

Impact of the Theory of Planned Behaviour and Innovation Diffusion Theory on the Adoption of Microtakaful in Malaysia

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ABSTRACT

Due to their low wealth and asset ownership, B40 groups are extremely prone to a financial downturn, which leaves them exposed to unstable economies and reliant on government help to get by. An economic shock, such as the illness or death of the family's main breadwinner, causes a household to lose its source of income and the necessary funds to cover unforeseen expenses. When floods or other disasters cause damage to their businesses, microenterprises will also have emergency expenses. Microtakaful can serve as a safety net in these circumstances, with takaful distributions providing short-term relief and assisting the group in overcoming financial problems. However, Malaysians, especially those in the B40 group, still have a low penetration rate of microtakaful. There is reportedly a substantial untapped microtakaful market in Malaysia because many small enterprises and low-income individuals lack protection. Therefore, the low rate of microtakaful market penetration among the B40 group and others serves as an alert to identify the factors influencing their intention to participate in the microtakaful product. By extending the Theory of Planned Behaviour (TPB) and Innovation Diffusion Theory (IDT), this study aims to analyse the relationship between the factors influencing the B40 and others to participate in a microtakaful product and, ultimately, to propose an adoption model of microtakaful among the B40 and others. Except for the relative advantage, all of the direct relationships in this study, which made use of SPSS version 21 software and IBM-AMOS version 21 software, have a significant relationship. As a result, academics and industry professionals may find value in and gain from the study's findings to further and prosper the takaful operator's future growth.

Keywords: Adoption, Innovation diffusion theory, Microtakaful, Theory of planned behaviour

INTRODUCTION

The B40 group's population, according to the United Nations Development Programme (2020), has little financial resources or possession of assets, leaving them vulnerable to economic uncertainty and relying on government help to improve their circumstances. Furthermore, Abdullah et al. (2022) asserts that their limited savings make them less financially stable, thereby increasing their vulnerability to danger. Furthermore, the B40 group consists of households that experience economic shocks, such as the illness or death of the main breadwinner, resulting in a loss of income and funds needed for unforeseen expenses. It is clear that the Malaysian people, especially the most vulnerable group, need financial assistance. The government and takaful operators have launched a number of initiatives, including MySalam, PekaB40, and Perlindungan Tenang, in an ongoing attempt to give financial security to the segments that need it (Bangaan Abdullah et al., 2022). Participants in microtakaful will get financial benefits in the event of a misfortune, such as an accident, death, or total and permanent disability. The participants will receive their money on time and with sufficient funds. Additionally, the microtakaful product will provide financial support to micro-entrepreneurs to safeguard their company against risks such as general liability, money, fire, glass, theft, employer liability, total disaster, or group accidents (Salleh et al., 2021). The microtakaful product is intended for the unserved and underserved

segment; however, other Malaysian consumers are also welcome to subscribe to it instead of the more widely available standard takaful product.

In light of that, the Financial Sector Blueprint 2022–2026 also emphasised how crucial it is to double the number of individuals who have signed up for microtakaful. The goal might be realised through promoting the growth of a varied microtakaful market that provides products that are affordable, accessible, have good protection value, are simple to purchase, and easy to make claims against (Bank Negara Malaysia, 2022). The country could profit from microtakaful products, as Malaysia is now pursuing the Sustainable Development

Goals (SDGs) by 2030. With a microtakaful plan in place and inclusive takaful solutions and services available, the SDG will promote the well-being of every Malaysian citizen. In addition, the concepts of VBIT (Value-based Intermediation for Takaful) encouraged industry players to attain growth that is sustainable and relevant to all stakeholders, hence supporting microtakaful initiatives (Malaysian Takaful Association, 2022).

The microtakaful market is still in its early stages of development, according to Md. Husin and Haron (2020), despite the importance of microtakaful to the unserved and underserved segment in particular. They noted that there is a significant untapped microtakaful market because many small businesses and low-income earners in Malaysia lack protection coverage. The demand for takaful has decreased as a result of a lower percentage of financial inclusion among low-income or bottom 40% income group households (B40). In order to cover the short-term liabilities borne by the breadwinners when they are no longer productive and able to maintain their families, low-income people will need to accumulate resources in the event of incapacitation, the death of family members, and accidental causes (Fikri et al., 2022). In addition, despite the fact that microtakaful is less expensive than the standard takaful product on the market, the B40 group does not appear to be aware of its existence (Yusoff et al., 2020). Husin (2019) and COMCEC (2019) also emphasised the problems associated with B40 groups' low takaful penetration. According to Jahya et al.'s most recent study from 2023, people in PPR Kerinchi Lembah Pantai, Kuala Lumpur, have little knowledge of microtakaful products.

Consequently, the low rate of microtakaful market penetration among Malaysians, particularly in the B40 group, serves as an indicator to identify the factors influencing consumers' intentions to use microtakaful products. In light of this, takaful operators need to take the required actions to safeguard their companies' competitive advantage and capacity to endure in the face of a challenging economic environment. It is imperative that the takaful industry develop and execute tactics aimed at motivating individuals to engage with microtakaful products. Previous academics have not adequately investigated some of the elements that may influence Malaysians' tendency to participate in microtakaful products—particularly those related to the B40 group. Therefore, these considerations could significantly impact the likelihood of Malaysians engaging in a microtakaful product. As a result, this study expanded on the TPB and IDT to provide a microtakaful adoption model for the B40 group and others. By examining the TPB's and IDT's ability to explain people's behaviour in terms of the microtakaful context, this study seeks to fill that gap.

LITERATURE REVIEW

B40 group in Malaysia

The term "B40" designates the lower 40% of household income in Malaysia. The four categories under B40 are B1, B2, B3, and B4. As of 2022, there were about 1.271 million B40 group members in Malaysia. Families earning RM2,560 or less constitute the B1 group; those earning between RM2,560 and RM3,439 make up the B2 class; those earning between RM3,440 and RM4,309 make up the B3 class; and that earning between RM4,310 and RM5,249 make up the last category, B4. The B40 household's mean income was RM3401, two times lower than that of the M40 group and six times lower than that of the T20 group. It demonstrates the significant difference in B40 income between M40 and T20 (Department of Statistics Malaysia, 2022). The B40 group, due to their low wealth and non-financial assets, is highly susceptible to economic shocks. They are more likely to experience housing stress and high debt levels, making them vulnerable to economic downturns. They often use their entire salary to cover daily expenses, making them fragile and vulnerable. Their low saving habits significantly impact household financial needs, leading to intergenerational poverty cycles. This trend is due to limited social mobility and restricted advancement opportunities, perpetuating economic hardship across generations (Muhammad Aris Fadzilah et al., 2025).

Furthermore, the B40 group is vulnerable in several ways that go beyond financial constraints. Their economic instability leads to far greater levels of stress, which may negatively impact family ties and spiritual ties by influencing interpersonal interactions and religious participation within families. In addition, these families face limited access to vital resources such as financial instruments, healthcare services, and educational possibilities. Households in the B40 category face higher living expenses due to high population density, as they must compete for limited resources to meet their basic necessities. When a person's income is less than their cost of living, their standard of living is considered to be falling. The individual ultimately took on a second job or part-time work to make up the difference (Ibrahim et al., 2022).

A person's financial situation is crucial to their survival and well-being. Three primary factors, such as education level, income, and occupation type, usually determine a family's or an individual's socioeconomic status (SES), which is usually divided into high, middle, and low strata. According to research, families with low socioeconomic status or unstable economies have more difficulties developing partnerships, which affects the growth and well-being of their children (Antonoplis, 2023). Due to a lack of access to healthcare, those with lower incomes are more likely to experience illnesses, diseases, and disabilities, and financial stress will lead to a pattern of financial difficulties and a decline in financial well-being. Financial stress, according to Suprpto (2020), is when someone is worried about their finances, such as pressure from debt or an inability to fulfil commitments. One's financial health deteriorates with increasing financial stress. Financial stress will have a detrimental effect on financial well-being because these two factors will always conflict.

The country's social expenses would increase if the socioeconomic standing of B40 households remained unchanged, as this would lead to a decreased demand for qualified workers, ultimately impacting economic growth (Rashid et al., 2020). Welfare programmes, medical care, unemployment support, and crime prevention are examples of social expenses. As a result, the government needs to do something to increase B40 households' income. However, as Malaysia develops, B40 households should not be denied access to the advantages that come with the region's growth, including improved infrastructure, employment opportunities, healthcare, and education. It is necessary to address B40 households, regardless of their ethnicity. This group encompasses low-income and impoverished households in both urban and rural areas. The government's involvement in the planning process, therefore, goes beyond only offering assistance; it also entails carrying out and supervising the procedure (Thinagar et al., 2021; Rapi et al., 2022; Jahya et al., 2023).

Microtakaful Adoption in Malaysia

The idea of microfinance has been more well-known in recent years because of its role in encouraging financial inclusion among marginalised groups (Jalil, 2021). Nonetheless, the provision of insurance services for these disadvantaged individuals is one element that is frequently disregarded. By offering easily accessible, reasonably priced insurance choices that adhere to Islamic values, microtakaful fills this gap. Malaysia is still a relatively new player in the microtakaful market, despite its history of expanding the insurance and takaful industries. The market is aware of the significance of providing this low-income population with access to the various services and programmes that banks and takaful operators offer, as well as any other services that these financial institutions may provide. This part of society needs some form of financial protection because of its current structure, which makes it more vulnerable to financial losses. In order to help it avoid financial losses and break free from the cycle of poverty, microtakaful product is an essential instrument (Islamic Financial Services Board, 2015). With costs as low as RM0.14 per day and RM50 per year, there are many reasonably priced microtakaful products available, such as Perlindungan Tenang, Takaful Hayati, Tabarru' Koperasi Scheme, Takaful Nelayan, SSPN-i Plus, and Sihat Selangor. However, according to Bangaan Abdullah et al. (2022), the B40 population still has a low microtakaful subscription rate. Furthermore, although the implementation of microtakaful reduces the chance of business closure and helps MSMEs better manage their risk, it is still uncommon among MSME (micro, small, and medium-sized enterprises) (Salleh et al., 2018).

In this regard, there are several challenges facing Malaysia's implementation of microtakaful. First, microbusinesses do not have a great need for takaful. The prior study indicates that SMEs are likely to see "purchasing Takaful" as an expense as opposed to a way to save money (Rapi et al., 2022). According to Salleh et al. (2018), another factor in the limited adoption of microtakaful among MSMEs is the low degree of awareness and knowledge regarding microtakaful products and services. Then, according to research by Rahman et al. (2021), financial well-being and financial literacy are positively correlated, which stresses the

B40 group's financial behaviours and literacy. In a similar vein, Fauzi et al. (2023) found that low-income individuals in Malaysia are most likely to unsubscribe from microtakaful for home and house content due to a lack of knowledge and understanding of the microtakaful product. From an alternative viewpoint, a common issue among the general public is the absence of confidence and assurance in financial service providers. They are uneasy and distrustful of the takaful operator since they do not know about the company. Because of this, consumers are reluctant and uneasy to deal with companies they are unfamiliar with when it comes to investing or transacting their hard-earned money (Rapi et al., 2022).

Despite all the challenges of microtakaful adoption in Malaysia, there is a gradual acceptance regarding the adoption of microtakaful products. According to a study by Salleh et al. (2023), for instance, a large number of smallholder farmers were prepared to take part in a takaful programme to prevent their crop losses. In addition, a study by Mohd Yusoff et al. (2025) shows that low-income Malaysian women entrepreneurs have a strong perceived need for microtakaful; they both recognise the value of having takaful and express a favourable intention to use the products. The monthly cost might be as low as RM 15.73, according to Manan et al. (2021), which is a reasonable sum for the B40 group. Therefore, to allow all income levels, including B40, M40, and T20 in Malaysia, to benefit from takaful and microtakaful, the government must promptly identify and address the issues pertaining to the B40's financial aid and well-being.

Theory of Planned Behaviour

According to the TRA and TPB, human behaviour is controlled by volition, which, in the absence of external factors, causes intents to behave a certain way. Next, in the opinion of Ajzen and Fishbein (1980), the fundamental components of behavioural intentions that affect actual behaviour are norms and attitude. Although the TRA has a number of advantages, it has been shown to be ineffective in predicting actual action when used in conjunction with other early models to examine ethical behaviour when examining an individual's intentions (Chang, 1998). Afterwards, Ajzen (1991) postulated in the TPB that perceived behavioural control is an additional factor that partially predicts human behaviour, rather than volitional control over behaviour. The idea that a person with poor self-control cannot carry out the intended conduct, even though they have a positive attitude and the behaviour is accepted by society, was one of the key components of perceived behavioural control. Subsequently, Ajzen (2002) asserted that habits and previous behaviour influenced present and future goals. Organisation researchers use these models well to examine ethical behaviour. Numerous prior studies (Ahmad et al., 2023; Tian et al., 2023; Hamid & Azhar, 2023; Razak et al., 2021; Bhatti & Husin, 2019; Rifas et al., 2024) have used the TPB in financial services studies. The Theory of Planned Behaviour (TPB), first introduced in 1985, is a widely used framework in social psychology. It posits that behaviour is influenced by individual intention and perceived behavioural control (PBC). Behavioural intention is influenced by three factors: attitude, subjective norm, and perceived behavioural control. For instance, a consumer's intention to buy a product is influenced by these factors.

The first predictor is attitude. The degree to which an individual has a positive or negative assessment of the behaviour in issue is referred to as their attitude (Ajzen & Fishbein, 1980). Attitude is a good indicator of intentions and behaviour, according to research on the theory of planned behaviour (Ajzen & Fishbein, 1980; Ibrahim et al., 2021; Lajuni et al., 2020; Bhatti & Husin, 2019; Kazaure, 2019; Ismail et al., 2022; Aime et al., 2022). When it comes to microtakaful, a person's negative attitude towards the products will prevent him from wanting to engage in and engaging in microtakaful product. When someone thinks that microtakaful products are good, advantageous, highly valuable and, ultimately, a clever idea, they can develop a positive attitude towards them. Because of this, it can be said that people's intentions to participate in microtakaful products may be influenced by their attitude towards doing so. Thus, the following hypothesis could be made:

H1: There is a significant relationship between attitude and the B40 group and others' intentions to participate in microtakaful product

The subjective norm is the next predictor. According to Ajzen's (1991) TPB model, social factors like norms have a significant influence on predicting specific behaviours. A subjective norm describes a person's perception of how other people will respond to a specific behaviour. In this instance, societal pressure or influence occurs within the subjective norm. According to Fishbein and Ajzen (1977), friends, family, classmates, and managers can all have a social effect. A number of earlier studies (Ibrahim et al., 2021; Xu et al., 2022; Hagger et al.,

2022; Pham et al., 2023; Bazhan et al., 2024; Ismail et al., 2022) have examined the relationship between intention and subjective norm. If customers perceive microtakaful as a good habit and receive encouragement from their friends, family, and community to participate in Islam, their interest in purchasing the products will increase. This suggests that the subjective norm surrounding participation in microtakaful products may influence people's intentions to engage in them. Thus, the following hypothesis could be made:

H2: There is a significant relationship between subjective norm and the B40 group and others' intentions to participate in microtakaful product

Next, perceived behavioural control is the third predictor. Ajzen (1991) proposed the theory that a person's self-belief predicts his or her ethical intentions. Perceived behavioural control is the degree of ability and control an individual believes they have over carrying out a specific behaviour (Ajzen, 1991). The connection between intention and perceived behavioural control has been examined in a number of earlier studies (Aslan, 2023; Lavuri et al., 2023; Liang et al., 2024; Farid et al., 2023; Anderson, 2023; Ismail et al., 2022). Regarding microtakaful, an individual's intention to engage in the behaviour is stronger the more they believe in and are confident about the microtakaful product. Because of this, it can be said that people's intentions to engage in microtakaful products may be influenced by their perception of their behavioural control. Thus, the following hypothesis could be made:

H3: There is a significant relationship between perceived behavioural control and the B40 group and others' intentions to participate in microtakaful product

Finally, TPB assumes that each person's goal drives their action. Morris (1961) defined intention as a mental state that expects a person's physical activity to have a definite outcome. Consequently, the willingness of a customer to purchase a specific product is the definition of purchase intention (Dodds et al., 1991). Such greater levels of willingness, according to Ajzen (1988), are probably going to lead to a larger likelihood of carrying out the behaviour. The significant correlation between behavioural intention and behaviour has been documented in a number of studies (Yadav & Pathak, 2017; Al-Jubari et al., 2019; Taufique & Vaithianathan, 2018; Gieure et al., 2020; Uyob et al., 2023; Munikrishnan et al., 2024). When it comes to microtakaful, the likelihood of its performance should increase with the strength of the intention to participate. Thus, the following hypothesis could be made:

H4: There is a significant relationship between behavioural intention and the B40 group and others' behaviour to participate in microtakaful product

Innovation Diffusion Theory

Several fields, including manufacturing, information systems, agriculture, and sociology, have used the Innovation Diffusion Theory to study the adoption of innovations by users. Innovation is defined as “an idea, practice, or object that is perceived as new by an individual or another unit of adoption,” whereas diffusion is defined as “the process by which an innovation is communicated through certain channels among the members of a social system over time” (Rogers, 1995). This idea of IDT was created to explain why people choose to accept or reject an invention based on their personal views. The IDT takes into account five factors that affect the uptake of technology. Complexity, observability, compatibility, trialability, and relative advantage are among the constructs (Rogers, 1995). The IDT has been used in several earlier studies, and the results have shown a strong influence on adoption behaviour (Ismail et al., 2022; Barre & Mukhtar, 2022; Ayanwale & Ndlovu, 2024; Al Breiki et al., 2023; Sharma et al., 2024; Shaikh et al., 2023). Relative advantage, compatibility, and complexity are the only three elements on which the current study will focus, because the other two are insufficiently appropriate for the microtakaful setting and there is insufficient prior research to support the current findings. Also, many existing studies have shown that only three of the five characteristics outlined by Everett which are relative advantage, compatibility, and complexity which have a reliable connection to innovation adoption (Agarwal & Prasad, 1998; Tornatzky & Klein, 1982). Most previous studies used observability and trialability in testing the adoption of information technology and system software. Nevertheless, the two variables could be implemented in the microtakaful context in the future in parallel with a more reliable and supportive literature review to strengthen the justification of the microtakaful context of

study. In the view of this, it would be one of the limitations of this study for the recommendation for future research

Firstly, relative advantage is defined by Rogers (1999) as the belief held by an individual that newly developed or fresh concepts are superior to the existing state. As stated differently, innovation is thought to be better than alternatives. An innovation is better than its alternatives if it has a highly perceived relative advantage. Relative advantage in this study refers to the product's ability to outperform conventional insurance. Relative advantage and adoption behaviour have been shown to be strongly correlated by numerous prior studies (Ismail et al., 2022; Raza et al., 2019; Raman et al., 2023; Ali et al., 2024; Ayanwale & Ndlovu, 2024; Barre & Mukhtar, 2022; Al Breiki et al., 2023; Qader et al., 2023; Shaikh et al., 2023). A person will be interested in using microtakaful products if he believes that the products provide him with a number of benefits, including an inexpensive price, prompt claims, convenience of handling, and good microtakaful employees. Because of this, it can be said that people's intentions to participate in microtakaful products may be influenced by their relative benefit from doing so. Thus, the following hypothesis could be made:

H5: There is a significant relationship between relative advantage and the B40 group and others' intentions to participate in microtakaful product

In the opinion of Rogers (2003), compatibility refers to how an invention is deemed to be consistent with the adopter's past experiences, societal beliefs, and cultural norms. It helps set the new idea in perspective and provides it with a more recognisable form. Innovative ideas with more compatibility have a higher probability of being adopted. However, one should take into account the likelihood that having too much compatibility could occasionally lead to trouble since people can conclude that a new idea is not very original or that it is not worth trying. With regard to microtakaful, a person is more likely to engage in microtakaful behaviours if a product complements and fits with their needs, values, experiences, and habits. Moreover, prior research has demonstrated that compatibility significantly influences adoption behaviour (Latip et al., 2017; Raza et al., 2019; Deng et al., 2023; Ali et al., 2024; Uyob et al., 2023; Qader et al., 2023; Acikgoz et al., 2023). Moreover, Rapi and Kassim (2023a) revealed that compatibility significantly affected microtakaful engagement. Therefore, it can be hypothesised that:

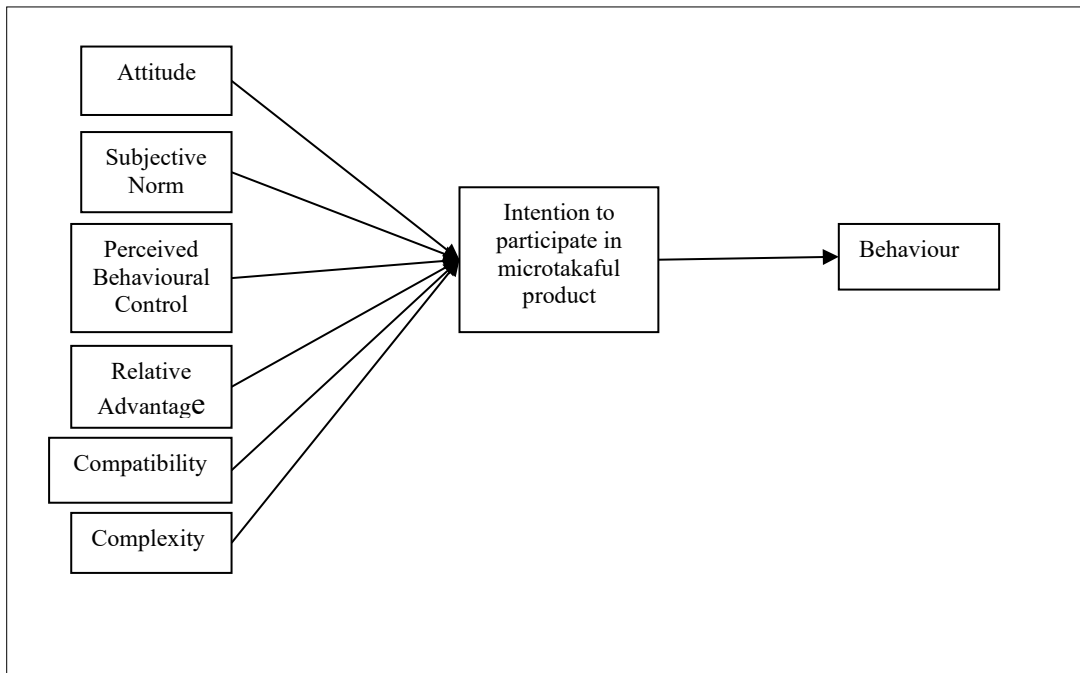
H6: There is a significant relationship between compatibility and the B40 group and others' intentions to participate in microtakaful product

Next, Rogers (1999) defines complexity as the extent to which an innovation reflects its perceived risk or difficulty. This illustrates different degrees of complexity and the ease or difficulty of implementing an innovation. Numerous earlier studies, such as Qader et al. (2023), Ali et al. (2022), Ali et al. (2024), Shaikh et al. (2019), and Ali et al. (2019), have demonstrated a negative association between complexity and adoption behaviour. When referring to microtakaful, it means how simple it is for people to take part in microtakaful. An individual will be more interested in using the microtakaful product if they believe it is simple to learn, comprehend, and use. In this study, the Complexity construct was measured using positively worded items. Higher scores therefore indicate greater perceived ease in understanding and using microtakaful products, which corresponds to lower perceived complexity. No reverse coding was applied because the analysis retained the original ease-oriented measurement direction. Therefore, one may hypothesise that:

H7: There is a significant relationship between complexity and the B40 group and others' intentions to participate in microtakaful product

Next, all of the hypothesised relationships are displayed in Figure 1, which also includes a conceptual model that combines the TPB and IDT. A total of seven hypotheses are developed to meet the research objectives, considering the prior literature analysis and the research gap.

Fig. 1 Proposed Conceptual Model



Source: Author's own, adapted and modified from Ajzen (1991), Rogers (1995)

METHODOLOGY

This study included a sample of 560 Malaysians, primarily members of the B40 group and others. The primary target audience for microtakaful is the B40 group, but the microtakaful product also welcomes subscribers from other income levels. Then, it was decided to include anyone over the age of 25 in the study. It is because the beginning age is greater for traders, entrepreneurs, and business owners. Omar (2007) and Husin (2015) also chose to start their study on insurance and takaful with respondents who were 25 years old due to similar reasons. Secondly, the majority of microtakaful products available in the market have a 60-year-old maximum participation age. Thus, using the covered age range of 25 to 50 years old and above is feasible for this research. Furthermore, only Muslims will be eligible to respond. The reason for this is that the great majority of Malaysians are Muslims. In Malaysia, Muslims make up about 63.5% of the population, followed by Buddhist (18.7%), Christian (9.1%), Hindu (6.1%), Atheist (1.8%), and others (0.9%) (Department of Statistics Malaysia, 2023). Additionally, Husin (2015) chose Muslims because they constituted the majority of the takaful market. Nevertheless, it is important to remember that takaful is available to both Muslims and non-Muslims. The Muslim respondent is one of the limitations of this study.

A nonprobability sampling design was used in this investigation. This study specifically employed the purposive sampling technique. Using a non-probability sampling technique called purposeful sampling, the researcher chooses only study participants who, in their opinion, meet the study's objectives. Using this sampling strategy, the researcher selects volunteers from the study population at his own discretion (Obilor, 2023). The study's inclusion criteria are respondents who identify as Muslim and who are 25 to 50 years of age or older. The study targeted Malaysian Muslim consumers, with particular attention to the B40 segment, while also including respondents from other income groups because microtakaful products are not exclusively restricted to B40 households. In addition, the researcher used snowball sampling to disseminate the paper and online questionnaire in order to increase the sample's reach. Snowballing, sometimes referred to as chain referral sampling, is a kind of purposive sampling. This method involves the researcher finding and choosing potential respondents who fit the requirements to be included in the study. Following the collection of data from the respondents, the researcher requests recommendations for more people from the pre-selected respondents who would also satisfy the requirements and serve as a representative sample of the population of interest. The sample is said to expand over time, akin to a rolling snowball (Obilor, 2023).

Instrument

Utilising questionnaires and the survey method, the data were gathered. There are two sections on the questionnaire: A and B. The respondents must complete the demographic profile characteristics in Section A, which include gender, age, marital status, level of education, and monthly household income. Behaviour, behavioural intention, attitude, subjective norm, perceived behavioural control, relative advantage, compatibility, and complexity are the eight sections that make up Section B. The Likert scale on the questionnaire ranges from 1 to 7. Strongly disagree to strongly agree is the range of options. In addition,

Data Collection

Both an online and a paper survey were used to administer the study's questions to participants. Combining these two strategies aims to ensure timely completion of data collection before further analysis. A total of 1,000 paper questionnaires were distributed to eligible respondents between July and November 2023. Of these, 534 completed paper questionnaires were returned, of which 50 were subsequently identified as incomplete, resulting in 484 usable paper responses. In addition, 150 valid responses were obtained through the online questionnaire. Thus, a total of 634 responses were initially available for analysis. Following data screening, 74 responses were excluded due to missing data and/or outliers, resulting in a final sample of 560 valid responses for subsequent statistical analysis.

Data Analysis

The software packages SPSS 21.0 and AMOS 21.0 were used to analyse the data that was gathered. Descriptive analysis, reliability testing, exploratory factor analysis (EFA), and confirmatory factor analysis (CFA) are all performed using SPSS 21.0 software. In the social sciences, the EFA is a statistical method for identifying latent variables, or factors. It is employed in situations in which it is unknown how many factors exist between the scale's items or which factors are influenced by which particular item (Orcan, 2018). Therefore, the EFA will be used in this study to find and eliminate less important elements, leaving only the strong ones for further examination. With a Kaiser-Meyer-Olkin (KMO) test score of 0.987, which indicates that the sample is sufficiently large, our data is considered suitable for factor analysis. Furthermore, a 0.000 significance level on Bartlett's Test of Sphericity suggests that the sample's variables are important and connected. Aside from that, factor loading for each variable falls under its corresponding component with a value of 0.50 or higher in the rotated component matrix. However, several items were omitted due to factor loading below 0.50, which explains why the items were not appropriate for further analysis. Furthermore, this shows that using multiple items, each heavily weighting a single factor, to represent each element results in a simple structure (Pett et al., 2003; Tabachnick & Fidell, 2001). We will also perform CFA on the gathered data, testing variable relationships. The effectiveness and path coefficient estimates of the model were subsequently calculated. The model's fit was evaluated using a variety of indices, such as χ^2/df , RMSEA, GFI, NFI, IFI, CFI, PNFI, PCFI, and PGFI (Hair et al., 2010; Awang et al., 2023). Furthermore, the method of structural equation modelling was utilised to assess the proposed hypothesis. It was determined that the p-value, which indicates significance, was $P < 0.05$.

RESULT AND DISCUSSION

Data Analysis

Out of the total 560 participants in the study, 73.70% were women and 26.30% were men. The responders' ages ranged from about 25 to 50 years old and above. Of the respondents, 27.80% belonged to the 25–30 age group, 12.00% to the 31–36 age group, 17.50% to the 37–42 age group, 18.60% to the 43–49 age group, and 24.10% to the 50 years and above age group. The age group of under-31-year-old respondents made up the majority, with respondents 50 years of age and older ranking second. Married respondents (66.70%) comprised the largest portion of the sample in terms of status, followed by single respondents (31.40%) and divorced respondents (1.90%).

Measurement Model

Measurement of these unobserved variables was described prior to path analysis among the latent variables

(factors or constructs). These are not directly quantifiable; hence, in order to create latent variables or constructs, a number of observed variables are computed beforehand. Each latent variable is measured using observable variables that have undergone validity and reliability testing (Hair Jr. et al., 2020; Hayes et al., 2017). The loadings of each item on the appropriate latent variable are analysed, with a focus on standardised loadings of at least 0.50 in order to assess item reliability (Hair et al., 2010; Wuen et al., 2021; Yahaya et al., 2022). Moreover, a common method for evaluating internal consistency is composite reliability (CR), which refers to a value of 0.70 or above for each latent variable (Hair et al., 2010). The ability of an instrument to measure what is intended to be measured for a construct is the next definition of validity. Convergent validity, construct validity, and discriminant validity are the three types of validity that are necessary for any measurement model (Awang et al., 2023). The convergent validity of a construct is measured using the average variance extracted, or AVE, in convergent validity analysis. Kline (2005) and Wong (2013), among other researchers, believe that compatibility cannot be determined without an AVE score of at least 0.50. The factor loading, CR, and AVE results for each of the structures that met the necessary conditions are displayed in Table 1 below.

Table 1: Factor loading, CR, and AVE for all of the constructs

Variable		Factor Loading	Composite Reliability	AVE
BR	BR3	0.781	0.915	0.682
	BR4	0.801		
	BR5	0.860		
	BR6	0.842		
	BR7	0.844		
BI	BI1	0.877	0.952	0.766
	BI2	0.906		
	BI3	0.825		
	BI4	0.887		
	BI5	0.919		
	BI6	0.852		
	BI7	0.903		
ATT	ATT1	0.921	0.973	0.837
	ATT2	0.932		
	ATT3	0.924		
	ATT4	0.935		
	ATT5	0.929		
	ATT6	0.876		
	ATT7	0.884		
SN	SN1	0.774	0.934	0.703
	SN2	0.868		
	SN3	0.853		
	SN4	0.859		
	SN6	0.855		
	SN7	0.819		
PBC	PBC1	0.875	0.886	0.722

	PBC4	0.865		
	PBC7	0.808		
RA	RA1	0.861	0.959	0.797
	RA2	0.906		
	RA3	0.916		
	RA4	0.915		
	RA5	0.910		
	RA6	0.846		
CM	CM1	0.883	0.938	0.790
	CM2	0.898		
	CM4	0.892		
	CM5	0.883		
CP	CP6	0.913	0.902	0.822
	CP7	0.900		

In addition, construct validity is established when every fitness index associated with a particular concept reaches the necessary threshold. According to Awang (2015), there are three types of fitness indexes: (1) absolute fit, (2) incremental fit, and (3) parsimonious fit. The level of acceptability is reached because the RMSEA value is 0.057, which is less than 0.08 and 1.0. The CFI score of 0.907 for the incremental fit, the second category, is higher than the desired range between 0.85 and 0.90, suggesting that the acceptance level has been reached. The TLI then displays a result of 0.902, indicating that the desired level of acceptability has been reached. The value of 0.864 is displayed by the NFI, another indicator that belongs to the same group. This indicates that the desired degree of acceptability has also been attained. The parsimonious fit category is the next one, and its chisq/df value is 2.847, which is below 3.0 and 5.0 and suggests that the acceptance threshold has been reached. Overall, the pooled measurement model that was employed for all of the study's constructs satisfied the requirements of construct validity. The value of the fitness index is shown in Table 2 below.

Table 2: Fitness indexes value

Fit Index	Absolute fit index	Incremental fit index			Parsimonious-fit index
	RMSEA	CFI	TLI	NFI	Chisq/df
Structural Model	0.057	0.907	0.902	0.864	2.847
Recommendation	<1.0	>0.85	>0.85	>0.85	<3.0

Next, a concept's discriminant validity establishes how distinct it is from other constructs within the same model. The main objective is to avoid building overlap (Awang et al., 2023). Awang (2023) mentioned that discriminant validity when each bold diagonal value surpasses all other values in the corresponding column and row. Every diagonal value (bold) in Table 3 is greater than any other value in the corresponding column and row. As a result, the pooled CFA (measurement model) can be said to have achieved discriminant validity.

Table 3: Discriminant Validity

Construct	SN	ATT	PBC	CP	CM	RA	BR	BI
SN	0.839							
ATT	0.393	0.915						
PBC	0.499	0.695	0.850					
CP	0.121	0.332	0.524	0.907				
CM	0.147	0.300	0.497	0.800	0.889			
RA	0.482	0.683	0.755	0.531	0.550	0.893		

BR	0.200	0.552	0.504	0.241	0.824	0.429	0.826	
BI	0.623	0.425	0.385	0.148	0.817	0.373	0.820	0.875

Structural Model

As seen in Fig. 1, the study's researchers employed SEM path analysis to examine the theories put forth in the created model. Table 4 displays the results of the hypothesis testing. The study found support for six of the seven tested hypotheses and rejected one. The study's conclusions supported hypotheses H1, H2, H3, H6, and H7 by showing that ATT ($\beta = 0.320$, $p < 0.001$), SN ($\beta = 0.199$, $p < 0.001$), PBC ($\beta = 0.195$, $p < 0.001$), CM ($\beta = 0.096$, $p < 0.019$), and CP ($\beta = 0.108$, $p < 0.004$) had a substantial favourable impact on BI. Then, H4 was supported by the study's finding that the component BI ($\beta = 0.872$, $p < 0.001$) had a substantial impact on BR. H5 was rejected because the impact of RA ($\beta = 0.084$, $P > 0.05$) on BI was not statistically significant. Therefore, it can be concluded that attitude, out of all the variables, had the greatest impact on behavioural intention. Subjective norm, perceived behavioural control, compatibility, and complexity also demonstrated significant effects on behavioural intention, whereas relative advantage did not have a statistically significant effect. The analysis results support six hypotheses for the direct path coefficient overall.

Table 4: Structural Model Relationship and Level of Significance

Structural relationship path	Standard Beta	S.E	C.R	P-value	Results
ATT→BI	0.320	0.037	8.964	***	Significant
SN→BI	0.199	0.028	6.980	***	Significant
PBC→BI	0.195	0.046	4.360	***	Significant
RA→BI	0.084	0.047	1.889	0.059	Not Significant
CM→BI	0.096	0.042	2.354	0.019	Significant
CP→BI	0.108	0.038	2.908	0.004	Significant
BI→BR	0.872	0.020	42.094	***	Significant

Notes: Three asterisk symbols (***) indicate a highly significant at < 0.001

DISCUSSION

In order to ascertain the variables that influence Malaysians' intents to engage in microtakaful products, this study used TPB and IDT. To examine the causal relationships between ATT, SN, PBC, CP, CM, RA, BR, and BI, a structural model was developed. To collect empirical data, a physical and online questionnaire were sent. According to the findings, SN, ATT, PBC, CP, CM, and BI all had a significant impact; however, RA had no significant impact. First, the findings showed that ATT had a substantial impact on the behavioural intentions of the B40 group and other participants in microtakaful products. ATT is the most important factor influencing a person's tendency towards adopting a microtakaful product. This means that a positive attitude towards microtakaful products can develop when someone thinks that buying them is a wise decision that is worthwhile, beneficial, and carries positive value. For example, the microtakaful products could provide financial protection to the consumers in the event of death, fire, flood, and others. According to earlier research such as Rapi and Kassim (2023b), Razak et al. (2021), and Chusmita et al. (2019), this result was consistent.

Second, according to the results of this study, SN had a significant effect on the intent of the B40 group and other participants to employ the microtakaful product. Perceived social pressure might arise from considering whether a particular behaviour will be accepted or rejected by close friends, family, or coworkers, claims Graafland (2017). One could argue that customers will become more interested in buying microtakaful products if they perceive the practice of using them as a good one and if friends, family, and the community support it in Islam. The results of multiple other investigations such as Razak et al. (2021), Rapi and Kassim (2023a), Rapi and Kassim (2023b) are in line with this opinion. Thirdly, it was found that PBC positively impacted the B40 group's and other people's intent to take part in the microtakaful product. This outcome is in line with other research that demonstrated PBC had a significant effect on takaful involvement (Razak et al., 2021; Raza et al., 2019; Ismail et al., 2022). Therefore, it may be concluded that if someone felt secure and in control enough such as sufficient fund to adopt the behaviour, they would be prepared to engage in a microtakaful product.

Fourth, RA had no significant impact on the B40 group's or any other group's behavioural intention to adopt microtakaful products. Similar results about the adoption of microtakaful in Ethiopia and Indonesia were found by several earlier studies, including those conducted by Beshir et al. (2023) and Rapi and Kassim (2023a). Therefore, it can be concluded that the current outcome may be attributed to the strong Islamic religious culture along with the customs and traditions that go along with it. This may have made the distinction between microtakaful and microinsurance irrelevant for Malaysian clients right away. Furthermore, the fact that this study exclusively focuses on Muslim consumers has rendered the outcome irrelevant. Aside from that, the insignificant outcome can be the consequence of Malaysian customers' ignorance of the benefits of microtakaful products. Fifth, this study demonstrated that CM had a substantial effect on the behavioural intentions of the B40 group and other participants in the microtakaful product. Customers who find a microtakaful product that aligns with and is consistent with their needs, beliefs, values, experiences, and habits are more likely to participate in it. If a person believes a microtakaful product would work for him in his current circumstances, he may engage in it. This outcome is in line with earlier research by Rapi and Kassim (2023a) and Beshir et al. (2023).

Next, CP demonstrated a significant positive relationship with behavioural intention among the B40 and other participants in adopting microtakaful products. Although Complexity is theoretically derived from Innovation Diffusion Theory (IDT), the measurement items used in this study were positively worded to assess the perceived ease of understanding, applying for, and using microtakaful products. Therefore, the positive coefficient indicates that respondents who perceived microtakaful products as easier to understand and use were more likely to develop an intention to participate. This finding highlights the importance of simplifying product information, application procedures, and participation processes to facilitate consumers' intention to participate in microtakaful.

The finding is consistent with previous studies, including Beshir et al. (2023), Ali et al. (2022), Shaikh et al. (2020), and Ali et al. (2019), which similarly suggest that the perceived simplicity and ease of use of Islamic financial products can facilitate consumers' adoption intentions. In the context of microtakaful, the positive relationship may indicate that when consumers perceive the product as simple, understandable, and easy to apply, they are more likely to form favourable behavioural intentions. Therefore, reducing perceived difficulty through clear product information, straightforward application procedures, and accessible processes may contribute to greater willingness to participate in microtakaful. Finally, BI had a significant effect on the behaviour of the B40 group and other participants in the microtakaful product. Higher levels of willingness are likely to result in a better possibility of carrying out the action, according to evidence from a range of research studies that demonstrate BI is a predictor of adoption behaviour (Al-Jubari et al., 2019; Taufique & Vaithianathan, 2018). This conclusion is supported by the findings of additional research (Kusumawati et al., 2021; Suyanto & Dewi, 2023; Gieure et al., 2020). Therefore, it can be concluded that the greater the intention to participate in the microtakaful product, the higher the likelihood of its execution.

Implication

To begin with, this study has identified a theoretical gap in relation to studies on microtakaful. The idea pertaining to consumer behaviour has not been extensively discussed in previous literature evaluations on the adoption of microtakaful products. Therefore, a more thorough explanation of the choice to accept an innovation will be given by the current research that integrates TPB and IDT. Further research on the adoption of microtakaful in Malaysia is necessary to expand our knowledge of the variables influencing people's decisions to engage in microtakaful. The current study then offers practical implications, such as the possibility of additional government subsidies for microtakaful products and the development of a variety of products related to microtakaful. These initiatives may give people multiple choices for adopting microtakaful products that meet their demands. Additionally, research will offer direction and inspiration for practitioners, including the Malaysian Takaful Association (MTA) and Bank Negara Malaysia (BNM), to develop new policies that suit the circumstances and enhance their cooperation with the business community and other stakeholders, such as Zakat and Waqf authorities. They might, for example, implement a short- and long-term plan that includes investment prospects, technology use, communication, branding, awareness-raising, and connections with regulators. Not to mention, the takaful operator can create effective marketing strategies to boost market share among Malaysians. Especially, they can focus on the awareness and understanding of the consumers about the microtakaful product since it was found that relative advantage has an insignificant impact on microtakaful behaviour.

CONCLUSIONS

With a combination of two theories, such as TPB and IDT, this study has shown the impact of ATT, SN, PBC, CP, CM, RA, BR, and BI. In detail, all of the direct relationships, which are ATT, SN, PBC, CP, CM, and BI, have a significant effect on adoption behaviour except relative advantage. Thus, this study is very important to cater to the needs of Malaysian people, especially the B40 group or low-income earners. By having the micro-

takaful product as one of their risk management tools in life, their financial needs could be protected in the event of financial emergencies. In light of that, the government also encourages and supports the participation of microtakaful products by launching and organising a variety of initiatives, financial aid, collaborations, and others. People should take these efforts as an opportunity for them to understand and embrace more of this microtakaful product.

Since financial inclusion is crucial, this underprivileged group should not be hindered by their economic level. Therefore, it would be acceptable to release a more suitable microtakaful product that prioritises accessibility, coverage, reasonable pricing, and worthwhile advantages. To be perceived as more desirable, product distribution and channelling must also be tailored to the target demands of these vulnerable people. The study's scope is then restricted to the TPB and IDT alone; hence, additional factors will need to be introduced in the future in order to fully analyse the context of adoption behaviour. Despite several restrictions, the results of this study offer important new insights into theory development and real-world applications. Finally, it should be mentioned that takaful is available to anyone in order to achieve financial inclusion and promote a sense of shared wealth.

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