACC3	3.910
ACC4	4.986
ACC5	4.437
FIN1	4.085
FIN2	3.443
FIN3	3.925
FIN4	3.338
FIN5	3.698
H1	1.718
H2	1.814
H3	1.904
H4	1.794
H5	1.673
S1	1.952
S2	2.002
S3	2.121
S4	1.786
S5	2.208

Appendix 4.11: Bootstrapping Test of Path Coefficient of Actual Study

Specific indirect effects - Mean, STDEV, T values, p values					
	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
HR -> FIN -> ACC	0.090	0.086	0.065	1.370	0.085
SQ -> FIN -> ACC	-0.062	-0.047	0.061	1.014	0.155
AW -> FIN -> ACC	0.171	0.167	0.049	3.481	0.000