

Khan, Safeer Ullah; Khan, Ikram Ullah; Khan, Ismail; Khan, Saif-ud-Din; Khan, Abid Ullah

## Article

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# Evaluating *ṣukūk* investment intentions in Pakistan from a social cognitive perspective

Safeer Ullah Khan

*University of Science and Technology Beijing, Beijing, China and  
IBA, Gomal University, Dera Ismail Khan, Pakistan*

Ikram Ullah Khan

*University of Science and Technology Bannu, Bannu, Pakistan*

Ismail Khan

*Sunway University Business School, Sunway University, Selangor, Malaysia*

Saif Ud Din

*King Abdul Aziz University, Jeddah,  
Saudi Arabia, and*

Abid Ullah Khan

*University of Science and Technology Bannu, Bannu, Pakistan*

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## Abstract

**Purpose** – This study aims to evaluate cognitive, personal and environmental factors affecting investors' behavioral intentions (BI) to invest in *ṣukūk* (Islamic investment certificates) in Pakistan.

**Design/methodology/approach** – Data from 462 participants were collected through survey-questionnaires by using the convenient sampling technique. Hypothesized proposed relationships among the constructs were examined by applying the structural equation modeling (SEM) technique through smart partial least squares.

**Findings** – Compatibility, internal influence, external influence and intrinsic motivation were found to be significant predictors of investors' BI to invest in *ṣukūk*. In addition, it was found that the religious aspect not only affects investors' BI positively but also works as a moderator in the relationships between BI and both internal and external influence.

**Practical implications** – The results are quite helpful for *ṣukūk* issuers and regulators to consider cognitive, personal and environmental factors that might enhance the adoption of *ṣukūk*, especially among Muslim investors.

**Originality/value** – This study is among the few research studies that shed light on investors' BI to invest in *ṣukūk*. Using social cognitive theory, the study investigates the cognitive, personal and environmental

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factors influencing *ṣukūk* adoption, which were previously unexplored. In addition, this is the first study that unveils the influential factors of *ṣukūk* adoption in Pakistan, a Muslim-majority country.

**Keywords** *Ṣukūk*, Sharī'ah, Social cognitive theory, Intrinsic motivation, Pakistan

**Paper type** Research paper

## Introduction

The previous two decades have witnessed accelerated growth in the products of the Islamic finance industry, including Islamic banking, *takāful* (Islamic insurance) and the Islamic capital market. There has especially been a significant increase in the issuance of *ṣukūk* (Islamic investment certificates) across the globe, predominantly in Muslim-majority countries (Schmidt, 2019; Mimouni *et al.*, 2019). Najeed *et al.* (2017) further describe *ṣukūk* as one of the fastest-growing products in the Islamic finance industry. The Islamic Financial Services Board's (IFSB) report (2020) confirms that *ṣukūk* comprise the second largest investment asset class with US\$543.4bn outstanding as at end-2019, thus representing 22.3% of the Islamic finance industry's total assets of US\$2.44tn.

Despite the growth in *ṣukūk* investment and issuance across the globe, limited research sheds light on the factors that explain and predict investors' intentions to invest in *ṣukūk*, especially in Pakistan. The literature indicates that the components of the theory of planned behavior (TPB) – i.e. attitude, subjective norms and perceived behavioral control – influence investors' intentions to use *ṣukūk* (Ajzen, 1985; Warsame and Ileri, 2016; Ashidiqi and Arundina, 2017). However, Mathieson (1991) criticizes TPB, stating that it cannot be applied to all individuals and in diverse user contexts. Duqi (2019) highlights some additional factors such as expected return, information and the issuing institution's reputation that predict investors' intentions to use *ṣukūk*. Based on previous literature, the study finds that there is a lack of empirical research focusing on cognitive, personal and environmental factors that might have an influence on investors' intentions. Khan *et al.* (2018) note the significant influence of personal and environmental factors on investors' intentions to invest in stock market securities. In an attempt to close this gap, this study argues that investors' intentions to invest in *ṣukūk* are a function of social influence, external influence, compatibility of *ṣukūk* investment with lifestyle, intrinsic motivation and the religious aspect.

The literature on consumers' behavioral intentions (BI) reveals the significant positive role of an inclination to invest in Islamic products on individuals' intentions, especially in Islamic countries (Warsame and Ileri, 2016; Riaz *et al.*, 2017; Duqi, 2019). *Ṣukūk* and conventional bonds have some shared features, though some characteristics differentiate *ṣukūk* from conventional bonds. Conventional bonds represent indebtedness of the issuer *vis-à-vis* the bondholder, while *ṣukūk* nominally provide an ownership stake to the holder in an underlying asset, which is according to Islamic principles (Fathurahman and Fitriati, 2013). The study investigates *ṣukūk* investment intentions among individual investors in Pakistan where 96.28% of the total population is Muslims (PBS, 2019). The study maintains that the variable "religious aspect of *ṣukūk*" will not only influence individuals' intentions positively but it will also affect the association between the proposed factors and the use of *ṣukūk*. Therefore, incorporating a religious aspect as a moderator will contribute and strengthen the explanatory power of the proposed model to better explain individuals' intention to use *ṣukūk* for investment purposes.

As mentioned earlier, research on investors' intentions regarding *ṣukūk* investment has been relying on the use of the TPB, which has been criticized on the grounds that the model has applicability issues in different contexts. Hence, the current study investigates

cognitive, personal, environmental and behavioral factors that affect investors' BI regarding *şukūk* investment. The tenets of social cognitive theory (SCT), developed by Bandura (1986a), reflect cognitive, personal, environmental and behavioral factors that represent individuals' intentions regarding the adoption of new products. Many studies have validated the SCT because of its adaptive nature and its use in examining the acceptance of various new products such as internet banking (Boateng *et al.*, 2016), internet stock trading (Khan *et al.*, 2020b), e-government (Rana and Dwivedi, 2015) and within the context of organizational management (Wood and Bandura, 1989) and tourism (Font *et al.*, 2016). Therefore, keeping in view the comprehensive nature and relevance of the context, the study proposes a model based on SCT, which according to Bandura (1989) is one of the leading theories of human behavior.

According to SCT, human intention is a function of the interactions between personal, environmental and behavioral factors. Personal factors include age, lifestyle, beliefs and expectations that are associated with BI (Boateng *et al.*, 2016). Environmental factors represent both natural elements and the social environment of an individual (Casper, 2001). Following Mohammadi (2015), the behavioral factor can be defined in terms of intentions or the likelihood that people will use *şukūk*. According to Boateng *et al.* (2016), an individual's behavior is shaped by the interaction between these three components. Besides this theoretical contribution, identifying the factor on the basis of which *şukūk* issuers might attract potential investors, the study incorporates the religious aspect of *şukūk* as a moderator and expects that it will modulate the effect of the proposed factors on investors' BI. In the context of Pakistan, it is a novel idea to probe into and presents solid guidelines for *şukūk* users and policymakers.

The structure of the remaining sections is as follows: the next section presents the theory and the proposed hypotheses. It is followed by the research methodology section which includes the process of data collection. The statistical results of the study are then presented, followed by a discussion of the findings and its implications. Finally, the paper ends with conclusive remarks and highlights the limitations of the study.

## Theory and hypotheses

### *Compatibility*

SCT argues that personal factors represent a key component determining individuals' actions (Bandura, 1986b). Likewise, Lerner (1982) reports that personal factors of individuals such as gender, age and lifestyle interact with environmental factors and affect their behavior. In this connection, Everett (1995) validates that some individuals accept a new product if they perceive that the product is compatible with their lifestyle. In the case of *şukūk* investment, the study expects that compatibility of individuals' lifestyles with *şukūk* investment is associated with their intention to use *şukūk*.

The current study defines compatibility as the situation in which a person perceives a new product as relevant to their actions, lifestyle and mode of thinking. Njuguna (2018) defines compatibility as investors' perception that the adoption of a particular financial product is relevant to their needs, lifestyle, past experience and ways of thinking. Similarly, Agarwal and Prasad (1997) state that compatibility is a fundamental factor in the initial stage of adopting a new product or service. Thus, compatibility is one of the key components that have a significant role in the adoption process (Hanafizadeh *et al.*, 2014; Boateng *et al.*, 2016; Gu *et al.*, 2019). Lee-Partridge and Ho (2003) determine significant effects of compatibility on investors' adoption of stock trading and their behavior. Similarly, compatibility was found to be one of the key determinants of investors' decisions and intentions (Tornatzky and Klein, 1982). In Muslim-majority countries like Pakistan where

people live in accordance with Islamic injunctions, *ṣukūk*, being based on Islamic principles, would be compatible with their lifestyle (Sayeda, 2019). In this connection, Ahmed *et al.* (2019) maintain that *ṣukūk* provide investment opportunities for investors who wish to comply with Shari'ah (Islamic law) principles. Thus, it is expected that compatibility will affect investors' intentions in Pakistan. Therefore, it is proposed:

H1. Compatibility has a positive association with investors' BI to invest in *ṣukūk*.

#### *Internal (social) influence*

One of the fundamental and assimilating elements of SCT is the social environment (Bandura, 1991; Rana and Dwivedi, 2015). People get influenced by their social networks such as family members, peers, friends and relatives to use a product (López-Nicolás *et al.*, 2008). As Khan *et al.* (2017) state that Pakistani culture is collectivist, it is considered that social influence is positively associated with investors' intentions to invest in *ṣukūk*. Similarly, Brown *et al.* (2008) demonstrate that the community plays an important role in this regard. This idea is also supported by Rana and Dwivedi (2015, p. 3), who define social influence as "the degree to which a person perceives as to how much the people within his/her social circle take into consideration the utility of the product or service." They further maintain that such thinking considerably influences the adoption of a product or service.

In addition, Tauni *et al.* (2017) argue that investors usually rely on word-of-mouth communication in their social networks to exchange information about financial market securities. They suggest that not everyone wishes to avail of the costly financial advice of experts; therefore, they mostly rely on word-of-mouth communication with friends, peers, family and relatives. In the same way, Lusardi and Mitchell (2011) and Van Rooij *et al.* (2011) conclude that most investors are not financially literate, so they follow their social networks for taking financial decisions. Moreover, Madrian and Shea (2001) state that interaction with social networks significantly affects employees' retirement plan participation decisions as people usually follow their peers' savings choices. The same findings are also reported by Dufflo and Saez (2002, 2003), who state that the patterns of peers' savings influence others in investment decisions. Likewise, Brown *et al.* (2008) find more stock market participation among those social groups in which some of the members were previously involved and/or active in such stock trading. Their study suggests that this might be the result of word-of-mouth communication between group members. Campbell *et al.* (2015) note that the involvement of one member in a social group in the stock market positively influences the market participation of other members of the group. These pieces of evidence suggest that social influence might have an impact on investors' BI to invest in *ṣukūk*. Thus, it is hypothesized that:

H2. Internal influence has a positive association with investors' BI to invest in *ṣukūk*.

#### *External influence*

As discussed earlier, one of the fundamental elements of SCT is the individuals' environment; i.e. factors external to the individuals. The main focus of SCT is to understand how individuals engage in a specific behavior by interacting with external and internal environmental factors (Chan, 2004). One of the external environmental factors is mass media, which according to Ratten (2013), considerably influences individuals' adoption intentions. Media represents oral or written communication that works as an information

source such as television, radio, newspaper, magazines and social media. In this connection, Rice and Bennett (1998) aver that media communication is an effective source for enhancing desired behaviors. Thus, it is expected that the higher the media communication about şukūk, the more people will learn about it, which, in turn, will influence their intentions.

In addition, Abreu and Mendes (2012) state that news from the specialized press has strong effects on investors' behavior. They also find significant effects of mass media on stock trading behavior. Khan *et al.* (2020a) determine awareness as being not only a direct predictor but also having an indirect impact (through risks) on stock trading adoption. Significant results of mass media attention on stock returns are also acknowledged by Yu-lei *et al.* (2010). Similarly, Davis (2006) admits that passive investment mostly relies on the communication environment that creates a herd-like behavior in the market. The empirical results of Deephouse (2000) indicate that mass media has a significant role in the performance of financial markets. The vital role of external influence (media) has been observed as changing individuals' BI in various contexts such as e-books (Ratten, 2010), mobile banking adoption (Ratten, 2013), information technology (Agarwal and Prasad, 1998) and online purchase intentions (Gunawan and Huarng, 2015). These studies reveal that external influence has a considerable impact on financial securities and individuals' BI. Accordingly, the study argues that external influence will positively influence investors' intentions to invest in şukūk. Therefore, it is proposed that:

H3. External influence has a positive association with investors' BI to invest in şukūk.

#### *Intrinsic motivation*

There are two main types of human motivation i.e. extrinsic and intrinsic motivation. According to SCT, extrinsic motivation is the external determinant and intrinsic motivation is an internal factor of behavior (Bandura and Walters, 1977; Bandura, 1986a). Extrinsic motivation refers to all those incentives that motivate individuals to perform a specific behavior such as money, promotion and rank, whereas intrinsic motivation is related to individuals' inner satisfaction, which results from taking satisfactory actions (Yoo *et al.*, 2012; Gerhart and Fang, 2015). Moreover, Zamani and Talatapeh (2014) explain the spiritual aspect of intrinsic motivation, which they found to be a more compelling force of individuals' intentions. It refers to the inner satisfaction that is gained through performing a behavior according to Sharī'ah.

Islam is not just worship. It guides and covers all aspects of human life including ḥalāl (permissible) means of earnings (Qur'ān, 62:10) and avoidance of impermissible sources of earnings like theft (Qur'ān, 5:38) and interest (Qur'ān, 2:276). The sagacious scholar Ibn Qayyim al Jawziyyah states:

Truly, there is a void in the heart that cannot be removed except with the company of Allah. And there is a sadness in it that cannot be removed except with the happiness of knowing Allah and being true to Him. And there is an emptiness in it that cannot be filled except with love for Him and by turning to Him and always remembering Him. If a person were given the entire world and what is in it, it would not fill this emptiness ([www.jannah.org/shazia/wordplay.html](http://www.jannah.org/shazia/wordplay.html)).

Şukūk investment is structured according to Sharī'ah. Based on the aforementioned discussion and prior research studies of Shang *et al.* (2005), Vallerand (2007), Yoo *et al.* (2012), who noted that intrinsic motivation is a vital antecedent of individuals' intentions,



this study considers intrinsic motivation as one of the factors of *ṣukūk* investment intentions. Accordingly, it is proposed that:

- H4. Intrinsic motivation has a positive association with investors' intentions to invest in ṣukūk.*

*Direct and moderating effects of the religious aspect*

Casper (2001) shows that religious principles and practices are key components of the social environment. Thus, it can be argued that the religious aspect of *ṣukūk* relates to individuals' intentions in Muslim-majority countries like Pakistan. In this connection, Zainul *et al.* (2004) maintain that the Islamic perspective of a product is the strongest predictor of individuals' intentions, especially in Islamic communities. Similarly, Riaz *et al.* (2017) demonstrate that religious motivation in Islamic products and finance have a considerable influence on individuals' perceptions in Pakistan. Again, Rahman and Anwar (2016) document a significant positive effect of the religious perspective on banking customers' satisfaction. Thus, the religious aspect may be determined as a significant predictor of individuals' intentions to invest in *ṣukūk* (Ashidiqi and Arundina, 2017; Duqi, 2019).

Muslims believe in Judgment Day, where they will be rewarded if they spend their lives according to Islamic rules or punished otherwise. Islam encourages mankind to opt for any type of business activity that is according to Islamic principles. In the Islamic concept of business, Muslims have to be reliable, honest and God-fearing in business dealings, as narrated by the text of the Holy Qur'ān:

[. . .] God has permitted trade and forbidden usury. Whoever, on receiving God's warning, stops taking usury may keep his past gains—God will be his judge—but whoever goes back to usury will be an inhabitant of the Fire, there to remain (2:275).

Muslims believe that on the Day of Judgment the good will be rewarded and the bad will be punished. Therefore, this study argues that the religious aspect of a product will not only influence individuals' BI positively but will also affect the association of the proposed independent factors on intentions to invest in *ṣukūk*. As mentioned above, SCT argues that BI is a function of the interaction among cognitive, personal, environmental and behavioral factors. Hence, it is worth arguing that the religious aspect and its interactions with compatibility, social influence, external influence and intrinsic motivation help to predict and explain variations in investors' intentions to invest in *ṣukūk*. Based on these grounds, the study postulates the following hypotheses:

- H5. Religion has a positive association with investors' intentions to invest in ṣukūk.*
- H5a. Religion moderates the association between compatibility and investors' intention to invest in ṣukūk.*
- H5b. Religion moderates the association between social influence and investors' intention to invest in ṣukūk.*
- H5c. Religion moderates the association between external influence and investors' intention to invest in ṣukūk.*
- H5d. Religion moderates the association between intrinsic motivation and investors' intention to invest in ṣukūk.*

## Methodology

### Participants

To collect data, a questionnaire survey was conducted in the capital of Pakistan, Islamabad, from both investors and non-users of *şukūk*. Individual investors constitute the population of the study. Respondents belonging to banks, public offices and universities were contacted randomly to avoid any bias in the sampling. In this regard, a convenient sampling technique was used. Past studies show that primary data gathering through questionnaires has been frequently used and is logical for such type of research questions where Islamic products/certificates are investigated (Warsame and Ireri, 2016; Ahmed *et al.*, 2019; Allah Pitchay *et al.*, 2019; Khan *et al.*, 2019). A printed version of the survey questionnaires was used for gathering the required data. For screening purposes and to reduce the hypothetical response biases, a question “have you heard of *şukūk* before?” was included in the survey questionnaires. A total of 500 questionnaires was circulated among individuals in Islamabad, of which 483 were returned. The data collection process was completed from June to August 2019. Among the returned responses, 13 responses were from those who had never heard of *şukūk*. Moreover, 8 questionnaires were incomplete, so they were excluded. Table 1 represents the respondents’ profile (demographic characteristics) (N=462) whose data was used for the final analysis.

### Measures

To test the postulated relationships depicted in the proposed model (Figure 1), a questionnaire survey that incorporates measuring items of all variables of the model was administered. The survey consisted of 19 items and six research constructs. Compatibility, which was measured with three items, was adapted from Boateng *et al.* (2016). Social influence and external influence were measured with three items that were borrowed from Bhattacharjee (2000) and Song (2014). The three measuring items of intrinsic motivation were taken from Tremblay *et al.* (2009). In addition, the religious aspect was measured with four items, validated by Riaz *et al.* (2017) and Duqi (2019). The three items for BI were adapted from Warsame and Ireri (2016). Moreover, the survey items were slightly revised to

	Demographics	Frequency	(%)
Gender	Male	319	69
	Female	143	31
Age	<25	113	24.5
	25–35	193	41.8
	35–50	109	23.6
	>50	47	10.2
Education level	<bachelor’s degree	78	16.9
	bachelor’s degree	126	27.3
	master’s degree	207	44.8
	>master’s degree	51	11
Income	<20,000	41	8.9
	20,000–50,000	193	41.8
	50,000–100,000	176	38.1
	>100,000	52	11.3
Şukūk investment	No	274	59.3
	Yes	188	40.7

**Table 1.**  
Participants’  
demographics



suit the *şukūk* investment context. Finally, the survey items were anchored on the seven-point Likert scale where “1” represents “strongly disagree” and “7” shows “strongly agree.”

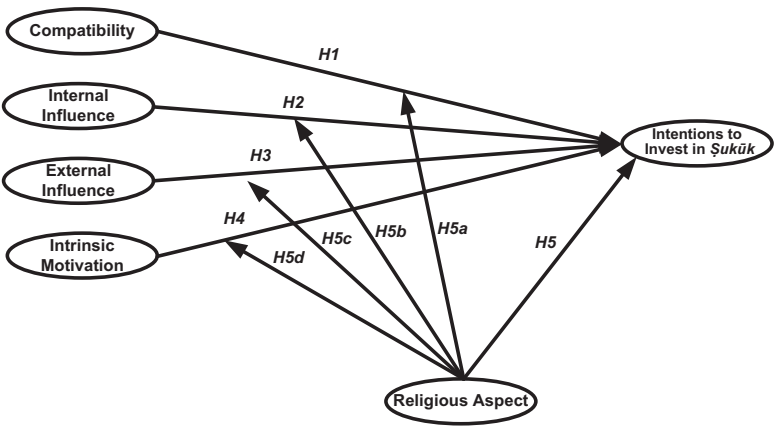
*Data analysis*

The hypothesized proposed relationships among the constructs were examined by applying structural equation modeling (SEM) through smart partial least squares (PLS). According to [Hair et al. \(2017\)](#), PLS-SEM is commonly used for testing complex statistical analysis in the fields of business and management sciences. The smart-PLS approach was a suitable and appropriate technique for the current study as it is suggested by many notable researchers such as [Chin et al. \(2003\)](#) and [Reinartz et al. \(2009\)](#), who recommend PLS for testing complicated cause-effect associations. Moreover, [Chin et al. \(2003\)](#) consider PLS useful, particularly for testing moderation effects. As the current study intends to test the moderation effects of religion, PLS is considered a technique for data analysis. The study followed the suggested two-stage approach by [Hair et al. \(2017\)](#). At the first stage, the measurement model was confirmed, whereas, at the second stage, the proposed relationships of the variables were examined.

**Findings**

*Normality of data and common method bias*

To test the normality of the data, the authors assessed skewness and kurtosis. The results, indicated in [Table 2](#), validate that the data were normal because the skewness and kurtosis values of all the constructs were found within the standard level  $\pm 2$ , as advised by [George and Mallery \(2010\)](#). The data of all the constructs were collected from the same respondents who answered all the questions at the same point in time. Such type of data, according to [Podsakoff et al. \(2003\)](#), might be confronted with a common method bias (CMB) issue. Therefore, to detect the issue of CMB, the authors run Harmon’s one-factor test, which is the most common approach for testing CMB in prior research studies. Harmon’s one-factor test shows a 44.15% variance of the first factor which is less than the standard value of 50% recommended by [Podsakoff et al. \(2003\)](#). This indicates that CMB was not a concern in the present study.



**Figure 1.**  
Conceptual model

**Source:** Authors’ own

**Table 2.**  
Measurement model

Construct	Items	FL	CA	CR	AVE	Skewness	Kurtosis
Compatibility (Com)	Com1	0.900	0.892	0.933	0.822	−0.065	−0.278
	Com2	0.925					
	Com3	0.895					
Internal influence (II)	II1	0.915	0.910	0.944	0.848	−0.246	−0.382
	II2	0.936					
	II3	0.911					
External influence (EI)	EI1	0.909	0.793	0.877	0.707	0.050	0.210
	EI2	0.701					
	EI3	0.895					
Intrinsic motivation (IM)	IM1	0.896	0.827	0.897	0.744	−0.226	−0.072
	IM2	0.810					
	IM3	0.878					
Religious aspect (RA)	RA1	0.859	0.846	0.899	0.691	−0.127	−0.109
	RA2	0.877					
	RA3	0.889					
	RA4	0.684					
Behavioral intention (BI)	BI1	0.913	0.843	0.904	0.760	−0.184	−0.133
	BI2	0.785					
	BI3	0.912					

**Notes:** FL: Factor loading; CR: Composite reliability; AVE: Average variance extracted; the loadings are significant at  $p < 0.001$  level

### Measurement model

To quantify the measurement model of the proposed reflective variables, this study follows the suggested criteria of [Hair et al. \(2017\)](#) by testing internal consistency, convergent validity and discriminant validity. The final values of the composite reliability (CR), indicating internal consistency and reliability, were found between 0.994 and 0.877 of all the constructs, which exceed the cut-off level of 0.70 recommended by [Hair et al. \(2010\)](#). Convergent validity that can be assessed from the values of factor loadings (FL) and average variance extracted (AVE) should be greater than 0.70 and 0.50, respectively ([Hair et al., 2010](#)). To this end, [Table 2](#) demonstrates that our results endorse a good convergent validity as the values of FL and AVE fulfill the criteria.

Discriminant validity was assessed by three methods: [Fornell and Larcker \(1981\)](#) suggestions, the cross-loading method advised by [Hsu and Lin \(2016\)](#) and the Heterotrait–Monotrait (HTMT) method suggested by [Henseler et al. \(2015\)](#). According to the first method, we examine the discriminant validity by calculating and comparing the correlation values of the constructs with the AVE's square root of all the constructs. The results shown in [Table 3](#) demonstrate good discriminant validity as the AVE square root values are greater than the corresponding correlation values of the constructs. Moreover, as shown in the cross-loadings table in the [Appendix](#), the cross-loading values of other variables are lower than the FL values of each construct, indicating good discriminant validity.

The results depicted in [Table 4](#) demonstrate good discriminant validity through the HTMT approach, as HTMT values of all the variables are lower than the threshold level of 0.85 as recommended by [Henseler et al. \(2015\)](#).

### Hypotheses results

[Table 5](#) and [Figure 2](#) indicate the structure model results which were obtained by using a bootstrapping process with 2,000 interactions ([Hair et al., 2017](#)). The proposed model of the

study accounts for 47% of the variance in intentions to invest in *şukūk*. As expected, intentions to invest in *şukūk* are significantly determined by compatibility ( $\beta = 0.095, p < 0.01$ ), internal influence ( $\beta = 0.370, p < 0.001$ ), external influence ( $\beta = 0.149, p < 0.001$ ), intrinsic motivation ( $\beta = 0.134, p < 0.01$ ) and religion ( $\beta = 0.275, p < 0.001$ ). All the proposed constructs were found to have significant effects on the intention to invest in *şukūk*. Therefore, *H1, H2, H3, H4* and *H5* were supported.

To assess the moderation effects of the proposed hypotheses (*H5a, H5b, H5c* and *H5d*), this study followed [Yoon and Steege \(2013\)](#) by applying the product-indicator approach. First, interaction constructs were established by cross-multiplying the measuring items of compatibility and religion, internal influence and religion, external influence and religion and finally, intrinsic motivation and religious aspect. To decrease the possible chances of multicollinearity, the measuring items of all variables were standardized before cross-multiplication ([Aiken et al., 1991](#)).

**Table 3.**  
Correlation values of  
the constructs

Constructs	1	2	3	4	5	6
1. BI	<i>0.872</i>					
2. Com	0.387	<i>0.907</i>				
3. EI	0.334	0.325	<i>0.841</i>			
4. IM	0.361	0.348	0.354	<i>0.862</i>		
5. RA	0.485	0.248	0.135	0.174	<i>0.831</i>	
6. II	0.572	0.353	0.19	0.255	0.386	<i>0.921</i>

**Note:** Diagonal elements and italics are the square roots of the AVE of each construct

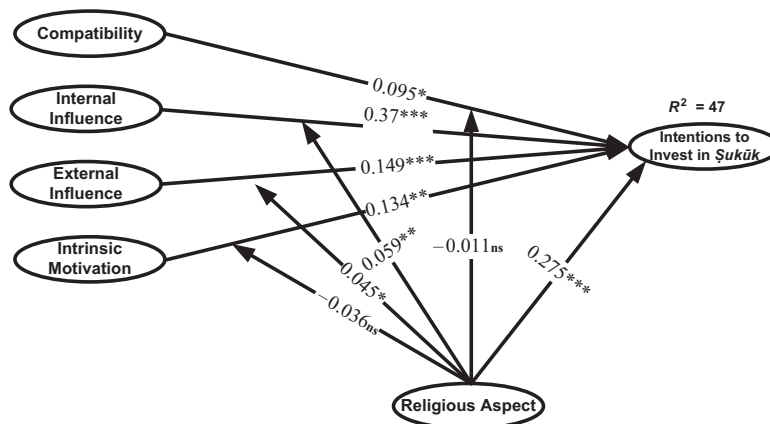
**Table 4.**  
Discriminant validity  
(HTMT)

Constructs	1	2	3	4	5	6
1. BI						
2. COM	0.436					
3. EI	0.389	0.381				
4. IM	0.432	0.402	0.431			
5. RA	0.557	0.286	0.152	0.206		
6. II	0.641	0.391	0.238	0.297	0.44	

**Table 5.**  
Path coefficients and  
hypotheses testing

Hypothesis	Relationship	Std. Beta	t-value	p-value	Decision
<i>H1</i>	Com —> BI	0.095	1.984	0.047*	Supported
<i>H2</i>	II —> BI	0.37	7.616	0.000***	Supported
<i>H3</i>	EI —> BI	0.149	3.989	0.000***	Supported
<i>H4</i>	IM —> BI	0.134	3.149	0.002**	Supported
<i>H5</i>	RA —> BI	0.275	5.747	0.000***	Supported

**Notes:** \* $p < 0.5$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$



Notes: \* $p < 0.5$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

Source: Authors' own

**Figure 2.**  
Model with results

As depicted from Table 6 and Figure 2, it is found that religion moderates the association between internal influence and behavioral intentions ( $\beta = 0.059, p < 0.01$ ), as well as external influence and behavioral intentions ( $\beta = 0.045, p < 0.05$ ). Thus, the proposed moderation hypotheses *H5b* and *H5c* were accepted.

## Discussion and implications

As mentioned, *şukūk* has recently become popular across financial markets, especially in Islamic countries. However, few research studies have focused on factors of investors' intentions that motivate investment in *şukūk*. This study examines, through SCT, the effects of cognitive, personal, environmental and behavioral factors on investors' BI regarding *şukūk* investment in Pakistan. The results reveal that compatibility, internal influence, external influence, intrinsic motivation and religion have a significant positive influence on investors' BI to use *şukūk* for the purpose of investment. According to the statistical results, the above factors have shown  $R^2 = 47\%$ , the total variance in investors' BI, which according to Yogesh (2017) is quite an acceptable level.

Among these variables, the internal influence was determined as the strongest predictor of investors' BI to invest in *şukūk*. Similar results were noted by Van Rooij *et al.* (2011), Abreu and Mendes (2012), Jamshidi and Hussin (2016) and Tauni *et al.* (2017). This indicates that internal influence plays a vital role in investors' decisions on investment in financial

Hypothesis	Relationship	Std. Beta	<i>t</i> -value	<i>p</i> -value	Decision
<i>H5a</i>	Com*RA —> BI	−0.011	0.505	0.614	Not supported
<i>H5b</i>	II*RA —> BI	0.059	2.992	0.003**	Supported
<i>H5c</i>	EI*RA —> BI	0.045	2.367	0.018*	Supported
<i>H5d</i>	IM*RA —> BI	−0.036	1.587	0.113	Not supported

Notes: \* $p < 0.5$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

**Table 6.**  
Moderating effect

products. As there is a collectivist culture in Pakistan, as highlighted by [Khan et al. \(2017\)](#) and *ṣukūk* constitute a Sharī'ah-compliant investment product, the influence of *ṣukūk* adoption by individuals on their social network seems evident and reasonable. As expected, compatibility showed a positive and significant association with investors' BI, which is in line with the previous studies of [Wessels and Drennan \(2010\)](#), [Boateng et al. \(2016\)](#) and [Jamshidi and Hussin \(2016\)](#). Individuals favor and adopt those products and services that suit their lifestyle. As *ṣukūk* is an Islamic financial instrument, people in Muslim-majority countries like Pakistan consider them compatible with their lifestyle as demonstrated by the significant statistical results.

The results further disclose a significant positive association between external influence and investors' BI, which are supported by the results of [Bhattacharjee \(2000\)](#), [Song \(2014\)](#) and [Khan et al. \(2020a\)](#). This result implies that the more people know about *ṣukūk* investment through communication channels such as television, newspapers and social media, the more they are likely to invest in *ṣukūk*. Likewise, intrinsic motivation exerts a significant impact on investors' BI, which are similar to the results of [Venkatesh \(2000\)](#) and [Zhang et al. \(2008\)](#). This result implies that Muslims feel inner satisfaction by adopting Islamic financial instruments or products. As mentioned previously, inner satisfaction with adopting Islamic behavior is intrinsic to religion.

The second objective of the current study was to test the interaction effects of the religious aspect along with its direct effects on investors' BI. As reported by previous research studies of [Ashidiqi and Arundina \(2017\)](#), [Mbawuni and Nimako \(2017\)](#) and [Duqi \(2019\)](#), significant positive effects of the religious aspect were found on investors' BI. Besides the direct effects, the results demonstrate that religion significantly moderates between internal influence and BI, as well as external influence and BI. As Muslims believe in the system of reward and punishment on Judgment Day, they are naturally inclined toward adopting Islamic financial instruments or products. The latest bulletin issued by the State Bank of Pakistan showed quarterly growth of 7.3% in assets and 9.3% in deposits of Islamic banks from April to June 2019 ([SBP, 2019](#)). Such a commendable growth rate shows people's inclination toward Islamic financial instruments. Therefore, the higher the awareness about *ṣukūk* from social networks or through the mass media, the higher the chance for investors to invest in *ṣukūk*.

Theoretically, the current study has several notable contributions to the extant literature. First of all, there are only a few research studies that have tried to investigate the factors that explain and predict investors' BI for *ṣukūk* investment. The current study extends the literature by identifying more relevant factors such as external influence, compatibility and internal influence that significantly explain investors' BI to invest in *ṣukūk*. Second, the direct effect of religiosity was confirmed by published studies; however, this study identifies that the religious aspect also acts as a moderator. Third, this study enhances our understanding that intrinsic motivation matters in adopting Islamic financial instruments. Moreover, this study is a fresh attempt to investigate intrinsic motivation in the context of Islamic financial instruments such as *ṣukūk*. Finally, the current study tested SCT in the context of *ṣukūk* investment intentions and adds fresh evidence of SCT's applicability to the Islamic instrument. Using SCT to *ṣukūk* investment intentions is a rich contribution that expounds the environmental and social perspective of *ṣukūk* acceptance. This will further encourage similar explorations through SCT in the context of Islamic banking instruments and products.

Practically, this study may help the issuers of *ṣukūk* in enhancing the adoption of *ṣukūk* among potential individual investors. As shown earlier, the religious perspective of *ṣukūk* not only affects BI positively but it also acts as a moderator that strengthens the association between internal influence, external influence and BI. This shows that issuers, including the government, can effectively increase investment in *ṣukūk* by using mass media to promote

the religious rationale of *shukūk* to the general public. Individuals opt for an instrument if it fits their lifestyle, as indicated by the results. As the *shukūk* instrument fits with the lifestyle of Muslims because of its inherent Islamic characteristics, Pakistani Muslim investors are more likely to adopt *shukūk* provided they are well aware of *shukūk* investment. *Shukūk* issuers can use existing *shukūk* holders as a tool to enhance the promotion of *shukūk* among potential investors. They can encourage *shukūk* holders to discuss the religious perspective of *shukūk* in their social circles, as is shown by the results.

## Conclusion and limitations

Islamic financial instruments/products have received the attention of researchers globally, especially in Muslim-majority countries. Various adoption models and theories are being applied to identify the factors affecting the adoption of Islamic financial instruments or products. However, *shukūk* has received limited research attention compared to other Islamic financial instruments. To fill in the gap, the current study offers a conceptual model based on SCT that focuses on cognitive, personal, environmental and behavioral factors affecting *shukūk* adoption in Pakistan. For empirical testing of the proposed model, the required data was gathered through survey-questionnaires using a convenient sampling technique. The findings exhibit that compatibility, internal influence, external influence, intrinsic motivation and religiosity have positive significant effects on investors' BI to invest in *shukūk*. In addition, the results reveal that the religious aspect moderates between internal influence and BI, as well as external influence and BI. Moreover, the study not only adds to the existing literature on *shukūk* it will also enable issuers of *shukūk* to understand the motivational factors that enhance the adoption of *shukūk* among potential investors.

This study acknowledges some limitations. First, being cross-sectional in nature, the current study is unable to account for changing human behavior over time. Therefore, future studies can consider longitudinal analysis to determine how temporal changes influence investors' BI. Second, this research covered only *shukūk*; thus, the results cannot be generalized and applied to other Islamic financial instruments or products. In this connection, future studies could test this model in examining the cognitive, personal and behavioral determinants of other Islamic instruments or products to further the results of the current study. Third, this study did not consider the actual adoption of *shukūk*. According to Boateng *et al.* (2016), it is the actual usage that depends on the objective of the organization. Therefore, future studies should also consider the actual usage of *shukūk*. Fourth, the study has generalizability issues across Pakistan, as the survey was conducted only in the capital city, Islamabad. Future studies could test *shukūk* investment intentions in other cities of Pakistan. Finally, the current study only investigated the *shukūk* investment intentions of individual investors. It is proposed that institutional perspectives be probed in future studies.

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**Table A1.**  
Cross loadings

Items	BI	COM	EI	IM	RA	SI
BI1	0.913	0.360	0.304	0.322	0.479	0.540
BI2	0.785	0.257	0.222	0.289	0.279	0.377
BI3	0.912	0.377	0.333	0.334	0.475	0.552
Com1	0.323	0.900	0.294	0.303	0.239	0.307
Com2	0.377	0.925	0.287	0.317	0.244	0.323
Com3	0.348	0.895	0.305	0.325	0.191	0.329
EI1	0.334	0.298	0.909	0.317	0.130	0.159
EI2	0.185	0.208	0.701	0.245	0.021	0.221
EI3	0.295	0.301	0.895	0.324	0.160	0.130
IM1	0.333	0.337	0.329	0.896	0.163	0.210
IM2	0.282	0.253	0.224	0.810	0.0900	0.261
IM3	0.318	0.305	0.353	0.878	0.191	0.195
RA1	0.390	0.177	0.102	0.133	0.859	0.277
RA2	0.401	0.214	0.099	0.161	0.877	0.297
RA3	0.444	0.215	0.120	0.135	0.889	0.371
RA4	0.370	0.217	0.129	0.151	0.684	0.334
SI1	0.531	0.323	0.149	0.222	0.357	0.915
SI2	0.530	0.330	0.190	0.247	0.366	0.936
SI3	0.519	0.322	0.188	0.236	0.344	0.911

**Survey questionnaire**

- (1) *Compatibility* (Boateng *et al.*, 2016):
  - Investing in *şukūk* would fit my lifestyle.
  - Investing in *şukūk* would fit well with how I like to do my investment.
  - Investing in *şukūk* would be compatible with most aspects of my investing activities.
- (2) *Internal (social) influence* (Bhattacharjee, 2000; Song, 2014):
  - My peers/colleagues/friends thought that I should use *şukūk* for managing investments.
  - People I knew thought that using *şukūk* was a good idea.
  - People I knew influenced me to try out *şukūk* for managing investments.
- (3) *External influence* (Bhattacharjee, 2000; Song, 2014):
  - Media information about *şukūk* influence my adoption decision.
  - Information from mass media would induce me to try *şukūk*.
  - Mass media consistently recommend people to use *şukūk*.
- (4) *Intrinsic motivation* (Tremblay *et al.*, 2009):
  - Because it is part of the way in which I have chosen to live my life.
  - Because I derive much pleasure from investing and adopting in Islamic products like *şukūk*.
  - For satisfaction, I am investing in Islamic products like *şukūk*.

- (5) *Religiosity* (Riaz *et al.*, 2017; Duqi, 2019):
  - Şukūk provides a Sharī'ah-compliant alternate to conventional bonds.
  - I prefer to use şukūk due to the Islamic prohibition of *ribā* (interest).
  - I like an investment in şukūk due to religious motivation.
  - I prefer to avoid usury investment.
- (6) *Behavioral intentions* (Warsame and Ireri, 2016):
  - I Intend to invest in şukūk at the moment.
  - I predict I will continue to invest in şukūk on a regular basis.
  - For my investment, I would invest in şukūk.

### About the authors

Safeer Ullah Khan received his PhD degree in Management Sciences from the Donlinks School of Economics and Management, University of Science and Technology Beijing, China. Currently, he is working as assistant professor at the Department of Business Administration, IBA, Gomal University, Dera Ismail Khan, KP, Pakistan. He has published several research articles in leading journals with a focus on digital, behavioral and Islamic finance. Safeer Ullah Khan is the corresponding author and can be contacted at: [safeer89@outlook.com](mailto:safeer89@outlook.com)

Ikram Ullah Khan earned his PhD in Business Administration from the University of Science and Technology of China. Currently, he is a faculty member of the Institute of Management Sciences, University of Science and Technology Bannu, KP, Pakistan. With multiple publications in renowned journals, his research focus is on behavioral and digital aspects of banking and finance.

Ismail Khan is a PhD scholar at the School of Management, Sunway University Business School, Malaysia. His research focus is on corporate governance and Islamic finance.

Saif Ud Din is Assistant Professor at the college of Business-Rabigh, King Abdul Aziz University, Jeddah, Saudi Arabia.

Abid Ullah Khan received a master's degree in Science in Economics from the Department of Economics, University of Science and Technology Bannu, Bannu, Pakistan. His research focus is on environmental and Islamic economics.