Intergenerational Analysis of Cash Waqf Behavior: Lessons Learned from Indonesia

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Abstract

Purpose — The proponents of cash waqf speak highly about its huge potential for mobilizing the third sector of the economy to fund the socio-economic development agenda. However, the under-collection issue has been characterizing the cash waqf movement globally. This study examines how understanding the distinct cash waqf donating behavior across different generations has the potential to address the problem.

Design/methodology/approach —This study extends the Theory of Planned Behavior (TPB) by adding religiosity and knowledge variables into the standard model, employing the Partial Least Square Structural Equation Modelling (PLS-SEM). A survey is conducted on 684 respondents representing the main provinces in Indonesia and four major generations (Baby Boomers, Gen X, Gen Y, and Gen Z).

Findings — Religiosity, Knowledge, Attitude, Subjective Norms, and Perceived Behavioral Control directly or indirectly affect cash waqf intention. The effect is contingent on the characteristics of generations.

Originality — To the best of our knowledge, this is the first study evaluating the intergenerational determinants of Intention toward cash waqf, particularly in Indonesia.

Research limitations/implications — This study covers only the Indonesian case with limited coverage of the more heterogeneous provinces in the country. The sample distribution for Baby Boomers can also be enlarged.

Practical implications — Cash waqf institutions (government and private) should apply the dynamic segmenting strategy, where the diversification of the promotion, marketing, awareness, and approaches are contingent on the different characteristics of each generation.

Keywords: Cash Waqf, Extended Theory of Planned Behavior, Intergenerational Analysis, Religiosity.

Type of paper: Research paper

1. Introduction

The current positive growth of Islamic economics and finance has also trickled down to Islamic social finance (Uluyol *et al*., 2021). Besides its more popular kind of zakah, Islamic charitable donation also includes waqf, i.e., an Islamic endowment fund. Waqf has been recorded as one of the most critical institutions in the socio-economic development of the Muslim world (Medias *et al*., 2022). Unlike zakat, the beneficiaries of waqf are more flexible, allowing it to address various socio-economic issues across different territories and generations (Abdullah, 2018). History suggests that waqf has been used in funding the development of society (Kahf, 1999), alleviating poverty (Sadeq, 2002), serving social objectives, and supporting economic growth (Yusof *et al*., 2017). It fulfills the gaps left by both the private sector, which has enormous resources but limited concern for social causes, and the government, which focuses on providing public goods for its citizen yet is constrained with limited resources. This makes waqf consistent with the Islamic development paradigm in promoting the achievement of falāh (multidimensional human well-being) (Jatmiko and Azizon, 2022). The very concept of waqf has also been adopted universally by other civilizations, as observed in the Common Law's trusts employed by many countries in the West (Koehler, 2010).

However, some studies critique that the structure of waqf lacks liquidity and flexibility for efficient resource utilization as far as modern economic practice is concerned (Kuran, 2001; Abdullah, 2019). The vast majority of waqf assets are immovable properties such as land. Indeed, the static perpetuity of waqf restricts the use of waqf assets beyond the declared function, even though altering the asset into another form serves higher objectives of socio-economic development (Kuran, 2001).

These critiques have motivated the (re-)birth of the so-called cash waqf, where cash corpus is now in place to form a benevolent endowment fund (Çizakça, 2004). Here, liquidity is no longer a problem as the corpus is bestowed by the donator in the form of a liquid asset that can

be transformed into any value-enhancing investment (Osman *et al*., 2016). Cash waqf also serves as a flexible financial tool for society since the allotment of the fund and/or the return obtained from cash waqf can be channeled into various public projects (Çizakça, 2000). Affordability is also an important feature of cash waqf as it enlarges the basis of donators beyond those who own tangible assets (Hassan *et al*., 2019). This is why this vehicle gained popularity in the sixteenth century when half of the new waqf created in the Ottoman Empire was in the form of cash waqf (Hassan *et al*., 2019). Even Muslim-minority country like Singapore has also implemented the cash waqf for mosque building since the 1970s (Mohsin *et al*., 2016).

The proponents of cash waqf speak highly about its huge potential for allocating more resources from the third sector of the economy towards socio-economic development. While the hard number about the prospect of global cash waqf is obscure, the Indonesian Waqf Board (BWI), an independent state institution aimed to advance and accelerate waqf practice in Indonesia, estimates that the national cash waqf potential can reach IDR 180 trillion (USD 11.163 billion) in 2020 (Utomo *et al*., 2020).[1] To put this number into perspective, it is equivalent to around 1% of Indonesia's GDP. Had all countries around the world had the same potential, it would suffice half of the additional resource allocation required for developing eco-friendly technologies and infrastructure every year to prevent catastrophic climate change (see Bouckaert *et al*., 2021).[2]

However, the realization of cash waqf worldwide remains far behind its potential. In Indonesia, for instance, the collection of cash waqf comprises only around 0.14% of its potential figure between 2011 and 2018 (Utomo *et al*., 2020). This mismatch encouraged the Indonesian

[1] The exchange rate assumption: USD 1 = IDR 15,500.
[2] According to some major scientific predictions, including Bouckaert *et al*. (2021), the world requires 'only' an additional 2% of world's GDP channelled for development of green technology annually to prevent climate catastrophe.

government to create the National Movement of Cash Waqf (GNWU or *Gerakan Nasional Wakaf Uang*) in early 2021, aimed at increasing the awareness of Indonesian to perform cash waqf. However, a year after the President launched the movement, the cash waqf collection remains very low, only around 0.56% of its potential (Ulya, 2021). Previous studies also document the lack of realization of cash waqf across different territories. See, to name a few, Pitchay *et al*. (2014) for the case of Malaysia, Sarker (2019) for Bangladesh, and Smolo (2019) for Bosnia and Herzegovina.

The gap between the potential and reality of the cash waqf collection discussed above raises intriguing questions. First, what determines public (society) behavior towards donating through cash waqf? Second, are there any intergenerational dynamics in the public behavior towards cash waqf? The first question is essential to determine the effectiveness of the current cash waqf movement in increasing the intention of donators to endow cash waqf. The second one is even more important to optimize the collection of cash waqf with respect to the uniqueness of different generations. Addressing the above questions is consistent with the future research trajectories in donation management (Böckel *et al*., 2021).

In so doing, this study focuses on the spatial context of Indonesia due to several reasons. First, the Southeast Asian Country has the largest Muslim population globally, making it a natural big market for cash waqf. Second, the country's administration has institutionalized the National Movement of Cash Waqf to increase cash waqf endowment to help the national socio-economic development. Third, Indonesia is also regarded as among the leading countries in the Islamic social fund. The country has been actively involved in the making of the core zakat and waqf principles. Finally, Indonesia has also been encouraging the practice of so-called blended Islamic financing, where cash waqf is combined with Islamic bonds (i.e., cash waqf-linked *sukuk*). The above characters make Indonesia an important case to learn how to improve the effectiveness of cash waqf collection.

The previous literature discussing society's behavior of cash waqf, especially in the Indonesian context, is scant. Most behavioral studies related to cash waqf were conducted in Malaysia (see Osman and Muhammad, 2017; Shukor *et al*., 2018; Azizi and Sabri, 2019; Zain *et al*., 2019). The few studies of waqf in Indonesia mainly focus on the managerial context. Our study is distinct as we focus more on the aspect of low cash waqf collection.

The closest previous studies to ours are Sari *et al*. (2014), who explore the determinants of Muslim behavior in donating waqf through institutions in Madura, Indonesia, and Kasri and Chaerunnisa (2022), who extend the Theory of Planned Behavior (TPB) to examine the impact of trust on cash waqf intention. However, those studies fail to account for the intergenerational dynamics of the donators.

The present study specifically aims to explore the factors influencing social behavior and intention toward cash waqf in Indonesia by employing an extended version of the TPB, consistent with Indahsari *et al*. (2014), Johari *et al*. (2015), Osman *et al*. (2016), Shukor *et al*., (2018), Al-Harethi *et al*., (2019), Azizi *et al*., (2019) and Haidlir *et al*. (2021). The TPB is among the leading theoretical frameworks used for evaluating the relationships between behavior, intention, and motivation in the management field and beyond (Barth and Muehlfeld, 2021). Alongside the three original variables of TPB (Attitude, Subjective Norms, and Perceived Behavioral Control), this study adds Religiosity and Knowledge variables as the extension.

Our analysis covers the dynamic of intergenerational behavior towards waqf payment. This enriches the literature and makes it possible to offer meaningful customized recommendations suitable for different generations evaluated in this study. Indeed, each generation may have different donating behavior. However, the literature on waqf donation has been silent on this issue, with the exception of Hasan *et al*. (2019) and Wadi and Nurzaman (2020). Hasan *et al*.

(2019) document that the waqf generosity index (WGI) can explain the behavioral difference between Gen Z and Millennials in donating waqf. Wadi and Nurzaman (2020) show that Performance Expectancy, Effort Expectancy, and Social Influence determine the acceptance of waqf technology. Our study deviates from those previous ones as (i) we include virtually all (full-grown) generational categories in our analysis, and (ii) we perform the extended TPB incorporating Religiosity and Knowledge into the equation.

The main contribution of this study is to examine how different generations (baby boomers, X, Y, and Z) have distinct behavioral characteristics toward cash waqf donation. Understanding the intergenerational dynamics can lead to more fit-for-purpose tailored policies and practical implications. Therefore, the strategies and policies can be customized to capture the intergenerational dynamics in cash waqf. This insight is beneficial not only for the regulator and awqaf institutions in Indonesia but across different territories.

The rest of this study is structured as follows. Section 2 discusses the extended TPB used in this study along with its hypothetical development. The methodology and data employed by this study are explained in Section 3. Section 4 provides the empirical results, while Section 5 discusses the findings further. Section 6 concludes the study.

2. Literature Review and Hypothesis Development

2.1. Extended-Theory of Planned Behavior (TPB)

The main theory used in this study is derived from the TPB, which is the extension of the Theory of Reasoned Action (TRA) originally developed by Ajzen (1975). Ajzen (1991) expands the predictors of behavior by integrating control belief and perceived behavior control variables. Based on this theory, people's intention to carry a certain behavior relies on three main factors: Attitude, Subjective Norms, and Perceived Behavioral Control (PBC). Intention

can be defined as the extent to which an individual is willing to make an attempt or effort to perform a specific behavior (Ajzen, 1991). Attitude is defined as the degree of a person's favorable or unfavorable response in carrying out a certain behavior. Subjective Norms are referred to as the perceived reactions of another person, group, or social referents to a specific behavior. Meanwhile, the PBC is the individual's perception of the simplicity or difficulty in performing a certain behavior (Ajzen, 2005). These variables have been extensively used to analyze behavioral changes in social sciences.

In economics, TPB is often seen as a potent instrument in evaluating individual behavior as it goes through the logical process of thinking affected by Attitude, Subjective Norms, and PBC. Those aspects will ultimately influence decision-making related to consumption (Kashif *et al*., 2015). The TPB model is undoubtedly the most widely used framework in evaluating and predicting an individual's intention to behave at a given time and place (Armitage and Conner, 2001; Iranmanesh *et al*., 2019). Iranmanesh *et al*. (2019) suggest that these three variables account for nearly half of a person's intention and willingness to perform the behavior.

The variables in TPB are not restricted to the three variables. The TPB framework permits the use of other variables to anticipate individuals' intentions and behavior. A study conducted by Iranmanesh *et al*. (2019) suggests that the extended TPB model can explain as much as 63.4% of the variance in willingness to perform a certain behavior by considering relevant factors. Therefore, researchers can add new variables to strengthen the explanatory factors, such as personal character (Zain *et al*., 2019), trust (Indahsari *et al*., 2014; Johari *et al*., 2015; Osman *et al*., 2016; Shukor *et al*., 2018; Haidlir *et al*., 2021), past behavior (Azizi *et al*., 2019), religiosity (Indahsari *et al*., 2014; Johari *et al*., 2015; Osman *et al*., 2016; Al-Harethi *et al*., 2019; Haidlir *et al*., 2021), and knowledge (Johari *et al*., 2015; Shukor *et al*., 2017; Haidlir *et al*., 2021). With this perspective, the extended TPB is considered an appropriate framework for investigating the factors influencing the intention to endow cash waqf.

2.2. Religiosity

Religiosity is commonly described as "the degree to which beliefs in specific religious values and ideals are held and practiced by an individual" (Delener, 1990, p. 27). McDaniel and Burnett (1990) explain religion as faith in God with a commitment to follow all of its principles. Religiosity can also be indicated by the individual's attitudes and behavior (Johnson *et al*., 2001). Mokhlis (2009) states that religion, along with behavior, attitude, and individual or social values, is the most common cultural factor influencing social institutions. Thus, Religiosity is a crucial factor in influencing public behavior in general and consumer behavior in the context of the economy (Mokhlis, 2006).

Al-Harethi (2019) uncovers that Religiosity, together with Subjective Norms and Attitude, can explain individual behavior in donating cash waqf. This result is consistent with the finding of consumer choice studies documenting a significant positive relationship between a consumer's religious affiliation and behavioral variables, such as Intention and Attitude (Rahman *et al*., 2015; Iranmanesh *et al*., 2019; Vanany *et al*., 2019; Amalia *et al*., 2020). A study investigating the relationship between Religiosity and charitable donation by Indahsari *et al*. (2014) suggests that Religiosity is important in explaining the donation behavior of zakah, infaq, and waqf. Furthermore, several theoretical studies support that Religiosity is a significant factor in public intention and behavior for waqf endowment (Johari *et al*., 2015; Osman *et al*., 2016; Baqutayan and Mahdzir, 2017; Haidlir *et al*., 2021).

This study utilizes the term religiosity to represent the perceived religiosity, referring to respondents' self-reported perceptions about the degree of commitment to religion and its effect on life and behavior. This commitment will subsequently influence attitude towards cash-waqf participation. Therefore, we hypothesize that:

H1: Religiosity has a direct positive influence on Intention towards endowing cash waqf

H2: Religiosity has an indirect positive influence on Intention towards endowing cash waqf through Attitude.

2.3. Knowledge

Knowledge is frequently perceived as the fact, feelings, or experiences of a person or a group of people. It could also be explained as awareness, consciousness, or familiarity obtained through experience or learning (Rahman *et al*., 2015). It can also mean the proficiency and skills obtained by a person or group through a theoretical or practical comprehension of a certain subject (Ahmat *et al*., 2011). In the context of this study, Knowledge is defined as individuals' understanding of the cash waqf.

According to previous studies, Knowledge influences public (consumer) behavior related to the implementation of Islamic economics (Hamdan *et al*., 2013; Vanany *et al*., 2019). The specific studies related to waqf, such as Johari *et al*. (2015), Shukor *et al*. (2017), and Haidlir (2021), show that Knowledge influences the decision-making and behavior of those endowing cash waqf (waqif). Shukor *et al*. (2013) point out that this variable is a determinant of endowing cash waqf. Meanwhile, Johari *et al*. (2015) document that familiarity with cash waqf encourages people to participate. Therefore, we pose the following hypotheses:

H3: Knowledge has a direct positive influence on Intention towards endowing cash waqf

H4: Knowledge has an indirect positive influence on Intention towards endowing cash waqf through Attitude

2.4. Attitude, Subjective Norms, and Perceived Behavioral Control

Attitude is a person's tendency to evaluate a particular behavior, both positive and negative. Ajzen (1991) defined Attitude as the degree of a person's favorable or unfavorable reaction (evaluation and appraisal) to perform a particular behavior. Smith and McSweeney (2007) consider Attitude as part of the expectations for behavioral beliefs measured based on an evaluation of outcomes. Attitude is built through three elements, namely affective, behavior, and cognitive (Jain, 2014). In this respect, a positive Attitude to endow cash waqf refers to the good evaluation of a person to cash waqf in the aspect of affective, behavior, and cognitive. Thus, Attitude in this study refers to a person's tendency to evaluate a behavior related to the Intention to endow cash waqf. This tendency could be influenced by several factors, including Religiosity and Knowledge, as discussed earlier.

Meanwhile, according to Ajzen (2005), Subjective Norms are the perceived responses of another person, group, or social referents to certain behavior where the approval or disapproval displayed affects a person's behavior. The mentioned social referents involve families, friends, and communities. An individual tends to execute a particular behavior that others think needs to be carried out. Thus, in the context of this study, subjective norms are expressed as a function of the extent to which social pressure from others affects individuals' opinions about cash waqf.

Furthermore, PBC is defined by Ajzen (2005) as an individual's perception of the ease or difficulty of performing a certain behavior. It can also be defined as the degree of confidence of someone in carrying out behavior in a given situation (Bashir *et al*., 2019). PBC is also closely related to the availability of the resources and opportunities necessary to carry out a particular behavior. Thus, in this study, PBC refers to conditions in which individuals perceive that participating in the cash waqf is an easy task (such as having the freedom to choose and make decisions) and financial ability to endow cash waqf (both in terms of personal materials and the media to participate). Such individuals will be more likely to intend to endow cash

waqf than individuals who perceive participating in this program as a difficult task because of a lack of resources or opportunities.

According to previous studies, these three variables of the TPB (Attitude, Subjective Norms, and PBC) are considered to have a significant influence on Intention to endow cash waqf (Hasbullah *et al*., 2015; Osman *et al*., 2016; Osman and Muhammed, 2017; Shukor *et al*., 2017; Yusoff *et al*., 2017; Azizi *et al*., 2019; Haidlir et al., 2021). We thus propose the following hypotheses.

H5: Attitude positively affects Intention to endow cash waqf

H6: Subjective Norms have a direct positive influence on Intention to endow cash waqf

H7: PBC has a direct positive influence on Intention to endow cash waqf

2.5. Intergenerational Analysis of Waqf Behavior

From the sociological point of view, 'generation' is defined as a cohort of people who have been born and socialized into similar socio-historic circumstances and, therefore, share a similar set of values and attitudes (Lambert 1972; Kovic and Hansli 2018). The current living generations are commonly divided into Baby Boomers (BB), Generation-X (Gen X), Generation-Y (Gen Y or Millennials), and Generation-Z (Gen Z or Post-Millennials). Indeed each generation may have unique characteristics. Approaching those four generations with a one-size-for-all strategy may not be the best way to optimize their participation in cash waqf.

The segmentation strategy is an important technique used to identify different types of groups with the goal of predicting who will respond favorably to a particular program, such as promotion, encouragement, and marketing (Harmon *et al*., 1999). In the context of cash waqf, it provides the cash waqf stakeholders (government and management institutions) with the ability to implement the appropriate strategy to increase people's participation in the waqf

program. At the very least, the segmentation strategy can help to identify the effectiveness of the one-size-for-all strategy and the need for a specific strategy for a type of targeted group.

Each age cohort has a specific character influenced by its experience and other related factors such as trends, technological development, and political situation. Gen Y has been experiencing fundamental changes in the availability of information technology. Their exposure to the internet and borderless flow of information has made them hitherto the most educated and technology-savvy of all generational groups (Acar, 2014). Gen Y comes in the post-print era, which is more adaptive to technologies in their daily lives. For charity bodies to reach this generation, they need to embrace multiple communication and fundraising tools employing appropriate technology. (Yusoff and Kian, 2013).

Gen Z consists of people who are born after 1995 (Lanier, 2017). Research indicates that the majority of Gen Z are children of millennials, and hence, they possess the qualities of millennials, like being loyal, thoughtful, responsible, and determined (Chillakuri and Mahanandia, 2018). Gen Z is also known as a digital native. Technology is playing a pivotal role in the lives of this generation; being raised with smartphones and other digital narratives every day, they expect everything to be fast and instant (Opris and Cenusa, 2017). Gen Z likes to be independent but does not shy away from being collaborative, as they know how to be well-connected with others (National Center for Education Statistics, 2017). Gen Z expects institutions to stand for ethical issues (McKinsey, 2018). Therefore, the cash waqf should also have a social value proposition on top of the use of interesting technology for payment and accessing the donation report.

The other two oldest generations, Gen X and BB, are currently living at a mature stage. More than half of BB are living in their retirement age, while Gen X is currently living in their peak career age. The literature suggests that BB demands more control of their expenses and that

marketing strategies should be adjusted based on their understanding (Kass 1996). BB prefers an information-intensive advertisement to identify products benefit and assess the goodness of product value and brand image (Robert and Manolis, 2000; Wolf *et al*., 2005). Gen X is more media savvy and views marketing as a highly manipulative practice, but they are not hostile towards advertising and require more reasonable reasons to put interest in a product (Robert and Manolis, 2000). Gen X demands proof that the product is reliable, simplifies their life, rate premium quality as the most desirable characteristic, and look for something comfortable (Beverland, 2001; Wolf *et al*., 2005).

Surprisingly, given the importance of intergenerational analysis, studies on donating behavior seem to neglect this issue. Instead, they are dominated by a single generational analysis or even consider no unique characteristics of different generations regarding their donation behavior. Kovic and Hanski (2018) are one of the exceptions. Kovic and Hanski (2018) evaluate whether there are differences in attitudes toward nonprofit organizations (NPOs) between the BB, Gen X, and Millennials. The overall results suggest that there are, at best, only a few small intergenerational differences. The results suggest that Millennial is at least as interested in and willing to engage with NPOs as previous generational cohorts. Koczanski and Rosen (2019) study the philanthropic behavior of millennials compared to other generations. They document the domination of Millennials' donations as compared to other earlier generations.

Other studies with the waqf-specific context are Hasan *et al*. (2019) and Wadi and Nurzaman (2020). The former compares the waqf generosity index (WGI) of Gen Z and Millennials and documents that the WGI can explain some behavioral differences in generosity between these two groups. The latter study examines the determinant of waqf technology adoption for millennials. The results show that Performance Expectancy, Effort Expectancy, and Social Influence are major determinants toward waqf technology acceptance. This study, thus, postulates the following hypothesis.

H8: The influence of extended TPB variables is contingent on the variation of generations.

3. Methodology

3.1. Data Collection and Respondent's Characteristics

The respondents who participated in this study are Indonesian Muslims with various backgrounds. The data was obtained from the online survey questionnaire after ensuring the validity and reliability of the items and variables. The setting of this study makes generating an accurate sampling frame not straightforward. Therefore, this study follows a non-probability purposive sampling technique as recommended by several studies in the consumer behavior context (Hulland *et al*., 2018; Sarstedt *et al*., 2018). To maintain the heterogeneity of the sample, we perform a periodic evaluation to maintain that the sample composition represents Indonesia's sociodemographic condition. As a result, this study managed to gather 684 valid respondents from all across Indonesian provinces covering the age of 18-65. The detail of the respondent's characteristics is provided in Table 1.[3]

[Insert Table 1 About Here]

3.2. Model and Estimation Method

Figure 1 illustrates the model used in this study that is derived from the theoretical framework and previous studies discussed in Section 2. Here, we extend the TPB in modeling the public donation behavior through cash waqf. TPB argues that the intention to participate in cash waqf

[3] Among the limitations of this study is the limited number of respondents in the category of Baby Bomer (BB). However, we refrain from excluding the same for some reasons. First, BB is a crucial generation to compare with other younger generations. Second, using PLS-SEM per se puts our paper at a better advantage than utilizing the CB-SEM, as far as the limited number of samples is concerned (Hair *et al*., 2017). While the literature has not agreed upon the minimum threshold for the number of observations, Cohen (1992) in Hair *et al.* (2017) suggest that our BB subsampling can achieve a statistical power of 80% for detecting an R-squared of at least 0.5 (with a 5% probability error). Finally, to control for the sensitivity of our results from the inclusion of BB, we perform a robustness check in Subsection 4.4, where we exclude BB from our sample and show that the aggregate result remains relatively unchanged.

is influenced by three main factors, namely (i) attitude towards cash waqf; (ii) the capability and possibility to participate; and (iii) encouragement of individuals' environment. This study extends the TPB model by adding two other factors, namely (i) knowledge of waqf and (ii) religiosity. These two factors are believed to positively influence Intention directly and indirectly through Attitude (see again Section 2). An even more crucial contribution of this study is that we consider different characteristics of generations, including Gen-Z, Gen-Y, Gen X, and BB. The operational variables are summarized in Table 2. All variables are latent and measured by a set of questionnaires with the six-point Likert scale, consistent with the previous literature (Hasbullah, 2015; Osman and Muhammad, 2017; Shukor et al., 2018).

[Insert Figure 1 About Here]

The Partial Least Square Structural Equation Modelling (PLS-SEM) is applied to test the hypothesis. This is because the PLS-SEM is considered the most rigorous and robust data analysis technique for causality relationships (Hair *et al*., 2010) and is recommended by Ascarya and Tekdogan (2022) for research in Islamic economics and finance. The specific process applied was Multi-Group Analysis (MGA) to test whether the particular characteristic of behavior varied among the generations. We follow Hair *et al*.'s (2017) and Henseler *et al*.'s (2016) Measurement Invariance of Composite Models (MICOM) to justify the use of MGA in our model.

[Insert Table 2 About Here]

4. Result

4.1. Model Assessment

Two model assessments are employed before evaluating the structural model in the MGA, namely (i) measurement model and (ii) invariance measurement across the groups. The measurement model assesses the accuracy of the construct measured and the model's

explanatory power. Here, factor loadings, composite reliability (CR), average variance extracted (AVE), and Cronbach alpha are performed (Chin, 1998; Fornell and Larcker, 1981). A concurrent validity construct requires all measurements to have loading factor above 0.5, CR above the cut value of 0.7, AVE exceeding the cut value of 0.5, and Cronbach Alpha's (CA) value is no less than 0.7 (See among others Fornell and Larcker, 1981; Chin, 1998; Wong, 2013; Henseler *et al*., 2015; Knock, 2015; Henseler *et al*., 2016a; Richter, 2016; Hair *et al*., 2017).

Table 3 shows that virtually all requirements are fulfilled for all groups, except the standard loading factor for A4 (0.470) and the AVE score of the Gen BB's attitude variable (0.477). We, however, refrain from excluding the items to preserve theories underpinning the model, considering the above values are only marginally below the threshold of 0.5 and are limited to a mere one group. This discretion also undertook by a prominent empirical study like Ertz *et al*. (2016) that preserves the items with loading factors above 0.4. Indicators with lower loading factors than 0.5 can still provide valuable information and should be retained due to their theoretical relevance, sample size, and data quality considerations (Chin, 1998; Richter *et al*., 2016). AVE is also not a stand-alone measurement of the indicator's quality (Hair *et al*., 2017). Fornell and Larcker (1981) argue that the value of AVE below (or close to) 0.5 can still be accepted as long as the composite reliability is higher than 0.6.

[Insert Table 3 About Here]

The next measurement model involves analyzing the discriminant validity to ensure each latent variable is distinct from other constructs in the model (Hair *et al*., 2017). The discriminant validity of the measurement model could be analyzed through the Fornell-Larcker criterion and the heterotrait–monotrait ratio of correlations (HTMT). Based on Fornell and Larcker (1981), each construct needs to have the square root of AVE (diagonal) larger than the correlations (off-diagonal) for all reflective constructs. On the other hand, the threshold HTMT value of the

valid discriminant is 0.90. Both of these discriminant validity criteria are fulfilled in Table 4. This shows that all of the constructs in the research framework are empirically different.

[Insert Table 4 About Here]

The second model assessment is invariance measurement across the groups. Before conducting MGA, the factor loadings between the groups are compared to assess the acceptability of the measurement models in all groups and establish the measurement invariance (Hair *et al*., 2017). The result shows that there is one item having a significant difference in 3 out of 6 group combinations. It is K4 having a significant difference in Gen BB vs. Gen Y, Gen BB vs. Gen Z, and Gen X vs. Gen Y. Therefore, we exclude this item from the analysis. There is another significant difference in factor loadings for one combination out of six, such as SN5 (Gen Y vs. Gen Z), SN2 (Gen Y vs. Gen Z), and I3 and I4 (Gen X vs. Gen Y). However, we retain these items to keep their representation in the construct, as the significant difference happened in only a small combination.

4.2. Measurement Invariance of Composite Models (MICOM)

We then evaluate if employing the MGA is meaningful for our study by performing the Measurement Invariance of Composite Models (MICOM), following Hair *et al*. (2017) and Henseler *et al*. (2016b). MICOM involves three sequential steps of evaluating the (1) Configural Invariance, (2) Compositional Invariance, and (3) Equality of Composite Mean Values and Variances. Table 5 illustrates the results of the three tests supporting the use of MGA.

First, our study achieves Configural Invariance by ensuring identical indicators per measurement, data treatment, and optimization criteria across different generations. Table 5 shows that the overall results for Gens X, Y, and Z, are established and can be further analyzed

for Compositional Invariance Assessment. However, it is worth noting that the number of BB respondents is relatively tiny compared to others. We, therefore, refrain from including Gen BB in our MICOM but address this issue in our robustness check in Subsection 4.4.

Second, the Compositional Invariance test evaluates whether the correlation between the composite scores of one group's latent variables and that of its pair statistically equals 1. Table 5 suggests that most of our pairs have the original correlations that are not statistically different from 1, with only one exception of the Attitude variable of Gens X and Z. Henseler *et al*. (2016) argue that having only one or two exceptions, like in our case, will not influence the inference of MGA. We, therefore, proceed to the next step of the Equality of Composite Mean Values and Variances test.

Finally, we examine whether the path coefficient should be measured partially using the MGA or in pooled due to the invariability of the measure. Our Equality of Composite Mean Values and Variances in Table 5 shows that the full measurement invariance is not established, suggesting the variations in the constructs used across different generations. Therefore, the standardized path coefficient across different subgroups can meaningfully be compared.

[Insert Table 5 About Here]

4.3. Structural Model Evaluation

Once the measurement model is established, we then assess the structural model and MGA. In order to know the public behavior across generations, we compare the path coefficient of each generation via bootstrapping analysis in Smart PLS. We seek to elaborate on the behavior variation in endowing cash waqf between generations by evaluating the causality relationship of the model. After that, the model fit, coefficient determination (R-squared), and predictive relevance (Q-squared) are also compared to strengthen the intergenerational analysis.

The path coefficient comparison and its causality relationship significance are shown in Table 6. Almost all causality relationships are significant, except the relationship between Religiosity and Intention for the all-sample. This suggests that all hypotheses are accepted except for the first one (H1). However, this trend does not hold in the intergenerational analysis as shall be discussed later in Section 5. The results show some variations of the causality relationship in the model across generations, supporting Hypothesis 8. The MGA's path coefficient shows that only two causality relationships are significant for all subgroups, namely (i) perceived behavioral control to Intention and (ii) perceived Religiosity to Attitude. Another variable of TPB, Attitude, is only significant for Gen X. The subjective norm is significant to attract Intention in all sub-groups except for Gen BB. The same trend also occurs in the causality relationship between Knowledge and Attitude. The direct influence of Knowledge on Intention is only significant in Gen X. Interestingly, the direct causality relationship of religiosity to Intention is not significant in any sub-groups.

[Insert Table 6 About Here]

To further test this intergenerational variation, we compare the value of coefficient determination (R squared), predictive prevalence (Q squared), and model fit criteria. These two measurements are used to evaluate which generation fits more with the model hypothesized in this study. The results are shown in Table 7. The values of R-square indicate that all variables used can explain the variation of Intention in the overall degree of more than 60%, except for Gen Z (55%). While the explanatory power of Knowledge and Religiosity in explaining Attitude ranges between 38% to 18%. Here, the highest explanatory power belongs to degree Gen BB (38%) followed by other sub-generations, namely Gen X, Gen Y, and Gen Z consecutively.

[Insert Table 7 About Here]

The predictive relevance test using the blindfolding procedure shows that the values of the Q-squared of dependent variables (Intention and Attitude) for all generations are above 0 (see Table 8). This result indicates that overall observations in this study are good. However, the degree is relatively better for Gen X and Gen Y compared to Gen Z and Gen BB.

[Insert Table 8 About Here]

In terms of the model fit, Table 9 shows that the model used in this study is fitter relatively for Gen X and Gen Y (it can be seen from the value of SRMR being lower than 0.08, the value of rms-theta is closed to 0 and that of NFI is closed to 1). It means that the model used in this study is more predictable for Gen X and Gen Y.

[Insert Table 9 About Here]

Lastly, the collinearity statistics in Table 10 also confirm the absence of multicollinearity among the variables as indicate by the value of VIF standing between 1 to 5.

[Insert Table 10 About Here]

4.4. Robustness Check

To avoid the potential bias in the overall inference of the model, we perform a robustness check by omitting Gen BB from the complete bootstrapping analysis since the number of respondents for Gen BB is relatively limited compared to others. Table 11 shows that our result is robust from the inclusion of the relatively tiny sample of Gen BB. After excluding Gen BB from the complete model, there are only insignificant differences in the path coefficients of a few causal relationships. Therefore, including BB in our sample does not interfere with the overall inference in Table 6. However, our study acknowledges that the limited sample of BB makes the intergenerational analysis for BB needs to be interpreted with caution.

[Insert Table 11 About Here]

5. Discussion

5.1. Aggregate Analysis

The complete sample analysis illustrated in Table 6 warrants interesting observation. The findings show that perceived Religiosity has no direct influence on the Intention to endow cash waqf. Although Religiosity is not significant directly in influencing cash waqf intention, this variable is significant to increase the good attitudes towards cash waqf. This result is shown in all generations, in line with previous studies such as Indahsari *et al*. (2014); Fuadah *et al*. (2015); Osman *et al*. (2016), and Baqutayan and Mahdzir (2017). It means that the level of one's Religiosity will first affect the donator's Attitude towards the cash waqf program, that in turn has a significant impact on the donator's Intention to endow cash waqf. This proves Hypotheses 2 and 5 but nullifies Hypothesis 1. However, the magnitude of effect from this path of Religiosity – Attitude – Intention is the weakest one relative to other channels. The path coefficient between Religiosity and Attitude is quite high, reaching 0.357 but that between Attitude and Intention is only 0.095.

The above magnitude is comparable with the path coefficients of Knowledge – Attitude – Intention, that is, 0.265 (for Knowledge to Attitude) and 0.095 (for Attitude to Intention) (hence, proving Hypothesis 4). However, it is worth noting that Knowledge also has a significant direct relationship with Intention with the path coefficient of 0.082 (proving Hypothesis 3). The results prove how important Knowledge and literacy are in waqf fundamentals, cash waqf, and waqf institutions, in harmony with the previous studies (see Johari *et al*., 2015; Shukor *et al*., 2017). Literacy on waqf leaves plenty of room for improvement, not to mention the cash waqf that is more complex than the classic 'tangible' waqf. Indonesia Waqf Board reported in 2020 that the national waqf literacy index was still low, scoring only 50.48 on a scale of 0 to 100 (BWI, 2020). An online survey of 753

respondents conducted by the Ministry of Finance Indonesia suggests that barely half of the respondent has minimum knowledge about cash waqf (the actual index is 0.472). The inclusion is even worse, reaching only 0.282 on an index scale of 0 to 1 (Fiscal Policy Agency, 2019).

While Knowledge has a role to play in influencing the Intention of performing cash waqf, other variables have even higher explanatory power, namely Perceived Behavioral Control (PBC) and Subjective Norms. Our proof of Hypothesis 7 documents that PBC has the biggest magnitude of influence towards Intention to endow cash waqf, reaching 0.447. PBC represents one's internal ability or motivation to perform cash waqf. It seems that ensuring that the targeted donator has the ability to donate waqf is very important. This ability is not only about the wealth but also the easiness of performing the donation. Cash waqf has actually offered more flexibility in terms of the amount of endowment required as it may start even from the smallest possible dollar, allowing larger outreach of potential donators. However, sometimes the easiness of performing it is not in place due to the lack of infrastructure and digital literacy. This is not to mention the disparity in the infrastructure and digital literacy across different territories in Indonesia.

Subjective Norms also have a considerable magnitude in influencing Intention. The size of its path coefficient is only second to PBC, i.e., 0.317. While PBC is about internal motivation, the Subjective Norms illustrates how donators' Intention to donate is influenced by their environment, including family, friends, colleagues, etc. The proof of Hypothesis 6 indicates that endorsement or discouragement from the donators' periphery does matter in determining their Intention. From the marketing point of view, cultural marketing strategies like word-of-mouth and endorsement are powerful in making social engineering in favor of donating through cash waqf.

5.2. Intergenerational Analysis

As far as Hypothesis 8 is concerned, this study documents the variance of cash-waqf donation behavior across different generations, namely Baby Boomers (BB), X, Y, and Z. The behavior of Generation X is highly consistent with the all-sample one discussed in Sub-Section 5.1. Here, all variables are significantly affecting Intention except for Religiosity. The latter's impact on Intention is only indirectly significant through Attitude. However, Generations Y, Z, and BB show a slightly divergent behavior from Gen X.

All generations share three primary relationships: PBC – Intention, Religiosity – Attitude, and Religiosity – Intention. TPB variables are essential determinants of endowing cash waqf, agnostic to the generation categories. This is in harmony with Hasbullah *et al*. (2015), Osman and Muhammed (2017), Yusoff *et al*. (2017), Abdul Kareem *et al*. (2019), Andam and Osman (2019), and Azizi (2019). The magnitude of TPB influence on Intention is consistently the biggest among other variables across different generations. The significantly positive impact of PBC on Intention suggests the importance of maintaining the capability and accessibility for the donators to participate in cash waqf. This is because the PBC variable represents financial ability, freedom to act, and facility (or access). This finding illustrates that better facilities and access to cash waqf help to increase donators' Intention to endow cash waqf. Thus, facilitating the variation of cash waqf programs (options), media or platforms, and easiness to endowing cash waqf will lead to higher Intention toward cash waqf endowment in all generations.

Religiosity also plays a vital role in influencing the Attitude of potential donators across all generations. However, only Generation X can materialize the positive relationship between Attitude and Intention. Evidence also suggests that Religiosity has no direct impact on Intention. Religiosity is, therefore, not the driver of donators' Intention to endow cash waqf, except for Generation X.

The variations of determinants of Intention are observable beyond the above three relationships. The youngest two generations of Y and Z tend to have more commonalities as compared to other generations. The two generations differ from Generation X in the relationship between (i) Knowledge and Intention as well as (ii) Attitude and Intention. Those two relationships are significant in the case of Gen X but not in Gens Y and Z. This is despite the fact that the Knowledge of the two generations influences their Attitude towards cash waqf. For those two generations, the Intention to endow cash waqf relies more on the capability and accessibility to participating in cash waqf (PBC) as well as their surroundings (Subjective Norms). The plausible explanation for this relates to the characteristics of Gens Y and Z that are native to information technology. For them, information (Knowledge) about the cash waqf is easily acquired. Their fluency with social media also may be the reason why their behavior is determined by Subjective Norms. They spend a significant proportion of their time on social media learning about what others are doing, including others' opinions and beliefs regarding cash waqf donation. For this same reason, the easy-to-use online platform for donating cash waqf also matters to them.

On the other hand, the oldest Gen BB seems to be the generation that deviates the most from others. The older generation's Intention to donate cash-waqf tends to be solely driven by PBC. Other TPB variables (Attitude and Subjective Norm) and the extended variables (Religiosity dan Knowledge) are not directly nor indirectly impact their behavior towards the cash waqf participation. It seems that Gen BB does not really care about their surrounding response to their participation in cash-waqf. They will donate their money to cash waqf as long as they have the capability and accessibility to participate in it. Their relatively mature age may be the reason why Subjective Norms like social pressure, families, and close relatives do not significantly affect their behavior in participating in the cash waqf program. Those factors, on the contrary, matter to the younger generations.

To sum up, the results of this study confirm that the unique characteristics of each generation influence their Intention to endow cash waqf, proving Hypothesis 8. Gen X is known as a rigid individual requiring a reasonable reason to take action. This is confirmed by the significant effect of Attitude towards cash waqf in our study. Compared to other generations, this factor matters only in Gen X as it creates an intention to participate in cash waqf. On the one hand, Gen X is a subgroup having the most significant determinant of cash waqf intention in this study. On the other hand, the oldest group BB has only one significant variable (i.e., PBC) that influences the Intention to participate in cash waqf. It suggests that BB's main consideration to participate in cash waqf is the accessibility and their capability to participate in cash waqf.

A similar pattern is shown between two young generations, Gen Y and Gen Z. Perceived behavioral control and subjective norm matter the most in these groups. This indicates that besides the easiness of the platform and capability to pay cash waqf, these two groups also consider their surroundings to participate in cash waqf. The insignificant impact of Attitude on Intention in these two groups also manifests that younger generations consider good perception towards and plausible reasons to pay cash waqf not too important to participate in cash waqf, consistent with Andam and Osman (2019) in the context of zakat. Instead, flexibility, accessibility, and surrounding support are the most crucial aspects as far as the action is perceived as good by them. Therefore, our findings show that every generation has its own characteristics that need to be taken into account when segmenting and implementing the marketing strategy for cash waqf.

6. Conclusion and Recommendation

This study examines the variations of cash waqf behavior across different generations. In so doing, we perform the Extended Theory of Planned Behavior (E-TPB) by adding Religiosity

and Knowledge variables in addition to Attitudes, Subjective Norms, and Perceived Behavioral Control. While the spatial context of this study is in the most populous Muslim country Indonesia, the findings may also be helpful for other territories. We uncover that the-above mentioned variables significantly affect donating intention toward cash waqf (directly or indirectly). However, some variances emerge once the intergenerational analysis is conducted. This suggests that each generation has its own characteristics. Understanding those characteristics is the need of the hour for improving the poor collection of cash waqf.

Our results show that PBC assumes the highest marginal effect on Intention. This is in harmony with the strand of the previous studies, such as Hasbullah *et al*. (2015); Osman and Muhammed (2017); Yusoff *et al*. (2017); Andam and Osman (2019), and Azizi (2019). This is followed by Subjective Norms, Attitudes, and Knowledge. While Religiosity appears to have no direct relationship with Intention, it has an indirect influence through Attitude.

Our intergenerational analysis shows that the above findings hold the most for Gen X. On the other hand, the oldest generation being studied, Baby Boomers (BB), deviates the most from others. For BB, PBC is the sole factor directly influencing the Intention to donate. In Gen Y and Z, Attitude and Knowledge are no longer the determinants of Intention. Interestingly, PBC becomes the only direct variable that influences the Intention in all generations.

Our findings have several implications. From the theoretical point of view, two contributions are made. First, we extend the literature on the TPB (see, for instance, Indahsari *et al*., 2014; Johari *et al*., 2015; Osman *et al*., 2016; Shukor *et al*., 2018; Al-Harethi *et al*., 2019; Azizi *et al*., 2019) by empirically adding Religiosity and Knowledge variables. Both variables proved to have direct and indirect influences on Intention to donate cash waqf.

Second, more importantly, we also extend studies regarding cash waqf behavior, which has been predominantly performed in the Malaysian setting (see Osman and Muhammad, 2017;

Shukor *et al*., 2018; Zain *et al*., 2019; Azizi and Sabri, 2019), not only by incorporating Indonesian context, but also accounting for the potential variations across different generations from the oldest generation BB to the eldest generation Z. This allows us to offer new insights for the literature and to draw more appropriate strategies to address each generation's needs.

From the managerial point of view, our findings encourage stakeholders of cash waqf (government and waqf institution) to apply the dynamic segmenting strategy. Diversifying the promotion, marketing, awareness, and approaching tools contingent on the types of generations targeted in the market is believed to increase public participation toward cash waqf endowment. For instance, PBC shows that having sufficient 'internal' resources is a crucial determinant shared by all generations. Thus, at a general level, government and waqf institutions should focus on the market profile that meets a set of 'ability to donate' derived from PBC, like the income level, regardless of age. For instance, we may not be too concerned about the Subjective Norms of Gen BB but must pay attention to this within the context of other generations.

Finally, from the social and economic views, our results provide an avenue to improve the role of Islamic financial instruments, especially the third sector (Islamic philanthropy), in socio-economic development, consistent with the higher ethical objectives of the Islamic law (*Maqasid Shari'ah*) (see Jatmiko et al., 2023). Philanthropy fund like waqf has been deemed vital for social development, such as reducing poverty and hunger and providing health care and education (Kahf, 1999; Sadeq, 2002; Yusof *et al*., 2017). Nowadays, its presence has become even more crucial as the expectation for it to contribute directly to economic development is growing. In the aftermath of PPP (Public-Private Partnership), the so-called blended finance invites not only the private sector to join the government's investment in infrastructure but also the third sector to allow a lower cost of funding the project. Understanding intergenerational dynamics amongst the potential donators can boost the waqf collection and hence its impact on socio-economic development.

Indeed, a few limitations are expected in this study. First, while the implication may be learned by other territories, this study only focuses on the Indonesian case. The findings may need to be interpreted with caution for other countries with different characteristics. Second, while we have a quite good distribution of respondents across different provinces of Indonesia, our coverage of the more heterogeneous province such as Bali and Papua are still limited. Finally, the sample distribution for Gen BB can be improved even larger, even though the robustness check suggests that the inclusion of Gen BB in our study does not interfere the inference. Further study is expected to address the above issues.

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Tables

Table 1. Respondent Characteristics

Demographic Information	BB(%)	X(%)	Y(%)	Z(%)	Pool(%)
Generation					
BB					26(4)
X					237(35)
Y					329(48)
Z					92(13)
Sex					
Male	19(73)	155(65)	211(64)	36(39)	421(62)
Female	7(27)	82(35)	118(36)	56(61)	263(38)
Religion					
Islam	26(100)	237(100)	329(100)	92(100)	684(100)
Marital Status					
Single	(0)	5(2)	100(30)	87(95)	192(28)
Widower/divorce	1(4)	5(2)	(0)	(0)	6(1)
Married	25(96)	227(96)	229(70)	5(5)	486(71)
Level of Education					
Elementary School	(0)	(0)	3(1)	(0)	3(0)
Senior High School	3(12)	17(7)	20(6)	64(70)	104(15)
Diploma	5(19)	4(2)	17(5)	(0)	26(4)
Bachelor	7(27)	123(52)	196(60)	28(30)	354(52)
Post Graduate	11(42)	93(39)	93(28)	(0)	197(29)
Income					
Less than Rp2.000.000	1(4)	41(17)	106(32)	73(79)	221(32)
Rp2.000.000-Rp4.999.999	7(27)	76(32)	87(26)	15(16)	185(27)
Rp5.000.000-Rp9.999.999	11(42)	57(24)	76(23)	4(4)	148(22)
Rp10.000.000-Rp19.999.999	6(23)	38(16)	44(13)	(0)	88(13)
Rp20.000.000 or higher	1(4)	25(11)	16(5)	(0)	42(6)
Islamic Edu Background					
Yes	4(15)	137(58)	187(57)	58(63)	386(56)
No	22(85)	100(42)	142(43)	34(37)	298(44)
Domicile					
Bali	(0)	2(1)	1(0)	(0)	3(0)
Java	21(81)	163(69)	239(73)	72(78)	495(72)
Borneo	(0)	8(3)	11(3)	2(2)	21(3)
Nusa Tenggara	(0)	2(1)	6(2)	(0)	8(1)
Papua	(0)	2(1)	(0)	(0)	2(0)
Sulawesi	1(4)	17(7)	22(7)	1(1)	41(6)
Sumatera	4(15)	43(18)	50(15)	17(18)	114(17)

Table 2. Variable and items of the questionnaire

Variable	Code	Indicator	Source
Attitude	*A1*	*I have a good perception of cash waqf*	Hasbullah (2015); Osman and Muhammad (2017); Shukor *et al*. (2018).
	A2	*I believe that participating in a cash waqf program is recommended for a Muslim*	
	A3	*I believe that by giving cash waqf I will receive benefits either in this world or hereafter*	
	A4	*I believe that participating in cash waqf program is also counted as alms*	
	A5	*I believe that participating in cash waqf program can increase the socio-economic development of society*	
	A6	*I am happy to be able to contribute to the cash waqf program*	
Subjective Norm	*SN1*	*Many people around me are supporting me to participate in the cash waqf program*	Osman and Muhammad (2017)
	SN2	*People who are close to me think that I should take part in the cash waqf program*	
	SN3	*When I take part in cash waqf program, people who are important to me would consider it as a noble act*	
	SN4	*My family are supporting me to participate in the cash waqf program*	
	SN5	*My family are very happy when I can take part in the cash waqf program*	
Perceived Behavioral Control	*PBC1*	*I have enough income to be able to contribute to the cash waqf program*	Osman and Muhammad (2017); Hasbullah (2015)
	PBC2	*The decision to contribute to the cash waqf program is entirely on me*	
	PBC3	*If I want, I can contribute to the cash waqf program anytime*	
	PBC4	*I can participate in the cash waqf program*	
Knowledge	*K1*	*I am familiar with the concept and programs of waqf*	Shukor *et al*. (2018).
	K2	*I think I know a lot about waqf*	
	K3	*I have enough knowledge about waqf institutions and Indonesia Waqf Bodies (BWI)*	
	K4	*I have participated or often participate in the waqf program*	
Intention	*I1*	*I have the desire to participate in the cash waqf program shortly*	Hasbullah (2015); Osman and Muhammad (2017); Shukor *et al*. (2018).
	I2	*There is the possibility that I will participate in the cash waqf program soon*	
	I3	*I will choose the cash waqf program as an alternative to donate*	
	I4	*I will recommend the cash waqf program for my friends and people around me*	
	I5	*My desire to participate in the cash waqf program is getting stronger day by day*	
Religiosity	*R1*	*Religion is very important for me*	PEW Research
	R2	*I always try to follow the orders and avoid restrictions of my religion*	
	R3	*I always participate in every religious service*	
	R4	*A strong sense of God's presence in my every activity is very important for me*	

Table 3. Measurement Model

Item	All				BB				X				Y				Z			
	FL	CR	AVE	CA	FL	CR	AVE	CA	FL	CR	AVE	CA	FL	CR	AVE	CA	FL	CR	AVE	CA
Attitude		0.906	0.618	0.877		0.840	0.477	0.771		0.914	0.641	0.888		0.913	0.638	0.886		0.862	0.514	0.817
A1	0.762				0.851				0.797				0.749				0.684			
A2	0.807				0.867				0.799				0.813				0.773			
A3	0.816				0.584				0.825				0.815				0.856			
A4	0.713				0.470				0.746				0.739				0.579			
A5	0.812				0.673				0.835				0.844				0.627			
A6	0.802				0.611				0.799				0.826				0.747			
Intention		0.945	0.775	0.927		0.940	0.758	0.920		0.953	0.801	0.938		0.948	0.786	0.932		0.911	0.675	0.877
I1	0.889				0.905				0.896				0.888				0.872			
I2	0.900				0.868				0.904				0.905				0.890			
I3	0.886				0.903				0.906				0.905				0.749			
I4	0.833				0.772				0.876				0.847				0.687			
I5	0.892				0.899				0.893				0.887				0.890			
Knowledge		0.918	0.790	0.867		0.903	0.757	0.849		0.921	0.795	0.871		0.912	0.776	0.855		0.926	0.807	0.882
K1	0.900				0.789				0.877				0.922				0.881			
K2	0.923				0.963				0.923				0.928				0.911			
K3	0.842				0.849				0.874				0.785				0.902			
Perceived Behavioral Control		0.890	0.671	0.834		0.929	0.767	0.898		0.890	0.670	0.834		0.897	0.688	0.846		0.853	0.596	0.767
PBC1	0.816				0.896				0.783				0.821				0.822			
PBC2	0.718				0.818				0.758				0.716				0.599			
PBC3	0.851				0.836				0.866				0.876				0.762			
PBC4	0.883				0.948				0.861				0.892				0.876			
Religiousity		0.889	0.669	0.833		0.861	0.619	0.786		0.849	0.584	0.765		0.910	0.719	0.866		0.866	0.622	0.794
R1	0.850				0.937				0.744				0.896				0.835			
R2	0.866				0.935				0.833				0.877				0.845			
R3	0.703				0.644				0.730				0.700				0.583			
R4	0.843				0.554				0.746				0.902				0.859			
Subjective Norm		0.915	0.686	0.884		0.924	0.710	0.900		0.912	0.676	0.879		0.924	0.710	0.896		0.883	0.605	0.840
SN1	0.834				0.710				0.809				0.850				0.828			
SN2	0.847				0.856				0.849				0.867				0.775			
SN3	0.683				0.805				0.689				0.683				0.619			
SN4	0.890				0.912				0.869				0.905				0.867			
SN5	0.870				0.913				0.879				0.888				0.778			

Table 4. Discriminant Validity

Generations	Variables	A	I	K	PBC	R	SN
Fornell-Larcker Criterion							
All	**Attitude**	**0.786**					
	Intention	0.502	**0.880**				
	Knowledge	0.371	0.402	**0.889**			
	PBC	0.398	0.691	0.333	**0.819**		
	Religiosity	0.436	0.349	0.296	0.283	**0.818**	
	Subjective Norm	0.565	0.652	0.386	0.523	0.351	**0.828**
BB	**Attitude**	**0.691**					
	Intention	0.621	**0.871**				
	Knowledge	0.287	0.447	**0.870**			
	PBC	0.580	0.746	0.570	**0.876**		
	Religiosity	0.544	0.420	-0.032	0.250	**0.786**	
	Subjective Norm	0.778	0.546	0.476	0.734	0.299	**0.843**
X	**Attitude**	**0.801**					
	Intention	0.567	**0.895**				
	Knowledge	0.451	0.526	**0.891**			
	PBC	0.489	0.737	0.428	**0.818**		
	Religiosity	0.455	0.325	0.274	0.306	**0.764**	
	Subjective Norm	0.557	0.651	0.497	0.546	0.346	**0.822**
Y	**Attitude**	**0.799**					
	Intention	0.488	**0.887**				
	Knowledge	0.337	0.308	**0.881**			
	PBC	0.363	0.679	0.248	**0.829**		
	Religiosity	0.453	0.358	0.313	0.291	**0.848**	
	Subjective Norm	0.600	0.674	0.364	0.522	0.379	**0.843**
Z	**Attitude**	**0.717**					
	Intention	0.397	**0.822**				
	Knowledge	0.288	0.350	**0.898**			
	PBC	0.278	0.626	0.311	**0.772**		
	Religiosity	0.377	0.281	0.254	0.183	**0.789**	
	Subjective Norm	0.405	0.588	0.144	0.442	0.193	**0.778**
HTMT							
All	**Attitude**						
	Intention	**0.549**					
	Knowledge	0.413	**0.448**				
	PBC	0.463	0.785	**0.388**			
	Religiosity	0.507	0.396	0.353	**0.345**		
	Subjective Norm	0.638	0.708	0.437	0.602	**0.405**	
BB	**Attitude**						
	Intention	**0.693**					
	Knowledge	0.432	**0.427**				

	PBC	0.671	0.798	**0.610**		
	Religiosity	0.689	0.453	0.284	**0.323**	
	Subjective Norm	0.879	0.550	0.503	0.802	**0.347**
X	**Attitude**					
	Intention	**0.616**				
	Knowledge	0.508	**0.579**			
	PBC	0.564	0.830	**0.502**		
	Religiosity	0.535	0.368	0.311	**0.369**	
	Subjective Norm	0.623	0.704	0.573	0.643	**0.403**
Y	**Attitude**					
	Intention	**0.531**				
	Knowledge	0.370	**0.344**			
	PBC	0.422	0.762	**0.282**		
	Religiosity	0.514	0.399	0.375	**0.343**	
	Subjective Norm	0.673	0.727	0.405	0.592	**0.427**
Z	**Attitude**					
	Intention	**0.408**				
	Knowledge	0.320	**0.387**			
	PBC	0.368	0.744	**0.364**		
	Religiosity	0.432	0.317	0.289	**0.305**	
	Subjective Norm	0.462	0.640	0.162	0.530	**0.250**

Table 5. Measurement Invariance of Composite Models (MICOM)

Construct	Compositional Invariance Assessment					Full Measurement Model Invariance Assessment							
	Configural Invariance	Original Correlation	5% quantile	Compositional Invariance	Mean - Original Difference	Confidence Interval		Equality of Means	Variance - Original Difference	Confidence Interval		Equality of Variances	Full Measurement Invariance
						2.50%	97.50%			2.50%	97.50%		
Gen X vs Gen Y													
Attitude	Established	1.000	0.997	Established	0.244	-0.167	0.162	Not Equal	-0.220	-0.452	0.444	Equal	Not Established
Intention	Established	1.000	1.000	Established	0.220	-0.169	0.161	Not Equal	-0.223	-0.246	0.237	Equal	Not Established
Knowledge	Established	0.999	0.997	Established	0.217	-0.165	0.170	Not Equal	-0.027	-0.243	0.231	Equal	Not Established
PBC	Established	0.998	0.998	Established	0.102	-0.170	0.167	Equal	-0.153	-0.240	0.228	Equal	Not Established
Religiosity	Established	0.993	0.993	Established	0.230	-0.170	0.161	Not Equal	-0.787	-0.784	0.770	Not Equal	Not Established
Subjective Norm	Established	0.999	0.998	Established	0.200	-0.170	0.165	Not Equal	-0.322	-0.273	0.258	Not Equal	Not Established
Gen X vs Gen Z													
Attitude	Established	0.988	0.994	Not Established	0.206	-0.226	0.246	Equal	0.105	-0.589	0.640	Equal	Not Established
Intention	Established	0.999	0.999	Established	0.496	-0.239	0.239	Not Equal	-0.101	-0.297	0.329	Equal	Not Established
Knowledge	Established	0.997	0.997	Established	0.572	-0.241	0.247	Not Equal	0.000	-0.299	0.338	Equal	Not Established
PBC	Established	0.997	0.995	Established	0.439	-0.237	0.235	Not Equal	-0.158	-0.281	0.317	Equal	Not Established
Religiosity	Established	0.983	0.957	Established	0.570	-0.227	0.249	Not Equal	-0.652	-0.797	0.856	Equal	Not Established
Subjective Norm	Established	0.998	0.996	Established	0.348	-0.237	0.240	Not Equal	-0.165	-0.312	0.379	Equal	Not Established
Gen Y vs Gen Z													
Attitude	Established	0.992	0.991	Established	-0.056	-0.228	0.244	Equal	0.327	-0.597	0.636	Equal	Not Established
Intention	Established	0.999	0.999	Established	0.250	-0.233	0.234	Not Equal	0.122	-0.304	0.340	Equal	Not Established
Knowledge	Established	0.993	0.990	Established	0.361	-0.237	0.228	Not Equal	0.026	-0.296	0.352	Equal	Not Established
PBC	Established	1.000	0.994	Established	0.333	-0.231	0.228	Not Equal	-0.032	-0.296	0.327	Equal	Not Established
Religiosity	Established	0.998	0.988	Established	0.208	-0.221	0.250	Equal	0.162	-0.913	0.968	Equal	Not Established
Subjective Norm	Established	0.999	0.996	Established	0.131	-0.225	0.237	Equal	0.152	-0.338	0.380	Equal	Not Established

Table 6. Causality Relationship and Significance of the Model

Hypothesized paths	Path Coefficient				
	Complete	Gen BB	Gen X	Gen Y	Gen Z
Attitude -> Intention	0.095**	0.392	0.136**	0.076	0.079
Knowledge -> Attitude	0.265***	0.305	0.353***	0.216***	0.205*
Knowledge-> Intention	0.082**	0.126	0.139***	0.024	0.134
PBC -> Intention	0.447***	0.672***	0.477***	0.437***	0.395***
Religiosity-> Attitude	0.357***	0.553***	0.359***	0.386***	0.325**
Religiosity -> Intention	0.045	0.150	-0.007	0.047	0.078
Subjective Norm -> Intention	0.317***	-0.357	0.248***	0.373***	0.347***

Notes: The numbers reported in this table represent the path coefficients (parameters) of the relationship between two variables in the hypothesized path panel. ***, **, and * indicates statistical significance at 1%, 5%, and 10% level consecutively.

Table 7. Coefficient Determination (R-square) of the Model

Dependent	*R-square*				
	Complete	Gen BB	Gen X	Gen Y	Gen Z
Attitude	0.254	0.389	0.322	0.248	0.181
Intention	0.612	0.669	0.661	0.610	0.552

Table 8. Predictive Prevalence (Q-square) of the Model

Dependent	*R-squared*				
	Complete	Gen BB	Gen X	Gen Y	Gen Z
Attitude	0.151	0.118	0.198	0.124	0.067
Intention	0.470	0.362	0.519	0.462	0.353

Table 9. Model Fit Criteria

Criteria	Complete	Gen BB	Gen X	Gen Y	Gen Z
SRMR	0.061	0.161	0.072	0.063	0.108
d_ULS	1.414	9.771	1.968	1.490	4.396
d_G	0.492	n/a	0.783	0.656	1.566
Chi-Square	2142.382	3955.746	1089.346	1307.886	733.712
NFI	0.829	0.101	0.769	0.809	0.582
rms-theta	0.146	0.279	0.158	0.157	0.187

Table 10. Collinearity Statistics (VIF) – Inner Model

Variables	Complete		Gen BB		Gen X		Gen Y		Gen Z	
	Att	Int	Att	Int	Att	Int	Att	Int	Att	Int
Attitude (Att)		1.676		3.467		1.783		1.745		1.399
Knowledge	1.096	1.269	1.001	1.594	1.081	1.450	1.109	1.218	1.069	1.196
PBC		1.441		2.561		1.578		1.399		1.353
Religiosity	1.096	1.289		1.557		1.289	1.109	1.335	1.069	1.202
Subjective Norm		1.794		3.912		1.825		1.945		1.399

Note: Att and Int stand for Attitude and Intention, respectively.

Table 11. Robustness Check

Hypothesized paths	Complete (With BB)	Complete (Without BB)
Path Coefficient		
Attitude -> Intention	0.095**	0.095**
Knowledge -> Attitude	0.265***	0.266***
Knowledge-> Intention	0.082**	0.082**
PBC -> Intention	0.447***	0.447***
Religiosity-> Attitude	0.357***	0.354***
Religiosity -> Intention	0.045	0.037
Subjective Norm -> Intention	0.317***	0.325***
R-Square		
Attitude	0.254	0.253
Intention	0.612	0.617
Q-Square		
Attitude	0.151	0.152
Intention	0.470	0.473
Model Fit		
SRMR	0.061	0.061
d_ULS	1.414	1.411
d_G	0.492	0.499
Chi-Square	2142.382	2087.943
NFI	0.829	0.828
rms-theta	0.146	0.146

Figures

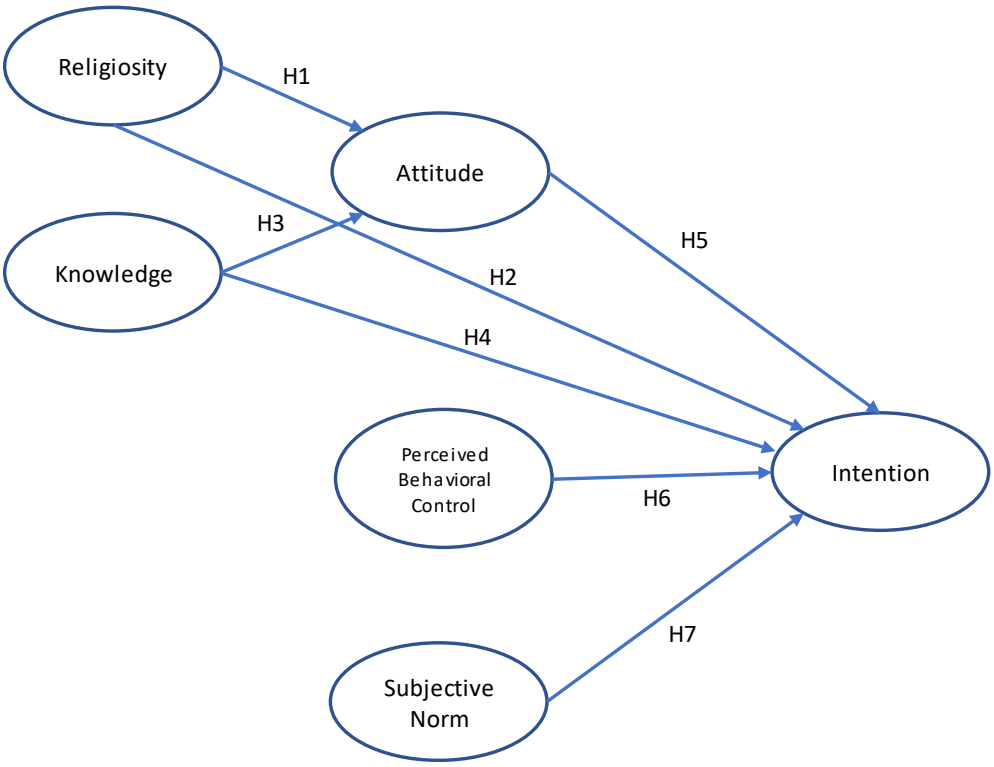

Figure 1. Model's Framework