

UNIVERSITI TEKNOLOGI MARA

**MEDIATING EFFECT OF THE
AGENT ON TAKĀFUL
ACCEPTANCE BASED ON SEM
APPROACH**

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MOHD SAZERI**

MA

July 2026

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**MUHAMMAD AMIRUL HUSNI BIN MOHD
SAZERI**

Thesis submitted in fulfillment
of the requirements for the degree of
Master of Contemporary Islamic Studies

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I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

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ABSTRACT

With an emphasis on the mediating function of agents, this study investigates the elements influencing Takāful acceptance among customers in Selangor and Kuala Lumpur. Although the Takāful industry has grown quickly as a Shari'ah-compliant substitute for traditional insurance, its penetration rate is still relatively low, suggesting gaps in public knowledge, comprehension, and acceptability. A quantitative research design was used, and data was gathered by distributing structured questionnaires to Klang Valley residents between the ages of 25 and 50. Important concepts like awareness and knowledge, social impact, service quality, financial technology, and behavioural intention were measured in the study. Both direct and indirect interactions between variables were analysed using Structural Equation Modelling (SEM) using IBM-AMOS, with a focus on the mediating role of the agent. The results show that customers' intention to engage in Takāful is heavily influenced by awareness and knowledge, social influence, service quality, financial technology, and Shari'ah compliance. Furthermore, behavioural intention was found to have a strong positive effect on actual behaviour. Crucially, the relationship between behavioural intention and actual involvement is strongly mediated by the agent's function, suggesting that agents are essential in converting intention into actual action. In addition to disseminating information, agents help prospective clients develop confidence and trust. In conclusion, the effectiveness of agents significantly increases participation levels, even though consumer-related criteria are significant determinants of Takāful acceptance. In order to increase knowledge and trust, the report recommends that Takāful operators and policymakers give priority to agent development, strategic communication, and public education activities. To boost Takāful acceptance and close the protection gap in Malaysia, agents' roles must be strengthened in addition to enhancing service quality and technology integration.

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LIST OF ABBREVIATIONS

Abbreviations

AGFI	Adjusted Goodness-Of-Fit Index
AK	Awareness And Knowledge
ASB	International Accounting Standards Board
AVE	Average Variance Extracted
BNM	Bank Negara Malaysia
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CMIN	Chi-Square Statistical Value In SEM
CR	Composite Reliability
df	Degrees Of Freedom (Statistical)
FT	Financial Technology
GCC	Gulf Cooperation Council
GFI	Goodness-Of-Fit Index
GOF	Goodness-Of-Fit
IBM-AMOS	IBM Analysis Of Moment Structures (Statistical SEM Software)
IFI	Incremental Fit Index
IFRS	International Financial Reporting Standards
MTA	Malaysian Takāful Association
RMSEA	Root Mean Square Error Of Approximation
SC	Sharī‘ah Compliance
SEM	Structural Equation Modeling
SI	Social Influence
SQ	Service Quality
TLI	Tucker Lewis Index
TOs	Takāful Operators

TRANSLITERATION GUIDELINES

Arabic Transliteration Guidelines

i Consonants

Huruf Arab	Huruf Rumi	Contoh	
		TulisanArab	TulisanRumi
أ	'(a,i,u)	الْقِرَاءَة	<i>al-qira'ah</i>
ب	B	بَعَثَ	<i>ba'atha</i>
ت	T	تَابَ	<i>tāba</i>
ث	Th	ثَوَابَ	<i>thawāba</i>
ج	J	جَعَلَ	<i>ja'ala</i>
ح	h	حَلَبَ	<i>ḥalaba</i>
خ	Kh	خَطَبَ	<i>khaṭaba</i>
د	D	دَفَعَ	<i>dafa'a</i>
ذ	Dh	ذَهَبَ	<i>dhahaba</i>
ر	R	رَجَعَ	<i>raja'a</i>
ز	Z	زَرَ	<i>zara'a</i>
س	S	سَمِعَ	<i>sami'a</i>
ش	Sh	شَفَعَ	<i>shafa'a</i>
ص	s	صَعَدَ	<i>ṣa'ada</i>
ض	ḍ	ضَلَّ	<i>ḍalala</i>
ط	ṭ	طَلَعَ	<i>ṭala'a</i>
ظ	ẓ	ظَفَرَ	<i>ẓafara</i>
ع	'(a,i,u)	عَلَيْهِ	<i>'alayh</i>
غ	Gh	غَفَرَ	<i>ghafara</i>
ف	F	فَلَحَ	<i>falaḥa</i>
ق	Q	قَلَمَ	<i>qalama</i>
ك	K	كَتَبَ	<i>kataba</i>
ل	L	لَعِبَ	<i>la'iba</i>
م	M	مَنَعَ	<i>mana'a</i>
ن	N	نَالَ	<i>nāla</i>
و	W	وَعَدَ	<i>wa'ada</i>
ه	H	هَدَمَ	<i>hadama</i>
ي	Y	يَعْلَمُ	<i>ya'lamu</i>

ii Short Vowels

Huruf Arab	Huruf Rumi	Contoh	
		TulisanArab	TulisanRumi
--- (فتحة)	A	نَصَرَ	<i>naṣara</i>
--- (كسرة)	I	نَاصِرَ	<i>nāṣira</i>
--- (ضمّة)	U	يَنْصُرُ	<i>yanṣuru</i>

iii Long Vowels

Huruf Arab	Huruf Rumi	Contoh	
		TulisanArab	TulisanRumi
أَ	A	قَالَ	<i>qāla</i>
أُو	U	مُوسَى	<i>mūsā</i>
أِي	Ī	إِيمَان	<i>īmān</i>

iv Diphthongs

Huruf Arab	Huruf Rumi	Contoh	
		TulisanArab	TulisanRumi
أَوْ	Aw	أَوَّابَ	<i>awwāba</i>
أَيَّ	Ay	أَيَّامَ	<i>ayyāma</i>
إَيَّ	Iy	إِيَّكَ	<i>iyyāka</i>

CHAPTER 1

INTRODUCTION

1.1 Research Background

The Arabic term of “Takāful” means ‘assuring each other’. Participants consent to split any losses resulting from the specified risk (Alam et al., 2023). Islam uses Takāful, which is more reliable the most, to mitigate danger (Zein et al., 2021). A guarantee provided to the insured is known as insurance, or Takāful (Nugroho et al., 2021; Wahyono & Palupi, 2021). In specifics, the guaranteeing party compensates the insured for the disaster by paying a predetermined premium (Nurbaya & Alam, 2019). Takāful literally translates to “solidarity and mutual guarantee”. The Malaysian Takāful Act 1984 defines Takāful as:

[...] a scheme based on mutual assistance, which provides for mutual financial aid and assistance to the participants in case of need whereby the participants mutually agree to contribute for the purpose.

Conventional insurance based on components that are forbidden by Islamic law (Sharī‘ah), such as ribā (interest), maisir (gambling), and gharar (uncertainty) (Alshammari et al., 2024). Takāful plans must adhere to Islamic principles and ethics. The basic sources of the Qur’an and Sunnah are referred to as Takāful operations (Alam & Hidayati, 2020). As a result, Takāful can be accepted by Muslim in situations when alms (tabarru‘) and collaboration (ta’awun) are necessary (Nazarov & Dhiraj, 2019). According to Dahnoun & Alqudwa (2018), Takāful also symbolises three characteristics of mutuality: supporting one another, shielding one another from loss, and accepting accountability for one another. Takāful and traditional insurance differ conceptually in that Takāful does not involve the exchange or trading of risks. Participants in Takāful pay a charge (Tabarru‘ fund) to the Takāful company. In this instance, the business manages Tabarru‘ fund on behalf of Takāful participants rather than selling risk. As a result, the risk is divided among Takāful participants who consent to share it rather than being assumed by the corporation.

Modern Takāful practices have developed beyond its conceptual basis to include more organised operational forms like wakālah (agency), muḍārabah (profit-sharing,

and hybrid approaches. These methods guarantee sharī'ah compliance in fund management and distribution while improving transparency and governance (Ismail et al., 2022; Rahman and Ahmad, 2023). While the muḍārabah model permits profit-sharing between participants and operator based on investment performance, the wakālah model involves the Takāful operator acting as an agent handling members' contributions for a predetermined fee. According to recent research, hybrid models are becoming more popular in Malaysia because of their adaptability and capacity to strike a compromise between operational effectiveness and moral commitments (Hassan et al., 2024). Additionally, regulatory frameworks have improved industry sustainability and participant trust by strengthening governance standards, risk management, and disclosure requirements, especially under Bank Negara Malaysia (Bank Negara Malaysia, 2022).

1.2 Introduction

Promoting risk management, increasing liquidity, and bolstering macroeconomic stability continues to be a key component of the insurance sector, including Islamic insurance (Takāful). According to recent research, insurance companies are essential to financial intermediation because they mobilise long-term capital, encourage investment, and reduce systemic risks that might otherwise cause the financial sector to become unstable (Ahmed & Rahman, 2022); Boubaker et al., 2023). Economic resilience is greatly enhanced by insurance mechanisms' circumstances. Financial protection strategies are crucial for maintaining both individual and institutional stability during unpredictable times like post-pandemic recovery stages or global economic downturns.

Takāful stands out in this larger financial context as a unique model based on sharī'ah principles, providing a moral and cooperative substitute for traditional insurance. Takāful functions on the ideas of mutual help (ta'awun) and voluntary contribution (tabarru'), in contrast to traditional systems that are frequently critiqued for including features like ribā (interest), maisir (gambling), and gharar (uncertainty) (Hassan et al., 2023). By contributing to a shared pool, participants share risks collectively, doing away with the idea of risk transfer to a profit-driven insurer. This risk-sharing system encourages social cohesion and shared accountability among members in addition to being consistent with Islamic law. Additionally, Takāful

underlines that all financial transactions must be supported by ḥalāl investments and actual economic activity, which improves transparency and lessens speculative activity in the financial system (Saiti & Yusoff, 2022). Takāful is therefore positioned as a sustainable financial solution in both Muslim and non-Muslim markets by integrating ethical, social, and financial goals.

The Takāful industry's importance and growth potential have been further enhanced by the global spread of Islamic finance. According to recent reports, Takāful and other Islamic financial assets have grown steadily due to supporting regulatory frameworks and rising demand for financial products that adhere to sharī'ah (Islamic Financial Services Board [IFSB], 2024). Financial inclusion has improved as a result of the introduction of Islamic finance into international markets, especially for groups that were previously neglected because of religious beliefs. In this sense, Takāful contributes to inclusive economic development by providing financial safety to a larger segment of society. Furthermore, Takāful is now a competitive option for both Muslims and non-Muslims looking for socially conscious financial solutions due to the growing global acceptability of ethical finance.

With the help of proactive governmental actions and a strong regulatory framework, Malaysia in particular has become a global leader in the growth of the Takāful business. Through comprehensive rules, risk-based capital structures, and governance requirements that guarantee operational transparency and sharī'ah compliance, Bank Negara Malaysia (BNM) has been instrumental in bolstering the sector (Bank Negara Malaysia, 2023). The proliferation of Family Takāful goods and growing customer awareness have been major factors in the steady growth of the Malaysian Takāful market. Furthermore, Malaysia's dual financial system, which supports both conventional and Islamic finance, fosters innovation and competition, strengthening the industry's sustainability and resilience.

Even with these encouraging advancements, the Takāful sector still faces a number of operational and structural difficulties. Due to a lack of efficient marketing tactics, misconceptions regarding Takāful products, and low public knowledge, one of the main issues is the relatively low penetration rate as compared to conventional insurance (Yusof & Karim, 2022). Furthermore, there is still a problem with product differentiation because many Takāful products are similar to traditional insurance policies, which makes them seem less distinctive to customers. In order to better

understand consumer intention and increase Takāful scheme participation rates, scholars have stressed the significance of incorporating behavioral insights. Individuals' decision to accept Takāful items have been proven to be highly influenced by factors like attitude, subjective norms, and perceived behavioral control.

Additionally, Takāful operators now face more challenges due to regulatory changes, especially the introduction of International Financial Reporting Standard (IFRS) 17. Accounting systems, actuarial procedures, and financial disclosures must all be significantly altered in order to comply with IFRS 17's requirements for a more transparent and uniform approach to insurance contract reporting (KPMG, 2023). Although these modifications are anticipated to enhance comparability and transparency throughout the worldwide insurance sector, Takāful providers, particularly smaller ones with fewer resources will face significant operational and financial challenges as a result. As a result, a crucial factor in determining the industry's long-term viability is its capacity to effectively adjust to regulatory changes.

In summary, the Takāful sector has developed into an important part of the worldwide Islamic financial system, providing a special fusion of financial functionality and moral values. Its focus on risk-sharing, mutual aid and shari'ah compliance sets it apart from becoming more important. However, in order to be competitive, the industry must use technology breakthroughs while addressing enduring issues with market penetration, product innovation, and regulatory compliance. The ability of Takāful operators to sustain the fundamental values of the system while balancing these aspects will determine future progress.

1.3 Problem Statement

The popularity of Takāful in Malaysia continues to grow alongside the advancement of Islamic finance. However, its uptake remains uneven when measured against conventional insurance. Even though it provides Shari'ah-compliant coverage, Takāful has not completely overtaken conventional insurance in consumer choices, showing the acceptance is shaped by various behavioral, economic, and perceptual factors rather than being motivated solely by religious beliefs (Hassan et al., 2023; Rahman et al., 2022). This indicates that a comprehensive analytical approach that includes both internal and external factors in a competitive financial landscape is necessary to understand the acceptance of Takāful.

The majority of current research on Takāful adoption mainly emphasizes the direct connections between factors like awareness, religiosity, perceived value, and behavioral intention. Although these studies offer valuable insights, they generally neglect the intricate nature of decision-making processes, which frequently include mediating effects. In actuality, individuals assess financial products via intermediate beliefs like trust, perceived utility, and financial competence prior to making acceptance choices (Hassan et al., 2023; Yusof et al., 2022).

Consumers assess Takāful in relation to conventional insurance, considering aspects like cost, benefits, accessibility, and quality of service. Empirical data indicates that Takāful and conventional insurance function within the same competitive landscape, where consumer choices are influenced by comparative benefits instead of inherent traits (Abdullah & Razak, 2023; Nurfatin Azira & Samsudin, 2025). Consequently, omitting traditional insurance from the analysis reduces the explanatory strength of acceptance models and fails to represent actual decision-making behavior.

While the COVID-19 pandemic has been extensively addressed as a factor affecting financial protection awareness, its significance should not be exaggerated as the main reason for Takāful acceptance. Rather, COVID-19 ought to be regarded as a contextual or mediating element that interacts with additional variables. Research indicates that the pandemic impacted both Takāful and traditional insurance industries, leading shifts in demand, product development, and claims outcome (Parizi & Riani, 2023; Lee & Isa, 2022). This suggests that COVID-19 did not solely promote Takāful adoption but instead heightened competition among financial protection offerings. Therefore, concentrating exclusively on COVID-19 could result in a skewed understanding of consumer behavior.

Furthermore, earlier research shows a deficiency in temporal analysis. The majority of studies utilize a cross-sectional approach, which does not account for shifts in consumer behavior over time. The comparison of 2019 (before pandemic), 2020 (start of the pandemic), and 2021 (adjustment period) offers a significant structure to analyze how acceptance levels change across various economic contexts. Studies show that consumer perceptions of insurance products are affected by economic instability and external disruptions, potentially altering buying choices across different times (Al Mamun et al., 2022; Rahman et al., 2023). In the absence of a longitudinal comparison, it becomes more challenging to ascertain if variations in Takāful acceptance are fleeting

or signify enduring behavioral changes, additionally, income and financial capacity are essential elements affecting consumer decisions between Takāful and traditional insurance. People with larger incomes tend to buy financial protection products, whereas individuals with financial limitations might focus on immediate consumption rather than long-term risk safeguarding (Al Mamun et al., 2022; Yusif et al.,2022).

This research focuses on Selangor and Kuala Lumpur, the most economically developed and densely populated areas in Malaysia, making them crucial for analyzing financial behaviors and product acceptance. As reported by the Department of Statistics Malaysia (2024), Malaysia's population has reached about 34.1 million, with Selangor holding the largest proportion, while Kuala Lumpur serves as a key urban and financial center. These areas are marked by increased urbanisation, heightened economic activity and a more advance financial system relative to other regions. Moreover, Selangor and Kuala Lumpur exhibit elevated median household incomes and increased involvement in formal financial services, such as insurance and Takāful offerings, indicating a more financially aware (Department of Statistics Malaysia, 2024; World Bank, 2023).

Additionally, the density of financial institutions, Takāful providers, and traditional insurers in these areas heightens consumer access to various financial products, thus amplifying competition and impact on decision-making patterns. People living in city environments tend to assess financial products based on comparative factors like price, service quality, accessibility, and perceived value, instead of only relying on religious or cultural aspects (Abdullah & Razak, 2023; Hassan et al., 2023). This renders Selangor and Kuala Lumpur especially ideal for assessing the relative acceptance of Takāful versus conventional insurance, since consumers in these areas are more knowledgeable and have better access to options.

On the other hand, previous research indicates that city dwellers typically exhibit greater financial knowledge, risk management, and need for protective products as a result of heightened exposure to economic volatility and living expense challenges (Rahman et al., 2023; Yusof et al.,2022). This indicates that consumers in Selangor and Kuala Lumpur tend to participate in rational and comparative decision-making processes, which is crucial for examining mediating effects. Thus, choosing these areas guarantees a sufficiently large and varied sample while also improving the credibility and applicability of the results in comprehending Takāful acceptance in a competitive financial system.

1.4 Research Objective

- a) To examine the mediating effects influencing Takāful acceptance among consumers in Selangor and Kuala Lumpur using a Structural Equation Modeling (SEM) approach.
- b) To analyse the correlation between awareness and knowledge, social influence, service quality, financial technology, and intention of Selangor and Kuala Lumpur resident to participate in Takāful scheme.
- c) To examine the mediating effect of role of agent in influencing consumers' acceptance of Takāful.

1.5 Research Questions

- a) What are the mediating effects influencing Takāful acceptance among consumers in Selangor and Kuala Lumpur?
- b) What is the relationship between awareness and knowledge, social influence, service quality, financial technology, and the intention of consumers in Selangor and Kuala Lumpur to participate in Takāful schemes?
- c) Does the role of agent mediate the relationship between awareness and knowledge, social influence, service quality, and financial technology, and the acceptance of Takāful?

1.6 Scope Limitations

This study used quantitative method. The data will be used to identify the awareness of the public towards Takāful as their emergency fund. A set of questionnaires will be set up and distribute to the public. The questionnaire will contain a set of questions that related to Takāful industry which to identify their understanding about Takāful and to examine how Takāful's agent approaches them.

This study will be conducted in Selangor and Kuala Lumpur (Klang valley) which to know the responds of Klang valley residents about their awareness about Takāful as their emergency fund. Respondents of this study will be at age around 25-50 years old and they must be people that live in Klang valley. Since this study used quantitative method, there is no qualitative method used in this study.

1.7 Significance of Study

This research will be useful in providing views and perspective to regulatory entities such as Bank Negara Malaysia and the sharī'ah advisory Council in overseeing and administering the Takāful industry's growth in Malaysia. It also means that they will be able to govern a new policy for Takāful products to make Takāful more convenient to the public to subscribe. It is hoped that the ideas and innovations will persuade the public to subscribe and participate in Takāful scheme.

Next, by partnering and mediating the connection between the authority and industry, this research will provide direction and ideas for industry associations such as Malaysian Takāful Association (MTA) in increasing the awareness of the public towards Takāful scheme. For example, they could create and implement a short-term and long-term strategies that encompasses branding, technology, utility, awareness, communication, investment prospects, and regulatory interactions. These initiatives will be carried out in response to public desire for a better living in the future.

The Takāful operator will be explained in relation to the elements that motivate the public to subscribe the Takāful scheme in this research. For example, this research will modify potential consumers' negative perceptions of participating Takāful schemes. For instance, Takāful operators are aware that potential customers are unaware about the products and services available in Takāful schemes or they have a limited financial resource to subscribe any Takāful plans. Next, this research also can help Takāful operators set up an effective promotional method to increase market penetration and encourage more people to subscribe Takāful plans.

Furthermore, this research will provide an important information to the public on the factors that influence Selangor and Kuala Lumpur resident's participation in a Takāful plans. It implies they will gain more knowledge and a better understanding of the factors that affecting their intentions to subscribe Takāful plans.

In addition, this research uses quantitative methods which provide a better understanding regarding awareness about Takāful. Indirectly, Selangor and Kuala Lumpur resident might address their own opinion towards the Takāful plans that provided to them. Takāful was created with a purpose of preserving the maqasid Sharī'ah and preventing people from participate in any businesses that contains prohibited elements in Islam which in this case, conventional insurance. Selangor and Kuala Lumpur resident should be aware of the need of having a risk management

strategy for their future. Both consumers and Takāful companies will get benefit from this research.

1.8 Organization of Study

There are five chapters in this thesis:

The introduction of this research is explained in Chapter 1 (Introduction). An outline of the evolution and expansion of Takāful has also been provided in this chapter. This chapter will cover the background, research objectives, research questions, limitations, significance, and the structure of the research as well as the thesis.

The research issue is critically evaluated overall in Chapter 2 (Literature Review). It examines the research on risk management, Takāful, and theories pertaining to consumer behavior. Additionally, the literature review is used to establish specific study hypotheses.

How this research is carried out is covered in Chapter 3 (Research Methodology). The population, sample size, sampling models, questionnaire design, data collection technique, and pilot research are also introduced.

Using IBM-AMOS version 21 and SPSS version 21, the data is interpreted to provide a summary of the data in Chapter 4 (Result and Discussion). In addition, a pilot study will be conducted to evaluate validity of this research. This chapter presents a comprehensive discussion of the study's findings.

The outcomes of the entire study are covered in Chapter 5 (Conclusion and Recommendation), which also offers suggestions for additional research.

1.9 Conclusion

The overview and introduction to Takāful are covered in this chapter. To improve comprehension of the objective of this research, a brief explanation of the research objectives and research questions was also provided. The theoretical and practical contributions of the study will also be presented to highlight its significance and let the readers know about its benefits. Therefore, the literature review for this topic will be covered in the following chapter.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Regarding the study's scope, this chapter will provide an explanation of previous literary works from a variety of periodicals, essays, research papers, and other publications. For the current research to obtain viewpoints and perspectives on the gap in this study in order to finish this research, previous research by others is crucial. To help the reader comprehend the material of various literary genres, this section will be separated into multiple actions.

2.2 Risk

2.2.1 Risk Management

According to Abu al-Haija E., & Houcine, A. (2023), the act of identifying potential losses and choosing the best ways to mitigate them is known as risk management. It involves an organization's making decisions to minimize uncertainty. The negative effects of risk can be either quantifiable, such as insurance premiums and claims expenses, or subjective, such as reputational harm or decreased productivity, which is hard to measure. A company's chances of success and business continuity are increased when it pays attention to risk and allocates the resources required to control and minimize the risk of uncertainty. This lowers the organization's expenses.

Broadly speaking, dangers can be classified into the following groups. A pure risk is a kind of risk where the possible outcomes are straightforward, such losing or not losing. It encompasses incidents like building burglaries, fire losses, and staff car accidents. Risk that has profit, loss, or status quo as possible outcomes is referred to as speculative risk. Investing in stock markets and making business decisions like launching new product lines or opening new locations are examples of speculative risk (Aven, 2016). Another kind of risk is credit risk, which is the danger of not making payments on loans. The process of minimizing risk through the purchase of an insurance policy, for example, is known as hedging and protects commercial organizations'

investments. A well-established tactic to reduce the credit risk element is diversification, or the allocation of financial investments across multiple fields (Rehman et al., 2019).

2.2.2 Risk Management from Sharī'ah Perspective

The Islamic legal code, or sharī'ah, serves as the foundation for the Islamic system. The Islamic Financial Services Act (IFSA) 2013 provides examples of how this law applies to the goals, methods, commercial dealings, and other undertakings of an organization in order to guarantee that they adhere to Sharī'ah. Islamic financial institutions, or IFIs for short, are established by the sharī'ah law, which also specifies how these organizations must be run. Actually, the notion of Islamic finance has been defined by academics like Balz (2008) and Ismail and Tohirin (2010) as the implementation of Islamic law in contemporary financial operations. Contracts, economic dealings, and goods supplied must therefore abide with sharī'ah law.

Mohd Noor et. al (2019) stated that it is interesting to note that IFIs run the danger of making financial transactions. At the very least, one of the most crucial issues that IFIs must address is conducting business and taking on risk is based on a jurisprudential premise that demonstrates the correlation between revenue and the obligation to endure loss (*al-kharāj bi-ḍamān*). To put it briefly, taking on risk is a must in any financial transaction in order to profit (*al-ghunm bil-ghurm*).

Contractual duties are also linked to risk. There is no denying the connection between risk and contract (keskitalo, 2006). Contractual commitments carried out in the framework of Islamic finance may reveal a particular kind of risk that deviates from sharī'ah standards. It is crucial to talk about the theory underlying the derivation of this risk rather than just controlling it. Pertinent evidence from al-Quran and Hadith can be used to support broad financial transaction concepts and the necessary components of legally binding contracts. It is crucial to have this conversation, in part because incidents of non-compliance with sharī'ah principles have brought attention to the distinct risk elements that distinguish Islamic financing from conventional finance risk. In Islamic finance, meeting a contractual duty means that the parties to the contract must carry out the terms and conditions stipulated in the agreements in order for the transactions to be considered legitimate. Naturally, contracting parties' risk having signed possibly void agreements if they have not adhered to sharī'ah contractual obligations.

The derivation of sharī'ah risk is still a relatively new topic of discussion in the literature. The precise nature of the theoretical framework behind the calculation of risk

resulting from a breach of shari‘ah principles is up for debate. While previous research has shown that shari‘ah risk is typically the result of non-adherence to shari‘ah principles, some scholars, including Khan and Ahmed (2001), Akkizidis and Kandelwal (2008), Febianto (2007, 2012), Bacha (2013), and Ginena (2014), have tended to concentrate on discussing practical matters, like shari‘ah risk mitigation in IFIs, rather than attempting to investigate the origins and derivation of shari‘ah risk. Nonetheless, some, like Laidin (2013) and Lahasasna (2014), chose to focus specifically on risk management related to shari‘ah non-compliance.

2.3 Takāful

2.3.1 Background of Takāful

"Takāful" means "assuring each other" in Arabic. Participants agree to divide any losses brought on by the designated risk (Alam et al., 2023). To reduce risk, Islam employs Takāful, which is the most dependable (Zein et al., 2021). Insurance, or Takāful, is a guarantee given to the insured (Nugroho et al., 2021; Wahyono & Palupi, 2021). In particular, the guaranteeing party pays a predetermined premium to compensate the insured for the calamity (Nurbaya & Alam, 2019).

For instance, a war would start between the tribe members if one of them committed a crime like murder, which occasionally even resulted in further fatalities and catastrophes. In order to settle these disputes and prevent additional bloodshed and retaliation, blood money was paid. To cover the victim’s family’s compensation costs, each tribe member made a payment on their behalf (Nazarov et al., 2019). These contributions were gathered as payment for any tribal conflicts. The tribe member would help each other by bearing each other’s hardships in a practice called as “‘Aqīlah”. Like the idea of mutual insurance today, the entire community guaranteed one another against any losses or dangers that might befall them. In The Preface (Al-Muqaddimah), Ibn Khaldun stated that the Arabs have developed a number of strategies for compensating and protecting group members against losses during their business ventures, known as winter and summer travels. They made a payment equal to a portion of their earnings or capital to cover any losses or damages incurred by any of the voyage’s participants.

Due to its apparent advantages, which are amply stressed and affirmed in the Holy Qur’an, “‘Aqīlah” practices persisted long after the introduction of Islam. The

Prophet (Peace be him) emphasized “Diyah”, which is compensation given to the murder victim’s heirs. The families came to an understanding over the amount and value of compensation. Although the person who committed the crime was personally responsible for the payment or reparation, it was also customary for “‘Aqīlah” (the murderer’s immediate family) or the tribe to be held responsible (Nazarov et al., 2019).

In the event that the murderer could not be found, Umar ibn al-Khattab, the second caliph of Islam (May Allah be pleased with him) established a similar system known as “Qasāmah” to compensate the victim’s family (Nazarov et al., 2019). Muslim had a strong naval force and advanced marine science by the end of the ninth century. The need for insurance to cover losses from maritime risks was recognized by merchants. They made contributions to the fund to recompense anyone who experienced losses in accordance with the moral principle of supporting one another.

In the Islamic world, commercial insurance contracts are rather recent. Ibn Abidin, a Hanafi jurist who lived between 1783 and 1836 AD, was the first to address this issue after receiving inquiries from Muslim businessmen about marine insurance and shari‘ah law. “I see that it is not permitted to any merchant to get indemnity for his damaged property against the payment of a certain sum of money known as insurance premium,” he said in reference to maritime insurance. The debate about the legitimacy of commercial insurance from an Islamic perspective persisted after Ibn Abidin for a century, during which time it underwent significant alterations among Islamic jurists (Nazarov et al., 2019).

Ansari (2022) stated that Islamic insurance system is a cooperative system. The Takāful mechanism has also been devised as a substitute for conventional insurance’s risk management strategies, which include ribā (Interest), gharar (Uncertainty), and maisir (Ambiguity). The concept of Takāful is put into effect by getting rid of the illegal components from an insurance system.

Referring to this scheme, participants or members in a group will jointly agree to guarantee each other against damage or loss. The entire of the group would lend a hand to the occupant person to compensate their loss and to help them with the financial aid. Takāful is a legally enforceable agreement among all scheme participants to compensate any of the scheme’s members who incur a loss as stipulated in the Takāful policy document. Takāful is an Islamic system of mutual insurance that built around the concept of donation. Furthermore, Takāful scheme has been evolved from the basis of the al-Quran and Sunnah itself. Allah said in Surah al-Maidah, verse 2:

وَتَعَاوَنُوا عَلَى الْبِرِّ وَالتَّقْوَىٰ وَلَا تَعَاوَنُوا عَلَى الْإِثْمِ وَالْعُدْوَانِ ۚ وَاتَّقُوا اللَّهَ إِنَّ اللَّهَ شَدِيدُ
الْعِقَابِ

Means: Cooperate with one another in goodness and righteousness, and do not cooperate in sin and transgression. And be mindful of Allah. Surely Allah is severe in punishment.

(Al-Maidah: 2)

The establishment of Takāful was necessitated by the obvious violations of sharī'ah principles in by the operations of conventional such as ribā (Interest), gharar (Uncertainty), and maisir (Ambiguity). Takāful is a sharī'ah-compliant alternative to conventional insurance. Muslim are meant to support Takāful unconditionally because it promotes the mechanism the excluded from interest, uncertainty and gambling elements which unlawful under sharī'ah principles. sharī'ah violation inherent in conventional insurance led to the prohibition of conventional insurance in Islam thus resulting requirement for Takāful. Despite having some noble goal of providing loss protection, conventional insurance's operation contains significant sharī'ah violations which are ribā (Interest), gharar (Uncertainty), and maisir (Gambling) (Hafiz et al., 2018).

2.3.2 Difference between Takāful and Insurance

Takāful (Islamic insurance) and conventional insurance are the two main categories of policies offered by insurance business. According to Akhter et al. (2017), one of the primary reasons why traditional insurance is forbidden by sharī'ah is when an insurance contract contains gharar, or uncertainty. Experts in sharī'ah contend that insurance contracts contain significant uncertainty. For instance, an insurance provider can offer a client a non-existent insurance package. According to Sharī'ah, one cannot sell something that does not exist (Ayub, 2007). Additionally, it is offering an insurance coverage against an unpredictably incurred loss for an absolute premium. None of the parties know for sure whether this loss will happen or how much it might cost. Both parties are also unaware of the precise moment the loss occurred. sharī'ah views insurance policies as unacceptable because of all these variables that create uncertainty.

In contrast, Takāful, or Islamic insurance, is a concept of brotherhood-based agreement in which each member contributes a certain amount to a fund known as the

waqf fund. The use of maisir (gambling) is the second factor that prohibits conventional insurance in Islam. For example, the policyholder pays a small premium in the hopes of receiving a large payout down the road. If not, the company will forfeit his premium and he will not receive anything (Wahab et al., 2007). On the other hand, there is no element of forfeiture in Takāful (Islamic insurance). If there is no loss, the members can split any residual Takāful fund surplus (Ayub, 2007). The quantity of the sharī‘ah-impermissible ribā (interest) in the insurance investments is the third component of traditional insurance. T-bills, regular bonds, and other interest-based investments are not permitted for a Takāful firm to invest in. it must make investments in financial instruments that adhere to sharī‘ah (Akhter et al., 2021).

Because of these distinctions, among Muslims, Takāful has become a popular substitute for traditional insurance. Takāful is becoming more popular in the Muslim nations of Asia and the Middle East, although having a very modest market share overall (Akhter and Khan, 2017).

2.3.2.1 Ribā (Interest)

The main tenet of Islamic law is the prohibition of ribā. This is aligned with Allah S.W.T said in al-Quran in surah al-Baqarah verse 275:

الَّذِينَ يَأْكُلُونَ الرِّبَا لَا يَقُومُونَ إِلَّا كَمَا يَقُومُ الَّذِي يَتَخَبَّطُهُ الشَّيْطَانُ مِنَ الْمَسِّ ذَٰلِكَ بِأَنَّهُمْ قَالُوا إِنَّمَا الْبَيْعُ مِثْلُ الرِّبَا وَأَحَلَّ اللَّهُ الْبَيْعَ وَحَرَّمَ الرِّبَا فَمَنْ جَاءَهُ مَوْعِظَةٌ مِنْ رَبِّهِ فَانْتَهَى فَلَهُ مَا سَلَفَ وَأَمْرُهُ إِلَى اللَّهِ وَمَنْ عَادَ فَأُولَٰئِكَ أَصْحَابُ النَّارِ هُمْ فِيهَا خَالِدُونَ

Means: Those who consume interest cannot stand (on the Day of Resurrection) except as one stands who is being beaten by Satan into insanity. That is because they say, “Trade is (just) like interest.” But Allah has permitted trade and has forbidden interest. So whoever has received and admonition from his Lord and desists may have what is past, and his affair rests with Allah. But whoever returns (to dealing in interest or usury) – those are the companions of the Fire; they will abide eternally therein.

(Al-Baqarah: 275)

Islamic economics and Muslim jurists have recently adopted a definition of Ribā methodology that is not only problematic but also at odds with Muslim jurists’ methodology (see Siddique and Ahmed, 2019). This recently established method divides ribā into two categories: ribā of the al-Quran and Hadith. The former is known

as ribā al-nasī'ah and is equivalent to interest paid in loan transactions, whilst the latter is known as ribā al-faḍl and is equivalent to surplus levied in exchange transactions. This philosophy holds that ribā al-nasī'ah also known as “real or explicit” ribā – is the major crime, as it is exclusively forbidden by the Quran. Regarding ribā al-faḍl, the Prophet (PBUH) appends it solely and separately on top of the Quranic or actual ribā. It was Rida (2007) who used this methodology. Using this logic, he came to the conclusion that bank interest is permissible since it is not covered by the Quran's prohibition on ribā. Following in his footsteps, a few other scholars (Shah, 1959; Pal, 1994; Asari, 2008; Abbasi, 2013) also proposed that bank interest differs from ribā of the Quran. In response to these viewpoints, Islamic economists and mainstream Muslim scholars made an effort to clarify that bank interest is forbidden by the Quran (ribā). But in the process, they unwittingly came to terms with the contradiction in the modern scholars' introduction of the concept of ribā. Put another way, even while they rejected the conclusion reached by those who justified bank interest, they nevertheless used their own system of dividing ribā into two categories: that of the Quran and that of the Sunnah.

According to Nyazee (1995) and Siddique and Mushtaq (2019), this way of interpreting ribā breaks the connection between the Quran and Sunnah as early Muslim jurists understood it, as they did not categorize ribā into these two groups. For them, meaning of ribā was defined by the Prophet Muhammad's (PBUH) Sunnah. Stated differently, the Prophet's (PBUH) Sunnah clarified the prohibitions stated in the Quran. A thorough understanding of Muslim jurists' approach will reveal that the drawing a distinction between the ribā of the Quran and the ribā of the Sunnah is illogical, as the Sunnah of the Prophet (PBUH) addresses the issue of interest charges in loan transactions. Regarding ribā al-faḍl and ribā al-nasī'ah, the jurists discuss how both fall within the umbrella of the Quranic prohibition. Only the Hanafi legal (fiqh) system was the subject of an earlier explanation of jurists' technique (Siddique and Mushtaq, 2019).

Fiqh schools have some under fire from contemporary scholars for lacking a consensus definition of Ribā, which means that their opinions cannot be trusted when determining the legal standing of bank interest (Rahman, 1963; Farooq, 2007). As a result, it is suggested that contemporary academics define ribā differently. According to Chapra (1984), the law giver intended monetary trade of products, and the Hadith concerning ribā al-faḍl was intended to prevent barter exchange of goods. According to him, ribā al-faḍl's true significance is not highlighted in the jurists' debate over the

reasons of ‘illah (cause). Others have concluded that there appears to be a misunderstanding over the extent of Ribā due to the dispute among jurists regarding the ‘illah of ribā (Abbasi, 2013; Farooq, 2009). Another thing that has bothered the researches is restricting the debate of the ‘illah of ribā to ribā al-fadl. Some have contended that the purpose of the ban on ribā al-fadl and its underlying cause was to obstruct the entrance to real ribā (Chapra, 1984; Borhan and Saari, 2004). Scholars have mostly concentrated on how a consensus definition of ribā might arise in spite of disagreements among jurists regarding the fundamental reason why ribā is prohibited (Thomas, 2006). However, Farooq (2007) has refused the notion of a consensus definition. In light of this discussion, it is necessary to show that the jurists used a common approach to define ribā and that the number of points of disagreement over the content of ribā. Regarding the prior research on ribā that is currently accessible, it is still unclear how various financial transactions and contracts relate to the idea of ribā within jurists’ frameworks (Siddique et. al., 2024).

Nahar (2015) stated that ribā may exist in financial products in different forms, especially in the case of ribā al-buyu’, which is a sales contract in trade (Iqbal, 2005). This Ribā has subclassifications called ribā al-fadl (uneven exchange value, meaning a lower premium for a larger coverage value) and ribā al-nasī’ah (delayed payment, meaning claims are paid later when risk arise) (Mohd Fadzli, 1996a).

2.3.2.2 *Gharar (Uncertainty)*

Gharar is defined by Ibnu Hazm (1988) as something that is contracted without knowledge of its worth or characteristics at the moment of the deal. Fuqaha have written on gharar in general terms and as a standard. As quoted by Al-Qahtani (1985), Al-Khattabi says that the origin of ambiguity is in what you do not know, and that its interior workings are a mystery that could lead to deceit. Gharar sale falls under the category of sales sections and refers to any transaction where the contract contains an element of uncertainty that does not exist at the time of the sale. Examples of such transactions include the sale of birds in the sky and the contents of animal stomachs (Al-Naisaburi, 2004). Al-shafi’I (2002) parallelly demonstrates gharar by stating that, because of the ambiguity surrounding the precise price for that specific transaction (Al-Shafi’I, 1985), it is selling a single thing at two distinct prices without specifying which of the prices is contracted prices.

Gharar is said to arise when an unseen object is sold and the payment is approved without providing the *Khiyār Ru'yah* or the chance to reverse the transaction, according to Al-Ruyani (2009). according to Al-Muzani (1985), transactions carried out by an unauthorized person, the sale of non-existent goods, the sale of a runaway slave, the sale of fish or birds before they have been apprehended or imprisoned, and other situations give rise to gharar. Gharar can also arise when a salam sale is made with the goal of deferring payment, according to Al-Qarafi (1998). According to Al-Subki (1995), there is gharar in al-musaqoh contracts, which involve watering plants in return for particular plants or fruits, as there is no guarantee that the tree will bear the plant that is the subject of the contract.

In the case of *khiyār al-majlis*, Abu Hanifah and Imam Malik disapproved of this kind of *khiyār* since it did not meet the requirement needed to satisfy the fundamental elements of a contract. Their denial is intended to stop Gharar, which is predicted on the idea of ambiguity surrounding the subject matter of the contract (Al-Qarafi, 1998).

Maliki's school of thinking holds that because of the danger and uncertainty surrounding the delivered asset, buying anything with the goal to not accept delivery can also regarded as gharar (Al-Qairawaini, 2002). Imam Malik (1994) disagreed, arguing that if the payment is delayed because of gharar and the hazards involved, the situation will only worsen and the gharar will become more obvious. Meanwhile, there is a gharar component to establishing conditions of purchase and sale that run counter to the intent of the agreement, such as selling a horse but not allowing it to be ridden. Furthermore, because the status of a debt is questionable, selling someone else's debt without the debtor present or any supporting evidence is considered as gharar (Al-Syaibani, 2006).

Prohibition of gharar makes sense for a number of reasons, including preventing a disagreement between the parties to an exchangeable contract and the unfavourable effects of their displeasure (Al-Hanbali, 1998). An essential component of Islamic finance is gharar avoidance. Gharar is the ambiguity that permeates the core of the contract, as opposed to *jahala*, which denotes an insufficient explanation of the agreement. Hence, a contract containing *jahala* is voidable, but a contract containing gharar, if its quantity is excessive, is void (Aldohni, 2015).

Gharar, or misrepresentation, is not easily classified as innocent, careless, or dishonest in English contract law. Because gharar is considered a "severe moral evil,"

Islamic law does not treat it as fraud or deception, regardless of how little or widespread (Rayner, 1991). It is a difficult and important work to comprehend the application of gharar in modern transaction. Balala (2009) defines gharar as the failure to know on the side of one or both parties to the contract. Lack of knowledge might occasionally imply varied interpretations and points of view depending on the spectator. Vogel and Hayes (1998) concurred, arguing that more investigation and articulation are required to define gharar. He argues that a particular concept for gharar cannot be established by Islamic jurisprudence (Al-Suwailem, 2000).

In light of this, numerous research on gharar in contemporary Islamic financial transactions have been conducted, including those by Suzuki (2013), Nording et al. (2014), and Khanfar (2016). Nevertheless, the articles make clear that there are few instances of Gharar application, and discussions of it are usually tucked away in larger discussions and concerning Islamic financial transactions like *ribā* and *maisir* (gambling).

Gharar is prohibited and is thought to pose a serious threat to the smooth running of Islamic finance transactions. In their publications, but only in broad terms and using generic benchmarks. This is a result of gharar's varying qualities from one transactional contract to the next. In order to prevent gharar components from being used in the operations of contemporary Islamic financial organizations, scholars of Islam have modified the general concepts. Therefore, the purpose of this study is to perform a comprehensive literature analysis of the gharar factor in contemporary Islamic financial transactions (Mohd Noh et al., 2024).

The importance of uncertainty-based prohibition lies at the center of the controversy surrounding conventional insurance. Based on their assessment of the likelihood of gharar, the majority of experts either accept or reject a standard conventional insurance contract (Kamali, 2000). When there is uncertainty about whether the product value will actually materialize following the transaction, either the seller or the buyer experience gharar. For example, if someone sells a camel that is on the loose, they cannot be sure the buyer will be able to catch and use it. Gharar, according to Kamali (2000), "comprises uncertainty and risk-taking as well as excessive speculation, gambling, and ignorance of the material aspects of contracts." It is widely acknowledged that the assessment criteria are set up so that a contract is subject to the rule of gharar only in the following situations:

- to Tolefat and Asutay (2013), gharar is considered excessive rather than light;
- the contract is Mu‘āwah (commercial exchange) rather than Tabarru‘ (donation);
- gharar influences the contract’s primary components (price, value, and time); and
- the contract is not motivated by necessity because there are other options.

Gharar in conventional insurance, according to Muslim jurists who disapproved of it, meets each of these requirements. In the insurance industry, gharar is considered excessive due to following kinds of uncertainty:

- ambiguity over the contract’s result (would the risk materialize at all?);
- ambiguity over the overall amounts of premiums;
- ambiguity over the entire amount of a payout for compensation; and
- ambiguity over the length of the contract (Tolefat and Asutay, 2013).

2.3.2.3 Maisir (Gambling)

Islam has also outright forbade maisir and qimar in any form. Every type of growth or financial gain in qimar is based only on chance and luck. As in winning money from a lottery or lucky draw, for example. However, maisir alludes to the effortless, chance-based accumulation of wealth, regardless of the rights of others (Uddin et al., 2020). Regarding the ban on gambling, academics are in agreement with one another. Allah forbids gambling in surah al-Maidah verse 90:

يَا أَيُّهَا الَّذِينَ ءَامَنُوا إِنَّمَا الْخَمْرُ وَالْمَيْسِرُ وَالْأَنْصَابُ وَالْأَزْلَامُ رَجْسٌ مِّنْ عَمَلِ الشَّيْطَانِ فَاجْتَنِبُوهُ لَعَلَّكُمْ تُفْلِحُونَ

Means: “They ask you concerning wine and gambling. Say: “In them is great sin, and some profits for men; but the sin is greater than the profits”

(Al-Maidah:90)

Husin et al. (2020) stated that conventional insurance operations contain elements of maisir, or gambling, because policyholders' premium payments and the insurer's indemnity in the event of a claim are both ambiguous. In contrast, the concept of tabarru' (gift) occurs in Takāful, wherein players mutually commit to support one another in the event of a specified loss. Since tabarru' does not fall under the group of exchange contracts where the element of maisir is not tolerated, the uncertainty in the payout to policy holders does not give rise to maisir issue under tabarru' principle.

2.3.3 Development of Takāful in Malaysia

According to Akram Laidin (2008), when the first Takāful operator was founded in Malaysia in 1985 to meet the general public's need for protection based on Islamic principles, the concept of Takāful (Islamic insurance) was first introduced. The Takāful Act 1984, which when into force 1984, served as the legal foundation for the creation of Takāful operators. By making a Tabarru', or donation, into the Takāful funds, a group of participants in Malaysia's Takāful program jointly agree to guarantee one another against specific loss or damage that might befall of them. This practice is based on the Shari'ah. A participant's agreement to donate a specific amount of the Takāful contributions that he agrees to pay is known as a Tabarru', and it enables him to fulfil his obligation of mutual assistance and joint guarantee should any of his fellow participants suffer a specific loss. The uncertainty in the Takāful contract is removed by the idea of Tabarru'. After the commitment to help the other participant has been met, the profit or surplus that may result from Takāful operations is shared. As a result, it is possible to think of the Takāful business as a profit-sharing venture between the Takāful operator and the many participants.

Takāful industry, particularly in the financial sector, contributes significantly to declining risks and worldwide basic economic growth (Arifin et al., 2018). About 93% of the global insurance market was kept in the nations of Europe and North America between the middle of the 1960s and the beginning of the 1970s. The shocks to oil prices in the late 1970s and the ensuing inflationary pressure had a negative effect on these countries' share of the global insurance market, which increased to 56% in 2012. The contribution of emerging Asian economies, however, increased during this time, rising from 3.8% in the 1960s to 30% in 2012. The growing economies of Asian nations were predicted to enable growth at an 8% rate, which is more than quadruple the 2.6% growth of Western nations (Swiss Re, 2013). However, the Malaysian Takāful business did

experience a sharp increase with total assets of RM 6.8 million in 2010 (Malaysian Takāful Association, 2010). According to Malaysian Takāful Association (2017), the total value of Takāful assets was RM 29.3 billion in 2017.

According to Eladaida et al. (2020), the Fatwa Committee of the National Council for Islamic Religious Affairs Malaysia issued a fatwa ruling that the type of life insurance is haram on June 15, 1972 since it contains contradicts elements from Islamic Sharī‘ah. Conventional insurance is prohibited and unacceptable under Islamic law according to a similar judgement issued by the Council of Islamic Fiqh Scholars in 1975. To counter this issue, the establishment of Malaysian Takāful industry was outlined from the three phases of Central Bank of Malaysia’s master plan (Bank Negara Malaysia, 2006). The first phase from 1982 to 1992, was about the establishment of Takāful industry’s infrastructure in Malaysia. In 1993 to 2000, the regional cooperation between Takāful operators was strengthened in the second phase. The third and final stage which started from 2001 to present, Financial Master Plan (FSMP) aims to strengthen the legal, sharī‘ah and regulatory framework as well as the capabilities of Takāful operators. Malaysia’s Takāful businesses has grown into vital prime hub in the Malaysian economy, supporting Malaysia’s status as a global Islamic financial center. Takāful sector in Malaysia currently faces significant competition from the conventional insurance industry. The organizational of the products in Takāful effective due to the absence of a secondary market. Islamic insurance businesses also confront a scarcity of Sharī‘ah-compliant products. With the growing number of Takāful companies in Malaysia, there is a need to develop a variety of products.

Table 2.1
Phase of FSMP

Phase 1 (1982-1992)	Phase 2 (1993-2000)	Phase 3 (2001-present)
• A special task force is examining whether it would be feasible to establish an Islamic insurance firm. • A special task force is examining whether it would be feasible to establish an Islamic insurance firm. • Syarikat <i>Takāful</i> Malaysia was the first	• Entry of <i>Takāful</i> Nasional Sdn Bhd, another <i>Takāful</i> operator • In 1995, the ASEAN <i>Takāful</i> Group was founded, and in 1997, ASEAN Re<i>Takāful</i> International (L) Ltd. • Members of the National <i>Sharī‘ah</i> Advisory Council for	• FSMP 2001: strengthening the legal, <i>Sharī‘ah</i>, and regulatory framework and increasing the capability of <i>Takāful</i> operators • In 2001, <i>Takāful</i> Malaysia and <i>Takāful</i> Nasional initiated a project with the Malaysian Life Insurance Association

Phase 1 (1982-1992)	Phase 2 (1993-2000)	Phase 3 (2001-present)
<i>Takāful</i> operator established in 1984 • The development of the industry's fundamental infrastructure was the primary concerns	Islamic Banking and <i>Takāful</i> are appointed • A Code of Ethics for the sector was created by <i>Takāful</i> Malaysia and <i>Takāful</i> National (now known as Etiqa <i>Takāful</i>) in 2000.	to advance industry best practices and boost professionalism. • increasing development and competition brought on by the authorization of additional operators • The Malaysian <i>Takāful</i> Association was founded in 2002 to help the <i>Takāful</i> industry continue to grow. • <i>Takāful</i> Ikhlas was established in 2002. • four new <i>Takāful</i> licenses were issued between 2005 and 2007 • Development of intermediation links in the international market with the establishment of MIFC (Malaysia International Islamic Financial Center) • The awarding of 4 additional family <i>Takāful</i> licenses in 2010 (bringing the total number of <i>Takāful</i> operators to 12) marked the liberalization of the <i>Takāful</i> business in 2009. • Malaysia has expanded the discussion of RBC to <i>Takāful</i> in order to establish stricter capital requirements. The RBC method will be put into practice in 2013, which will help to strengthen the capital basis of the sector.

2.3.4 *ReTakāful*

ReTakāful is a risk-sharing system, just like Takāful. Participants in ReTakāful are different Takāful operators who desire to share their Takāful risks through the ReTakāful mechanism, which is run by ReTakāful operators (NuHtay et al., 2014). This indicates that, except from a few idiosyncrasies that are specific to the ReTakāful operational framework, Takāful and ReTakāful are essentially equivalent in the contractual dimensions. In regard to this, the ReTakāful is defines as follow under the Islamic Financial Service Act 2013 (Malaysia):

“Takāful coverage arranged by a Takāful operator with a second Takāful operator on the risks of the Takāful fund it administers, wholly or partially...”

Takāful and ReTakāful generally adhere to the same Sharī‘ah principles and practices. ReTakāful is also a donation contract (‘Uqūd al-Tabarru‘āt) between Takāful operators to share their individual Takāful risks and liabilities based on defined ReTakāful contributions, into a defined ReTakāful Risk Fund, to cover defined ReTakāful risks, in a defined ReTakāful period, managed by ReTakāful operator based on various contracts such as al-Muḍārabah, al-Wakālah, or hybrid model (NuHtay et al., 2014). The idea of ReTakāful broadens the scope of the concept of solidarity whereby a participant in one Takāful pools essentially helps or is helped by other participants in other Takāful pools managed by various Takāful operators who renounce their individual Takāful risks or pool of individual risks in favour of the Takāful operator.

El Attar et al. (2022) stated that ReTakāful solves the issue of inadequate Takāful funds, which might not be able to accumulate enough reserves to achieve a solvency margin. The fees or surpluses from the ReTakāful contribution will also go to the ReTakāful operator. The Takāful operator and the ReTakāful operator must agree on the percentage or sum of these contributions at the outset of the contract.

Takāful cannot be performed without ReTakāful, according to field studies and current Takāful insurance company practice. Furthermore, actuarial research and a few statistical techniques have demonstrated the ReTakāful has a favourable impact on the business of Takāful insurance companies. Reinsurance thus plays a significant role in boosting the activities of Takāful insurance businesses, offering them protection and preserving their stability (Okba and Elamine, 2020).

2.3.5 Takāful Models

2.3.5.1 *Al-Muḍārabah Model*

Al-Muḍārabah is a profit-sharing agreement (Saeed, 2019), in which players contribute capital (contribution), and the Takāful operator, or mudharib, employs managerial expertise to produce profit from the capital investment. All share the profit in accordance with a predetermined ratio. Two accounts which are the participant special account (PSA) and the participant account (PA) are created in the Al-Muḍārabah contract under Family Takāful. The former researcher goes on to say that, in PA, the majority of the contribution is set aside for investment whereas in PSA, just a small fraction is preserved for paying claims and underwriting costs.

On the other hand, according to Hassan (2020), the contributions made by members of a general Takāful plan are combined into a general Takāful fund and then invested in businesses that adhere to sharī'ah law. Profits are kept in the fund, and the fund is used to pay underwriting costs and insurance claims. The surplus is subsequently shared according to established rules and between rābul-māl (the policy holder) and mudharib. It should be remembered that the mudharib do not share in losses. Contributions from participants and investment income, which is used to fund claims from the General Takāful Fund, cover all losses. If finances are not enough to cover the deficiency, participants offer qarḍ hasnah (an interest-free loan) (Muhammedi et al., 2023).

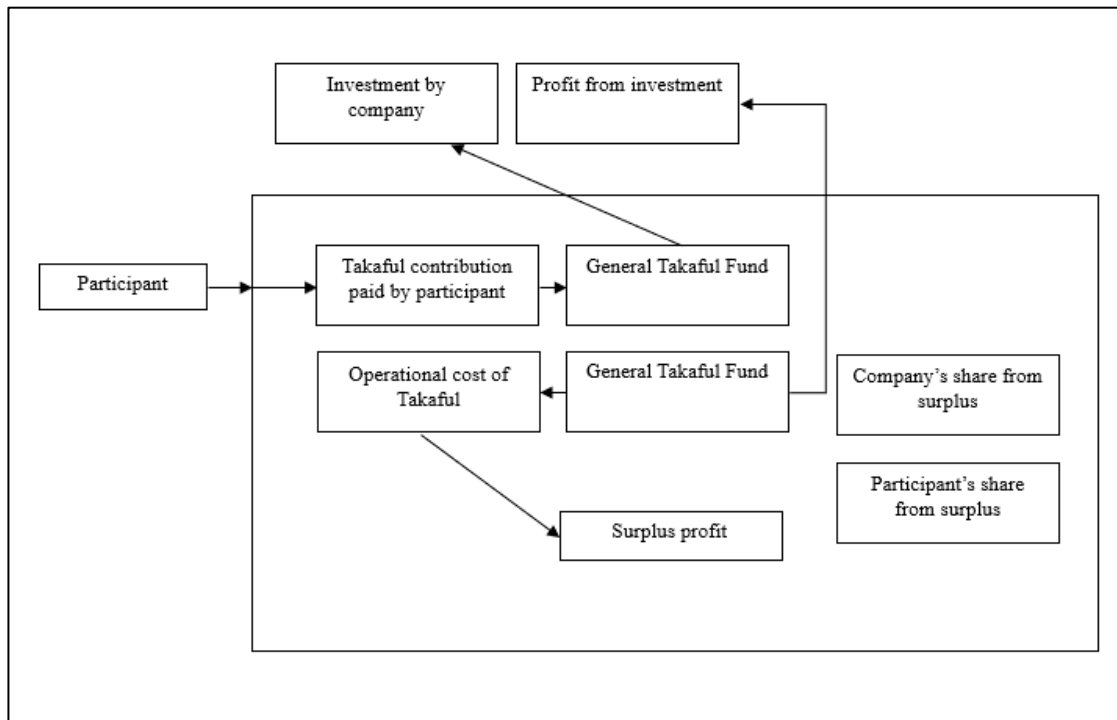


Figure 2.1 *Al-Muḍārabah Model*

Source: Eldaia et al. (2022)

2.3.5.2 *Wakālah Model*

According to Ahmad (2021), ‘representative’ or ‘agency’ are what the Arabic word *wakālah* signifies. Therefore, *wakālah* is a mutually agreed-upon agency relationship between the two parties to carry out specific business activities under the agency structure. On the basis of this premise, a model displays an agency agreement between an operator serving as an agent or representative to a participant acting as a principal, to manage the participation of participants in various Takāful products offered by the operator. According to the agreement, the operator is permitted to charge for the agency services rendered. The money from participant-donated Takāful donations is used to pay fees or service charges. According to this agreement, management costs could be paid for in advance from Takāful funds. Theoretically, the Takāful operator should not be personally liable for any insurance risks. The act of sharing the risk is considered as one of solidarity amongst participants and only involves the group of insured people, hence the name “joint guarantee”. The insurer is, however, subject to a non-negligible insurance risk since it must make up for any shortfalls in the pooled underwriting fund: if insufficient surplus is produced over time, it might not be able to recover a *qarḍ hassan* (Jaffer et al., 2010). Furthermore, there may not be any interest

assessed on the existing loan; however, this is one of the fundamental principles of Islamic banking and must be rigorously adhered to. Therefore, contrary to what the concept's creators may have intended, the Takāful operator under a wakālah model actually faces greater risk. Extreme underfunding of the underwriting fund can result in a permanent deficit in the fund, putting the Takāful operator's duty at a risk.

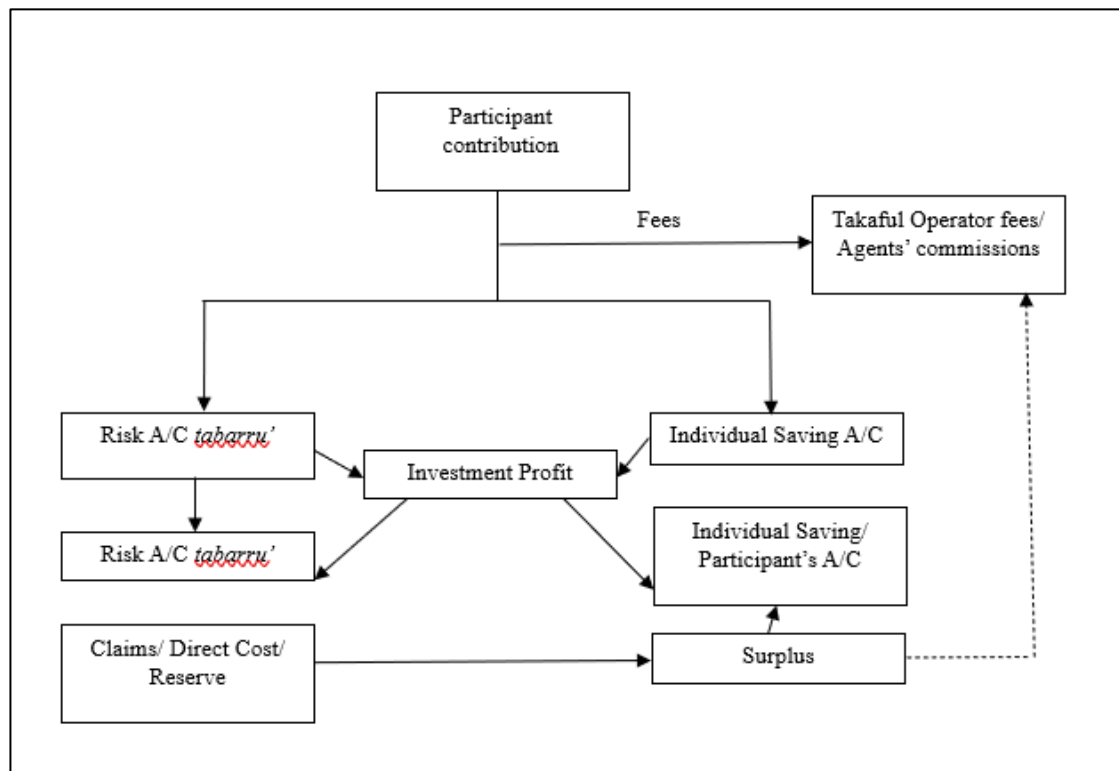


Figure 2.2 Wakālah Model

2.3.5.3 Mixed Model

The hybrid model combines the wakālah and Al-muḍārabah models, with wakālah being used for underwriting agreements and Al-muḍārabah being used for investment successes (Djafri et al., 2018). In this regard, the stakeholders serve as the wakeel (agent) on behalf of the contributors to manage their capitals, wherein the Takāful firm (stakeholders) receives a contribution, pays claims, set up retakāful, and does all other necessary tasks associated with the Takāful business (Khan, 2019). In exchange for carrying out these responsibilities, the corporation charges each contributor a fee known as wakālah fee, which is often a percentage of the donation

provided by each contributor. In terms of investment, the company makes use of the additional contributions in accordance with al-Al-muḍārabah agreements, acting as mudharib on behalf of the contributors (rābul-māl or capital suppliers) (Alkhan et al., 2020).

However, the ratio of profit is determined and agreed upon between the two parties at the beginning of the trade in order to satisfy the sharī‘ah requirement of the al-Al-muḍārabah deal. According to supporters of this theory, Al-muḍārabah approach is more appropriate for managing and investing Takāful funds (Almulhim, 2019), and it gives the Takāful operator an incentive to increase its return by splitting profits. For the agency charge (cost of insurance), the wakālah model may be more suitable than Al-muḍārabah for operating the Takāful business. It is less contentious and more transparent than the traditional Takāful fund indictment of expenses, such as marketing commissions. These actions must be seen as a part of efforts to find the optimal Takāful model and to bring existing Takāful models into harmony (Akhter, 2009).

The mixed model is supported by several financial authorities and international organizations (such as Accounting and Auditing Organization for IFI, AAOIFI), as it capitalizes on the advantages of both the wakālah and Al-muḍārabah models. While using the wakālah model enables the operator to recover the administrative costs of underwriting, using the Al-muḍārabah model to investment events helps reduce principal-agent concerns (Swiss Re, 2008). The Middle Eastern market and Takāful businesses all around the world use this concept extensively. Takāful Nasional Berhad and Maybank Takāful Berhad both engage in it in Malaysia. A proponent of this model claims it combines the advantages of the wakālah and Al-muḍārabah models (Obaidullah, 2005). Therefore, creating a global model that is standardized may be helpful.

The deployment of a specific Takāful model makes the CG debate contentious in terms of contributors’ rights to Takāful firms. Even if the workers are functioning as agents, trustees, and managers of the invested funds, which collect their profits in the form of Al-muḍārabah and the Agency fees, their primary focus was to maximize the profits of the stakeholders while disregarding the rights of the participants. Because the participants do not hold positions on the Board of Directors (BODs), they do not have the authority to challenge the BODs, which results in the BODs not being held accountable and their decisions not being adequately monitored for the participants and the community as a whole (Archer et al., 2002).

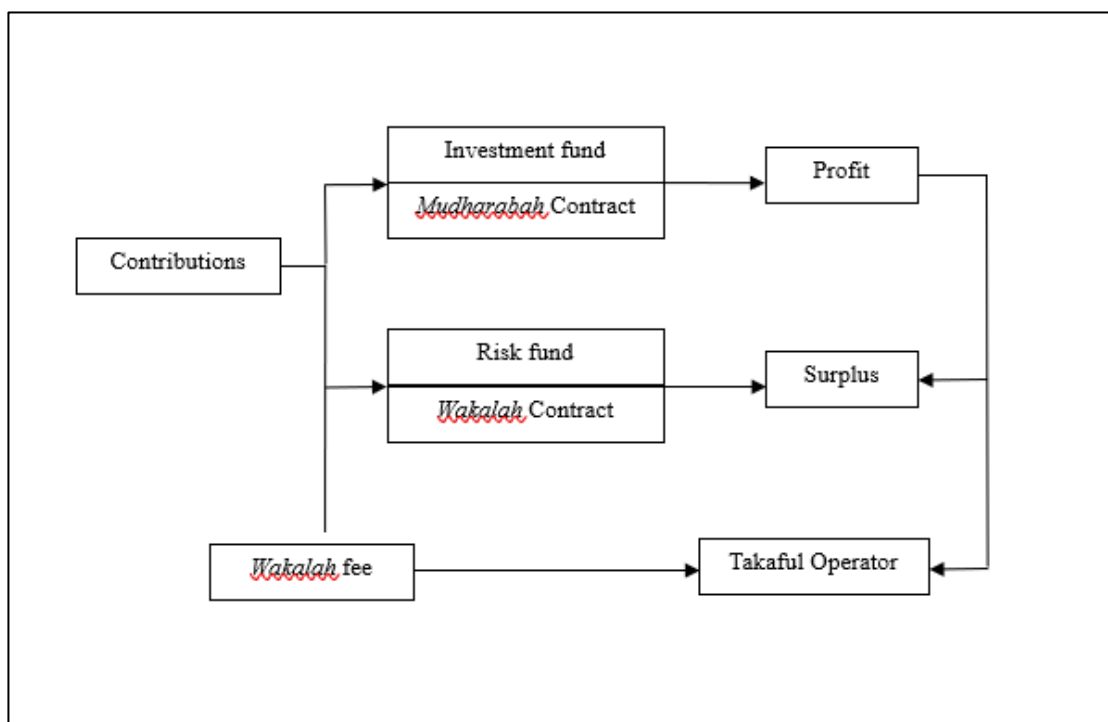


Figure 2.3 Hybrid Model
Source: Eldaia et al. (2022)

2.3.6 Product of Takāful

2.3.6.1 General Takāful

On an annual renewal basis, general Takāful products are often created to offer a form of shari‘ah-compliant risk-sharing and risk management procedures. While the relationship between the Takāful operator and participants is based on Al-muḍārabah, wakālah or waqf, the relationship among the participants in this scheme is based on ta’awuni and tabarru’ (Eldaia et al., 2022). According to Abu-Hussin et al. (2014), motor vehicles, motorbikes, homes, and other tangible property are covered under general Takāful.

Kantakij et al., (2020) stated that the general Takāful business makes up the majority of Takāful business in the Middle and Far East markets, despite there being many varieties of Takāful. For instance, in Saudi Arabia and the UAE, general Takāful amounts for 96% and 78% of total contributions, respectively. There are internal and external elements that have an impact on financial performance. Size, liquidity, reliance on ReTakāful, and gross contributions are four company-specific criteria that come under the control of the Takāful operator and may differ from one company to another. These factors are related to the former category. The latter category deals with three

economic variables which GDP per capita, interest rates, and equity returns that are influenced by the overall state of the economy.

2.3.6.2 *Family Takāful*

Human beings are the subject of family Takāful, whereas property is the subject of general Takāful. More specifically, in family Takāful, participants are financially protected from impending death and potential accidents (Purwaningrum and Filianti, 2020). If the insured reaches his ultimate age or passes away prior to retirement, this sort of insurance shields him from material losses. Life insurance has a risk of death, which puts the family at risk of losing their source of income. Additionally, this insurance covers liabilities, such as promises for children that they will not be neglected in life if their father passes away too soon. Additionally, the two Takāful have different operating principles. The underlying principle is ta'awun, or helping others, nevertheless (Sukmaningrum et al., 2022).

The gharar, ribā, and maisir operational structure for family Takāful must be avoided. To avoid these components, family Takāful uses two primary contract types: tabarru' contracts and Al-muḍārabah (profit-sharing) contracts. The business creates two accounts as part of its activities. The first is a tabarru' fund account that can hold deposits made by every participant with the goal of assisting other participants. The tabarru's account will be used to pay the claim if a participant is at risk of getting sick, getting into an accident, or dying. Each member supports other individuals who are at danger through this process. Second, investments are made using Al-Muḍārabah contract using the participant's personal account or tijarah fund. The insurance firm, on the other hand, merely serves as an operator who accepts participants' directives to manage the funds from client contributions (Mapuna, 2019).

2.4 Underpinned Theories

2.4.1 Theory of Reasoned Action (TRA)

According to the Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1980), behaviour is influenced by intention, which is influenced by attitude and subjective norm. In essence, intention represents the likelihood that someone would act in a particular way (Md Husin et al., 2013). The difference between attitude and subjective norm is that the former refers to a person's overall opinion of how favourable or

unfavourable they see the behaviour in issue (Ajzen & Fishbein, 1980). In practical settings, TRA is able to explain, comprehend, predict, and affect almost any human behaviour and is not constrained to a particular behaviour area (Ajzen & Fishbein, 1980). Regarding behaviour, TRA has also been applied in the financial services industry.

According to Farhat et al. (2019), their study used the TRA model to forecast the factors that will influence family Takāful buyers' behaviour in Pakistan. The behavioural intention (BI), subjective norm (SBN), and attitude (ATT) are the three variables that make up the TRA, which is based on social and psychological aspects. According to the TRA, a person's behavioural intention is determined by their attitude and subjective norm. In the past, a number of researches have applied the TRA model to a variety of situations involving the adoption of Islamic banking and financial goals. In other researches, Razak and Abduh (2012) utilized TRA to gauge client attitudes toward declining partnership home financing in Islamic Banking, and Fauziah et al. (2011) used TRA to predict intention to adopt Islamic home finance. Similar to this, Lada et al. (2009) used TRA to forecast consumers' intentions to purchase food. Apart from that, other prior researchers have used the TRA, such as Ab Rahim and Amin (2011), who found that attitude, subjective norm, and the amount of information available are important determinants of Islamic insurance acceptance. In addition, according to Amin (2012), attitudes, subjective norms, and the amount of knowledge available are all important variables in selecting whether or not to participate in Islamic insurance. However, according to Ajzen and Fishbein (1980), TRA only applies to voluntary behaviour and most behaviour are not voluntary.

2.4.2 Theory of Planned Behavior (TPB)

According to Jose et al. (2022), one of the basic theoretical frameworks in psychology that is used to describe human activities in a variety of contexts is the theory of planned behavior. The behavioral intention theory, proposed by Ajzen (1991), is a theory of planned behavior that looks into the factors that lead up to an individual's willingness to do action. Among the factors influencing behavioral intention that are the antecedents, which include attitude, subjective norm, and perceived behavioral control. However, there has been criticism levelled at the theory of planned behavior model's validity. The primary issue is that the model was unable to adequately account for the variability of behavior and/or intention (Sniehotta et al., 2014). In order to provide a

more thorough explanation of the behavioral intention, recent researchers expanded the theory of planned behavior model by adding a new explanatory variable (Vinnell et al., 2021).

The most direct predictor of behavior, according to the theory of reasoned action (Ajzen and Fishbein, 1980), is an individual's intention for the behavior. One can anticipate a person to be more motivated to conduct (or not perform) a behavior if their intention is greater. Beliefs and attitudes are predictive of intent when the target, the action itself, the behavioral context, and the appropriate moment to act are all congruent (Fishbein and Ajze, 1975). Attitudinal and normative beliefs are two fundamentally separate types of beliefs that influence behavioral intentions. Every set of beliefs is made up of the idea that a particular behavior will result in a given set of outcomes multiplied by the value that is placed on those outcomes. Attitude are predicted on the potential advantages or disadvantages of engaging in a behavior. The degree of social pressure from other significant individuals to engage in the behavior or refrain from it is referred to as normative views. Although their relative relevance will change depending on the circumstances, attitudes toward a behavior and the level of normative support are thought to simultaneously produce behavioral intention (Fishbein et al., 1993).

By adding perceptions of behavioral control, the theory of planned behavior (Ajzen 1991; Ajzen and Madden, 1986) expands on the notion of reasoned action. There are other important factors that either support or contradict the potential behavior, even in cases where normative and attitude beliefs are positive. Positive intentions cannot always translate into behavior if opportunities are not present. The degree to which the focal behavior depends on outside resources is the limit of the individual's ability to control their behavior. Hence, three main factors impact behavioral intent: the degree of perceived personal prerogative regarding the behavior (perceived behavioral control), the evaluation of the behavior (attitude toward the behavior), and the perceived social pressure to perform or not perform the behavior (normative support). In addition, TPB was used by Siang and Weng (2011) to evaluate non-Muslim consumers' intentions to use Islamic banking services and products in Malaysia. They discovered that respondents' views, subjective norms, and perceived behavioral control were predictive of their intents to use Islamic banking products and services, which is in line with TPB's recommendations. They also discovered that, in terms of influence, attitude is the most

significant elements, followed by perceived behavioral control and subjective norm. From these past researches, the TPB model is the most suitable for this study.

2.5 Factors that related with the theories

2.5.1 Behaviour

According to Ajzen (1988) and Sheppard et al. (1988), when behaviours do not pose major control challenges, they can be predicted with considerable accuracy from intentions. Stronger intentions toward engaging in a Takāful scheme should imply a greater possibility of taking action. This remark is backed up by Ajzen (1991), who claims that behavioural intention and behavioural control can be utilized to predict behavioural performance directly. It means that in order to conduct a given behaviour, a person must have a stronger desire to do so. Aside from that, if two people have an equally strong intentions to learn how to participate in Takāful scheme and both try, the person is confident in his intention, even though he has never done before is more likely to preserve than the person who doubts with his intention. This demonstrates the perceived behavioural control is also important in deciding the behaviour.

As it relates to Takāful, perceived behavioural control has also been operationalized into two dimensions: enabling conditions and self-regulatory efficacy (Husin and Rahman, 2013). The study by Amin (2012), like that by Rahim and Amin (2011), operationalized perceived behavioural control as information a person has access to that can help him or her in enforcing a behaviour. The study's key finding was the importance of information accessibility in influencing a person's intention to participate in Takāful.

According to Hassan (2022a), perceived behavioural control is a result of control beliefs, which are a person's perceptions of the opportunities or resources that are necessary to carry out a certain behaviour. Wahab (2018) further explains perceived behavioural control as a person's view of how well he or she can control circumstances that enable or restrict a person's actions to carry out a given conduct in a particular circumstance.

2.5.2 Behavioural intention

According to Doswell et al (2011), TRA can be used to comprehend a person's voluntary behavior. They discover that the theory's concepts are relevant to a person's

fundamental drive to take an activity. According to Ajzen and Madden (1986), the intention to carry out a particular behaviour comes before the actual behaviour. Due to the conviction that engaging in the behaviour would produce a particular result, this intention is referred to as a behavioural intention. In addition, according to Colman (2015), behavioural intention is crucial to the theory since it is influenced by attitudes toward behaviours and subjective norms. Accordingly, this theory contends that behaviours are more likely to be performed since stronger intentions result in greater effort to carry them out (Haji Wahab, 2018).

According to Rifas et al. (2023), numerous researches have looked into people's intentions when using technology, family takāful, and internet buying (Aziz et al., 2019). A small percentage of young people will probably start a micro, small, and medium entrepreneurs (MSME). According to Theory of Planned Behaviour (TPB), Indonesian Muslim youth are enterprising (Baharuddin and Ab Rahman, 2021). Huda et al. (2012) discovered that whereas external impacts were not substantiated, attitude and perceived behavioural control had an intrinsic impact on intention. According to Ajzen (1991), attitude, subjective norms, and perceived behaviour control all influence intention, which in turn predicts conduct. This claim about the factors influencing personal intention was expanded by TPB, where perceived behavioural control was now seen as a significant factor influencing behavioural intention (Ajzen, 1991). Three beliefs which are behavioural belief (attitude), normative belief (subjective norms), and control belief (PBC) that can be used to predict behaviour intentions. According to Sommer (2011), behavioural beliefs account for the existence of elements that either help or hinder people from carrying out behaviour-based acts.

2.5.3 Awareness and knowledge

According to Harunnur et al. (2019), the word 'sharī'ah' comes from the Arabic word which means 'divine law', or 'God's Law'. Islamic sharī'ah has four sources which are Quranic interpretations, Hadith interpretation, ijma' and Qiyas/ijtihad. Quranic interpretations are God's guidance to humanity through the last messenger, Prophet Muhammad (PBUH). Hadith interpretations are about Prophet's saying and lifestyle, meanwhile *Ijma'* is an agreement among Muslim scholars or jurists and Qiyas/Ijtihad is the individual reasoning (Harunnur et al., 2019). Because of rules of dealing with every human life provided by Allah (SWT) and Prophet Muhammad (PBUH), Islam is a complete code of the life. Allah said in *al-Baqarah* verse 275:

الَّذِينَ يَأْكُلُونَ الرِّبَا لَا يَقُومُونَ إِلَّا كَمَا يَقُومُ الَّذِي يَتَخَبَّطُهُ الشَّيْطَانُ مِنَ الْمَسِّ ذَلِكَ بِأَنَّهُمْ قَالُوا إِنَّمَا الْبَيْعُ مِثْلُ الرِّبَا وَأَحَلَّ اللَّهُ الْبَيْعَ وَحَرَّمَ الرِّبَا فَمَنْ جَاءَهُ مَوْعِظَةٌ مِنْ رَبِّهِ فَانْتَهَى فَلَهُ مَا سَلَفَ وَأَمْرُهُ إِلَى اللَّهِ وَمَنْ عَادَ فَأُولَئِكَ أَصْحَابُ النَّارِ هُمْ فِيهَا خَالِدُونَ

Means: “But those who take usury will rise up on the Day of Resurrection like someone tormented by Satan’s touch. That is because they say, ‘Trade and usury are the same,’ but God has allowed trade and forbidden usury. Whoever, on receiving God’s warning, stops taking usury may keep his past gains- God will be his judge- but whoever goes back to usury will be an inhabitant of the Fire, there to remain.

(Al-Baqarah:275)

The primary premise of following sharī‘ah in the banking industry is found in this verse. Furthermore, Islamic banks are barred from engaging in *gharar* (very dangerous ventures), *maisir* (projects whose outcomes are determined by luck or chance), and *haram* or harmful product such as tobacco, alcohol, short-selling, pornography. This sharī‘ah rule established Halal business practices which prevent all forms of inequity from the financial system and ensure socioeconomic progress.

According to Cheong (2021), sharī‘ah-compliance refers to following Islamic Law or known as sharī‘ah. This label has been spread widely in financial or non-financial products. sharī‘ah-compliance is not only limited to equities and other financial instruments, consumer staples, food production and banking services. sharī‘ah-compliance is typically measured using a combination of two criteria which are qualitative and quantitative. Qualitative is related to the company that engaged with businesses that are prohibited that are prohibited by Islam or *haram*. Meanwhile, quantitative is related to the company’s involve in businesses within allowed limits which advised by an appointed sharī‘ah Supervisory Board. Conventional financial services such as banking and insurance involved in alcohol, tobacco and pork are the most common *haram* industries. Quantitative criteria focus on the company’s interest income, debt and receivables in accordance with the Islamic prohibitions on *ribā*, and *gharar*. A company is considered as sharī‘ah-compliant if it passes both qualitative and quantitative standards.

According to Aziz et al. (2019), consumer behaviour is largely influenced by product knowledge. With more information about a product or service, consumers are more likely to make thoughtful selections. Using that information, the product’s value

is calculated, and purchase is made. Risk-taking behaviour is affected by various factors. Processing data about a certain product requires prior knowledge.

According to Kazaure (2019), awareness is the capacity of people to directly know, understand, experience, and receive a good or service in their surroundings. Conversely, awareness can be thought of as the customer's perception and knowledge of any particular good, service, or circumstance (Rogers, 1962). According to Areeba et al. (2020), 'awareness' refers to a customer's level of knowledge and attitude regarding Islamic insurance products and services. The relationship between consumer awareness and the use of particular goods or services has been the subject of numerous researches. For instance, Mohamed (2017) discovers that when employing Islamic insurance products in the context of Kenya, client understanding of a product has a favourable on their decision.

Due to their lack of familiarity with the offered goods and services, customers' purchase decisions are significantly impacted by their ignorance about Islamic insurance. Additionally, this study discovered that awareness greatly increases a customer's propensity to purchase an insurance coverage (Poan et al., 2021). Customer awareness has a significant positive correlation with consumer behaviour toward Takāful services, claim Kahinde and Sharofiddin (2021). According to Sheikh Ali and Abdi Jama (2016), establishing an understanding of the applications and advantages built into a good or service is crucial. In Mogadishu, Somalia, the study also discovered a relationship between behavioural desire to utilize Takāful products and knowledge about Takāful insurance. Raza (2019) stated that customers' perception and information about a given product, service or circumstance are referred to awareness. It assists clients and deciding on a product and purchasing a product. Customers will not buy a product or service until they are informed about it. According to several research, awareness is a crucial component in buying intention. Purchase intent is directly influenced by awareness. Customers favour products and services about which they are knowledgeable.

Bangaan Abdullah et al. (2021) stated in their paper that low-income groups have a bad opinion of insurance due to lack of knowledge. Insurance is certainly a concept for the wealthy, and it has even been linked to unnecessary, wasteful and unfair purchases. According to other researcher, product knowledge is a driving element in Takāful product purchases. Individuals might feel confident in existing items and thanks to the availability of information and expertise, which encourages them to buy the

product. Knowledge has been discovered to be a factor of microinsurance demand by several researchers. In addition, due to the lack of information about the importance of Takāful, Takāful products continue to be poorly welcomed in Muslim culture, Malaysians are eager to subscribe Islamic insurance services if they are informed and comprehend the benefits. To summarize, knowledge and comprehension of insurance and Takāful products are clearly important in influencing the decision to purchase insurance or Takāful protection.

Customers' adoption of Takāful products is positively and significantly impacted by their knowledge of the Takāful service. Family Takāful products have a strong positive correlation with consumer awareness (Ibrahim et al., 2021). According to the studies mentioned above, consumers' decisions are substantially influenced by their lack of knowledge or awareness of the goods and services provided by Takāful operator. So according to Maiyaki and Ayuba (2015), insurance penetration suffers a bug challenge in promoting their goods because of a lack of public awareness.

2.5.4 Sharī'ah Compliant

According to Fendi (2020), for two main reasons, according to sharī'ah provisions, the conventional guarantee of deposits at Islamic banks is a transaction that does not comply with sharī'ah. Firstly, conventional insurance is viewed as a prohibited contract from a sharī'ah perspective because it implies a significant amount of gharar (uncertainty) (Archer et al., 2009, p. 9). Second, the various deposit kinds offered by Islamic banks are governed by various contractual frameworks between the depositor and the Islamic bank, and each of these frameworks implies a different allowable limit on loss coverage. Stated differently, sharī'ah provisions allow Islamic banks to ensure certain types of deposits at their expense and shield depositors from doing so; for other types of deposits with different contractual bases, they forbid Islamic banks from insuring the deposits and give depositors the option to do so. The Quran, the Sunnah, the Ijma' and qiyās are the basic sources of sharī'ah, which serve as the standard reference for this permissibility. Because most modern financial contracts and transactions did not exist when these materials were created, sharī'ah scholars extracted the so-called sharī'ah principles, or Fiqh rules, from both primary and secondary sources. The legitimacy of financial transactions and contracts is determined by sharī'ah principles, which also provide rulings and decisions about this legitimacy.

Islamic Financial Institutions (IFIs) were created based on principles that forbid the separation of religious and worldly affairs, whereas the traditional system concentrates on the financial and economic sides of transaction. In order to achieve socioeconomic growth, Wiyono and Rahmayuni (2012) offer both Muslim and non-Muslim a fair and equitable system of justice (Venardos, 2015) as well as an awareness of the *maqasid shari'ah* (Mohd Shariff, 2010). *Maqasid shari'ah* generally aims to protect the public interest and avoid harm, which is in line with the goals of the *shari'ah*. Essential (*dharuriyyah*), complementary (*hajiyyah*), and embellishments (*tahsiniyyah*) are all covered. Without a doubt, IFIs are supposed to turn a profit and fulfil their social and moral responsibilities. The institutions must adhere to the principles and practices of commercial transactions outlined in the al-Quran and Hadith, in addition to adhering to *shari'ah* legislation (Wan Ibrahim and Ismail, 2015). *Shari'ah* is supposed to fulfil the advancement of commerce, practice, and thought, despite their unquestionable laws and standards. "People have clear intentions, and they base their decisions on evidence," states the core idea guiding these actions (Wilson, 2014, p. 258). Dusuki (2008) goes on to discuss how all transactions made through Islamic banks must adhere to *shari'ah* in terms of forms, legal nuances, and meeting socioeconomic requirements.

The study from Johan et al. (2020) shown some significant findings, as there were differences in the adoption of Islamic banking products between Muslims and non-Muslims. Strong and substantial correlations were seen in both groups between attitude, subjective norm, and intention to uphold *shari'ah*-compliant credit card.

2.5.5 Social Factor/Social Influence

According to Mehboob Shaikh (2023), social elements include roles and laws that affect one's perception of oneself and aim. According to Triandis (1977), rules or norms are "beliefs that some behaviors are correct, appropriate or desirable and other behaviors are incorrect, inappropriate, immoral or undesirable." These are essentially social standards regarding what must be done and what must not be neglected. Roles are also described as "sets of behaviors that are considered appropriate for persons holding a particular position in a group" (Triandis, 1977).

Hassan et al. (2020) stated that according to Ajzen (1985), social influence is peer pressure that people experience from their families, friends, and environment, which affects their decision to engage in a certain behaviour. Taylor and Todd (1995) claims that social influence has a favourable influence on behavioural intention in a

variety of contexts. Peer pressure and cultural norm typically impact decisions about Islamic banking and Takāful insurance. Meanwhile, Kahinde et al. (2021) stated that people's opinions impacted by custom, values, culture, socialization, sale, advertisement, and marketing are referred to as the social as the social factor. These are some examples of how social variables might affect someone's ideology when they are impacted by others. Informational social factors occur when people lack of confidence in a situation. Individual acceptability levels in various situations can be influenced by certain situations.

Family, friends, and co-workers are the main variables for gathering social characteristics, according to Amin (2016) findings. As a result, communications sent by these parties within a social circle via oral and written communication that can be shared via SMS and Facebook have a particularly big impact on the recipient. The number of social components increases as the internet becomes more adept at approving things. Shaikh and Noordin (2020) recognise the same rationale, according to which a person's social circle shapes their decision to make a final patronage, as in the case of mortgage. An important link between social factors and internet stock trading in Malaysia is found in earlier research by Ramayah et al (2014). The authors acknowledge that exposing non-users to online stock trading may increase societal pressure. The same author and colleagues, Ramayah et al. (2009), also find that social factors have a substantial impact on people's intentions to file taxes online, expanding the applicability of the social dimension to the setting of tax filing in Malaysia. However, the impact of societal determinants on family Takāful adoption is absent in an Islamic insurance environment. The social factors construct is used in the current study to achieve this goal of having a comprehensive understanding of determinant factor of Takāful in Selangor and Kuala Lumpur. According to earlier research, social influences on intention come from peers, referent groups, families, and others in various contexts.

Bhatti et al. (2020) stated in their paper that normative beliefs are concerned with the likelihood that significant referent individuals or groups would either approve of or disapprove of engaging in a particular behaviour. According to normative views, the desire to act as significant referents do or believe one would act motivates behaviour. The chance that referents, with whom people are compelled to comply, will approve or disapprove of a particular behaviour is what normative views are concerned with. Referents like friends, family, word-of-mouth, and the media are all viable options. Previous research has shown that the most frequent reason for Family Takāful

participation is recommendations from family and friends. The analysis of a variety of Islamic banking systems showed that friends and family play a significant role.

Two latent aspects of the subjective norm, namely “word-of-mouth referents” and “media referents,” were also included in the study by Md Husin et al. (2013). While “media referents” refers to the influence of mass media that could affect one’s intention toward the in-question behaviour. Word-of-mouth referents refers to personal referents such as family members and friends. In other words, customers may be persuaded to buy insurance and Takāful by their friends, family members, or religious leaders. On the other hand, the mass media, including magazines, newspapers, television, and any other relevant sources, can also persuade people to buy insurance and Takāful.

Meanwhile, Javabdeh et al. (2014) mentioned in their paper that a pleased customer’s word-of-mouth (WOM) is an oral or written recommendation to potential customers of goods or services. In today’s competitive industry, one of the most difficult things for marketers is creating demand. Advertising, sales promotion, and public relations are the three main forms of traditional communication methods. These are two types of communication channels: non-personal and personal. On a non-personal level, magazines, radio and television, online services, and website interact. WOM is very significant in high-volume sales. Because most customers prefer “informal and personal communication sources in making purchase decisions rather than formal and organizational reasons such as advertising efforts.” It has an impact on sales.

2.5.6 Service Quality

The provision of quality services is essential to the development and expansion of organizations, and the quality issue is a fundamental one (Kashif et al., 2016). Academics and business professionals have traditionally considered research on the service quality notion to be of the utmost importance. As earlier research has shown (Endara et al., (2019), service quality is essential for firms to maintain a competitive edge in the market. Customer expectations and impressions of offered services that are not quantitatively measurable in nature are compared to determine service quality (Osman et al., 2022).

According to Mihardjo et al. (2020), since the insurance industry and the nature of business are very people-oriented, Takāful operators must hire experienced and empathetic insurer agents to comfort, educate, and convince consumers to embrace Takāful products (Djafri and Noordin, 2017). In the insurance industry, human

resources are crucial for providing accurate, high-quality information and attracting customers by offering the finest suggestions for launching their services in a cutthroat, international market.

According to Abdur Rehman et al. (2020), sincerity of the service, which refers to the sincerity of service workers, is another aspect of service quality that is important in developing corporate image (Raajpoot, 2004). Giving clients' interests and well-being top priority is what it means to provide sincere service. The article makes the case that customer impressions of the sincerity of the service have a favourable impact on a company's corporate image (Raajpoot, 2004). In fact, being sincere may mean that a company puts its consumers' needs and interests first. Customer service was thought to be a substantial and advantageous predictor of brand image by Rahi et al. (2017). Past research that looked into and demonstrated the beneficial impact of several aspects of service quality in corporate image reinforce this impact of perceived sincerity of service on corporate image.

According to Saoula et al. (2023), the importance of customer satisfaction and service quality (Mohd Shaladdin et al., 2018), the function of agents (Kamil and Nor, 2014), perceived cost (Edward and Sahadev, 2011), and corporate image (Bhatti, 2018), all which have a favourable impact on customer satisfaction, have been highlighted in numerous studies. The results of previous studies showed that the corporate image of the company in the market, along with the favourable amount of service quality, perception of the cost of financial services, and the agent's credibility, have a significant impact on the strength or weakness of the relationships between the customers and the financial insurance service provider.

For a long time now, many businesses have realized how important customer happiness and service quality are (Sallam, 2016). This partnership is founded on the solid bonds of commitment and trust that exist between the companies and their clients (Rather et al., 2019). Because it conveys the level of devotion from the businesses in the service offering (Devece Garcia-Agreda and Riberio-Navarrete, 2015), service quality is a crucial element of trust. Customers are constantly drawn to high-quality services because they demonstrate a dedication to offering higher value (Rather and Camilleri, 2019). Accordingly, the results of a quality service are referred to as customer satisfaction (Grönroos, 1997). Superior-quality services increase consumer happiness, according to research by Bahari (2014). Service quality refers to the general evaluation criteria and is akin to how one feels about receiving services. As a result, it is viewed as

a significant antecedent in all elements of customer satisfaction from a broad perspective (Zeithaml et al., 1996). According to earlier research (Nguyen et al., 2018), better customer satisfaction results from better service quality.

2.5.7 Financial Technology (Fintech)

The use of technology to deliver a variety of financial services is known as financial technology, or Fintech (Dwivedi et al., 2021). According to Firmansyah et al. (2020), fintech companies are creative middlemen that use technology innovations to enable new business models, optimize operational procedures, and provide improved goods and services. Fintech began to take shape in the early 1990s, right around the time of the Internet's introduction. This development has been crucial in influencing the direction of the Fintech industry (Guang-Wen and Siddik, 2023). Fintech research has been rapidly gaining traction, even though it was initially recorded by Mackenzie in 2015 (Siddik et al., 2023), with the majority of the research available in the various journals. Fintech is viewed as a disruptive force that could improve the transparency, usability, and affordability of finance (Harris, 2021). By upending established financial service providers like banks, insurance companies, and investment firms, it is also seen as a catalyst for completely changing the financial landscape (Fang et al., 2023). Apart from technological progress, Fintech has gained prominence because of its distinct legal framework, which permits companies to function more adaptably in regulatory sandboxes and promote creativity (Romanova and Kudinska, 2016).

The Fintech ecosystem is made up of a number of different components, such as traditional financial institutions, government agencies, Fintech start-ups, and technology developers (Muthukannan et al., 2020). Fintech business models encompass a wide range of industries within ecosystem, including capital markets, insurance, peer-to-peer (P2P) lending, crowdfunding, wealth management, and payments (Zhang et al., 2021). Fintech has grown significantly in the last several years, and research from a variety of fields and viewpoints have emerged (Wonglimpiarat, 2017). Furthermore, Mohsin and Jamaani (2023a) note that Fintech is a dynamic and developing field propelled by technology innovation and a unique legal environment. By providing innovative solutions and posing a challenge to established firms, it has the potential to completely transform the financial industry (Mohsin et al., 2021). The growing corpus of revolutionary phenomena. For instance, there is a significant study vacuum on DT's adoption of Fintech and green financing (Mohsin and Jamaani, 2023b). Few research

has looked at the opportunities and difficulties of combining Fintech advances to improve the efficiency of green financing programs. There is still much to learn about how cutting-edge technologies like blockchain, AI and digital platforms may improve resource allocation, transparency, and effect measurement in sustainable finance (Mohsin et al., 2021). Closing this gap will be essential to maximizing Fintech's ability to promote environmental sustainability, as well as to devise plans to mitigate risks and guarantee the ethical incorporation of technology in the green financial ecosystem (Hidayat-ur-Rehman et al., 2024).

2.5.8 Role of Agent

Sales representatives, often known as Takāful agents, are in charge of providing Takāful services in addition to selling Takāful goods. The Qur'an describes the agent, also known as wakeel as the individual who represents another person in certain situations (Shukor, 2020). As mentioned in Surah Al-Imran verse 173 and Surah An-Nisa verse 132:

الَّذِينَ قَالَ لَهُمُ النَّاسُ إِنَّ النَّاسَ قَدْ جَمَعُوا لَكُمْ فَاخْشَوْهُمْ فَزَادَهُمْ إِيمَانًا وَقَالُوا حَسْبُنَا اللَّهُ وَنِعْمَ الْوَكِيلُ

Means: "Those who were warned, "Your enemies have mobilized their forces against you, so fear them," the warning only made them grow stronger in faith and they replied, "Allah (alone) is sufficient (as an aid) for us and (He) is the best Protector."

(Al-Imran: 173)

وَلِلَّهِ مَا فِي السَّمٰوٰتِ وَمَا فِي الْاَرْضِ ۚ وَكَفٰى بِاللّٰهِ وَكِيلًا

Means: To Allah (alone) belongs whatever is in the heavens and whatever is on the earth. And Allah is sufficient as a Trustee of Affairs.

(An-Nisa: 132)

Wakeel may indicate to defend or preserve (hifz) (Hairul Azlan et al., 2004). It also refers to tafwid, which is defined as 'to entrust' in Al-Quran in Surah Al-Imran verse 160 and Surah Yusuf verse 67, as well as "to be responsible for one's own affairs in Surah Al-An'am verse 66 and 107.

إِنْ يَنْصُرْكُمُ اللَّهُ فَلَا غَالِبَ لَكُمْ وَإِنْ يَخْذُلْكُمْ فَمَنْ ذَا الَّذِي يَنْصُرُكُمْ مِنْ بَعْدِهِ ۗ وَعَلَى اللَّهِ فَلْيَتَوَكَّلِ الْمُؤْمِنُونَ

Means: If Allah helps you, no one can defeat you. But if He denies you help, then who else can help you? So in Allah let the believers put their trust.

(Al-Imran: 160)

وَقَالَ يَبْنَیَّ لَا تَدْخُلُوا مِنْ بَابٍ وَاحِدٍ وَادْخُلُوا مِنْ أَبْوَابٍ مُتَفَرِّقَةٍ ۚ وَمَا أُغْنِي عَنْكُمْ مِنَ اللَّهِ مِنْ شَيْءٍ إِنْ أَلْحَمُّ إِلَّا لِلَّهِ عَلَيْهِ تَوَكَّلْتُ وَعَلَيْهِ فَلْيَتَوَكَّلِ الْمُتَوَكِّلُونَ

Means: He then instructed (them), “O my sons! Do not enter (the city) all through one gate, but through separate gates. I cannot help you against (what is destined by) Allah in the least. It is only Allah who decides. In Him I put my trust. And in Him let the faithful put their trust.”

(Yusuf: 67)

وَكَذَّبَ بِهٖ قَوْمُكَ وَهُوَ الْحَقُّ ۚ قُلْ لَسْتُ عَلَيْكُمْ بِوَكِيلٍ

Means: Still your people (O Prophet) have rejected this (Quran), although it is the truth. Say, “I am not a keeper over you.”

(Al-An'am: 66)

وَلَوْ شَاءَ اللَّهُ مَا أَشْرَكُوا ۚ وَمَا جَعَلْنَاكَ عَلَيْهِمْ حَفِيظًا ۚ وَمَا أَنْتَ عَلَيْهِمْ بِوَكِيلٍ

Means: Had Allah willed, they would not have been polytheists. We have not appointed you as their keeper, nor are you, their maintainer.

(Al-An'am: 107)

Agents are in charge of helping clients in all situations pertaining to their financial security and educating both Muslims and non-Muslims about Takāful (Islamic Banking and Finance and Institute Malaysia (IBFIM), 2011). Agents need to be well-versed in the knowledge, abilities, and tactics needed to carry out their duties, which requires extensive training. Takāful agents must use cautions and accept liability for any damages brought on by negligence (Frenz and Soulhi, 2010). They must also get along well with both current and potential customers and support the Takāful operators they represent in marketing and closing deals with customers. In summary, they represent the Takāful operators in their interactions with clients.

According to Saoula et al, (2024), financial agents need to follow legal procedures, give accurate information, and deliver excellent service quality in order to earn trust of their clients (Gunawardane, 2022). The current level of service quality may

harm the financial firm's reputation and result in long-term issues for clients if it is not addressed (Shukor, 2020). The customers' degree of commitment and trust is violated, and this disruption is also evident in the perceived costs and service quality that were decided upon at the beginning of the contract (Usman et al., 2017). The customer's and financial services provider's relationship suffer as a result. Most clients find it difficult to use the Takāful service as a result of these problems. Currently, the provision of financial services depends on the dedication and confidence of both the service provider and its clients (Kaur and Soch, 2018). Consumers are quite concerned about the financial service providers' corporate image, perceived expenses, and overall quality of service.

2.6 Analysis of Literature Review

The scope of the literature review, which concerned with the variables influencing Takāful products' participation, is where the analysis of the review starts. The summary of the constructs impacting behavioral intention and behavior is provided in Table 2.2 below:

Table 2.2

An overview of the concepts that affect behavioral intention and conduct

Construct	Antecedent
Behavioural Intention	Awareness and Knowledge
	Sharī'ah-Compliant
	Social Influence/Social Factors
	Service Quality
	Financial Technology (FINTECH)
	Role of Agent
Behaviour	Intention

Table 2.2 illustrates that there are six variables that may influence a person's intention to use a Takāful product. For the purpose of providing the most recent five years of prior research, the analysis of prior studies has also been filtered from 2018 through 2023. The majority of earlier researches focused on perceived behavioral control, attitude, and subjective norms. Thus, the researches combined and modified the concept by using awareness and knowledge, Sharī'ah-compliant, social influence/social

factors, service quality, FINTECH, and role of agent, all of which have the ability to significantly impact participants' intentions to join a Takāful plan.

2.7 Theoretical Framework

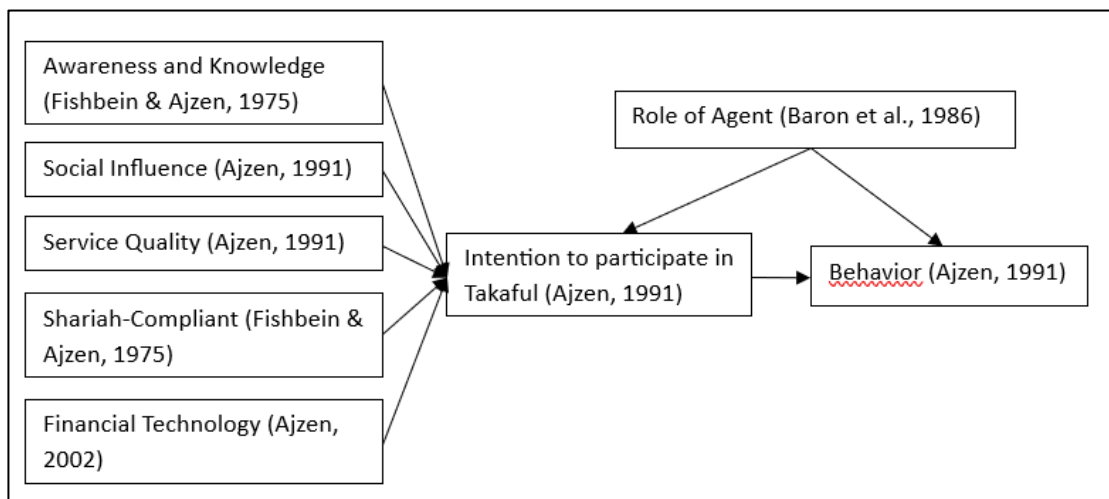


Figure 2.4 Theoretical Framework

Source: Adopted from Ajzen and Fishbein (1980) and modified with additional constructs

2.8 Hypotheses

2.8.1 The relationship between Awareness and Knowledge and Customer Intention

Prior knowledge serves as a guidance for making judgements on specific consumption (Ambali and Bakar, 2014). Consumer awareness campaigns are the first step towards making a purchase (Kertajaya and Ridwansyah, 2014). In many societies, the Takāful sector is not well-liked and people are unaware of how it should operate. This is especially true in Sri Lanka, where there is a large Muslim minority and it is impossible to gauge how much people know about Takāful products. According to some research (Maysami and Williams. 2006; Htay and Salman, 2013; Coolen-Maturi, 2013; Hasan et al., 2018), people's knowledge of Takāful has to be raised.

Human preferences and dislikes can be explained and given ideas by knowledge (Ramirez, 2014). When information derives from cognitive ability, there are risks and challenges that researchers need to be mindful of (Rifas et al., 2023). As per Omar (2010), knowledge is produced in the world by humans through their flawed

observation, discovery, and inquiry. Customers choose the goods and services to use based on their knowledge (Hoyer, 1984; Husin and Ab Rahman, 2016). Prior behavioral research has utilized knowledge as an affective element, demonstrating how knowledge interacts with experience to influence behavior (Salleh and Laksana, 2018). Thus:

H1: There is a significant influence between awareness and knowledge and the public intention to subscribe in Takāful scheme

2.8.2 The relationship between Social Influence and Customer Intention

Social influence includes the roles and regulations that affect and individual's intention and self-evaluation. Beliefs that some behaviors are right, proper, or desirable while other behaviors are wrong, unsuitable, immoral, or undesirable are known as rules or norms (Triandis, 1977). These are essentially societal norms that specify what must be done and what should not be disregarded. Moreover, roles are described as “sets of behaviors that are considered appropriate for persons holding a particular position in a group” (Triandis, 1977). According to earlier research, social factors and behavioral intention are significantly positively correlated. Chang and Cheung (2001), for example, found that social influence have a strong positive impact on affect in addition to a significant association between social factors and intention in their search for internet usage determinants. Furthermore, Moody and Siponen (2013) discover that intention is influenced by social circumstances. Similarly, Amin (2016) and Shaikh and Noordin (2020) find a high positive correlation between intention to social characteristics.

Referring to Amin's (2016) findings, the most important factors for gathering social aspects are coworkers, friends, and family. As a result, messages provided by these individuals inside a social circle, whether or orally or in writing and via Facebook and SMS, have a particularly strong effect on an individual. The more social aspects there are, the more adept the internet is at awarding approval. The same rationale that an individual's social circle shapes their decision to make a final patronage, such as mortgage is acknowledged by Shaikh and Noordin (2020). Previous research by Ramayah et al. (2014) finds that social factor and online stock trading in Malaysia are significantly correlated. The authors agree that educating non-users about online stock trading may increase societal pressure. The same author and his associates, Ramayah et al. (2009), also find that social factors have a major impact on the intents

of individuals to file taxes online and expand the use of the social dimension in the context of tax filing in Malaysia. However, socioeconomic considerations have little bearing on family Takāful adoption in an Islamic insurance environment. The goal of the current study is to gain a comprehensive understanding of Takāful acceptance in Pakistan by utilizing the social factors construct. According to earlier research, social influences from family, friends, peers, and other people in various contexts affect the intention (Mehboob Shaikh et al., 2024). Consequently:

H2: There is a significant influence between social influence and the public intention to subscribe in Takāful scheme

2.8.3 The relationship between Service Quality and Customer Intention

The provision of quality services is essential to the development of expansion of organizations, and the quality issue is a fundamental one (Kashif et al., 2016). The concept of service quality has long been considered a high priority for academics and business professionals. Prior research (Endara et al., 2019; Murugiah and Akgam, 2015) has demonstrated the critical role that service quality plays in assisting firms in preserving their competitive advantages in the marketplace.

The term “service quality” describes the assessment made by a comparison of the expectations and perceptions of customers regarding the provision of services that are not quantitatively measurable (Parasuraman et al., 1988). The SERVQUAL scale was developed by Parasuraman et al. (1988) as one of the most widely applied assessments in a variety of cultural contexts. They also noted that the perception of service quality is dependent in a number of multi-dimensional elements, such as tangibility, reliability, assurance, responsiveness, and empathy. However, according to current theories the SERVQUAL scale is less helpful in developing nation contexts and more advantageous for developed countries, especially those in the West, as the concept of quality is susceptible to cultural differences (Malhotra et al., 2005).

According to this study, a company’s image is positively impacted by the quality of its services. First, according to Parasuraman et al. (1988), tangibility in the financial services sector refers to the physical attributes and descriptions. According to Endara et al, (2019) and Raaipoot (2004), tangible is the customer’s perception of the service provider and how their offerings, including personnel, tools, and physical surroundings, may be assessed. According to Santos (2002), service providers are often driven to

tangibilize their offerings through concrete signals, which can also improve their company's reputation. Roy (2018) asserts that the tangibility component of service excellence is critical to the customer experience. There is a claim that the tangibility of a customer's experience can impact a company's image since consumer perceptions of value and other elements of service quality shape the company's image (Osman et al. 2022). As a result, the perceived value of the services is often influenced by material factors. Based on the aforementioned claims, the following is how the first hypothesis is developed:

H3: There is a significant influence between service quality and the public intention to subscribe in Takāful scheme

2.8.4 The relationship between Financial Technology and Customer Intention

According to Davis (1989), perceived ease of use is the degree to which a person thinks using a specific system would require no effort at all. Lewis (1991) claims that customers' dissatisfaction with their branch experience was the primary factor in their decision to convert from traditional to online self-service as their delivery channel. They could include the slow branch's pace of service, the branch's odd hours, and the staffing level, which is insufficient for serving consumers.

Both views regarding online banking and actual behaviors are influenced by customers past experiences with computers and technology as well as their attitudes toward computers (Karjaluoto et al., 2021; Loureiro et al., 2014). When compared to traditional ways, internet banking is faster, less expensive, simpler and more service-oriented, which contributes to positive sentiments regarding it (Karjaluoto et al., 2002). Banks have been providing these services through mobile applications and websites increasingly frequently in the last few years (Amin et al., 2014b). Therefore, in the current environment, online banking may be regarded as being easier to use as technology progresses. Additionally, an online banking system has been shown through empirical research to draw in both current and new clients. Therefore, if internet banking is user-friendly, lower costs, and enhance productivity at work, clients are more likely to embrace its services (Hoque et al., 2018). These claims suggest that any improvements made to the online Islamic insurance or Takāful will probably have a beneficial impact on the correlation between consumer behavior and behavioral intentions to buy goods and services from Takāful. Consequently:

H4: There is a significant influence between Financial Technology and the public intention to subscribe in Takāful scheme

2.8.5 The relationship between Sharī‘ah-Compliant and Customer Intention

Islamic Financial institutions were created based on principles that forbid the separation of religious and worldly affairs, whereas the traditional system concentrates on the financial economic sides of transactions. In order to achieve socioeconomic growth, Wiyono and Rahmayuni (2012) offer both Muslims and non-Muslims a fair and equitable system of justice (Vernados, 2015) as well as an awareness of the maqasid sharī‘ah (Mohd Shariff, 2010). Maqasid sharī‘ah generally aims to protect the public interest and avoid harm, which is in line with the goals of the sharī‘ah. Essentials (dharuriyyah), complementary elements (hajiyyah), and embellishment (tahsinyyah) are all covered. Without a doubt, IFIs are supposed to turn a profit and fulfil their social and moral responsibilities (Johan et al., 2020). The institutions must adhere to the principles and practices of commercial transactions outlined in the Al-Quran and Hadith, in addition to adhering to sharī‘ah legislation (Wan Ibrahim and Ismail, 2015).

Sharī‘ah is supposed to fulfil the advancement of commerce, practice, and thought, despite their unquestionable laws and standards. “People have clear intentions, and they base their decisions on evidence,” states the core idea guiding these actions (Wilson, 2014, p. 25). Dusuki (2008) goes on to discuss how all transactions made through Islamic banks must adhere to sharī‘ah in terms of form, legalese, and meeting socioeconomic requirements. Thus, the research claims that:

H5: There is a significant influence between sharī‘ah-compliant and the public intention to subscribe in Takāful scheme.

2.8.6 The Relationship between Behavioural Intention and Behaviour

The phrase “behavioral intention” describes a person’s level of commitment and readiness to engage in particular behaviors, which are frequently influenced by their attitude and subjective norms (Ajzen, 1988). Such greater levels of willingness, according to Ajzen (1988), are probably going to lead a larger likelihood of carrying out the behavior. The theory of reasoned action (Ajzen and Fishbein, 1975) and the theory of planned behavior (TPB) (Ajzen, 1988) are examples of intention-behavior theories that contend that an individual’s intentions influence their behavior. In the literature, intentions are defined in a variety of ways. Ajzen (1991) described intention as a person’s willingness to purchase a specific good. Intents are referred to as behavioral intents in intention-behavior theories (Ajzen, 1991). It is the degree to which a person is prepared to make an attempt and exert effort to carry out behavior. Put otherwise, behavioral intention refers to likelihood that would engage in a particular behavior. The actual behavior is a result of the behavioral goals (Ajzen and Fishbein, 1980).

The primary element of the TRA is an individual’s intention to engage in a particular behavior. TRA makes the assumption that a person’s intention determines their actual conduct (Ajzen and Fishbein, 2002). Furthermore, it is believed that a person’s motivational elements have an impact on their intention. According to Ajzen (1991), intention is a tangible component that demonstrates the extent and duration of an individual’s efforts to carry out a particular behavior. Generally speaking, people are more likely to undertake a particular behavior if they have a higher degree of intention (Ajzen, 1991). By assessing an individual’s attitude and individual’s attitude, subjective norm, and intention toward a specific behavior. TRA has been frequently utilized to predict purchasing behavior (Farhat et al., 2019). Gieure et al. (2020), for instance, found that entrepreneurial goals have a beneficial impact on entrepreneurial behavior. Thus, it is possible to speculate that:

H6: There is a significant influence between behavioral intention to participate in Takāful scheme and the behavioral

2.8.7 The Mediating Effect of Role of Agent Between Behavioural Intention and Behaviour

The literature on serviced marketing it clear that, in Takāful financial services, the agent's position has a major impact on overall client satisfaction (Lai et al., 2014; Mohd Shaladdin et al., 2018). Furthermore, Chang (2006) provided evidence that an agent is essential to the growth of a positive customer-financial service provider relationship. To offer their service, the majority of businesses rely on agents. It has been noted that the financial industry employs a number of intermediaries to serve as a bridge between clients and financial service providers (Ibrahim et al., 2021).

Studies on financial services have long acknowledged the impact of an agent's role on consumers' purchase decision (Daud et al., 2020). For instance, File and Prince (1992) found that when consumers are choosing which financial services to buy, they favor the advice of the agents. Additionally, Zoliat and Ainin (2009) looked into how an agent's position affected respondents' use of e-banking and found that it greatly encouraged them to do so.

Takāful participants who want to join the Takāful system must be recruited by Takāful agents. Explaining the Takāful policy is another responsibility of the agents (Abdullah et al., 2020). Thus, it is evident that a key factor in deciding a customer's pleasure when selecting a Takāful plan is the involvement of the agents (Shaladdin, Mokhtar, & Zawawi, 2018). The similar opinion was expressed by Haslina, Kartini, and Norudin (2016), who said that a Takāful agent may serve a participant well and boost participant satisfaction, which would encourage more people to enroll in Takāful schemes with expensive monthly premiums. Since agents are the one who provide customer care, their attitude is also crucial. The way their client interpret Takāful items will be influenced by their customer service. Customers will participate voluntarily if they are happy with the information and services they received from the agent (Roushdy& Ali, 2017; Ishak, 2017). Based on these earlier studies, researcher can conclude that:

H7: Role of agent moderates the relationship between the behavior intention to participate in Takāful product and behavior.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter will detail the research methods utilized to meet the study's objectives, such as the research design, data gathering method, sampling, and data analysis. The aspects included will demonstrate how the data is integrated using SPSS version 21 software and IBM-AMOS version 21 software to reach the conclusion for ease of understanding of the information presented. In any research, research methodology must be employed to process the acquired data in order to make the research outcome clearer and more intelligible.

3.2 Research Design

The definition of research design is a comprehensive plan for combining the many aspects of the research in a clear and logical manner, ensuring that the researcher will efficiently deliver the problem. It also provides as a framework for data analysis, collecting, and measurement (USC, 2018). The study employed positivist research philosophy and a deductive approach. The data were collected from respondents at a particular point in time; hence the study's temporal frame is cross-sectional. The inquiry was carried out utilizing a logical approach (Saoula et al., 2024). Obtaining data related to the topic of study in social sciences research often necessitates validating the type of proof required to examine a theory, evaluate a program, or precisely justify an occurrence (Sacred Heart University, 2011). There are three different sorts of research methods; qualitative, quantitative, and mixed.

Qualitative research in the realm of market research is constantly evolving and has the power to change from dawn to dusk (Haring, 2008). According to Crescentini & Mainardi (2009), they agree with Porter (2007), who states, after analyzing Rolfe's contribution, that there are two main ways of defining qualitative research: the first refers to method (using this word to identify the type of information collected and analysed), and the second refers to epistemological and ontological assumptions (Rolfe, 2006). Furthermore, Ritchie et al. (2013) state that the important aspects of qualitative research design “what”, “how”, and “why” question instead of “how many” questions.

Focus groups, methods of observation, interviews with semi-structured questions, and dept interviews are all used to generate data. Images and words are typically connected with qualitative data, rather than numerical statistics. Rather than employing logical and statistical methods, qualitative researchers explore human phenomena utilizing a variety of inquiry systems such as biography, historical analysis, case study, ethnographic research, empirical theory, discourse analysis, and phenomenology (UTA Libraries, 2023).

According to Faria et al. (2017), the quantitative method was used in this study to achieve the research's objectives. Quantitative research emphasizes impartially and is especially useful when quantifiable variables can be collected from population samples. Matveev (2002) also pointed out that using a standardized questionnaire to control the settings makes the quantitative data more reliable. The identical topic will be asked of a respondent with a different background and data will be collected. According to Maizatulaidawati Md Husin (2014), when deciding whether to choose one strategy over another or both, a variety of factors should be considered. Budget and time limits, study topics, the utility of the findings, the level of understanding of the problem provided by the technique, and the resources available at the time the research is conducted are just a few examples. The quantitative technique was the most appropriate strategy to apply because this study aimed to investigate the likely relationship between components and hypotheses were developed to assess the correlation.

3.3 Instrument

The data were acquired using the survey approach with questionnaires. The questionnaire is divided into two sections: A and B. Section A requires respondents to provide demographic information such as gender, age, marital status, degree of education, and monthly family income. Section B is divided into seven sections: awareness and knowledge, shari'ah-compliant, social influence, service quality, financial technology, role of agent and intention. The questionnaire uses a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). The choices range from strongly disagreeing to strongly agreeing. This decision was used to obtain accurate answers to the questions in the questionnaire. Table 3.1 displays the overall number of items and where they were altered, as well as the answers to the questionnaire;

Table 3.1
List of Items

Constructs	Items Statements	Total Items	Adapted and modified from
Awareness and Knowledge	I know about Takāful. I am concerned about Takāful. I know Takāful will provide me more advantages in future. I know Takāful is Shari'ah-compliant products compared to conventional insurance.	4	Aziz et al., (2019), Bassir et al., (2014), Alam et al., (2014), Mohd Azizi Ibrahim (2021), Shaikh et al., (2020), Hall et al., (1997), and Husin (2014)
Shari'ah-compliant	Takāful scheme is in line with an Islamic philosophy of doing insurance business. Takāful scheme based on guidelines from al-Quran and Hadith. Takāful scheme is free from doubt elements in their transactions. Takāful scheme is free from Ribā, gambling, and fraud.	4	
Social Influence	People who influence my decision to participate in Takāful scheme. My relative think I should participate in Takāful scheme. People whose opinions I value suggested me to participate in Takāful scheme. People who are close to me think I should participate in Takāful scheme. People who influence my behavior suggested to me to participate in Takāful scheme. I learn about Takāful in social media. Social media give me more comprehension towards Takāful products. With the help from media, I can differentiate between Takāful products and insurance.	8	Taylor & Todd (1995), Khalil Md Nor (2005) as cited by Maizatulaidawati Md Husin (2014), Lee et al. (2017), and Uittenhout (2012)

Constructs	Items Statements	Total Items	Adapted and modified from
Service Quality	It is very easy to register and participate in Takāful scheme. I can find all important information from Takāful operators' website. The information provided in Takāful operators' website is adequate and accurate.	3	Lee et al. (2017)
Financial Technology (Fintech)	I need mobile payment service. I am satisfied with the online services provided by Takāful operators. Mobile payment for Takāful is reliable. I received receipt in time whenever I make a payment. When a problem occurs with respect to transaction, applicable service provider will take an effort to protect me.	5	Yoon, B., Kim, J., You, Y., & Kim, S. (2016).
Role of Agent	Takāful agents are very polite and attractive. Takāful agents provide me many useful information. Takāful agents are very responsive towards my queries. Takāful agents is trusted.	4	Lee et al. (2017)
Intention	My general intention to choose Takāful. product is very high I am likely to choose Takāful scheme rather than insurance. I expect to participate in Takāful. In the future, I predict that I will participate in Takāful scheme.	4	Lada et al., (2009), Francis et al., (2004) & Khalil Md Nor (2005) as cited by Maizatulaidawati Md Husin (2014), Shaikh et al., (2020)

3.4 Sampling

3.4.1 Population

A study's sampling method begins with the identification of the population of interest (Davis, 2000). The population is the researchers' target group for data collection in the study. The population is made up of a group of people (Gray, 2013). Similarly, Creswell (2007) described the target population as a group of people who shared identifiable and measurable traits. It was agreed that the unit analysis used as the assessment level would be at the individual level. Population for this study is the citizens of Selangor. According to Department of Statistic Malaysia (2020), there are 6,994,423 people live in Selangor. According to the most recent data from the Malaysian Department of Statistics, there will be 2,525.8 million millennials in the state of Selangor by 2022 (Ahmad, 2023). Selangor is a state on Peninsular Malaysia's west coast that surrounds the Malaysian capital, Kuala Lumpur. It is a well-developed and progressive state in Malaysia. Selangor has profited from Kuala Lumpur's rising economy and high population density (Wong et al., 2023). Selangor has experienced remarkable growth in both GDP and population. In 2021, Selangor's GDP made up 38.55% of the national total. By 2020, it was responsible for 27.91% of Malaysia's population (Department of Statistic Malaysia, 2022). Thus, the researcher thought that Selangor is the best region to run this research. Economy situation and population of Selangor is important to describe the factors that influence people that live in such developed city to participate in Takāful scheme.

3.4.2 Sample

The samples were carefully selected because performing a population survey is typically time-consuming, expensive, and challenging due to its magnitude. Data collected from the study sample might show the current state of an issue or circumstance being investigated (Fraenkel and Wallen, 2006). According to Fink (2003), a good sample "is a miniature version of population just like it, but smaller." A good sample can thus properly represent the entire population.

The insurable age group was used to choose the participant for this study. Because of numerous reasons, such as the unemployment crisis, genuine income begins at the age of 25 for salaried workers, the study chose an insurable age range of 25 to 50 years old. Entrepreneurs, businessmen and traders have a higher beginning age. Second,

Malaysian typically retire at the age of 60, those beyond the age of 50 rarely seek for new insurance. Due to the same consideration, Omar (2007) and Maizatulaidawati (2014) chose a starting age of 25 for their respondents in their insurance and *Takāful* studies. As a result, the insurable age range of 25 to 50 years old is appropriate for this research.

Additionally, this study's respondents were individuals who have subscribed and participate in Takāful scheme and not participate in insurance products. Since the primary goal of this study is to investigate the moderating factor that influence people to subscribe Takāful scheme, this study eager to determine the significant of role of agent regarding being a moderating factor towards participation in Takāful products. It was necessary to filter out those who did not engage with Takāful products. For example, if a potential respondent has insurance, he might be less likely to participate in Takāful plan because they already have the substitute' product which is insurance.

According to the Malaysian Department of Statistic (2023), majority of the population is Muslim consists of 61.1%, followed by 21.6% Buddhist, 10.3 % Hindu, 4.9% Christian, 0.8% atheist, and 1.3% others. However, this study will not focus on the religion of the participants in this questionnaire because Takāful products are Islamic products that can be subscribed to by both Muslims and non-Muslims. Thus, the questionnaire will be provided to all individuals who have participated in the Takāful scheme, whether Muslim or non-Muslim. Table 3.2 summarizes the characteristics of the respondents in this paper:

Table 3.2

Respondent's characteristics

Inclusion	Exclusion
Selangor and Kuala Lumpur	Other than Selangor and Kuala Lumpur
25 to 50 years old	Less than 25 years old and more than 50 years old
Muslim	Non-Muslim
Individual who has subscribe Takāful scheme and not engaging with any of insurance products.	Individual who has not subscribe Takāful product and subscribe insurance products.

The determination of the sample size is an important issue to consider in every investigation. Krejcie and Morgan (1970) suggested 384 for the sample size. Nevertheless, this study will collect total of 600 respondents for the sample. The demographic and sample size table by Krejcie and Morgan shown in Figure 3.1 below;

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384
Note: N is Population Size; S is Sample Size					Source: Krejcie & Morgan, 1970				

Figure 3.1 Population and Sample Size Table

Furthermore, there are various reasons why this sample is adequate for this study, such as Ding et al., (1995), who said suitable sample size for SEM is minimum 100 to 150 people. Boomsma A. (1983) went on to say that for models of moderate complexity, 400 participants are sufficient. Then, according to previous study by Hulland et al. (1996) and Kline (2015), a sample size of 100 is deemed small, 100-200 considered as medium and more than 200 is considered large. Then according to Hair et al. (1998), an appropriate sample size for studies that employ structural equation modelling sampling method (structural equation model) as the analysis of the study is between 100 and 200 samples, with a sample size of 600 samples being beyond their guideline.

As a result, a sample size of 500-600 was used for this study is to avoid many unforeseen consequences. For instance, respondents who chose nearly the same rate for each item which can contaminate the statistics. In addition, the greater sample size recommended reduces the problem of respondents not returning the questionnaire.

3.4.3 Sampling Technique

The strategy, process, or act of selecting a representative element of a population to determine parameters or characteristics of the entire population is defined by Meriam-Webster's dictionary (Emerson, 2015). In general, samples can be classified as either probability (also known as random samples) or non-probability. Simple random sampling, systematic sampling, stratified sampling, cluster sampling, area sampling and double sampling are the next groups under probability sampling techniques. Convenience sampling, judgmental sampling and quota sampling are examples of non-probability sampling procedures.

Non-probability sampling techniques and probability sampling techniques are the two types of sampling techniques available (Neuman, 2014). Non-probability sampling techniques, on the other hand, will not be used since they are not advised for establishing samples that are representative of a community, and because the conclusions gained from a sample cannot be securely applied to the entire population (Neuman, 2014). In this study, simple random sampling technique will be used, which means that all cases will have an equal chance of being selected using a completely random procedure (random-number table or computer programme), and these instances will be the most likely to accurately represent the total population in the study (Neuman, 2014)

Non-probability sampling techniques and probability sampling techniques are the two types of sampling techniques available (Neuman, 2014). Non-probability sampling techniques, on the other hand, will not be used since they are not advised for establishing samples that are representative of a community, and because the conclusions gained from a sample cannot be securely applied to the entire population (Neuman, 2014). In this study, simple random will be used, which means that all cases will have an equal chance of being selected using a completely random procedure (random-number table or computer programme), and these instances will be the most likely to accurately represent the total population in the study (Neuman, 2014).

3.5 Data Collection Method

Primary and secondary data are included in the data gathering. Data obtained directly by the researcher for a specific study design is referred to as “primary data”. As a result, the primary data for this study comes from self-administered surveys in which respondents are given a set of questionnaires to fill out. The researcher plans to deliver the questionnaire himself in the field.

The term of “secondary data” refers to information gathered by other researchers. Nonetheless, the information gathered may be useful for other researcher’s goals. As a result, the researcher accessed online databases such the PTAR website, Google Scholar, and the online Libraries of other universities. As a result, the researcher can gather as many journals, articles, e-books, publications, research papers, and other relevant materials as feasible for writing references.

3.6 Method of Data Analysis

SPSS version 22.0 and IBM-AMOS v23 software were used to analyze the data. The original data was examined using SPSS, which included general descriptive analysis, reliability testing. The IBM-AMOS v23 software was then utilized as a framework for inferential statistics using Structural Equation Modelling (SEM). SEM can be used to investigate the impact of numerous independent constructs on a single dependent construct (Haenlein and Kaplan, 2004).

To begin, the Cronbach Alpha Test used to determine the questionnaire’s reliability. The Cronbach Alpha Test is a measure of internal coherence, or how closely a group of items are connected. It is regarded as a reliable indicator of the scale’s accuracy (Institute for Digital Research and Education Statistical Consulting, 2016). Following that, a descriptive analysis will be performed to offer information on the respondents’ demographic traits as well as the factors under investigation (Pallant, 2020). The data will be analysed using Mann-Whitney Test and the Kruskal-Wallis Test in the descriptive analysis. On a continuous measure, the Mann-Whitney test is used to compare the differences between two independent groups. On the other hand, the Kruskal-Wallis test compares three or more groups’ results on some continuous variables (McKight & Najab, 2010).

Aside from that, regression analysis will be used to assess the elements and discover which ones have an impact. Regression analysis (Uyanik & Güler, 2013) is a

statistical technique for assessing the relationship between variables with explanation and outcome relations. Aside from that, factor analysis will be used to analyse all of the data in this study. Factor analysis is an unobserved variable like factors. Exploratory and confirmatory factor analyses are the two types of factor analyses (Kline, 2014).

Furthermore, the extended model will be empirically validated using Structural Equation Modeling (SEM). Structural Equation Modeling with IBM-AMOS v23 will be used to examine all assumptions (Awang, 2015). Awang (2015) also mentioned that the SEM technique includes quantitative data and correlation. Furthermore, incorporating a causal assumption into the model confirmatory factor analysis (CFA), analyzing multiple regression models simultaneously, analyzing regression with multicollinearity problems, analyzing the path analysis with multiple dependents, estimating the 45 correlation and covariance in a model, and finally, modelling the inter-relationship in a model simultaneously are all six things that can be resolved using SEM (Awang, 2015).

3.7 Pilot Test

Before the primary data collection procedure, a pilot test was carried out to assess the questionnaire's internal consistency, clarity, and dependability. For this pre-test, a total of 30 Klang Valley residents were chosen, in accordance with Creswell's (2014) advice that a sample size of 20 to 30 is adequate for a pilot study.

The main goal was to use Cronbach's Alpha, a measure of internal consistency, to assess the reliability of each construct in the instrument. For social science research, a value of 0.70 or above is deemed appropriate (Hair et al., 2014; Sekaran & Bougie, 2016).

The pilot test's findings showed that each construct had the following Cronbach's Alpha values:

Table 3.3
Cronbach's Alpha

Construct	Number of Items	Cronbach's Alpha
Awareness and Knowledge	5	0.801
Social Influence	5	0.784
Service Quality	5	0.766
Intention to Participate	5	0.827

Cronbach's Alpha scores for all constructs were over 0.70, indicating strong internal consistency and a recommendation that the questionnaire be used on a large scale. Based on respondents' feedback, some phrasing changes were made to improve several items' clarity and comprehension.

CHAPTER 4

FINDINGS

4.1 Introduction

The results of hypothesis testing conducted with AMOS software and Structural Equation Modeling (SEM) are presented in this chapter. The analysis was developed to examine the factors that influence public intentions and behaviours when they subscribe to Takāful schemes. Seven hypotheses were developed, each of which was supported by prior literature and was based on theoretical underpinnings. These hypotheses encompassed critical constructs, including social influence, service quality, financial technology, sharī'ah compliance, behavioural intentions, and the mediating effects of agents.

In order to evaluate the direct and indirect relationships among the constructs in the proposed model, the SEM approach was implemented. Additionally, this methodology permits the simultaneous assessment of intricate theoretical frameworks and the investigation of numerous dependency relationships. In order to determine the validity of the proposed relationships, the model fit indices, path coefficients, and statistical significance levels were employed.

The initial five (5) hypotheses investigated the direct impact of independent factors including awareness and knowledge, social influence, service quality, financial technology, and sharī'ah compliance on individuals' correlation between actual behavioural engagement and behavioural intention in Takāful participation. Finally, the seventh hypothesis examines the mediating effects of the agents on the relationship between behavioural intentions and actual behaviour, emphasising the potential influence of intermediaries in the adoption of Takāful.

The findings of this chapter will provide a comprehensive explanation of the critical factors that influence the involvement of individuals in Takāful. This information will be beneficial to a variety of stakeholders, including policymakers, Takāful operators, and marketing agents.

4.2 Pilot Test Result

To evaluate the research instrument's reliability, a pilot study with 30 Klang Valley respondents was carried out. Cronbach's Alpha was used to assess each construct's internal consistency. The results are shown in Table 4.1.

Table 4.1
Reliability Statistics of Pilot Study

Construct	Cronbach's Alpha
Awareness and Knowledge	0.801
Social Influence	0.784
Service Quality	0.766
Intention to Participate	0.827

According to the findings, every construct surpassed the suggested cutoff point of 0.70 (Hair et al., 2014), demonstrating the questionnaire's respectable internal reliability. As a result, each construct's elements measure the desired idea consistently. Minor changes to the phrasing of some items were also made possible by the comments received during the pilot test in order to improve clarity.

This pilot test confirms the instrument's dependability and makes sure it is appropriate for usage in the full-scale data gathering procedure.

4.3 Response Rate

The response rate is calculated by dividing the number of survey participants by the total of sample size, expressed as a percentage. It represents the proportion of questionnaires returned in relation to those distributed (Babbie, 2012). The response rate is a significant concern in a large-scale cross-sectional epidemiological investigation (Li & Begin, 2012). Data for this study was collected from around Klang Valley with the participants being 600 holding bachelor's, master's, and PhD degrees. Out of the 600 questionnaires mailed, all 400 that were retrieved were considered applicable resulting in a response rate of 83.33%. In the study of Babbie (2012), the author indicated that 50% response rate is considered acceptable in social research utilising surveys. The response rate of 83.33% was considered reliable for the study's goal. Data for this study was collected from Klang Valley (Kuala Lumpur and Selangor), with participants being 600 holding SPM's, STPM/STAM/Diploma's, bachelor's,

master's, and PhD degrees. Out of 600 questionnaires mailed, retrieved 400 were considered applicable, resulting in a response rate of 66.67%. In the study of Babbie (2012), the author indicated that a 50% response rate is considered acceptable in social research utilising surveys. The response rate of 66.67% was considered reliable for the study's goal. According to Boomsma A. (1983), 400 participants are sufficient for somewhat complex models. The collected 400 usable questionnaires were deemed sufficient for statistical analysis.

4.4 Demographic Profile

The respondents varied in their demographic characteristics (see Table 4.2) as evidenced by the sample profile's descriptive analysis results. As mentioned, in the data collection, process chapter, the questionnaire survey was distributed 600. The frequency analysis results of respondents' presented in Table 4.2.

Table 4.2
Sample Profile

Gender	Frequency	Percentage (%)
Male	228	57
Female	172	43
Age		
25-29 years	203	50.75
30-34 years	58	14.5
35-39 years	69	17.25
40-44 years	54	13.5
45-50 years	16	4
Education Level		
SPM	21	5.25
Diploma/STPM/STAM	87	21.75
Bachelor	235	58.75
Master	53	13.25
PHD	4	1
Marital Status		
Single	206	51.5
Married	182	45.5
Widow or widower	12	3

4.5 Data Screening

It is necessary to screen data to make sure that they are accurately entered into the software., free from missing values and outliers and they are normally distributed. The exogenous and endogenous variables with their relative estimation errors are presented in Appendix B.

4.5.1 Replacing Missing Values

The author dealt with missing data by replacing with the variable median, which is the most often used method (Schwab, 2005) and the most extensive one (Hair et al., 1998), when it comes to treating missing data. In particular, missing data was dealt with by replacing them based on the median valid responses.

4.5.2 Outliers

This section explains the determination of univariate and multivariate outliers

4.5.2.1 Univariate Outliers

For the detection of univariate outliers, histograms and boxplots are used in addition to the standardized z-score. Hair et al. (1998) indicated that for considerable sample size exceeding 2000, absolute $(z) > \pm 4$ represents an extreme observation. The construct items' accompanied by the z-scores are summarised and presented in **Table 4.4**.

Table 4.3
List of Construct

2 nd Order Construct	1 st Order Construct	Number of Items (32)
Intention to participate in <i>Takāful</i>	Awareness and Knowledge	4
	Social Influence/ Social Factor	8
	Service Quality	3
	<i>Sharī'ah</i> -Compliant	4
	Financial Technology	5
Role		4
Behaviour		4

Table 4.4

Results of Univariate Outliers Based on the Standardised Values

Variables	Construct	Item	Standardised value (Z-Score)	
			Lower Bound	Upper Bound
Intention to participate in <i>Takāful</i>	Awareness and Knowledge (AK)	AK1	-6.5409	0.7810
		AK2	-6.5278	0.7658
		AK3	-6.3722	0.8861
		AK4	-6.4255	0.8762
	Social Influence/ Social Factor (SI)	SI1	-4.7988	0.8542
		SI2	-6.6716	0.7862
		SI3	-4.5877	0.9882
		SI4	-4.6090	0.9255
		SI5	-4.5700	0.8276
		SI6	-4.7098	0.7456
		SI7	-4.4086	0.9568
		SI8	-4.5263	0.8872
	Service Quality (SQ)	SQ1	-4.4419	0.8848
		SQ2	-4.4955	0.8883
		SQ3	-4.4405	0.8598
	<i>Sharī'ah</i> -Compliant (SC)	SC1	-4.4843	0.8719
		SC2	-6.3914	0.7899
		SC3	-4.7701	0.8272
		SC4	-4.3942	0.9393
	Financial Technology (FT)	FT1	-4.8614	0.8616
		FT2	-4.6586	0.7724
		FT3	-4.5861	0.9172
		FT4	-4.5606	0.9121
		FT5	-4.3432	0.9036
Mediator	Role	Role1	-5.8249	0.7818
		Role2	-5.8826	0.8117
		Role3	-4.1444	0.9098
		Role4	-3.8776	0.9129

Variables	Construct	Item	Standardised value (Z-Score)	
			Lower Bound	Upper Bound
Behaviour		Behaviour1	-4.7748	0.8243
		Behaviour2	-4.6675	0.8058
		Behaviour3	-4.4522	0.9736
		Behaviour4	-4.2546	0.8886

Table 4.4 presents the results of univariate outlier detection using standardised Z-scores for each item across multiple constructs measuring the intention to participate in Takāful. Several items particularly from the Awareness and Knowledge (AK) and Social Influence (SI) construct exhibited extreme negative Z-scores, with values ranging from -6.67 to -3.87. Traditionally, Z-scores beyond ± 3 are flagged as potential outliers (Tabachnick & Fidell, (2007)). However, the presence of extreme scores does not automatically justify data deletion.

Upon further inspection, the majority of these outliers appear to reflect genuine variation in participant responses rather than data entry errors or measurement issues. These cases may represent individuals who are truly unaware of or uninfluenced by Takāful products, which is valuable information in itself. Removing them could bias the dataset by artificially truncating the range of observed behaviour and underrepresenting critical segments of the target population (Osborn & Overbay, 2004).

Moreover, the sample size in this study is sufficiently large, reducing the overall impact of a small number of outlying values on the robustness of parametric analysis. When large samples are involved, outliers tend to exert minimal influence on central tendency and variance estimates (Field, 2018). In addition, the use of robust analytical methods such as Structural Equation Modelling (SEM) or bootstrapping, which are less sensitive to non-normality, further justifies retaining these data points (Byrne, 2013).

Therefore, in alignment with best practices in quantitative research, the decision was made not to delete these participants. Instead, they are retained to preserve the representativeness and generalizability of the findings, ensuring that the analysis accurately reflects the diversity of participant perspectives.

4.5.2.2 *Multivariate Outliers*

Data was also exposed to multivariate outliers Detection using the Mahalanobis distance. In particular Mahalanobis D-squared distances were produced for each case through AMOS regression, with the exogenous variables as case numbers and endogenous ones as on-demographic measures. According to Hair et al. (1998), a high D^2/df exceeds 3.5 indicates the presence of a multivariate outlier. **Appendix B** shows that the highest D^2 value belongs to 2 and it is 142.56. as for the 100 exogenous and endogenous variables and their relative estimation errors (see **Appendix B**), the highest D^2/df is $142.56/100=1.426$ that is way below 3.5 (cut-off) confirming the absence of multivariate outliers and such the entire observation were kept for the proceeding analysis.

4.5.2.3 *Assessment of the Data Normality*

This study conducted the normality test to meet the assumption of the maximum likelihood estimation when it comes to normal data distribution. The results of the normality test for all model variables and items are presented in Table 4.5.

Table 4.5
Assessment of Normality for Measurement Model

Construct	Item	Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis
Awareness and Knowledge (AK)	AK1	-1.033	.100	1.930	.199
	AK2	-1.082	.100	2.011	.199
	AK3	-.767	.100	1.390	.199
	AK4	-.782	.100	1.445	.199
Social Influence/ Social Factor (SI)	SI1	-.590	.100	-.482	.199
	SI2	-.999	.100	1.976	.199
	SI3	-.325	.100	-.668	.199
	SI4	-.467	.100	-.550	.199
	SI5	-.744	.100	-.154	.199
	SI6	-1.026	.100	.734	.199
	SI7	-.465	.100	-.456	.199
	SI8	-.594	.100	-.361	.199
Service Quality	SQ1	-.625	.100	-.301	.199

Construct	Item	Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis
(SQ)	SQ2	-.601	.100	-.344	.199
	SQ3	-.690	.100	-.217	.199
<i>Sharī'ah</i> -Compliant (SC)	SC1	-.647	.100	-.282	.199
	SC2	-1.023	.100	1.782	.199
	SC3	-.684	.100	-.309	.199
	SC4	-.566	.100	-.020	.199
	SC5	-.647	.100	-.282	.199
Financial Technology (FT)	FT1	-.543	.100	-.598	.199
	FT2	-.889	.100	.097	.199
	FT3	-.496	.100	-.504	.199
	FT4	-.519	.100	-.466	.199
	FT5	-.607	.100	-.307	.199
Role	Role1	-1.212	.100	2.264	.199
	Role2	-1.094	.100	1.927	.199
	Role3	-.782	.100	.664	.199
	Role4	-.832	.100	.661	.199
Behaviour	Behaviour 1	-.691	.100	-.298	.199
	Behaviour 2	-.782	.100	-.105	.199
	Behaviour 3	-.413	.100	-.516	.199
	Behaviour 4	-.714	.100	.101	.199

Table 4.5 presents the results of the normality assessment for the measurement model by evaluating the skewness and kurtosis of each item across the studies constructs, namely Awareness and Knowledge (AK), Social Influence (SI), Service Quality (SQ), *Sharī'ah*-Compliant (SC), Financial Technology (FT), Role, and Behaviour. In Structural Equation Modelling (SEM), normality is a key assumption, and it is generally considered acceptable when skewness and kurtosis values fall within the range of ± 2 (Hair et al., 2010).

For the Awareness and Knowledge (AK) construct, all four items (AK1 to AK4) demonstrate negative skewness, ranging from -1.082 to -0.767, with kurtosis

values between 1.390 and 2.011. although slightly elevated, these values remain within acceptable thresholds, indicating a relatively normal distribution.

The Social Influence (SI) construct, which contains eight items, shows skewness values ranging from -1.026 (SI6) to -0.325 (SI3). Most of these values are within the -1.0 threshold, suggesting a mild left skew. The kurtosis values ranging from -0.668 to 1.976, also remain within the acceptable ± 2 range. SI2 is notably closer to the upper threshold with a kurtosis of 1.976, indicating a slightly peaked distribution.

Item under the Service Quality (SQ1 to SQ3) show slight negative skewness (ranging from -0.690 to -0.601) and minimal kurtosis (ranging from -0.344 to -0.217), indicating a nearly symmetrical distribution.

For the shari'ah-Compliant (SC) construct, skewness values range from -1.023 (SC2) to -0.566 (SC4), with SC2 also showing the highest kurtosis (1.782) among this group. While this indicates a somewhat peaked and skewed distribution for SC2, the overall normality assumption remains acceptable.

The Financial Technology (FT) items (FT1 to FT5) exhibit skewness values between -0.889 and -0.496 and kurtosis values ranging from -0.598 to 0.097, suggesting a symmetric and mesokurtic distribution across the construct.

In the Role construct, skewness values range from -1.212 to -0.782, while kurtosis values go up to 2.264 (Role1), slightly exceeding the ideal threshold of ± 2 . This may suggest a moderate deviation from normality in Role1 however, it is not severe enough to invalidate model assumption.

Lastly, the Behaviour construct also demonstrates acceptable distribution properties, with skewness ranging from -0.782 to -0.413 and kurtosis from -0.516 to 0.101, indicating the data is approximately normally distributed.

In conclusion, while modest discrepancies exist in a few items, particularly Role1 and SI2, the overall skewness and kurtosis statistics for the measuring items are within acceptable limits. This supports the assumption of univariate normality, which is sufficient for further analysis with SEM, especially as techniques like Maximum Likelihood Estimation (MLE) are resistant to slight deviations (Byrne, 2010; Kline, 2015).

4.6 Constructs Measures

Prior instruments were adopted to be used as principal construct measures. The measurement items of this study's research variables are summarised in Table 4.6, with

the first-order and second-order constructs used in the statistical measurements of the instruments.

Table 4.6
List of Constructs and Measurement Items

2 nd Order Construct	1 st Order Construct	Number of Items (32)
Intention to participate in <i>Takāful</i>	Awareness and Knowledge	4
	Social Influence/ Social Factor	8
	Service Quality	3
	<i>Sharī'ah</i> -Compliant	4
	Financial Technology	5
Intention		4
Behaviour		4

4.7 Measurement Model (CFA)

The construct's operationalization is a crucial step in ensuring accuracy (Hair et al., 2006) and according to researchers, there are several scales in this regard. Nevertheless, regardless of such scales, researches are often faced with the issue of lack of universal scale and thus, they are forced to develop new measurement scales or tweak existing ones to accommodate new cases. Based on the above considerations, the SEM analysis basis in the item selection is the measurement of constructs (Hair et al., 2006). In the present study, five (5) individual CFA models were developed for the variable of intention to participate in *Takāful*. The development of a measurement model and a structural model are detailed in the next subsections, with the results of unidimensionality test for every construct obtained through the use AMOS 28.

4.7.1 CFA Model for Intention to Participate in *Takāful*

4.7.1.1 CFA Model for Awareness and Knowledge (AK)

The constructs of HC were measured by 4 items. The CFA model developed for AK construct along with its 4 items are depicted in Figure 4.1.

i Standardised Loadings of the Model's Item

The CFA model developed for AK depicted in Table 4.7 illustrates the model.

Table 4.7
Standardised Factor Loadings of the Items in AK Model

Construct / Variable	Item	Initial Factor Loading	After AK2 Deleted
Awareness and Knowledge (AK)	AK1	0.58	0.63
	AK2	0.36	-
	AK3	0.75	0.79
	AK4	0.58	0.50

Table 4.7 presents the standardized factor loadings for the items measuring the construct Awareness and Knowledge (AK) before and after the deletion of item AK2. Initially, the AK construct consisted of four items: AK1, AK2, AK3, and AK4. Among them, AK2 recorded a notably low factor loading of 0.36, which falls below the acceptable threshold of 0.50, indicating that this item did not adequately reflect the underlying construct. Due to its weak contribution, AK2 was removed from the measurement model to enhance its validity and reliability.

Following the deletion of AK2, the model was recalibrated using Confirmatory Factor Analysis (CFA), and improvements were observed in the remaining items. The factor loading for AK1 increased from 0.58 to 0.63, and AK3 already the strongest item, climbed from 0.75 to 0.79. These increases suggest a better representation of the latent construct after AK2's removal. However, the factor loading for AK4 slightly decreased from 0.58 to 0.50. although AK4 now lies at the lower bound of acceptability, it is still retained in the model as loadings of 0.50 or above are considered acceptable in exploratory research or when model fit improves as a result of item retention (Hair et al., 2010).

Overall, the deletion of AK2 resulted in a more robust and stable measurement model for the Awareness and Knowledge construct. The improved factor loadings for AK1 and AK3 support the construct's internal consistency, while the retention of AK4 remains justified based on its minimum acceptable loading. This refinement strengthens the overall validity of the measurement model and prepares it for further analysis within the structural equation modelling framework.

ii Goodness of Fit Indices

Based on the results the CFA model of AK had adequate data fit with 3 items (see Table 4.8).

Table 4.8
GOF Indices of CFA Model for AK

Fit Index	Modified Model	Recommended values	Source
df	0		
CMIN (χ^2)	0.00		
p-value	-	> 0.05	
χ^2/df	-	≤ 5.00	Bagozzi and Yi (1998)
GFI	1.000	≥ 0.90	Hoyle (1995)
AGFI	-	≥ 0.80	Chau and Hu (2001)
CFI	-	≥ 0.90	Bagozzi and Yi (1998); Byrne, 2013
TLI	-	≥ 0.90	Hair et al., (2006); Ho (2006)
IFI	-	≥ 0.90	Hair et al., (2006); Ho (2006)
RMSEA	-	≤ 0.10	Schumacker and Lomax, 2010

Table 4.8 presents the Goodness-of-Fit (GOF) indices for the Confirmatory Factor Analysis (CFA) of the Awareness and Knowledge (AK) measurement model. The results indicate a perfect model fit, as shown by the Chi-Square (CMN) value of 0.00 with zero degrees of freedom ($df = 0$). While the p-value is not available due to the saturated model, the Chi-Square/df ratio could not be computed but is expected to be ideal, given the zero values for both numerator and denominator. Most notably, the Goodness-of-Fit Index (GFI) is 1.000, which far exceeds the recommended threshold of 0.90, indicating an excellent fit between the hypothesized model and the observed data (Hoyle, 1995).

Although several other indices such as the Adjusted Goodness-of-Fit (AGFI), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Incremental Fit Index (IFI), and the Root Mean Square Error of Approximation (RMSEA) were not reported numerically, their inclusion reflects a comprehensive model validation approach. Based on established guidelines, acceptable thresholds for these indices include $AGFI \geq 0.80$ (Chau & Hu, 2001), $CFI, TLI, \text{ and } IFI \geq 0.90$ (Bagozzi & Yi, 1998; Hair et al., 2006; Ho, 2006), and $RMSEA \leq 0.10$ (Schumacker & Lomax, 2010). Given that the GFI is perfect and the Chi-Square is zero, it can be inferred that the model structure for the AK construct is highly satisfactory. These results collectively affirm that the AK measurement model demonstrates a strong degree of fit, supporting its reliability and validity for use in subsequent SEM analysis.

iii Reliability and Convergent Validity

After achieving the unidimensionality of constructs, each of the construct's reliability and validity was tested. Cronbach's alpha, composite reliability and average variance extracted were used to test Composite Reliability and the obtained values of the 3 items are presented in Table 4.9. all the items had high factor loadings that ranged from 0.50 to 0.79, confirming the preservation of the indicators of the factors.

Table 4.9

Results of Cronbach Alpha and Convergent Validity for AK of CFA Model

Construct / Variable	Item	Final Factor Loading	Average Variance Extracted (Hughes et al., 2010) ^a	Composite Reliability (CR) ^b	Internal Reliability Cronbach Alpha
Awareness and Knowledge (AK)	AK1	0.63	0.681	0.424	0.667
	AK3	0.79			
	AK4	0.50			

a: Average Variance Extracted = (summation of the factor loadings) / ((summation of the square of the factor loading) + (summation of the error variance)).

b: Composite reliability = (square of the summation of the factor loadings) / ((square of the summation of the factor loadings) + (square of the summation of the error variances)).

Knowledge (AK) construct within the CFA model. The construct consists of three measurements items: AK1, AK3, and AK4, with final factor loadings of 0.63, 0.79, and 0.50 respectively. These loadings reflect the strength of the relationship between each item and the underlying construct. According to Hair et al. (2010), standardized factor loadings above 0.50 are considered acceptable, although higher loadings (≥ 0.70) are preferable. In this case, AK3 meets the ideal threshold, while AK1 and AK4 are acceptable but indicate room for improvement in item quality.

The Average Variance Extracted (AVE) for the AK construct is 0.424, which falls below the recommended threshold of 0.50 (Fornell & Larcker, 1981), suggesting that the construct explains less than 50% of the variance in its items. This may indicate limited convergent validity, meaning that the items do not consistently represent the same underlying concept. However, in exploratory studies or early-stage model development, AVE values slightly below 0.50 can still be tolerated if other validity indicators are acceptable (Huang et al., 2013).

The composite Reliability (CR) value is reported at 0.681, which also falls just below the recommended threshold of 0.70 (Bagozzi & Yi, 1998), suggesting moderate internal consistency. Nevertheless, the Cronbach's Alpha value of 0.667 is reasonably close to the acceptable cut-off, indicating an acceptable level of reliability, especially in social science research contexts where a value above 0.60 can be justified (Nunnally & Bernstein, 1994).

In summary, although the AVE and CR values are slightly below the ideal thresholds, the overall indicators suggest that the Awareness and Knowledge construct had moderate reliability and marginal convergent validity.

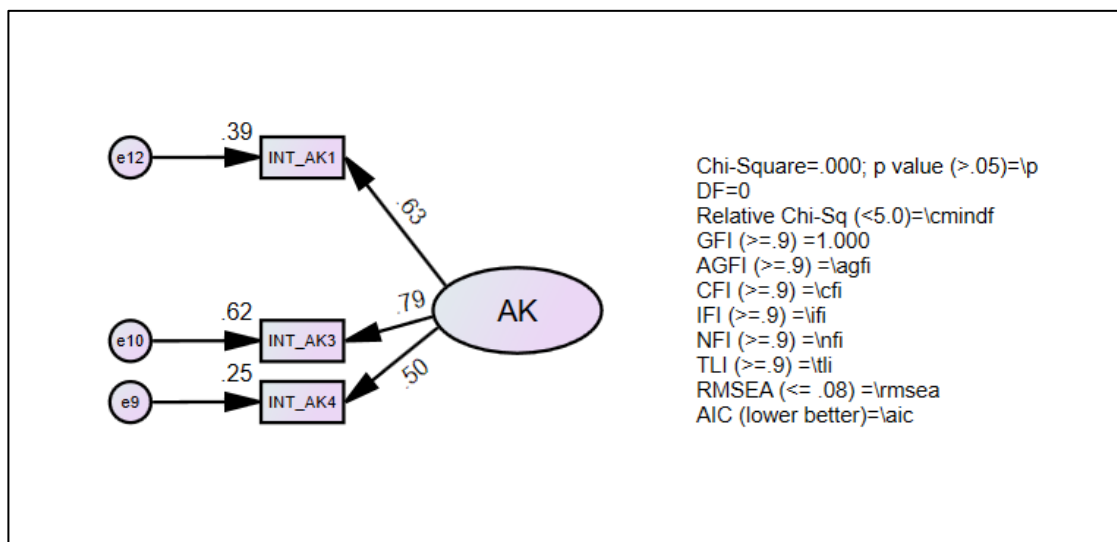


Figure 4.1 CFA Model for AK with all 3 items

4.7.1.2 CFA Model for Social Influence/ Social Factor (SI)

The constructs of SI were measured by 8 items. The CFA model developed for SI construct along with its 8 items are depicted in Figure 4.2.

i Standardised Loadings of the Model's Item

The CFA model developed for SI depicted in Table 4.10 illustrates the model.

Table 4.10
Standardised Factor Loadings of the Items in SI Model

Construct / Variable	Item	Initial Factor Loading	Item Deleted
Social Influence/ Social Factor	SI1	0.64	
	SI2	0.66	
	SI3	0.75	
	SI4	0.72	
	SI5	0.68	
	SI6	0.71	
	SI7	0.67	
	SI8	0.69	

Based on the table, the standardised loadings of the 8 items in the model exceeded 0.40 as suggested by Hair et al. (2006), ranging from 0.64 to 0.75. Thus, all items were kept as they all had sufficient factor loadings. Chuck (2024) suggests that factor loadings more than 0.4 are acceptable.

ii Goodness of Fit Indices

Based on the results the CFA model of SI had adequate data fit with 8 items (see Table 4.11).

Table 4.11
GOF Indices of CFA Model for SI

Fit Index	Modified Model	Recommended values	Source
df	16		
CMIN (χ^2)	73.664		
p-value	0.000	> 0.05	
χ^2 /df	4.604	≤ 5.00	Bagozzi and Yi (1998)
GFI	0.969	≥ 0.90	Hoyle (1995)
AGFI	0.930	≥ 0.80	Chau and Hu (2001)
CFI	0.971	≥ 0.90	Bagozzi and Yi (1998); Byrne, 2013
TLI	0.950	≥ 0.90	Hair et al., (2006); Ho (2006)
IFI	0.971	≥ 0.90	Hair et al., (2006); Ho (2006)

Fit Index	Modified Model	Recommended values	Source
RMSEA	0.078	≤ 0.10	Schumacker and Lomax, 2010

Table 4.11 presents the Goodness-of-Fit (GOF) indices for the Confirmatory Factor Analysis (CFA) of the Social Influence (SI) construct. The results indicate that the measurement model exhibits an overall good fit with the data. The Chi-Square (CMIN) value is 73.664 with 16 degrees of freedom, and the associated p-value is 0.000, which is statistically significant. Although a non-significant p-value (>0.05) is preferred, Chi-Square is highly sensitive to sample size; thus, other fit indices provide a more robust indication of model fit (Byrne, 2013).

The Chi-Square/df ratio (χ^2/df) is 4.604, which falls within the acceptable threshold of ≤ 5.00 as recommended by Bagozzi and Yi (1998), indicating reasonable fit. In terms of absolute and incremental fit indices, the Goodness-of-Fit Index (GFI) is 0.969, and the Adjusted Goodness-of-Fit (AGFI) is 0.930, both exceeding the recommended cut-offs of 0.90 and 0.80 respectively (Hoyle, 1995; Chau & Hu, 2001). The Comparative Fit Index (CFI) and Incremental Fit Index (IFI) are both reported at 0.971, and the Tucker-Lewis Index (TLI) is 0.950, all of which surpass the commonly accepted threshold of ≥ 0.90 (Hair et al., 2006; Ho, 2006). These indices confirm the model's strong comparative incremental fit.

Additionally, the Root Mean Square Error of Approximation (RMSEA) is 0.078, which falls within the acceptable range of ≤ 0.08 0.08 to 0.10 (Schumacker & Lomax, 2010), suggesting an adequate approximation of model fit to the population covariance matrix. Collectively, these findings confirm that the Social Influence measurement model demonstrates a satisfactory level of fit, supporting its reliability and validity for further analysis within the structural model.

iii Reliability and Convergent Validity

After achieving the unidimensionality of constructs, each of the construct's reliability and validity was tested. Cronbach's alpha, composite reliability and average variance extracted were used to test Composite Reliability and the obtained values of the 8 items are presented in Table 4.11. All the items had high factor loadings that ranged from 0.64 to 0.75, confirming the preservation of the indicator of the factors.

Table 4.12

Results of Cronbach Alpha and Convergent Validity for SI of CFA Model

Construct / Variable	Item	Final Factor Loading	Average Variance Extracted (Hughes et al., 2010) ^a	Composite Reliability (CR) ^b	Internal Reliability Cronbach Alpha
Social Influence/ Social Factor	SI1	0.64	0.477	0.879	0.877
	SI2	0.66			
	SI3	0.75			
	SI4	0.72			
	SI5	0.68			
	SI6	0.71			
	SI7	0.67			
	SI8	0.69			

a: Average Variance Extracted = (summation of the factor loadings)/((summation of the square of the factor loading) + (summation of the error variance))

b: Composite reliability = (square of the summation of the factor loadings)/((square of the summation of the factor loadings) + (square of the summation of the error variances)).

Table 4.12 evaluates the internal consistency and convergent validity for the Social Influence (SI) construct as part of the Confirmatory Factor Analysis (CFA) measurement model. The SI construct measured using eight items (SI1 to SI8), with factor loadings ranging from 0.64 to 0.75. These values exceed the minimum acceptable threshold of 0.50, indicating that all items moderately to strongly correlate with the underlying construct (Hair et al., 2010). The relatively consistent loading pattern suggests that each item contributes meaningfully to measuring the construct of social influence.

The Average Variance Extracted (AVE) for the construct is 0.477, slightly below the recommended threshold of 0.50 (Fornell & Larcker, 1981). Although this indicates that less than half of the variance in the indicators is explained by the latent construct, the deviation is marginal. In such cases, a lower AVE may still be considered acceptable if other validity and reliability indicators are strong (Malhotra & Dash, 2011).

Notably, the Composite Reliability (CR) is 0.879, well above the acceptable cut-off of 0.70, demonstrating a high degree of internal consistency and suggesting that the items reliably represent the construct. Similarly, the Cronbach's alpha value 0.877 supports this conclusion, as it reflects excellent internal reliability (Nunnally &

Bernstein, 1994). These findings indicate that the measurement of the SI construct is both consistent and stable across its items.

In summary, while the AVE is slightly below the ideal threshold, the high composite reliability and Cronbach's alpha strongly support the reliability and overall convergent validity of the Social Influence construct. Therefore, the construct is considered acceptable for inclusion in the structural model, particularly in the context of social science research where some flexibility in cut-off values is permissible.

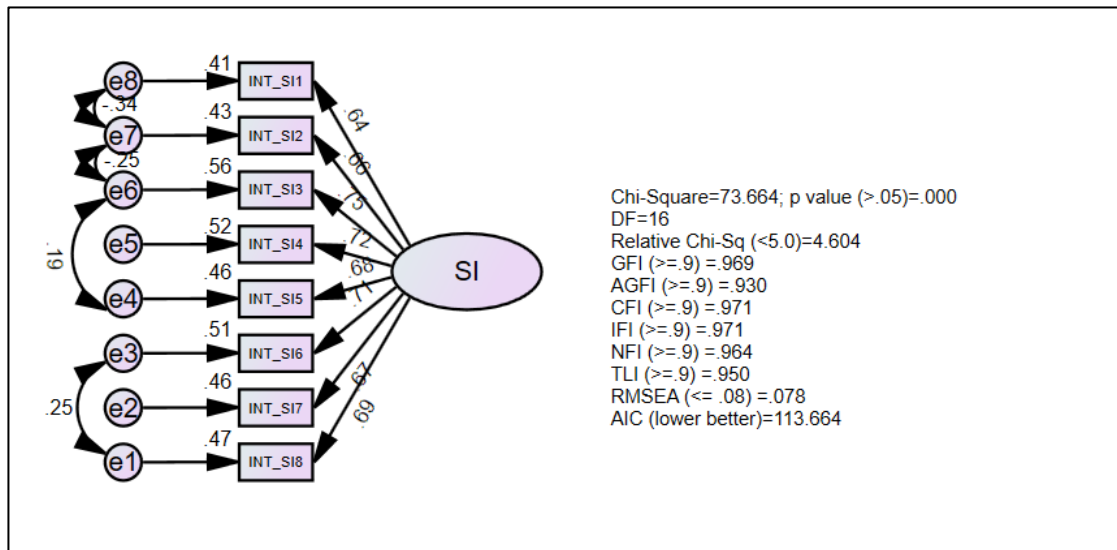


Figure 4.2 CFA Model for SI with all 8 items

4.7.1.3 CFA Model for Service Quality (SQ)

The constructs of SQ were measured by 3 items. The CFA model developed for SQ construct along with its 3 items are depicted in Figure 4.2.

i Standardised Loadings of the Model's Item

The CFA model developed for SQ depicted in Table 4.13 illustrates the model.

Table 4.13
Standardised Factor Loadings of the Items in SQ Model

Construct / Variable	Item	Initial Factor Loading	Item SQ2 Deleted
	SQ1	0.59	0.77

Construct / Variable	Item	Initial Factor Loading	Item SQ2 Deleted
Service Quality (SQ)	SQ2	0.37	-
	SQ3	0.99	0.76

Table 4.13 displays the standardized factor loadings for the items measuring construct Service Quality (SQ) before and after the deletion of the item SQ2. Initially, the construct comprised three items: SQ1, SQ2, and SQ3. The factor loading for SQ2 was relatively low at 0.37, which is below the commonly accepted threshold of 0.50 for convergent validity (Hair et al., 2010). This indicates that SQ2 did not adequately represent the latent construct and was contributing minimally to the overall measurement model. As a result, SQ2 was removed from the model to improve the construct's validity and reliability.

After the deletion of SQ2, the CFA model was recalibrated with the remaining two items, SQ1 and SQ3. The factor loading for SQ1 increased from 0.59 to 0.77, suggesting a stronger relationship with the latent variable once the low-performing item was removed. Similarly, SQ3's factor loading, initially extremely high at 0.99, adjusted to a more acceptable level of 0.76, reducing concerns of potential overfitting or redundancy. These revised loadings indicate that both items have good explanatory power and are strongly reflective of the Service Quality construct.

Although two-item constructs are generally less ideal than those with three or more items, they are considered acceptable in structural equation modelling when both items show high factor loadings, theoretical justification exists, and the overall model fit remains satisfactory (Hair et al., 2010; Kline, 2016). Therefore, the refined two-item model for Service Quality is both statistically and theoretically justifiable for inclusion in the structural analysis.

ii Goodness of Fit Indices

Based on the results the CFA model of SQ had adequate data fit with 4 items (see Table 4.14).

Table 4.14
GOF Indices of CFA Model for SQ

Fit Index	Modified Model	Recommended values	Source
df	0		
CMIN (χ^2)	0.00		
p-value	-	> 0.05	
χ^2/df	-	≤ 5.00	Bagozzi and Yi (1998)
GFI	1.000	≥ 0.90	Hoyle (1995)
AGFI	-	≥ 0.80	Chau and Hu (2001)
CFI	-	≥ 0.90	Bagozzi and Yi (1998); Byrne, 2013
TLI	-	≥ 0.90	Hair et al., (2006); Ho (2006)
IFI	-	≥ 0.90	Hair et al., (2006); Ho (2006)
RMSEA	-	≤ 0.10	Schumacker and Lomax, 2010

The CFA model for the SQ construct shows a perfect fit, as indicated by a Chi-Square (CMIN) value of 0.00 with zero degrees of freedom ($df = 0$). This scenario typically occurs in a just-identified model, where the number of estimated parameters equals the number of unique data points, leading to a perfect reproduction of the observed covariance matrix. Consequently, the p-value and CMIN/df are not applicable in this context.

The Goodness-of-Fit Index (GFI) is reported as 1.000, which exceeds the recommended threshold of 0.90, indicating an excellent fit between the hypothesized model and the observed data (Hoyle, 1995). Although other fit indices such as AGFI, CFI, TLI, IFI, and RMSEA are not reported, the perfect GFI and zero Chi-Square suggest that the model fits the data exceptionally well.

iii Reliability and Convergent Validity

After achieving the unidimensionality of constructs, each of the construct's reliability and validity was tested. Cronbach's alpha, composite reliability and average variance extracted were used to test Composite Reliability and the obtained values of the 4 items are presented in Table 4.14. All the items had high factor loadings that ranged from 0.54 to 0.64, confirming the preservation of the indicators of the factors.

Table 4.15

Results of Cronbach Alpha and Convergent Validity for SQ of CFA Model

Construct / Variable	Item	Final Factor Loading	Average Variance Extracted (Hughes et al., 2010) ^a	Composite Reliability (CR) ^b	Internal Reliability Cronbach Alpha
Service Quality (SQ)	SQ1	0.77	0.586	0.738	0.741
	SQ3	0.76			

a: Average Variance Extracted = (summation of the factor loadings) / ((summation of the square of the factor loading) + (summation of the error variance)).

b: Composite reliability = (square of the summation of the factor loadings) / ((square of the summation of the factor loadings) + (square of the summation of the error variances))

Table 4.15 presents the internal consistency and convergent validity assessment for the Service Quality (SQ) construct, as measured in the Confirmatory Factor Analysis (CFA) model. The construct is evaluated using two items: SQ1 and SQ3, with final factor loadings of 0.77 and 0.76 respectively. These values exceed the commonly accepted threshold of 0.50, indicating that both items load strongly onto the latent construct and contribute meaningfully to its measurement (Hair et al., 2010).

The Average Variance Extract (AVE) for the SQ construct is 0.586, which surpasses the minimum threshold of 0.50 recommended by Fornell and Larcker (1981). This suggests that more than half of the variance in the observed indicators is explained by the underlying construct, thus indicating adequate convergent validity.

The Composite Reliability (CR) is 0.738, also above the recommended threshold of 0.70 (Bagozzi & Yi, 1988), demonstrating good internal consistency of the indicators. Similarly, the Cronbach's Alpha value of 0.741 confirms the reliability of SQ construct. Although the construct includes only two items which can sometimes limit internal consistency which these reliability statistics indicate that the scale is dependable and the items are sufficiently correlated.

In conclusion, all three indicators which are factor loadings, AVE, and CR support the construct validity and reliability of Service Quality in this CFA model. Despite its brevity, the two-item structure provides acceptable psychometric properties, making the SQ construct suitable for inclusion in the structural model.

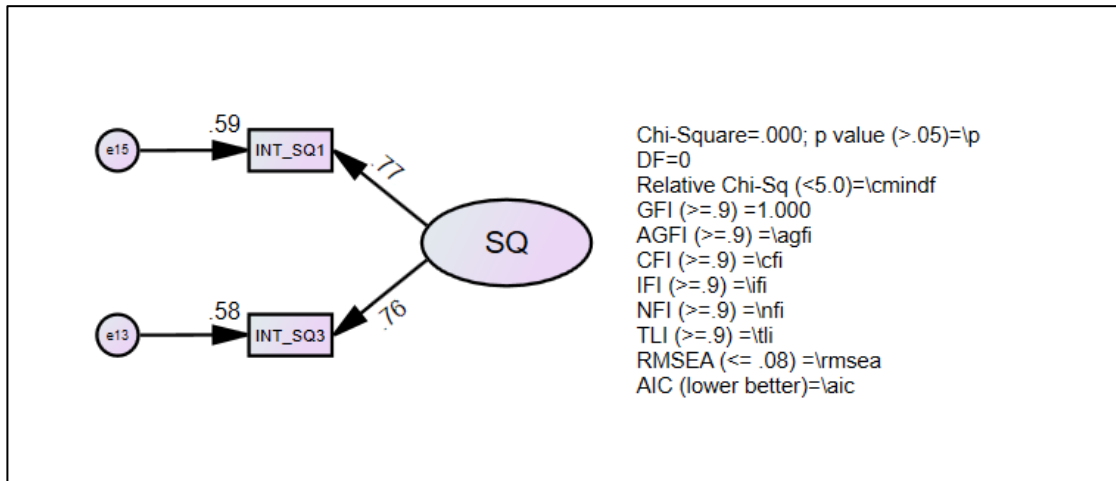


Figure 4.3 CFA Model for SQ with all 2 items

4.7.1.4 CFA Model for *Sharī'ah-Compliant (SC)*

The constructs of SC were measured by 4 items. The CFA model developed for SC construct along with its 4 items are depicted in Figure 4.4.

i Standardised Loadings of the Model's Item

The CFA model developed for SC depicted in Table 4.16 illustrates the model.

Table 4.16
Standardised Factor Loadings of the Items in SC Model

Construct / Variable	Item	Initial Factor Loading	Item SC2 Deleted
Sharī'ah-Compliant (SC)	SC1	0.64	0.72
	SC2	0.54	-
	SC3	0.77	0.78
	SC4	0.73	0.65

Table 4.16 presents the standardized factor loadings the construct *Sharī'ah-Compliant (SC)* before and after the deletion of item SC2. Initially, the SC construct consisted of four items: SC1, SC2, SC3, and SC4. The item SC2 recorded a factor loading 0.54, which is slightly above the minimum acceptable threshold of 0.50 (Hair et al., 2010), but still relatively weaker in comparison to the other indicators. Additionally, issues observed in the CFA model including a strong negative covariance between SC2 and another item, suggested potential redundancy or conceptual overlap. Consequently, SC2 was removed to improve the model's clarity and fit.

Following the deletion of SC2, the factor loadings of the remaining three items improved or remained strong. SC3 maintained from 0.64 to 0.72, indicating an enhanced representation of the construct. SC3 maintain a high loading, increasing slightly from 0.77 to 0.78, while SC4, although experiencing a slight decrease from 0.73 to 0.65, still remained well above the minimum threshold and retained its validity. The overall improvement in standardized loadings, particularly for SC1 and SC3, supports the decision to remove the SC2. This refinement enhances the construct's convergent validity and strengthens the measurement model, making the revised three-item SC construct suitable for further use in the structural model analysis.

ii Goodness of Fit Indices

Based on the results the CFA model of SC had adequate data with 3 items (see Table 4.17).

Table 4.17
GOF Indices of CFA Model for SC

Fit Index	Modified Model	Recommended values	Source
df	0.000		
CMIN (χ^2)	0.000		
p-value	-	> 0.05	
χ^2/df	-	≤ 5.00	Bagozzi and Yi (1998)
GFI	1.000	≥ 0.90	Hoyle (1995)
AGFI	-	≥ 0.80	Chau and Hu (2001)
CFI	-	≥ 0.90	Bagozzi and Yi (1998); Byrne, 2013
TLI	-	≥ 0.90	Hair et al., (2006); Ho (2006)
IFI	-	≥ 0.90	Hair et al., (2006); Ho (2006)
RMSEA	-	≤ 0.10	Schumacker and Lomax, 2010

Table 4.17 presents the Goodness-of-Fit (GOF) indices for the modified Confirmatory Factor Analysis (CFA) model of the shari'ah-Compliant (SC) construct. After the removal of item SC2, the model became just-identified, as indicated by a Chi-Square (CMIN) value of 0.000 with 0 degrees of freedom. In such cases, the model perfectly reproduces the observed covariance matrix, leading to a perfect model fit by default. As a result, several standard fit indices such as p-value, χ^2/df , and incremental indices (CFI, TLI, IFI) are not applicable or are not calculated.

Despite these limitations, the Goodness-of-Fit Index (GFI) is reported at 1.000, which exceeds the recommended threshold of 0.90 (Hoyle, 1995), indicating an excellent fit. However, the absence of values for other indices such as AGFI, CFI, TLI, and RMSEA is typical in just-identified models and does not reflect a lack of fit but

rather a lack of evaluability. According to model evaluation guidelines, just-identified models always produce fit indices because there are no degrees of freedom left to test the model statistically (Byrne, 2013).

iii Reliability and Convergent Validity

After achieving the unidimensionality of constructs, each of the construct's reliability and validity was tested. Cronbach's Alpha, composite reliability and average variance extracted were used to test Composite Reliability and the obtained values of the 3 items are presented in Table 4.18. All the items had high factor loadings that ranged from 0.65 to 0.78, confirming the preservation of the indicators of the factors.

Table 4.18
Results of Cronbach Alpha and Convergent Validity for SC of CFA Model

Construct / Variable	Item	Final Factor Loading	Average Variance Extracted (Hughes et al., 2010) ^a	Composite Reliability (CR) ^b	Internal Reliability Cronbach Alpha
Shari'ah-	SC1	0.72	0.516	0.761	0.760
Compliant (SC)	SC3	0.78			
	SC4	0.65			

a: Average Variance Extracted = (summation of the factor loadings) / ((summation of the square factor loading) + (summation of the error variance)).

b: Composite reliability = (square of the summation of the factor loadings) / ((square of the summation of the factor loadings) + (square of the summation of the error variances)).

Table 4.18 summarizes the evaluation of internal reliability and convergent validity for the shari'ah-Compliant (SC) construct, which comprises three items: SC1, SC3, and SC4. The factor loadings for these items are 0.72, 0.78, and 0.65 respectively which all exceeding the recommended minimum threshold of 0.50 (Hair et al., 2010). These loadings indicate a moderate to strong relationship between each item and the latent SC construct, suggesting that the items are valid indicators of the underlying concept.

The Average Variance Extracted (AVE) for the SC construct is 0.516, which is above the critical value of 0.50 (Fornell & Larcker, 1981). This implies that more than half of the variance in the measurement items is explained by the latent construct, supporting acceptable convergent validity.

The construct also demonstrates solid internal consistency, with a Composite Reliability (CR) of 0.761 and a Cronbach's Alpha value of 0.760. Both indicators exceed the common cut-off point of 0.70 (Bagozzi & Yi, 1988), suggesting that the items are consistent and reliable in measuring the sharī'ah-compliant construct. These reliability coefficients reflect that respondents interpreted the items in a consistent manner and that the scale can be trusted to yield stable results.

In summary, the SC construct demonstrates satisfactory reliability and convergent validity, with factor loadings, AVE, CR, and Cronbach's Alpha all meeting or exceeding accepted thresholds. This affirms that the items adequately capture the sharī'ah-compliance dimension and are suitable for further structural modeling and hypothesis testing.

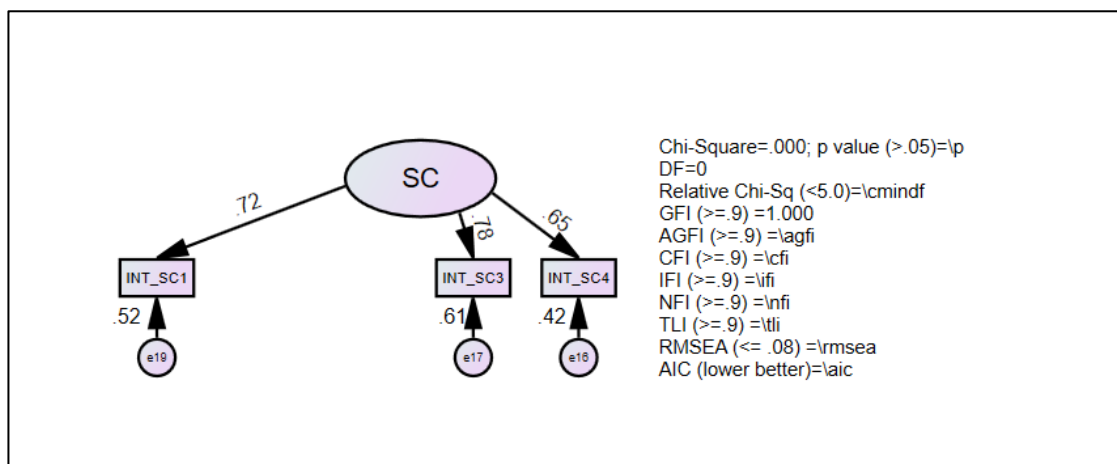


Figure 4.4 CFA Model for SC with all 3 items

4.7.1.5 CFA Model for Financial Technology (FT)

The constructs of FT were measured by 5 items. The CFA model developed for FT construct along with its 5 items are depicted in Figure 4.5.

i Standardised Loadings of the Model's Item

The CFA model developed for FT depicted in Table 4.19 illustrates the model.

Table 4.19
Standardised Factor Loadings of the Items in FT Model

Construct / Variable	Item	Initial Factor Loading	Item Deleted
Financial Technology (FT)	FT1	0.72	
	FT2	0.52	
	FT3	0.80	
	FT4	0.61	
	FT5	0.73	

Table 4.19 displays the standardized factor loadings for the construct Financial Technology (FT) based on the Confirmatory Factor Analysis (CFA). The construct comprises five observed variables: FT1, FT2, FT3, FT4, and FT5. All five items demonstrate acceptable standardized factor loadings, ranging from 0.52 to 0.80, indicating they adequately represent the latent construct. The item FT3, with a loading of 0.80, contributes most strongly to the construct, followed by FT5 (0.73) and FT1 (0.72). These items exhibit strong correlations with the underlying factor and significantly enhance the model's convergent validity.

Although FT2 shows the lowest loading at 0.52, it still meets the minimum threshold of 0.50, suggesting it contributes sufficiently to the measurement model (Hair et al., 2010). Similarly, FT4, with a factor loading of 0.61, also reflects a moderate but acceptable level of association. As all items surpass the standard cutoff for acceptability, no items were removed from the model at this stage.

Overall, the standardized factor loadings indicate a robust measurement model for the Financial Technology construct, with each indicator contributing meaningfully. This supports the construct's internal consistency and convergent validity, forming a strong basis for subsequent reliability testing and structural model integration.

ii Goodness of Fit Indices

Based on the results the CFA model of FT had adequate data fit with 5 items (see Table 4.20).

Table 4.20
Indices of CFA Model for FT

Fit Index	Modified Model	Recommended values	Source
df	3		
CMIN (χ^2)	7.3000		
p-value	0.063	> 0.05	
χ^2/df	2.433	≤ 5.00	Bagozzi and Yi (1998)
GFI	0.995	≥ 0.90	Hoyle (1995)
AGFI	0.976	≥ 0.80	Chau and Hu (2001)
CFI	0.996	≥ 0.90	Bagozzi and Yi (1998); Byrne, 2013
TLI	0.986	≥ 0.90	Hair et al., (2006); Ho (2006)
IFI	0.996	≥ 0.90	Hair et al., (2006); Ho (2006)
RMSEA	0.049	≤ 0.10	Schumacker and Lomax, 2010

Table 4.20 presents the Goodness-of-Fit (GOF) indices for the Confirmatory Factor Analysis (CFA) model of the Financial Technology (FT) construct, which includes five measurement items. The results indicate that the model demonstrates an adequate and satisfactory fit to the observed data. The Chi-Square value (CMIN) is 7.300 with 3 degrees of freedom, and the associated p-value is 0.063, which is greater than 0.05. This non-significant p-value suggests that the model's predicted covariance structure does not significantly differ from the observed structure, an indication of good model fit.

The relative Chi-Square (χ^2/df) is 2.433, which is well within the acceptable threshold of ≤ 5.00 as recommended by Bagozzi and Yi (1998), further supporting the model's adequacy. In terms of absolute and incremental fit indices, all reported values exceed the recommended cutoffs. The Goodness-of-Fit Index (GFI) is 0.995, and the Adjusted Goodness-of-Fit Index (AGFI) is 0.976, both well above their respective thresholds of 0.90 and 0.80 (Hoyle, 1995; Chau & Hu, 2001).

Furthermore, the incremental indices, Comparative match Index (CFI) and Incremental Fit Index (IFI), are both reported at 0.996, indicating a very good comparative match. The Tucker-Lewis Index (TLI), reported at 0.986, also exceeds the minimum requirement of 0.90 (Hair et al., 2006; Ho, 2006). Finally, the Root Mean Square Error of Approximation (RMSEA) is 0.049, which falls within the preferred range of ≤ 0.08 and comfortably below the maximum acceptable threshold of 0.10

(Schumacker & Lomax, 2010). This suggests a good approximation of the model to the population covariance matrix. In conclusion, the GOF indices confirm that the CFA model for the FT construct, consisting of five items, achieves a robust level of model fit.

iii Reliability and Convergent Validity

After achieving the unidimensionality of constructs, each of the construct's reliability and validity was tested. Cronbach's alpha, composite reliability and average variance extracted were used to test Composite Reliability and the obtained values of the 5 items are presented in Table 4.21. All the items had high factor loadings that ranged from 0.53 to 0.80, confirming the preservation of the indicators of the factors.

Table 4.21

Results of Cronbach Alpha and Convergent Validity for FT of CFA Model

Construct / Variable	Item	Final Factor Loading	Average Variance Extracted (Hughes et al., 2010) ^a	Composite Reliability (CR) ^b	Internal Reliability Cronbach Alpha
Financial Technology (FT)	FT1	0.72	0.467	0.811	0.809
	FT2	0.52			
	FT3	0.80			
	FT4	0.61			
	FT5	0.73			

a: Average Variance Extracted = (summation of the factor loadings) / ((summation of the square of the factor loading) + (summation of the error variance)).

b: Composite reliability = (square of the summation of the factor loadings) / ((square of the summation of the factor loadings) + (square of the summation of the error variances)).

Table 4.21 presents the internal consistency and convergent validity analysis for the Financial Technology (FT) construct, which comprises five items: FT1, FT2, FT3, FT4, and FT5. The factor loadings for these items range from 0.52 to 0.80, with FT3 showing the highest loading (0.80) and FT2 the lowest (0.52). According to Hair et al. (2010), loadings above 0.50 are acceptable, indicating that all five items demonstrate a meaningful relationship with the underlying FT construct, though FT2's contribution is comparatively weaker.

The Average Variance Extracted (AVE) is 0.467, which is slightly below the recommended threshold of 0.50 (Fornell & Larcker, 1981). This suggests that less than

half of the variance in the indicators is explained by the latent construct, indicating marginal convergent validity. However, given that all item loadings are above 0.50 and the reliability indices are strong, this slight shortfall is considered acceptable in social science research (Malhotra & Dash, 2011).

The Composite Reliability (CR) is 0.811, well above the acceptable threshold of 0.70, demonstrating high internal consistency. Similarly, Cronbach's Alpha is 0.809, supporting the scale's reliability and confirming that the items consistently measure the same underlying construct. These reliability values indicate that despite the slightly low AVE, the overall measurement model for the FT construct is statistically sound and dependable.

To summarize, the Financial Technology (FT) construct has acceptable reliability and adequate convergent validity. While there is space for improvement in item strength, particularly FT2, the model as a whole is suitable for additional structural modeling and hypothesis testing.

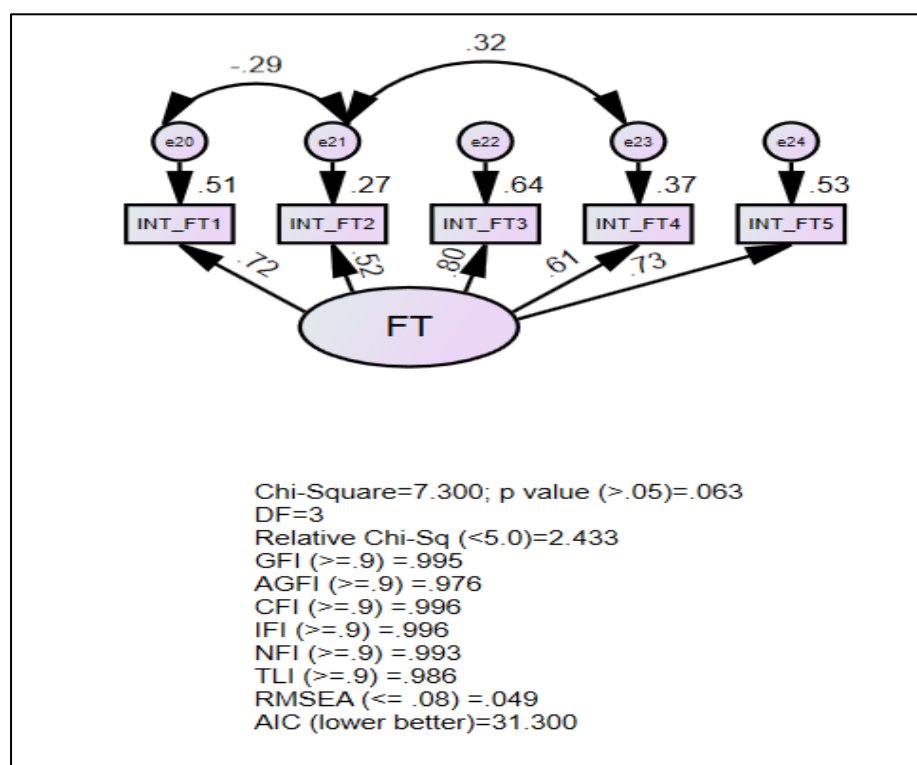


Figure 4.5 CFA Model for FT with all 5 items

4.7.2 Second-Order Model for Intention to Participate in Takāful

Twenty (25) items were utilised in this study for the measurement of five first-order constructs of attitude namely, awareness and knowledge (AK), social influence

(SI), service quality (SQ), sharī'ah compliant (SC) and financial technology (FT). Figure 4.6, presents the attitude CFA model along with the related 25 items.

4.7.2.1 *Standardised Loadings of the Model's Item*

This study constructed a CFA model for Attitude and the factor loadings of the items are presented in Table 4.22.

Table 4.22

Initial Standardised Factor Loadings of the Items in Attitude CFA Model

Variables	Construct / Variable	Item	Initial Factor Loading	Item Deleted
Intention to participate in <i>Takāful</i>	Awareness and Knowledge (AK)	AK1	.54	
		AK3	.68	
		AK4	.66	
	Social Influence/ Social Factor (SI)	SI1	.63	
		SI2	.60	
		SI3	.73	
		SI4	.72	
		SI5	.70	
		SI6	.74	
		SI7	.67	
		SI8	.72	
	Service Quality (SQ)	SQ1	.75	
		SQ3	.79	
	Sharī'ah-Compliant (SC)	SC1	.67	
		SC3	.78	
		SC4	.70	
	Financial Technology (FT)	FT1	.71	
		FT2	.61	
		FT3	.76	
		FT4	.69	
		FT5	.69	

Based on the table, the standardised loadings of the items in the model exceeded 0.40 as suggested by Hair et. al (2006), ranging from 0.54 to 0.79. Thus, all items were kept as they all had sufficient factor loadings.

4.7.2.2 *Goodness of Fit Indices*

Based on the results the CFA model of Intention to participate in Takāful had adequate data fit with 25 items (see Table 4.23).

Table 4.23
GOF Indices of CFA Model for Intention to participate in Takāful

Fit Index	Modified Model	Recommended values	Source
df	183		
CMIN	605.255		
(χ^2)			
p-value	0.00	> 0.05	
χ^2/df	3.307	≤ 5.00	Bagozzi and Yi (1998)
GFI	0.905	≥ 0.90	Hoyle (1995)
AGFI	0.880	≥ 0.80	Chau and Hu (2001)
CFI	0.931	≥ 0.90	Bagozzi and Yi (1998); Byrne, 2013
TLI	0.921	≥ 0.90	Hair et al., (2006); Ho (2006)
IFI	0.931	≥ 0.90	Hair et al., (2006); Ho (2006)
RMSEA	0.062	≤ 0.10	Schumacker and Lomax, 2010

Table 4.23 reports the Goodness-of-Fit (GOF) indices for the Confirmatory Factor Analysis (CFA) model assessing the construct of 'Intention to participate in Takāful'. The results demonstrate that the model has an overall acceptable fit based on several widely-used fit indices and benchmark criteria from the literature.

The Chi-square value (CMIN) is 605.255 with 183 degrees of freedom (df). Although the associated p-value is 0.00, which indicates statistical significance and thus suggests a poor fit, this outcome is expected in large samples due to the test's sensitivity to sample size (Byrne, 2013). Therefore, researchers often rely on additional fit indices to evaluate model adequacy.

The chi-square/df ratio (χ^2/df) is 3.307, which is well below the acceptable threshold of 5.0 (Bagozzi & Yi, 1998). This indicates a reasonably good fit between the model and the observed data.

The Goodness-of-Fit Index (GFI) is 0.905, exceeding the recommended minimum value of 0.90 (Hoyle, 1995), which supports the model's overall fitness.

Similarly, the Adjusted Goodness-of-Fit Index (AGFI) is 0.880, which surpasses the acceptable threshold of 0.80 (Chau & Hu, 2001), indicating that the model accounts for a substantial proportion of the variances and covariances in the data, adjusted for model complexity.

The Comparative Fit Index (CFI) and the Incremental Fit Index (IFI) both record values of 0.931, and the Tucker-Lewis Index (TLI) stands at 0.921—all of which are above the standard cut-off of 0.90 (Hair et al., 2006; Bagozzi & Yi, 1998). These indices collectively suggest that the model performs well compared to a baseline model, thus reinforcing model adequacy.

Finally, the Root Mean Square Error of Approximation (RMSEA) is 0.062, which is comfortably below the recommended threshold of 0.10, and closer to the preferred range of ≤ 0.08 for a good fit (Schumacker & Lomax, 2010). This further supports the notion that the model is not overly complex or poorly specified.

The CFA model for intention to engage in Takāful has an adequate and valid fit, according to the overall fit indices, especially GFI, AGFI, CFI, TLI, IFI, and RMSEA, even with the significant chi-square p-value. This contributes to the model's structural integrity and theoretical soundness for future SEM analyses.

4.7.2.3 Reliability and Convergent Validity

After the achievement of the construct's uni-dimensionality, each of the constructs' reliability and validity was tested. In particular, reliability was examined through three tests namely, Cronbach's alpha, composite reliability and average variance extracted (Hughes et al., 2010) and validity was examined by testing construct, convergent and discriminant validity. The Cronbach's alpha and convergent validity results of the CFA model of Intention to participate in Takāful with 25 items are listed in Table 4.24.

Table 4.24

Results of Cronbach Alpha and Convergent Validity for Intention to participate in Takāful of CFA Model

Construct / Variable	Item	Final Factor Loading	Average Variance Extracted (Hughes et al., 2010) ^a	Composite Reliability (CR) ^b	Internal Reliability Cronbach Alpha
Awareness and Knowledge (AK)	AK1	.54	0.397	0.661	0.667
	AK3	.68			
	AK4	.66			
Social Influence/ Social Factor (SI)	SI1	.63	0.477	0.879	0.877
	SI2	.60			
	SI3	.73			
	SI4	.72			
	SI5	.70			
	SI6	.74			
	SI7	.67			
	SI8	.72			
Service Quality (SQ)	SQ1	.75	0.593	0.745	0.741
	SQ3	.79			
Sharī'ah-Compliant (SC)	SC1	.67	0.516	0.761	0.760
	SC3	.78			
	SC4	.70			
Financial Technology (FT)	FT1	.71	0.481	0.822	0.809
	FT2	.61			
	FT3	.76			
	FT4	.69			
	FT5	.69			

. a: Average Variance Extracted = (summation of the factor loadings) / ((summation of the square of the factor loading) + (summation of the error variance)).

b: Composite reliability = (square of the summation of the factor loadings) / ((square of the summation of the factor loadings) + (square of the summation of the error variances)).

Table 4.24 shows the internal reliability and convergent validity results for the CFA model's five latent constructs of intention to participate in Takāful: Awareness and Knowledge (AK), Social Influence (SI), Service Quality (SQ), shari'ah-Compliant (SC), and Financial Technology (FT). These assessments are critical for validating the measuring model and ensuring that the items employed accurately and consistently represent their respective constructs.

This construct includes three items (AK1, AK3, AK4) with factor loadings ranging from 0.54 to 0.68. The Average Variance Extracted (AVE) is 0.397, which is below the recommended minimum threshold of 0.50 (Fornell & Larcker, 1981), indicating weak convergent validity. However, the Composite Reliability (CR) is 0.661 and Cronbach's Alpha is 0.667, both slightly below the ideal 0.70 level. These results suggest that while the internal consistency is borderline acceptable in exploratory research, the AK construct may benefit from item refinement or revalidation.

With eight items (SI1 to SI8), the SI construct shows strong standardized loadings ranging from 0.60 to 0.74. The AVE of 0.477 is marginally below the 0.50 cut-off, indicating acceptable but not strong convergent validity. However, the CR (0.879) and Cronbach's Alpha (0.877) are both excellent, clearly exceeding the 0.70 benchmark, suggesting high internal reliability. This means that although the variance explained is slightly below ideal, the scale is stable and consistent.

This construct is measured by two items (SQ1 and SQ3) with loadings of 0.75 and 0.79. The AVE of 0.593 is above the 0.50 threshold, and the CR (0.745) and Cronbach's Alpha (0.741) both meet the acceptable standard of 0.70. These results demonstrate good convergent validity and internal consistency. Despite being a two-item construct, SQ is reliable and well-measured in this model.

The SC construct includes three items (SC1, SC3, SC4) with factor loadings between 0.67 and 0.78. It achieves an AVE of 0.516, CR of 0.761, and Cronbach's Alpha of 0.760, all of which meet or exceed the required thresholds. These values confirm that the construct has acceptable convergent validity and high reliability, and the items adequately represent the concept of shari'ah compliance in the context of Takāful.

Comprising five items (FT1 to FT5), the FT construct exhibits factor loadings from 0.61 to 0.76. The AVE is 0.481, slightly below 0.50, indicating moderate convergent validity. However, both the CR (0.822) and Cronbach's Alpha (0.809) exceed the 0.70 benchmark, suggesting that the construct is internally consistent and reliable, despite the marginal AVE.

The findings shown in Table 4.20 show that the majority of the constructs, including SI, SQ, SC, and FT, exhibit adequate convergent validity and acceptable high internal reliability. Metrics for the Awareness and Knowledge (AK) construct are comparatively poorer. The constructs are mostly suitable for inclusion in structural modeling pertaining to the intention to participate in Takāful, and the measurement model is largely supported.

4.7.2.4 Discriminant Validity

Discriminant validity reflects the actual distinctiveness of the construct from other constructs, in which case the correlations between factors in the measurement have to remain under 0.85 (Kline, 2005). Discriminant validity was confirmed by comparing correlations between constructs and the square root of the average variance extracted for them (Fornell & Larcker, 1982). The discriminant validity values of the modified measurement model of TRLD are listed in Table 4.25.

Table 4.25
Discriminant Validity of Attitude

Constructs	AK	SI	SQ	SC	FT
Awareness and Knowledge (AK)	.630				
Social Influence (SI)	.792	.691			
Service Quality (SQ)	.757	.689	.770		
Shari‘ah-Compliant (SC)	.774	.723	.578	.718	
Financial Technology (FT)	.740	.810	.689	.672	.694

Note: Diagonals represent the square root of the average variance extracted while the other entries represent the square correlations.

Table 4.25 presents the discriminant validity analysis for the constructs related to attitude towards participation in Takāful, specifically Awareness and Knowledge (AK), Social Influence (SI), Service Quality (SQ), shari‘ah-Compliant (SC), and Financial Technology (FT). Discriminant validity is assessed using the Fornell-Larcker criterion, which states that the square root of the Average Variance Extracted (AVE) for each construct should be greater than its correlations with other constructs. This ensures that each construct is empirically distinct from the others and measures a unique concept.

In the table, only the Service Quality (SQ) construct meets this criterion, with a square root of AVE of 0.770, which exceeds its correlations with all other constructs. This indicates that SQ has satisfactory discriminant validity and is well differentiated from the other latent variables. In contrast, Awareness and Knowledge (AK), which has a square root of AVE of 0.630, is highly correlated with SI (0.792), SC (0.774), and FT (0.740). Similarly, Social Influence (SI) also falls short, with a square root of AVE of 0.691, which is lower than its correlation with FT (0.810) and AK (0.792). These findings suggest that AK and SI are not sufficiently distinct and may overlap in content or respondent interpretation. The sharī'ah-Compliant (SC) construct also shows concerns with discriminant validity, with its AVE square root of 0.718 being lower than its correlations with AK (0.774) and SI (0.723). The Financial Technology (FT) construct demonstrates a similar pattern, where its square root of AVE (0.694) is lower than its correlation with SI (0.810) and AK (0.740). These results suggest that the constructs of AK, SI, SC, and FT may share conceptual similarities or common measurement characteristics, leading to high inter-construct correlations.

In conclusion, the discriminant validity for several constructs in the model is not well established, indicating potential redundancy or insufficient distinctiveness among them. This may affect the structural integrity of the model and should be addressed by re-examining and refining measurement items to ensure clearer conceptual boundaries between constructs related to attitude towards Takāful participation.

The model can nevertheless be cautiously accepted, especially in exploratory or early-stage research, even if there is a lack of discriminant validity among various dimensions, primarily amongst Awareness and Knowledge, Social Influence, sharī'ah-Compliant, and Financial Technology. This is because previous CFA tables (e.g., acceptable CFI, RMSEA, $CR > 0.7$, etc.) demonstrate that other components of model quality, including goodness-of-fit indices, composite reliability, and convergent validity, fall within acceptable limits.

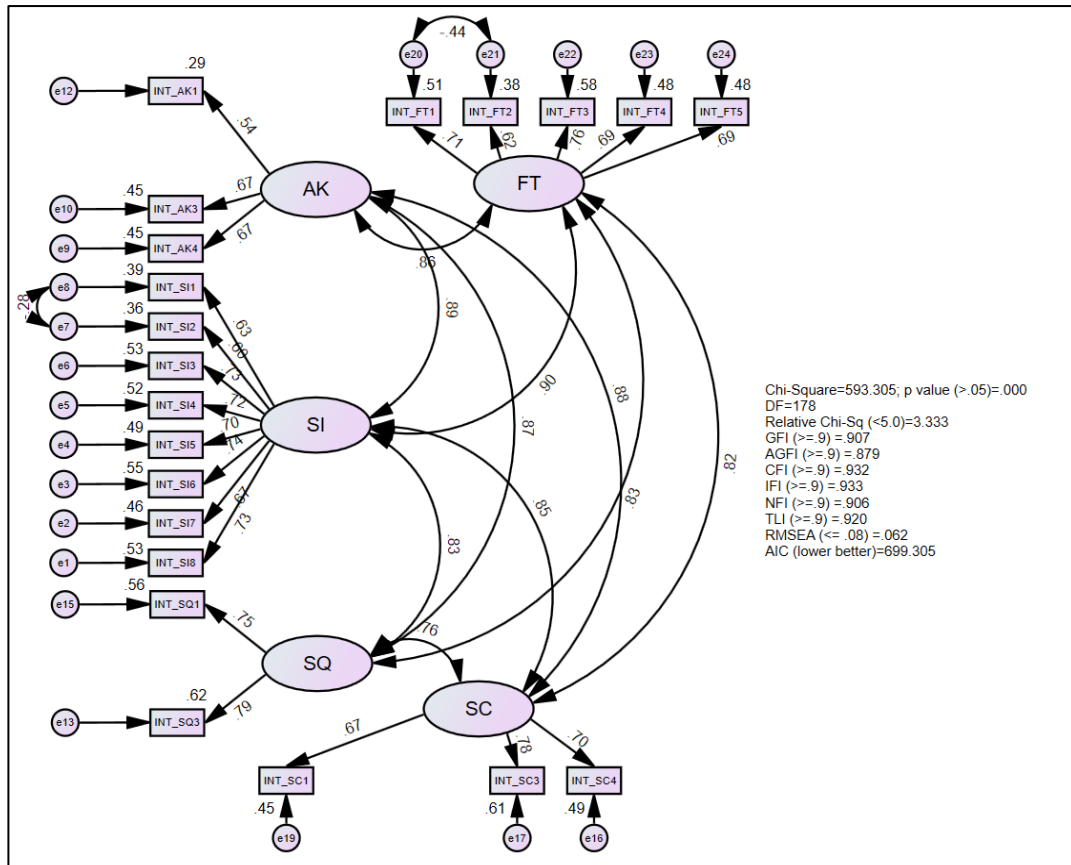


Figure 4.6 CFA Model for Intention to Participate in *Takāful* with all 25 items

4.7.3 CFA Model for Role of Agent (Role)

The constructs of Role were measured by 4 items. The CFA model developed for Role construct along with its 4 items are depicted in Figure 4.7.

4.7.3.1 Standardised Loadings of the Model's Item

The CFA model developed for Role depicted in Table 4.26 illustrates the model.

Table 4.26
Initial Standardised Factor Loadings of the Items in Role CFA Model

Construct / Variable	Item	Initial Factor Loading	Item Deleted
Role of Agent (Role)	Role1	0.76	
	Role2	0.75	
	Role3	0.71	
	Role4	0.76	

Based on the table, the standardised loadings of the 4 items in the model exceeded 0.40 as suggested by Hair et. al (2006), ranging from 0.71 to 0.76 Thus, all items were kept as they all had sufficient factor loadings.

4.7.3.2 Goodness of Fit Indices

Based on the results the CFA model of Role had adequate data fit with 4 items (see Table 4.27)

Table 4.27
GOF Indices of CFA Model for Role

Fit Index	Modified Model	Recommended values	Source
df	1		
CMIN	3.851		
(χ^2)			
p-value	0.050	> 0.05	
χ^2/df	3.851	≤ 5.00	Bagozzi and Yi (1998)
GFI	0.997	≥ 0.90	Hoyle (1995)
AGFI	0.968	≥ 0.80	Chau and Hu (2001)
CFI	0.997	≥ 0.90	Bagozzi and Yi (1998); Byrne, 2013
TLI	0.979	≥ 0.90	Hair et al., (2006); Ho (2006)
IFI	0.997	≥ 0.90	Hair et al., (2006); Ho (2006)
RMSEA	0.069	≤ 0.10	Schumacker and Lomax, 2010

Table 4.27 presents the Goodness-of-Fit (GOF) indices for the Confirmatory Factor Analysis (CFA) model assessing the ‘Role’ construct. The results indicate that the model exhibits a good and acceptable fit based on multiple fit indices recommended in the structural equation modeling (SEM) literature. The chi-square value (CMIN) is 3.851 with 1 degree of freedom (df), and the p-value is 0.050, which meets the threshold of $p > 0.05$, suggesting that there is no significant difference between the observed data and the hypothesized model, thus indicating a good model fit.

The chi-square/df ratio (χ^2/df) is 3.851, which is well below the commonly accepted maximum value of 5.0, supporting the adequacy of the model (Bagozzi & Yi, 1998). The Goodness-of-Fit Index (GFI) is 0.997 and the Adjusted Goodness-of-Fit Index (AGFI) is 0.968, both of which exceed the recommended cut-off values of 0.90 and 0.80 respectively (Hoyle, 1995; Chau & Hu, 2001), indicating a high proportion of variance explained by the model.

Furthermore, the Comparative Fit Index (CFI) and Incremental Fit Index (IFI) both report values of 0.997, while the Tucker-Lewis Index (TLI) is 0.979. These indices exceed the standard threshold of 0.90, as recommended by Hair et al. (2006), confirming

that the model compares favorably against a baseline model and fits the data well. Lastly, the Root Mean Square Error of Approximation (RMSEA) is 0.069, which is below the recommended threshold of 0.10 (Schumacker & Lomax, 2010), further affirming that the model is well-specified and parsimonious.

In summary, the CFA model for the Role construct demonstrates a strong and satisfactory fit across all GOF indices. This supports the structural validity of the construct and indicates that the measurement model is appropriate for use in further structural equation modeling.

4.7.3.3 *Reliability and Convergent Validity*

After achieving the unidimensionality of constructs, each of the construct's reliability and validity was tested. Cronbach's alpha, composite reliability and average variance extracted were used to test Composite Reliability and the obtained values of the 4 items are presented in Table 4.28. All the items had high factor loadings that ranged from 0.71 to 0.76, confirming the preservation of the indicators of the factors.

Table 4.28
Results of Cronbach Alpha and Convergent Validity for Role of CFA Model

Construct / Variable	Item	Final Factor Loading	Average Variance Extracted (Hughes et al., 2010) ^a	Composite Reliability (CR) ^b	Internal Reliability Cronbach Alpha
Role of Agent (Role)	Role1	0.76	.549	.829	.811
	Role2	0.75			
	Role3	0.71			
	Role4	0.76			

a: Average Variance Extracted = (summation of the factor loadings) / ((summation of the square of the factor loading) + (summation of the error variance)).

b: Composite reliability = (square of the summation of the factor loadings) / ((square of the summation of the factor loadings) + (square of the summation of the error variances)).

The findings of the internal consistency and convergent validity evaluation of the Role of Agent (Role) construct using confirmatory factor analysis (CFA) are shown in Table 4.28. Role1, Role2, Role3, and Role4 are the four elements that make up this construct, and their standardized factor loadings range from 0.71 to 0.76. Factor loadings greater than 0.70 are regarded as high, suggesting that the indicators accurately

reflect the latent concept (Hair et al., 2010). In this instance, every loading satisfies or approaches this criterion, indicating that every item makes a significant contribution to the measurement of the role construct.

The Average Variance Extracted (AVE) is 0.549, which exceeds the recommended threshold of 0.50 (Fornell & Larcker, 1981), suggesting that more than 50% of the variance in the indicators is accounted for by the latent construct. This indicates adequate convergent validity, meaning the items converge well in representing the concept of the agent's role in influencing intention to participate in *Takāful*.

Additionally, the Composite Reliability (CR) is 0.829, which is above the accepted cut-off value of 0.70 (Bagozzi & Yi, 1988), demonstrating high internal consistency. Similarly, Cronbach's Alpha is 0.811, further confirming that the set of items is reliable and consistently measures the same underlying construct. These reliability values indicate that the items are cohesive and yield consistent results across different samples.

In summary, the Role of Agent construct in the CFA model demonstrates strong psychometric properties, including high factor loadings, sufficient AVE, and excellent reliability. These results support the validity and reliability of this construct for use in further structural modeling and hypothesis testing related to the intention to participate in *Takāful*.

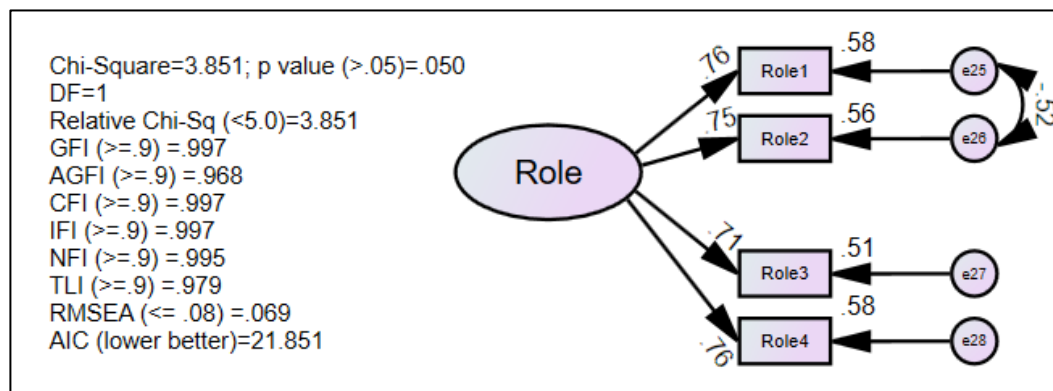


Figure 4.7 CFA Model for Role with all 4 items

4.7.4 CFA Model for Behaviour (Behaviour)

The constructs of Behaviour were measured by 4 items. The CFA model developed for Behaviour construct along with its 4 items are depicted in Figure 4.8.

4.7.4.1 *Standardised Loadings of the Model's Item*

The CFA model developed for Behaviour depicted in Table 4.29 illustrates the model.

Table 4.29

Standardised Factor Loadings of the Items in Behaviour CFA Model

Construct / Variable	Item	Initial Factor Loading	Item Behaviour 2 Deleted
Behaviour (Behaviour)	Behaviour1	0.59	0.59
	Behaviour2	0.40	-
	Behaviour3	0.97	0.97
	Behaviour4	0.54	0.54

Table 4.29 presents the standardised factor loadings for the Behaviour construct within the CFA model, including the result after the deletion of Item Behaviour2. Initially, the Behaviour construct included four items: Behaviour1, Behaviour2, Behaviour3, and Behaviour4. Upon analysis, Behaviour2 showed a low factor loading of 0.40, which is below the minimum acceptable threshold of 0.50 (Hair et al., 2010).

Such a low loading indicates that Behaviour2 has a weak relationship with the underlying construct and contributes minimally to measuring the intended latent variable. Therefore, it was removed from the model to improve construct validity.

After deletion, the model retained Behaviour1 (0.59), Behaviour3 (0.97), and Behaviour4 (0.54). All three remaining items have factor loadings above 0.50, indicating a moderate to strong correlation with the latent Behaviour construct. Notably, Behaviour3 has an exceptionally high loading (0.97), suggesting it is the most dominant item in defining the construct. While the presence of high loading is generally positive, extremely high loadings (≥ 0.95) may also suggest redundancy or a potential issue with multicollinearity, which should be reviewed further (Kline, 2015).

Despite the model being just-identified ($df = 0$, as shown in Table 4.27), the retained items show sufficient factor loadings, and the decision to remove Behaviour2 is theoretically and statistically justified.

4.7.4.2 *Goodness of Fit Indices*

Based on the results the CFA model of Behaviour had adequate data fit with 3 items (see Table 4.30).

Table 4.30
GOF Indices of CFA Model for Behaviour

Fit Index	Modified Model	Recommended values	Source
df	0.000		
CMIN (χ^2)	0.000		
p-value	-	> 0.05	
χ^2/df	-	≤ 5.00	Bagozzi and Yi (1998)
GFI	1.000	≥ 0.90	Hoyle (1995)
AGFI	-	≥ 0.80	Chau and Hu (2001)
CFI	-	≥ 0.90	Bagozzi and Yi (1998); Byrne, 2013
TLI	-	≥ 0.90	Hair et al., (2006); Ho (2006)
IFI	-	≥ 0.90	Hair et al., (2006); Ho (2006)
RMSEA	-	≤ 0.10	Schumacker and Lomax, 2010

Table 4.30 reports the Goodness-of-Fit (GOF) indices for the Confirmatory Factor Analysis (CFA) model of the Behaviour construct after the removal of Behaviour2, due to its low factor loading of 0.40 (as shown in Table 4.26). The revised model now includes three items: Behaviour1, Behaviour3, and Behaviour4. The CFA output shows zero degrees of freedom ($df = 0$) and a chi-square (CMIN) value of 0.000, resulting in the absence of most standard GOF indices such as RMSEA, CFI, TLI, and AGFI. This occurs because the model is just-identified, meaning the number of free parameters equals the number of data points, allowing the model to perfectly reproduce the data by definition, but not enabling statistical testing of model fit (Byrne, 2013; Kline, 2015).

The Goodness-of-Fit indicator (GFI), which is 1.000 and denotes a mathematically perfect fit, is the only fit indicator offered. However, since it represents a saturated model rather than empirical proof of model adequacy, such a conclusion should be considered cautiously in a just-identified model. The validity of the construct should be assessed using alternate methods, such as factor loadings, Composite Reliability (CR), and Average Variance Extracted (AVE), as the fit cannot be properly assessed using GOF indices in this situation.

Despite the limitation in model fit evaluation, the remaining items (Behaviour1 = 0.59, Behaviour3 = 0.97, Behaviour4 = 0.54) demonstrate acceptable factor loadings (≥ 0.50), suggesting that they contribute moderately to strongly to the measurement of the Behaviour construct. If the construct also achieves sufficient CR (≥ 0.70) and AVE (≥ 0.50), it can be deemed acceptable for inclusion in the structural model, provided this limitation is clearly acknowledged in the research report.

4.7.4.3 Reliability and Convergent Validity

After achieving the unidimensionality of constructs, each of the construct's reliability and validity was tested. Cronbach's alpha, composite reliability and average variance extracted were used to test Composite Reliability and the obtained values of the 3 items are presented in Table 4.31. All the items had high factor loadings that ranged from 0.59 to 0.97, confirming the preservation of the indicators of the factors.

Table 4.31

Results of Cronbach Alpha and Convergent Validity for Behaviour of CFA Model

Construct / Variable	Item	Final Factor Loading	Average Variance Extracted (Hughes et al., 2010) ^a	Composite Reliability (CR) ^b	Internal Reliability Cronbach Alpha
Behaviour (Behaviour)	Behaviour1	0.59	0.527	0.757	0.727
	Behaviour3	0.97			
	Behaviour4	0.54			

a: Average Variance Extracted = (summation of the factor loadings) / ((summation of the square of the factor loading) + (summation of the error variance)).

b: Composite reliability = (square of the summation of the factor loadings) / ((square of the summation of the factor loadings) + (square of the summation of the error variances)).

Table 4.31 presents the results of internal consistency and convergent validity for the Behaviour construct within the Confirmatory Factor Analysis (CFA) model, based on three retained items: Behaviour1 (0.59), Behaviour3 (0.97), and Behaviour4 (0.54). The standardised factor loadings are all above the minimum threshold of 0.50 (Hair et al., 2010), indicating that the items moderately to strongly represent the latent Behaviour construct, with Behaviour3 showing a particularly strong loading.

The construct achieved an Average Variance Extracted (AVE) of 0.527, which exceeds the recommended benchmark of 0.50 (Fornell & Larcker, 1981). This suggests that more than half of the variance in the observed indicators is explained by the underlying construct, reflecting adequate convergent validity. Additionally, the Composite Reliability (CR) is 0.757, and the Cronbach's Alpha is 0.727, both of which are above the acceptable threshold of 0.70 (Bagozzi & Yi, 1988; Nunnally & Bernstein, 1994). These reliability indicators confirm that the construct demonstrates strong internal consistency.

In conclusion, although one item (Behaviour2) was removed due to weak loading, the remaining items from a reliable and valid measurement of Behaviour. This

supports the construct's inclusion in the structural model for further analysis of its influence on intention to participate in Takāful.

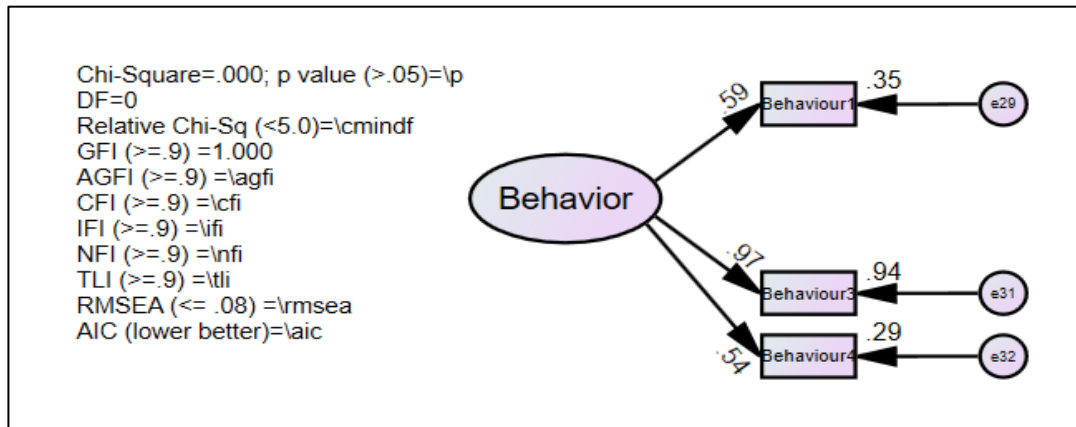


Figure 4.8 CFA Model for Behaviour with all 3 items

4.7.5 The Overall Measurement Model

The overall measurement model was assessed by confirmatory factor analysis, with the model consisting of the first and second order constructs. Figure 4.9 shows the overall CFA model with 7 constructs.

4.7.5.1 Standardised Loadings of the Model's Items

The overall CFA model is shown in Table 4.32. From the table, it is evident that the results of standardised loadings assessment of the model items indicated that the 28 items had loadings over 0.5 ranging from 0.48 to 0.79. None of the items were therefore deleted as they all had sufficient factor loadings.

Table 4.32
Standardised Factor Loadings of the Items in the Overall CFA Model

2 nd Order Construct	1 st Order Construct	Item	Final Factor Loading
Intention to Participate in <i>Takāful</i> (INT)	Awareness and Knowledge (AK)	AK1	0.48
		AK3	0.61
		AK4	0.65
	Social Influence/ Social Factor (SI)	SI1	0.63
		SI2	0.61

2 nd Order Construct	1 st Order Construct	Item	Final Factor Loading
		SI3	0.73
		SI4	0.72
		SI5	0.70
		SI6	0.74
		SI7	0.67
		SI8	0.72
	Service Quality (SQ)	SQ1	0.72
		SQ3	0.82
	<i>Shari'ah</i> -Compliant (SC)	SC1	0.67
		SC3	0.78
		SC4	0.70
	Financial Technology (FT)	FT1	0.70
		FT2	0.65
		FT3	0.78
		FT4	0.71
		FT5	0.69
	Role of the Agent (Role)	Role1	0.74
		Role2	0.73
		Role3	0.75
		Role4	0.76
	Behaviour on Takāful Acceptance	Behaviour1	0.64
		Behaviour3	0.79
		Behaviour4	0.67

4.7.5.2 *Goodness of Fit Indices*

In Confirmatory Factor Analysis (CFA), Goodness-of-Fit (GOF) indices are essential in assessing how well the hypothesised model matches the observed data. Several fit indices are used in combination to evaluate different aspects of model fit, as no single measure is sufficient on its own. The Chi-square (χ^2) test is traditionally used to assess exact model fit, where a non-significant p-value ($p > 0.05$) suggests a good fit. However, this test is highly sensitive to sample size and often leads to rejection of models that otherwise fit well (Byrne, 2013). To mitigate this, the chi-square divided by degrees of freedom (χ^2/df) is commonly reported, with values less than 5.0 considered acceptable and values below 3.0 indicating a good fit (Bagozzi & Yi, 1998).

The Goodness-of-Fit Index (GFI) and its adjusted version, the Adjusted Goodness-of-Fit Index (AGFI), evaluate the proportion of variance explained by the estimated model. GFI values ≥ 0.90 and AGFI values ≥ 0.80 are typically considered acceptable (Hoyle, 1995; Chau & Hu, 2001). Meanwhile, the Comparative Fit Index (CFI) and Incremental Fit Index (IFI) compare the proposed model to a baseline model, with values ≥ 0.90 reflecting acceptable fit and values ≥ 0.95 reflecting excellent fit (Byrne, 2013; Bagozzi & Yi, 1998). The Tucker-Lewis Index (TLI) is another incremental fit index that adjusts for model complexity, where values above 0.90 indicate a satisfactory model (Hair et al., 2006; Ho, 2006).

Perhaps the most widely respected absolute fit index is the Root Mean Square Error of Approximation (RMSEA), which takes model parsimony into account. RMSEA values ≤ 0.10 indicate a reasonable fit, with values ≤ 0.08 considered good and ≤ 0.05 reflecting excellent fit (Schumacker & Lomax, 2010). Collectively, these indices provide a comprehensive evaluation of model adequacy. A model is generally considered acceptable when the majority of these indices fall within their recommended thresholds, offering evidence that the theoretical model adequately represents the observed data. The measurement model for overall CFA with their standardised factor loadings of the main constructs are depicted in Figure 4.9.

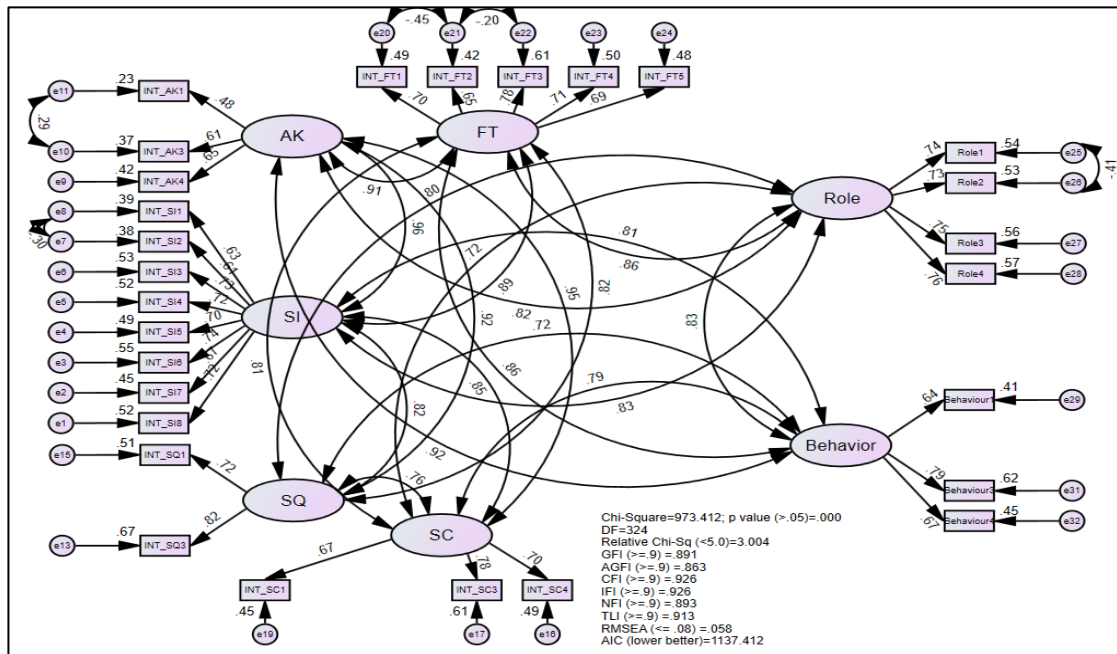


Figure 4.9 CFA Model for Overall Model

4.8 Structural Models

The structural equation model is the second major process in the analysis using SEM and after the measurement model is validated, the structural model can be represented with the constructs' relationships specifications. It provides detailed relationships among the exogenous and endogenous variables (Hair et al., 2006; Ho, 2006). The structural model evaluation stresses on the overall model fit, the size, direction and the significance of the hypothesised parameter estimations as indicated through the path diagrams' one-headed arrows (Hair et al., 2006).

The other part of the analysis entailed the structural model's confirmation on the basis of the hypothesised relationships. The study's structural model examined the hypotheses through AMOS and maximum likelihood estimate (MLE) as the regression technique. The relationships among the study variables (transformational leadership, authentic leadership, organisational culture's mediating role on the relationship between transformational leadership, authentic leadership and turnover intention was examined. In the coming sub-sections, the structural model developments in testing research hypotheses are illustrated in codes and descriptions. Table 4.33 presents the study's structural model and the research hypotheses codes and descriptions.

Table 4.33

Research Hypotheses Codes and Descriptions

Code	Description	Path
Direct Effect Constructs		
H1	There is a significant influence between awareness and knowledge and the public intention to subscribe to the Takāful scheme.	AK → INT
H2	There is a significant influence between social influence and the public intention to subscribe to the Takāful scheme.	SI → INT
H3	There is a significant influence between service quality and the public intention to subscribe to the Takāful scheme.	SQ → INT
H4	There is a significant influence between Financial Technology and the public intention to subscribe to the Takāful scheme.	FT → INT
H5	There is a significant influence between Sharī'ah-Compliant and the public intention to subscribe in Takāful scheme	SC → INT
H6	There is a significant influence between behavioral intention to participate in Takāful scheme and the behavioral.	INT → Behaviour
Mediation Effects of Intention (INT)		
H7	Role of agent moderates the relationship between the behavior intention to participate in Takāful product and behavior.	INT → Role → Behaviour

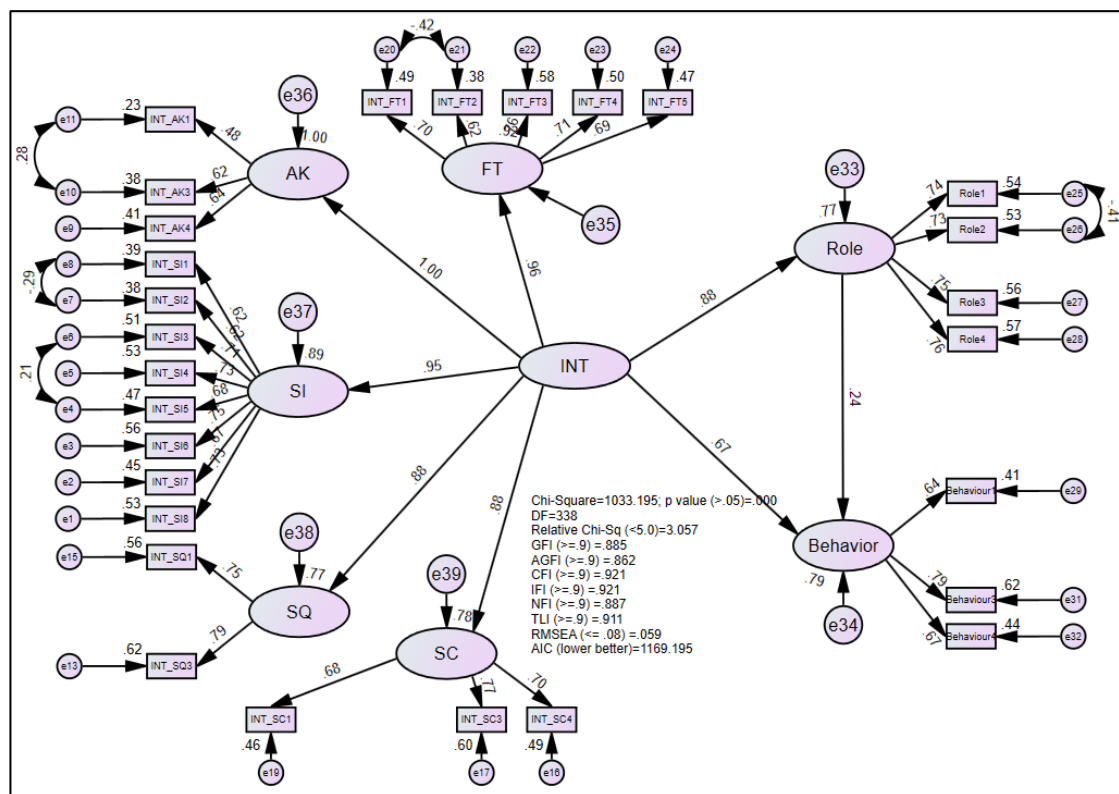


Figure 4.10 Research Hypotheses on Research Structural Mode

The structural model was assessed for its overall fit using several commonly recommended Goodness-of-Fit (GOF) indices, and the results indicate an acceptable and robust model fit. The Chi-Square (χ^2) value was 1033.195 with 338 degrees of

freedom and a p-value of 0.000. Although the p-value is significant, this is common and expected in models with large sample sizes, as the chi-square test is sensitive to sample size. Therefore, alternative indices were used to more accurately assess model fit. The relative chi-square (χ^2/df) was 3.057, which falls within the acceptable threshold of less than 5.00 (Bagozzi & Yi, 1988), suggesting a reasonable level of model fit.

Several other fit indices further support the model's adequacy. The Goodness-of-Fit Index (GFI) was 0.885, which is slightly below the recommended 0.90 threshold but still acceptable in combination with stronger indices. The Adjusted Goodness-of-Fit Index (AGFI) was 0.862, exceeding the minimum threshold of 0.80 (Chau & Hu, 2001). More impressively, the Comparative Fit Index (CFI) and the Incremental Fit Index (IFI) both scored 0.921, while the Tucker-Lewis Index (TLI) was 0.911, all surpassing the minimum recommended value of 0.90 (Hair et al., 2006; Byrne, 2013), indicating excellent incremental fit. The Normed Fit Index (NFI) was 0.887, slightly below the threshold, but close enough to be considered acceptable in the context of the model's overall performance. The Root Mean Square Error of Approximation (RMSEA) was 0.059, which falls well below the acceptable limit of 0.08 (Schumacker & Lomax, 2010), signifying a good approximation of fit between the hypothesized model and the population data.

In addition to model fit, the squared multiple correlations (R^2) provide insight into the model's explanatory power. The intention to participate in *Takāful* (INT) was explained with an R^2 value of 0.95, indicating that 95% of the variance in intention was accounted for by the independent constructs. The role of the agent (Role) recorded an R^2 of 0.77, suggesting that 77% of its variance was explained by the model. Lastly, behaviour (actual participation) was explained with an R^2 of 0.79, indicating strong predictive power of the structural paths leading to behavioural outcomes.

Taken together, the model demonstrates both strong explanatory power and acceptable to excellent goodness-of-fit. These results affirm the robustness of the structural model and support its use in testing the proposed hypotheses.

4.8.1 Direct Effects of Constructs (Path Analysis)

The hypothesised direct effects of the variables were tested by examining the coefficient parameters estimates. The path coefficients and the results of examining hypothesised direct effects are displayed in Table 4.34.

Table 4.34

Examining Results of Hypothesised Direct Effects of the Constructs

Path	Unstandardised Estimate	Standardised Estimate Beta	Critical Ratio (C.R)	p-value	Hypothesis Results
AK → INT	0.70	0.06	1.00	11.05	*** H1 Supported
SI → INT	1.02	0.07	0.95	15.51	*** H2 Supported
SQ → INT	1.01	0.06	0.88	16.71	*** H3 Supported
FT → INT	1.43	0.13	0.96	11.05	*** H4 Supported
SC → INT	1.27	0.12	0.88	10.71	*** H5 Supported
INT → Behaviour	0.88	0.14	0.67	6.27	*** H6 Supported

Table 4.34 presents the results of the structural model analysis assessing the hypothesised direct effects of the independent constructs on the intention to participate in Takāful (INT), and the effect of intention on behaviour. All hypothesised relationships (H1 to H6) are statistically supported, as indicated by the highly significant p-values ($p < 0.001$, denoted as ‘*’)** and critical ratio (C.R.) values exceeding 1.96, the standard threshold for statistical significance in structural equation modeling.

H1: There is a significant influence between awareness and knowledge and the public intention to subscribe to the Takāful scheme.

Hypothesis H1 examines whether awareness and knowledge significantly influence the intention to participate in Takāful. The analysis shows a strong and statistically significant relationship, with an unstandardised estimate of 0.70, a standard error of 0.06, and a critical ratio (C.R.) of 11.05, which exceeds the threshold of 1.96. The standardised beta coefficient of 1.00 suggests a very strong direct effect, indicating that individuals who are more informed and aware of Takāful products are more likely to intend to participate. This finding aligns with the Theory of Reasoned Action, which asserts that knowledge positively impacts decision-making and behavioural intention.

H2: There is a significant influence between social influence and the public intention to subscribe to the Takāful scheme.

The impact of social influence on the intention to engage in Takāful is examined by Hypothesis H2. With the highest C.R. of 15.51 among all constructions and a

standardised estimate of 0.95, the results show a very strong and favorable influence. The robustness of this association is further supported by the low standard error of 0.07 and the unstandardized estimate of 1.02. This suggests that a person's intention to subscribe to Takāful is greatly influenced by social variables such as peer pressure, community norms, and family support. The importance of this relationship is especially pertinent in collectivist cultures, such as Malaysia, where individual decision-making is heavily influenced by communal attitudes.

H3: There is a significant influence between service quality and the public intention to subscribe to the Takāful scheme.

Hypothesis H3 investigates the impact of service quality on Takāful intention. The relationship is statistically significant and strong, with a beta value of 0.88 and the highest C.R. value of 16.71, suggesting that participants place great emphasis on the reliability, responsiveness, and professionalism of service providers. An unstandardised estimate of 1.01 with a standard error of 0.06 indicates a stable and precise effect. These findings support existing literature which posits that perceived service quality is a key determinant of satisfaction, trust, and ultimately the decision to engage with financial services like Takāful.

H4: There is a significant influence between Financial Technology and the public intention to subscribe to the Takāful scheme.

Hypothesis H4 evaluates the effect of financial technology on intention. The analysis reveals a strong positive influence, with a standardised estimate of 0.96, an unstandardised value of 1.43, and a C.R. of 11.05. This suggests that the availability and usability of digital platforms, such as mobile apps, online portals, and cashless payments, significantly encourage intention to adopt Takāful. In the digital era, fintech features like convenience, speed, and transparency enhance consumer trust and drive uptake, particularly among younger and tech-savvy populations.

H5: There is a significant influence between Shari'ah-Compliant and the public intention to subscribe to the Takāful scheme.

Hypothesis H5 tests the influence of shari'ah-compliant practices on intention. The results indicate a significant and positive relationship, with a beta of 0.88,

unstandardised estimate of 1.27, and C.R. of 10.71. This supports the premise that religious adherence and ethical financial practices influence consumer preferences in Islamic finance. The finding reinforces the importance of ensuring transparency, risk-sharing, and compliance with Islamic principles in building consumer trust and intention to participate in *Takāful* schemes.

H6: There is a significant influence between behavioral intention to participate in Takāful scheme and the behavioral.

Hypothesis H6 evaluates whether intention significantly predicts actual behaviour. The findings confirm this relationship, with a standardised estimate of 0.67, an unstandardised estimate of 0.88, and a C.R. of 6.27, indicating statistical significance. This result is consistent with behavioural theories such as the Theory of Planned Behaviour (Ajzen, 1991), which proposes that intention is the most immediate antecedent of behaviour. In the context of Takāful, this suggests that individuals who report a strong intention to participate are more likely to act on that intention, translating it into actual purchase or enrollment.

4.8.2 Indirect Effect of the Variables (Mediation Analysis)

The seventh study objectives correspond to the mediation analysis of intention on the relationship between attitude and consumption. This study also examined the indirect effects of the independent variables on the dependent one via the mediating variable.

Among the regression techniques used to test mediation, SEM is preferred owing to its modelling of measurement and structural relationships and the yielded overall fit indices (Brown, 2014; Garver & Mentzer, 1999). Therefore, in this study, SEM's bootstrapping method was utilised (Bagozzi & Yi, 1998) for the assessment of the mediating role of organisational culture on the relationship between transformational leadership and authentic leadership, and turnover intention. The eight hypotheses were duly tested in this section. The results obtained from the mediating hypothesis testing are presented in Table 4.35, along with the standardised effects of various paths.

Table 4.35
Results of Examining Mediation Effects of Role of Agent

DV = Intention (INT)	Independent Variables (IV)
M = Role of Agent (Role)	Behaviour
Total Effect of IV on DV without M (path a)	0.88 (p = ***)
Direct Effect of IV on DV with M (path a')	0.67 (p = ***)
Indirect Effect of IV on DV through M (path bc)	0.211
Effect of IV on M (path b)	0.88 (p = ***)
Effect of M on DV (path c)	0.24 (p = 0.01)
Mediation path	INT→Role→Behaviour
Mediation Effect	Yes
Degree of Mediation	Partial mediation
Hypothesis Result	H8 Supported

Table 4.35 presents the results of an analysis examining the mediation effects of Intention (INT) in the relationship between Attitude and Consumption (CON). The table is structured to assess whether Intention acts as a mediator between the independent variable (Attitude) and the dependent variable (Consumption), providing insights into the total, direct, and indirect effects along with the statistical significance of these relationships.

H8: Role of agent moderates the relationship between the behavior intention to participate in Takāful product and behavior.

Table 4.34 examines the mediating role of the Role of Agent in the relationship between Intention and Behaviour in the context of Takāful participation. The results indicate that the Role of Agent functions as a partial mediator, rather than a full mediator. This is evident as the total effect of Intention on Behaviour without the mediator is significant at 0.88 ($p < 0.001$), and even after including the mediator, the direct effect remains statistically significant at 0.67 ($p < 0.001$). Although this direct effect is reduced, it does not become insignificant, which rules out the possibility of full mediation. According to Baron and Kenny's (1986) classical criteria, full mediation is established only when the direct path becomes non-significant after introducing the mediator. The indirect effect through the Role of Agent is 0.211, and both the path from Intention to Role (0.88, $p < 0.001$) and Role to Behaviour (0.24, $p = 0.01$) are statistically significant, confirming the presence of a mediation pathway.

Although intention still has a direct impact on behavior, these results confirm Hypothesis H8 and indicate that the Role of Agent plays a significant role in the behavioral realization of Takāful participation. Practically speaking, this means that although agents are important in converting intention into action by offering direction,

encouragement, and support, people can also act alone when they are highly motivated internally. As a result, the model captures both the direct impact of intention and the mediating function of agents in determining behavioral outcomes, indicating a partial mediation effect. This method is in line with contemporary frameworks for mediation analysis, which permit the interpretation of indirect effects even in cases when the direct effect is still substantial (Preacher & Hayes, 2008).

4.9 Summary

This chapter presented the results of the hypothesis testing conducted through Structural Equation Modeling (SEM) to examine the direct and mediating relationships between the proposed constructs in influencing public participation in Takāful. A total of seven hypotheses (H1 to H7) were tested and all were statistically supported, indicating strong empirical evidence for the proposed model.

The analysis confirmed that Awareness and Knowledge (H1), Social Influence (H2), Service Quality (H3), Financial Technology (H4), and sharī'ah-Compliant principles (H5) all exerted significant and positive direct effects on the public's intention to subscribe to the Takāful scheme. These findings reinforce the importance of both informational and experiential factors in shaping consumer attitudes and intentions, particularly in the context of Islamic insurance products.

Furthermore, the results validated Hypothesis H6, which confirmed that intention significantly influences actual behaviour, consistent with the Theory of Planned Behaviour. This finding highlights the critical role of behavioural intention as a precursor to actual participation in Takāful products.

Lastly, Hypothesis H7, which assessed the mediating role of the agent in the relationship between intention and behaviour, was also supported. The Role of Agent was found to significantly mediate the relationship, indicating that agents act as crucial enablers in translating consumer intention into real behavioural outcomes. This suggests that beyond individual intention, interpersonal interaction and guidance from knowledgeable agents play a pivotal role in influencing actual subscription behaviour. Table 4.36 listed the summary of all of the research hypotheses.

In summary, all hypothesised relationships in the conceptual model were validated, offering strong support for the theoretical framework. The findings emphasize that intention alone is not sufficient to drive behaviour; rather, a combination of awareness, technology, service experience, religious compliance, and agent

facilitation collectively contribute to the uptake of Takāful among the public. These insights provide a foundation for practical strategies and policy recommendations to enhance Takāful participation in Malaysia.

Table 4.36
Summary of the Research Hypotheses

Code	Description Direct Effect Constructs	Results
H1	There is a significant influence between awareness and knowledge and the public intention to subscribe to the Takāful scheme.	Supported
H2	There is a significant influence between social influence and the public intention to subscribe to the Takāful scheme.	Supported
H3	There is a significant influence between service quality and the public intention to subscribe to the Takāful scheme.	Supported
H4	There is a significant influence between Financial Technology and the public intention to subscribe to the Takāful scheme.	Supported
H5	There is a significant influence between Sharī'ah-Compliant and the public intention to subscribe in Takāful scheme	Supported
H6	There is a significant influence between behavioral intention to participate in Takāful scheme and the behavioral.	Supported
Mediation Effects of Intention (INT)		
H7	Role of agent moderates the relationship between the behavior intention to participate in Takāful product and behavior.	Supported

CHAPTER 5

SUMMARY, CONCLUSION, AND RECOMMENDATION

5.1 Introduction

The results and understandings gained during the investigation of the agent's mediating role in Takāful acceptance are summarized in this last chapter. It summarizes the main conclusions, methods, research goals, and theoretical and practical ramifications. This chapter also lists the study's shortcomings and offers thorough suggestions for future researchers, practitioners, and policymakers. This chapter concludes the research in a logical and considerate manner by offering a thorough analysis of the findings in light of the literature examined in previous chapters.

5.2 Summary of the Study

The purpose of the study was to investigate the variables affecting Klang Valley citizens' involvement in Takāful, an Islamic insurance program. The study's foundation was the Theory of Planned Behavior (TPB), which was expanded upon by adding concepts like Sharī'ah Compliance, Financial Technology, and Service Quality. Through IBM AMOS, a Structural Equation Modeling (SEM) technique was used to propose and test a total of eight hypotheses. With the Takāful agent acting as a mediating variable, the constructs being examined were Awareness and Knowledge, Social Influence, Service Quality, Financial Technology, Sharī'ah Compliance, Behavioural Intention, and Actual Behaviour.

A total of 600 participants completed the survey; 400 valid responses were gathered, yielding a 66.67% response rate. The demographics of this sample, including its age range (25–50 years), ethnic variety, and urban–rural socioeconomic variation, made it both statistically significant and typical of the Klang Valley population. Confirmatory Factor Analysis (CFA) was used to validate each construct, and the SEM results gave the model substantial support.

Every one of the eight theories was validated. The findings demonstrated the strong influence of Financial Technology, Sharī'ah Compliance, Social Influence, Awareness and Knowledge, and Service Quality on Behavioural Intention, which in turn had a major impact on Actual Behaviour. Additionally, the association between

behavioral intention and actual behavior was found to be partially mediated by the Takāful agent, indicating that the presence and function of agents increase the possibility of participation. From the discussion in Chapter 4, this research concludes that a person's intention to participate in Takāful is greatly influenced by social variables such as peer pressure, community norms, and family support more than other constructs.

5.3 Theoretical Contributions

By adding agent mediation, FinTech, and service quality to the behavioral model for Takāful participation, this study theoretically enhances the Theory of Planned Behavior. It shows that although behavioral intention is important, it is not always enough; agents and other extrinsic facilitators are crucial.

5.4 Practical Contributions

In a practical sense, the study provides stakeholders with useful insights. Digital change, better service quality, and agent empowerment are essential for Takāful operators. For policymakers like the Malaysian Takāful Association (MTA) and Bank Negara Malaysia, the report emphasizes the significance of institutional support, public awareness, and regulation.

5.5 Limitations of the Study

This study has limitations despite its contributions. First, this study's geographic coverage is limited to the Klang Valley's Selangor and Kuala Lumpur. The results may not apply to other parts of Malaysia, especially rural or less developed states where socioeconomic situations, financial literacy levels, and access to Takāful services may differ dramatically, even though these areas are highly urbanised and economically developed. As a result, care should be taken when extrapolating the findings outside of the community under study.

Second, structured questionnaires are the only quantitative research method used in this study. Although statistical analysis and generalisation are possible with this approach, the depth and complexity of respondents' motivations, perspectives, and subtle behavioral aspects regarding Takāful involvement may not be adequately captured. It's possible that elements like individual experiences, cultural influences, and emotional factors are not sufficiently examined. A more comprehensive understanding

of the phenomenon and deeper insights may be obtained by incorporating qualitative techniques like focus groups and interviews.

Furthermore, this study does not cover all potential factors that could influence Takāful acceptance, even if it includes five important dimensions: awareness and knowledge, social influence, service quality, financial technology, and faith in Takāful providers. The study model's comprehensiveness and explanatory capacity may be limited if certain factors are excluded.

Additionally, because all data were gathered from a single source at one point in time using self-reported measures, this study may be susceptible to common technique bias. The accuracy of the results may be impacted by respondents' social desirability bias, especially when answering questions about financial behavior or religious observance.

Finally, despite its strength, the application of Structural Equation Modelling (SEM) depends on the assumptions and model specification. The validity of the results could be impacted by any model misspecification or absence of pertinent variables. Building on these constraints, future studies could take a more thorough approach by using a mixed-method design to capture both deeper behavioural insights and statistical trends, as well as a larger and more diverse sample from other Malaysian regions. In order to better understand how people's intentions and actual Takāful engagement change over time, longitudinal studies are also advocated. Furthermore, adding variables like perceived risk, religiosity, and trust to the research model could increase its explanatory value. Future research would be in a better position to produce more reliable, broadly applicable, and practically useful results for both academia and the Takāful sector if these factors were taken into consideration.

5.6 Recommendations for Future Research

Future studies should broaden their scope to include East Malaysia and rural communities, where access to and understanding of Takāful products may vary. Qualitative research techniques like focus groups and interviews may provide more in-depth understandings of the attitudes and motives of consumers.

Future research should further examine how perceived danger, faith, and trust affect Takāful engagement. In the post-COVID era, where risk awareness and digital dependence have grown, longitudinal research could monitor behavioral changes over time. Lastly, research comparing Malaysia to other nations with a majority of Muslims may provide insightful cross-cultural insights.

5.7 Conclusion

This study used an extended Theory of Planned Behavior to examine the mediating function of the agent in the acceptance of Takāful schemes. The results verify that awareness, social impact, service quality, FinTech, and sharī'ah compliance all influence behavioral intention. Additionally, having a Takāful agent present improves the conversion of intention into real behavior.

The Takāful sector has enormous potential as Malaysia grows as a major center for Islamic finance worldwide. Operators and legislators may improve service delivery, increase participation, and guarantee the long-term viability of this morally sound financial product by addressing the issues raised in this study.

In the end, the knowledge gained from this study offers a useful basis for enhancing public participation in Takāful, bringing financial protection into line with Islamic law, and developing a more robust and inclusive financial system.

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APPENDICES

Appendix A

Observation number	Mahalanobis d- squared	p1	p2
2	142.56	0	0
5	132.76	0	0
83	107.8	0	0
115	106.39	0	0
114	105.24	0	0
98	98.28	0	0
481	97.16	0	0
1	94.3	0	0
535	91.97	0	0
91	85.88	0	0
489	83.64	0	0
107	82.82	0	0
69	80.04	0	0
355	75.82	0	0
102	71.47	0	0
23	70.78	0	0
134	70.39	0	0
440	69.89	0	0
12	69.2	0	0
131	69.19	0	0
105	68.78	0	0
137	67.25	0	0
93	67.24	0	0
116	67.1	0	0
66	66.86	0	0
9	66.79	0	0
72	64.67	0	0
87	63.56	0	0

Observation number	Mahalanobis d- squared	p1	p2
43	63.23	0	0
167	61.31	0	0
162	60.72	0	0
76	60.43	0	0
586	59.93	0	0
345	59.66	0	0
21	59.2	0	0
109	57.83	0	0
96	57.81	0	0
73	56.5	0	0
431	56.14	0	0
529	56.07	0	0
89	56.04	0	0
27	55.72	0	0
90	55.06	0	0
78	54.95	0	0
189	54.45	0	0
145	54.15	0	0
40	53.7	0	0
147	53.68	0	0
154	53	0	0
20	52.56	0	0
119	51.79	0	0
111	51.03	0	0
373	49.89	0.01	0
153	49.53	0.01	0
190	49.37	0.01	0
139	49.24	0.01	0
444	48.92	0.01	0
100	48.88	0.01	0
178	48.82	0.01	0

Observation number	Mahalanobis d- squared	p1	p2
80	48.67	0.01	0
205	48.21	0.01	0
101	48.06	0.01	0
68	47.98	0.01	0
160	47.75	0.01	0
192	47.54	0.01	0
342	47.28	0.01	0
8	46.88	0.01	0
175	46.84	0.01	0
136	46.83	0.01	0
334	46.69	0.01	0
186	46.58	0.02	0
150	46.57	0.02	0
32	46.18	0.02	0
174	46.11	0.02	0
500	45.88	0.02	0
377	45.75	0.02	0
208	45.63	0.02	0
227	45.58	0.02	0
118	45.21	0.02	0
371	45.12	0.02	0
569	44.95	0.02	0
45	44.84	0.02	0
265	44.8	0.02	0
283	44.78	0.02	0
129	44.76	0.02	0
123	44.62	0.02	0
143	44.57	0.02	0
584	44.44	0.03	0
6	44.33	0.03	0
246	44.24	0.03	0

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Muhammad Amirul Husni Bin Mohd Sazeri obtained a Bachelor's degree in Bachelor of Muamalat from Universiti Teknologi MARA (UiTM) in 2021 and is currently pursuing a Master of Islamic Contemporary Islamic Studies at Universiti Teknologi Mara (UiTM). His current research focuses on the factors influencing Takāful participation, with particular emphasis on the mediating role of agents. His research interests include Islamic finance, Takāful, consumer behaviour, financial technology, and Structural Equation Modeling (SEM).

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