



# Role of Institutional Support in Economic Development: Investor Perspective. A Case of Government of Pakistan (GOP) Ijarah Sukuk

Uzma Kashif<sup>a\*</sup>, Ahmed Ali Siddiqui<sup>b</sup>, Hafiz Saad<sup>c</sup>, Shahzad Ali<sup>d</sup>

<sup>a,d</sup> Department of Management Sciences, Superior University, Lahore, Pakistan

<sup>b</sup>CEIF-IBA(Karachi), Pakistan

<sup>c</sup>Shariah Compliance Department, Meezan Bank, Pakistan

\*Corresponding author: [uzma.kashif@superior.edu.pk](mailto:uzma.kashif@superior.edu.pk); [uzmanoor1979@gmail.com](mailto:uzmanoor1979@gmail.com)

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## Abstract

The study aims to investigate the role of Ijarah Sukuk in the economic development of the Pakistani business environment an initiative taken by the Government of Pakistan (GOP) by issuing Shari'ah-compliant investments at a national level during a period of deep financial crisis in the country. A modified questionnaire was used in this study to answer research questions and test the evolving hypothesis. Questionnaires containing 30 items were distributed and collected from 379 respondents as representative of Sukuk investors. The data collected was analyzed using Smart PLS. The findings suggest that within the recently reorganized Islamic Market of Pakistan, the variable with the greatest influence and strongest predictive power is Shari'ah Compliance. It is followed by market structure and subsequently the quality of underlying assets. However, once Shari'ah-compliant securities are introduced, investors are anticipated to seek the advantages offered by well-structured markets, such as yields, market liquidity, and the balance of Islamic Securities in both long and short-term Sukuk. This study represents a pioneering effort in Pakistan, as it examines the impact of fundamental investor characteristics and Shari'ah compliance on investment decision-making in the nascent Islamic Market. The findings of this study hold potential value for countries at the early stages of establishing Islamic banking cultures. Moreover, the results will prove beneficial for policymakers as they seek to expand the range of Islamic instruments available to investors through the utilization of Islamic modes of financing. Additionally, the study sheds light on how the market environment, regulatory measures, and other investor-oriented factors can be optimized to create a more viable and attractive environment for investors.

*Keywords: Shari'ah compliance, Institutional support, Market structure, Quality of underlying asset, Investment decision*

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## 1. Introduction

### 1.1 Background

The global Sukuk market, also known as the Islamic bond market, has witnessed significant growth and evolution in recent years, offering Shari'ah-compliant financial instruments that adhere to principles prohibiting interest and emphasizing risk-sharing (Nouman and Ullah, 2023). It has become a crucial part of the global financial landscape, attracting both Islamic and non-Islamic investors (Sairally and Rassool, 2022). This expansion is driven by increasing demand for Shari'ah-compliant investment options, with governments, corporations, and financial institutions in Muslim-majority countries issuing Sukuk for diverse projects (Juisin et al., 2023). This market's diversity, including sovereign, corporate, and green Sukuk, has gained momentum due to improved regulatory standards, enhancing investor confidence and enabling cross-border transactions

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(Uddin, 2022). The Sukuk market's adaptability, resilience, and potential for innovation have made it an integral component of the global financial system, promoting diversity and stability while adhering to Islamic principles and contributing to financial inclusivity (Skjøtt et al., 2021). Pakistan has strategically embraced Sukuk issuance, to mobilize capital for developmental projects in accordance with Islamic finance principles, making it a significant player in the global Sukuk market. Pioneering sovereign Sukuk issuance in 2005, Pakistan has diversified its Sukuk portfolio, including Ijarah Sukuk, Musharakah Sukuk, and green Sukuk, attracting a diverse investor base. The competitive yields offered have made Pakistan's Sukuk appealing to both domestic and international investors, contributing to the nation's capital generation. Foreign investment has been integral, diversifying the investor base and supporting economic development through funding critical infrastructure projects such as road development and energy initiatives. Pakistan's Sukuk initiatives have proven instrumental in enhancing the market's appeal and improving living standards.

The issuance of Ijarah Sukuk in Pakistan is primarily driven by several key objectives, including funding large-scale infrastructure projects, stimulating economic growth, and aligning financial transactions with Islamic Shari'ah principles (Nawaz et al., 2019). However, this practice has not been without its challenges. One of the prominent issues faced is the lack of standardization in the structures of Ijarah Sukuk, which can lead to confusion and inconsistency for both issuers and investors (Hussain and Khalil, 2019). Additionally, the pricing of Ijarah Sukuk can be complex, with the profit rate being determined by multiple factors, making it challenging to achieve a uniform and transparent pricing mechanism (Aman et al., 2022). To address these issues, there have been efforts to establish a more standardized framework for Ijarah Sukuk in Pakistan, providing greater clarity in terms of structure and pricing (Hussain and Khalil, 2019). The State Bank of Pakistan and the Securities and Exchange Commission of Pakistan have also been active in introducing and refining regulations to govern the issuance of Ijarah Sukuk (Nawaz et al., 2019).

In a predominantly conventional market, issuing Ijarah Sukuk faces substantial challenges from the investor perspective. One of the most significant issues is the lack of familiarity and understanding of Islamic finance principles among conventional investors (Iqbal and Mirakhor, 2011). The unique nature of Ijarah Sukuk, which complies with Shari'ah-compliant principles, may be unfamiliar to investors accustomed to conventional interest-based instruments. This knowledge gap can create uncertainty and reluctance to invest in Ijarah Sukuk. Furthermore, the perceived complexity of Ijarah Sukuk structures compared to conventional bonds can deter investors. The requirement for asset backing and rental income arrangements, which differ from the straightforward interest-based structure of conventional bonds, may be seen as intricate and less transparent (Iqbal and Mirakhor, 2011). This complexity can lead to concerns about investment risks and returns. Market liquidity is another significant challenge. Ijarah Sukuk offerings in a predominantly conventional market may have limited liquidity due to a smaller pool of potential investors who are familiar with and willing to trade these instruments (Aman et al., 2022). Investors might be concerned about the ability to buy or sell Ijarah Sukuk easily.

### *1.2 Objective*

Investors are increasingly favouring Ijarah Sukuk as a valuable Islamic investment tool, recognized for its potential to alleviate the debt burden of public institutions and providing an alternative to conventional bonds. However, the financial market's heterogeneity, including secular-oriented investors, poses challenges for broad acceptance of Islamic financial instruments. Scholars emphasize exploring investor behaviour dynamics, especially in predominantly secular contexts within Islamic countries. The research aims to uncover critical factors attracting investors to Islamic financial products like Ijarah Sukuk, establishing a foundation for enhancing investor attention and promoting Islamic financial markets. Acknowledging Sukuk as a driving force in the Pakistani stock exchange, the study investigates the distinctive attributes of conventional and Islamic bonds, aiming to discern pivotal factors shaping the national Ijarah Sukuk market. It employs an exploratory approach, utilizing a case study technique and semi-structured interviews, contributing to Islamic finance literature and empowering policymakers to encourage acceptance of Islamic values. The study addresses a shift towards prioritizing Halal earnings in financial decision-making and emphasizes not only high returns but also alignment with religious principles. The decision to use Ijarah financing aims to lower borrowing costs for national institutions and share risks associated with underlying assets, contributing to continuous improvement in the Sukuk market on both national and international levels.

## 2. Literature Review

### 2.1 Background theory

The Theory of Islamic Planned Behavior (TIPB) is a specialized conceptual framework aimed at understanding and predicting individuals' behaviour in the realm of Islamic entrepreneurship, particularly their intention to engage in worshipful activities intertwined with financial transactions, such as acquiring Sukuk. TIPB integrates established theories while adapting them to the distinctive context of Islamic values and beliefs. Key variables within the model include Empathy (EMP), Niyyah, Internal Behavioral Control Factors (ICFs), External Behavioral Control Factors (ECFs), and Islamic Moral Values. EMP serves as a proxy-variable for attitude, influencing intentions, especially Niyyah related to Sukuk purchase. ICFs mirror Bandura's self-efficacy, representing internal factors influencing behaviour, encompassing personal abilities and contextual factors. ECFs capture societal support from various sources, impacting personal beliefs and attitudes. Lastly, Islamic Moral Values, drawn from the Quran and Hadiths, guide adherents' behaviour, influencing attitude, personal efficacy, and societal support. In the Theory of Islamic Planned Behaviour, the fusion of "Shari'ah compliance behaviour" and "moral values" underscores individuals' deep commitment to Shari'ah principles and ethical conduct, shaped by Islamic values from the Quran and Hadiths. This integration significantly influences their intentions and actions in Islamic entrepreneurship, particularly in Sukuk purchases, highlighting the impact of religious and ethical convictions on decision-making processes. Additionally, the connection between "market structure" and "external behaviour control" reveals that the prevailing market environment plays a substantial role in shaping external support for decision-making in Islamic entrepreneurship, notably in Sukuk purchases. Within the Theory of Planned Islamic Behaviour, the interaction among "Shari'ah compliance behaviour," "market structure," and the "quality of underlying assets" collectively moulds individuals' "Niyyah to invest in Sukuk." This dynamic interplay reinforces intentions to engage in Sukuk investments aligned with Shari'ah principles, a conducive market structure, and high-quality underlying assets, fostering an environment of trust, ethical alignment, and financial soundness that motivates resolute investment in Sukuk in adherence to Islamic financial principles.

### 2.2. Previous studies and hypotheses development

#### 2.2.1. Shari'ah-compliant investments

Shari'ah-Compliance judgement involves a great deal of subjectivity. [Delle Foglie and Keshminder \(2022\)](#) conducted research on the effect of Shari'ah-compliant stocks on Malaysian stock market performance. They discovered that stocks that adhered to Shari'ah had a favourable and significant impact on market returns, demonstrating that investors view these investments as advantageous choices ([Ridwan and Barokah, 2023](#)). [Gundogdu \(2023\)](#) compared the financial success of Islamic banks to those of conventional banks. They discovered that Islamic banks had higher levels of stability and profitability, indicating that adhering to Shari'ah principles may help businesses perform better financially. [Fitrah and Soemitra \(2022\)](#) looked into the connection between Pakistan's stock market performance and adherence to Shari'ah. The study found a positive and significant correlation between Shari'ah-compliant stocks and returns on markets, indicating that investments that adhere to Islamic law can provide investors with favourable returns.

#### 2.2.2. Shari'ah compliant and institutional support

Two interrelated ideas that are important in the framework of Islamic finance and governance are Shari'ah compliance and support from institutions ([Juisin et al., 2023](#)). To draw and keep clients committed to Islamic finance, Islamic financial institutions (IFIs) must adhere to Shari'ah law. IFIs, however, also require strong institutional backing in order to properly manage the risks related to Shari'ah compliance ([Sairally and Rassool, 2022](#)). Institutional support can assist IFIs in a number of ways to attain Shari'ah compliance. First, institutional backing may guarantee that IFIs have the ability to access the knowledge and materials needed to put Shari'ah compliance into practice ([Nouman and Ullah, 2023](#)). Second, institutional support might contribute to the development of a compliance culture inside IFIs, hence reducing the likelihood of unintended Shari'ah law transgressions.

*Hypotheses 1(H1): The Shari'ah Compliance has positive effect on Institutional Support.*

### 2.2.3. Quality of underlying asset and institutional support

An essential component in evaluating the risk and profit potential of an Ijarah Sukuk investment is the calibre of the underlying asset (Romadhon and Mutmainah, 2023). A high-quality asset is likely to produce a consistent flow of payment of rent, which will in turn give the Sukuk holders a regular income stream (Sayyid et al., 2023). On the other side, a low-quality asset might not yield enough rent payments to recover the Sukuk owners' investment, which could result in losses. Another crucial element in deciding the threat and reward of an Ijarah Sukuk transaction is institutional backing (Ibrahim and Sanusi, 2022). The likelihood that an Islamic financial institution (IFI) with a solid track record can successfully handle the risks involved with Ijarah Sukuk investments is high.

*Hypotheses 2(H2): The Quality of underlying asset has positive effect on Institutional Support.*

### 2.2.4 Market structure and institutional support

A climate that is well-supportive encourages issuers to enter the Ijarah Sukuk marketplace, bringing in more investors and boosting market liquidity (Khan, 2023). An atmosphere that is favourable to effective transactions and market operations is produced by a well-structured market with well-established rules, regulations, and marketplace infrastructure (Keshminder et al., 2022). This increases investor trust and draws institutional backing in the form of frameworks and regulatory organisations that guarantee compliance, openness, and investment protection (Khan, 2023). The Ijarah Sukuk market has a more vibrant and varied participant base, which boosts trading activity and liquidity. Market makers, brokers, and other facilitators who enable trading and market liquidity then lend institutional support in response to this (Hasan et al., 2022). To encourage effective and liquid markets, institutional support may take the shape of market-making services, liquidity-improving measures, and trading platforms.

*Hypotheses 3(H3): The Market Structure has positive effect on Institutional Support.*

### 2.2.5. Shari'ah compliance and investment decision

Shari'ah compliance has a favourable impact on investment choices, especially for people and organisations looking to make investments that adhere to Islamic principles (Khan, 2022). Investment activities must comply with Shari'ah to uphold Islamic values and principles. Investors are more likely to select Shari'ah-compliant investments if religious and ethical factors are given priority in the decision-making process (Muhammad and Haruna, 2022). Shari'ah compliance gives investors the reassurance that their investments are consistent with their values and beliefs, which has a favourable impact on their investment choices. Shari'ah compliance boosts trust and confidence among investors. Knowing that their financial decisions are being closely analysed and governed by Shari'ah gives investors a greater sense of security (Sani et al., 2022).

*Hypotheses 4(H4) The Shari'ah Compliance has positive effect on investment decision.*

### 2.2.6. Quality of underlying asset and investment decision

The quality of the underlying assets influences investing choices favourably (Duku, 2023). Investors frequently evaluate the quality of the underlying assets when contemplating investment possibilities to determine the potential risks and returns (Romadhon and Mutmainah, 2023). Underlying assets of greater calibre are more likely to produce favourable returns. Strong fundamentals, such as consistent financial performance, reliable cash flows, and promising growth prospects, increase the likelihood that an asset will generate profitable returns over the course of an investment (Harahap et al., 2022).

*Hypotheses 5(H5): The Quality of underlying asset has positive effect on Investment Decision.*

### 2.2.7. Market structure and investment decision

In fact, the market framework can influence investment choices for the better. The term "market structure" refers to a market's organizational features, such as the quantity and size of enterprises, the level of rivalry, and the obstacles to entry and exit (Bin-Nashwan et al., 2022). Competition tends to push businesses to be more inventive and efficient in a highly competitive marketplace system with lots of buyers and sellers. As a result, costs are reduced, goods are of higher quality, and productivity is raised (Bin-Nashwan and Muneeza, 2023). A competitive market layout can be advantageous for investors since it shows that businesses must always work to increase their performance to stay competitive, which could result in higher returns on



investment (Harahap et al., 2022). Financial accounts, trends in the market, and industry analysis are all included.

*Hypotheses 6(H6): The Market Structure has positive effect on Investment Decision.*

#### 2.2.8. Relationship among perceives investor characteristics, cognitive biases and institutional support

The positive correlation between perceived investor traits, Shari'ah compliance, quality of underlying assets, market structure, and institutional backing can be moderated by investor cognitive biases. Cognitive biases are systematic thinking flaws that can affect how decisions are made. Here is how cognitive biases may affect how these variables interact: Investors' perceptions of the traits of other traders in the market can be influenced by cognitive biases (Yandra and Wijayanti, 2022). Confirmation bias, for instance, might cause investors to selectively perceive data in a way that supports their preexisting opinions of other investors (Duku, 2023).

*Hypotheses 7(H7): Investor cognitive biases moderate the positive relationship between perceived investor characteristics Shari'ah compliance (H7a), quality of underlying asset (H7b), market structure (H7c) and institutional support.*

#### 2.2.9. Institutional support and investment decision

Institutional backing can, in fact, help with investing decisions. The term "institutional support" describes the help, direction, and materials offered by numerous organisations, including governmental entities, regulatory authorities, financial institutions, and trade groups (Hariyani, 2023). Providing accurate and current information on investment opportunities, market trends, and legislative changes is a common component of institutional support (Kiaee, 2022). By lowering uncertainty and deepening their comprehension of the financial environment, this knowledge can assist investors in making well-informed decisions (Kiaee, 2022). To assess risks and prospective returns and make better investing decisions, one needs access to thorough and reliable information (Seth et al., 2022).

*Hypotheses 8(H8): Institutional Support has positive effect on Investment Decision.*

#### 2.2.10. Relationship among perceived investor characteristics, institutional support and investment decision

When institutional support functions as a mediator, it aids in explaining or transmitting the impacts of the independent factors (as perceived investor characteristics, Shari'ah compliance, quality of underlying assets, and market structure) on the dependent variable (investment decisions). Institutional support plays the role of a mediating element in this situation that affects the relationship between these independent variables and investment choices (Hasan et al., 2022). Investor traits and attitudes, such as risk tolerance, financial knowledge, and biases in decision-making, might influence the investments they make (Nasir et al., 2023). By offering advice, educational opportunities, or mentoring, institutional assistance might affect how investor's view and assess their own traits.

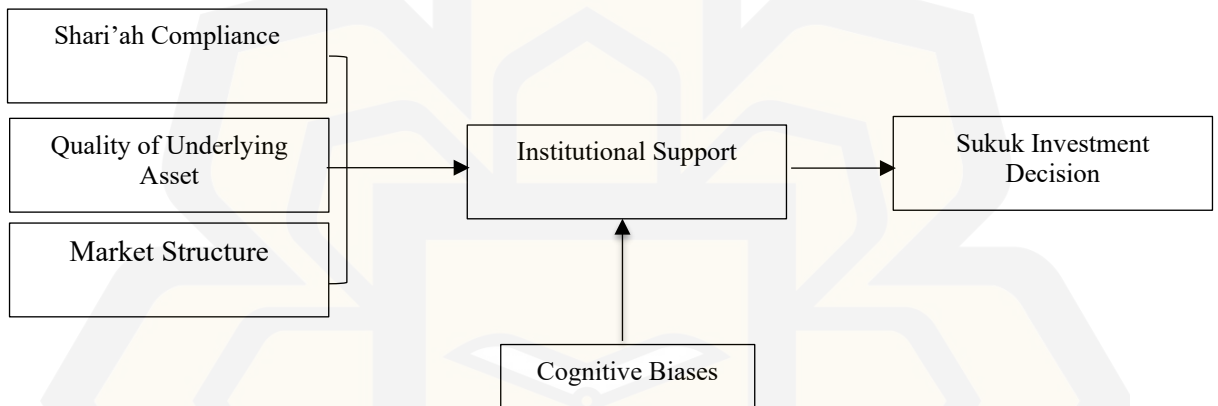
*Hypotheses 9(H9): Institutional Support mediates the positive relationship between perceived investor characteristics Shari'ah compliance (H9a), quality of underlying asset(H9b), market structure(H9c) and investment decision.*

### 3. Methodology

This section outlines the methodology, instrument, data collection tool, and sampling strategies employed in the study, which investigates the relationships between investor characteristics (such as Shari'ah compliance, quality of underlying assets, and market structure), institutional support, and investment decisions, with cognitive biases as a moderator variable in the context of Ijarah Sukuk investors in Pakistan. The research adopts a positivistic methodology to address the study's unbiased nature, following expert advice i.e., Ascarya (2022) for contemporary methods in Islamic eco-finance, the study adheres to positivism's ontological and epistemological viewpoints, maintaining an objective and detached stance to examine variable relationships. Positivist theory guides the researcher in an objective role, adhering to predetermined rules and exploring how different variables relate to one another within the study (Nagano, 2022). The instrument used to obtain the data is one of the study's most vital and important elements. A closed-ended questionnaire was employed to gather the data for this investigation. The closed-ended questionnaire, aligned with the study paradigm, aimed to ensure honest participant feedback, utilizing a five-point Likert scale for responses. The survey underwent contextual adjustments based on expert advice and pilot study results, involving 50 individuals to assess the

instrument's appropriateness. Random sampling was employed for the pilot study group selection, and subsequent research and data collection were conducted with the same individuals to affirm the instrument's reliability. The pilot study, utilizing a random sample selection approach, concluded the assessment of research procedures and the instrument's suitability for the study. The Investor Portfolio Securities (IPS) account is essential for GOP Ijarah Sukuk investments, with primary dealers holding these Sukuk in IPS accounts on behalf of their customers. A purposive sampling strategy targeted Islamic investors, particularly those with at least two years of experience, chosen through primary dealers to ensure representation. Using Rao-soft software to determine an adequate sample size, the study received correctly completed questionnaires from 379 respondents, including top management (45%), corporate investors (30%), and SME entrepreneurs (15%). The survey was conducted over 55 days, with participants demonstrating familiarity with similar systems or instruments, affirming their understanding and ability to engage with the survey effectively.

Figure 1: Research model



#### 4. Results and Analysis

In order to evaluate the measurement approaches and the structural equations of modelling, this study used the Smart-PLS-3 structural modelling (SEM) software. Through structural equation modelling, both the measurement model and the structural model may be evaluated using algorithms and bootstrapping. The decision to use SMART-PLS was made because it has some benefits over other software, including the ability to handle complex models, the ability to handle tiny amounts of data, and the lack of a consistency requirement. The majority of investigators prefer to utilise Smart-PLS over alternative software since it is convenient and user-friendly.

##### 4.1. Descriptive statistics of respondents

Table 1 provides a demographic overview of the participants, with 63% men and 37% women. Age distribution indicates 30% under 30, 15% between 31 and 40, 45% between 41 and 50, and 10% over 50. Regarding education, 42% hold master's degrees, 43% have M.Phil.'s, and 15% possess doctorates. In terms of organizational roles, 20% are executives, 25% entrepreneurs, 10% non-team leads, 35% portfolio managers, 15% directors, and 10% non-team leads. Work experience shows 35% with less than 5 years, 35% with 6 to 10 years, and 30% with over 10 years. Additionally, 80% identify as practicing Muslims, 15% as non-practicing Muslims, and 5% as converted Muslims.

Table 1: Descriptive statistics of respondents

Items	Description	Percentage
Gender	Male	63%
	Female	37%

Items	Description	Percentage
Age	Less than 30	30%
	31-40	15%
	41-50	45%
	Above 50	10%
Education Level	Masters	42%
	M.Phil.	43%
	Doctoral.	15%
Investment Experience	Beginner	28%
	Intermediate	31%
	Experienced	41%
Religious Affiliation	Practicing Muslim	80%
	Non-Practicing Muslim	15%
	Converted Muslim	5%
	Executive	20%
Levels in Organization	Entrepreneur.	25%
	Non-Team Lead	10%
Work Experience	Portfolio Manager	35%
	Less than 5 Years	35%
	6 to 10 Years	35%
	Above 10 Years	30%

#### 4.2. Assessment of measurement model

The measuring model's validity, including content validity, discriminant reliability, and convergent validity, was rigorously examined. Various statistics, such as cumulative reliability, Average Variance Extracted (AVE), and factor loadings, were considered to ensure convergent dependability. Emphasis was placed on factor loadings, with values above 0.70 deemed crucial for validity. Up to 20% of items could be discarded if AVE values fell below the threshold, and a minimum threshold of 0.50 was considered acceptable. Composite reliability (CR) numbers exceeded the acceptable cutoff of 0.70, and AVE values surpassing 0.50 were deemed acceptable. Convergent validity was further supported by Cronbach's Alpha exceeding 0.70, confirming the model's sufficiency. Details of convergent validity are presented in Table 2.

Table 2: Reliability and convergent validity

	Cronbach's alpha	(rho_a)	Composite reliability.	AVE
Cognitive Biases	0.820	0.841	0.875	0.586
Investment Decision	0.855	0.864	0.896	0.634
Institutional Structure	0.876	0.878	0.910	0.670
Market Structure	0.820	0.825	0.875	0.585
Quality of Underlying Asset	0.887	0.901	0.924	0.753
Shariah Compliance	0.710	0.732	0.810	0.463

#### 4.3. Factor loadings

The values of factor loadings depict how much the construct contributed to the primary variables. The factor loadings' values must all be larger than or equally equal to 0.60. The numbers show that every value is higher than the cutoff point of 0.60. The minimum value in the variable 'Cognitive Biases' is 0.585, and the maximum value is 0.779. Similarly, the maximum value of the 'Shariah Compliance' is 0.749, and the minimum value

is 0.754. Moreover, the values of the 'Market Structure' fall between 0.789 and 0.793. Similarly, the values of 'Investment Decision' are between 0.778 and 0.725. Additionally, the values of "Market Structure" and "Quality of Underlying Asset" are both in the range of 0.62 and 0.88. Due to their undesirable contributions, two elements are removed from the loadings because we have a 20% margin to do so. Cb6, Id3, and MS7 were the items that were eliminated because their values fell below the cutoff (Details are to be provided upon request).

#### 4.4. Discriminant validity

The Fornel-Larcker criteria and cross-loading assessment were commonly used methods for assessing discriminant reliability; however, Janadari et al. (2018) noted shortcomings in the Fornel-Larcker technique. In this study, additional approaches, including the multitrait-multimethod matrix and Heterotrait-Monotrait correlation ratio (HTMT), were employed for discriminant validity assessment. Following Ringle et al. (2014), which suggests an HTMT value below 0.85 to indicate discriminant validity, all values in Table 3 meet this criterion, affirming unaffected discriminant validity. It is emphasized that assessing discriminant reliability is crucial for estimating measurement error size and determining the connection between two notions, necessitating consideration of audio signal attenuation in this context.

Table 3: Fornell–Larcker Criterion

		1	2	3	4	5	6
Cognitive Biases	1	<b>0.766</b>					
Investment Decision	2	0.667	<b>0.796</b>				
Institutional Structure	3	0.605	0.589	<b>0.818</b>			
Market Structure	4	0.538	0.576	0.762	<b>0.765</b>		
Quality of Underlying Asset	5	0.506	0.455	0.593	0.656	<b>0.868</b>	
Shariah Compliance	6	0.462	0.479	0.640	0.675	0.531	<b>0.681</b>

The HTMT ratio was employed in this study alongside to the Farnell and Larcker criterion to determine the discriminant validity. Ringle et al. (2015) state that the values should be smaller than 0.90.

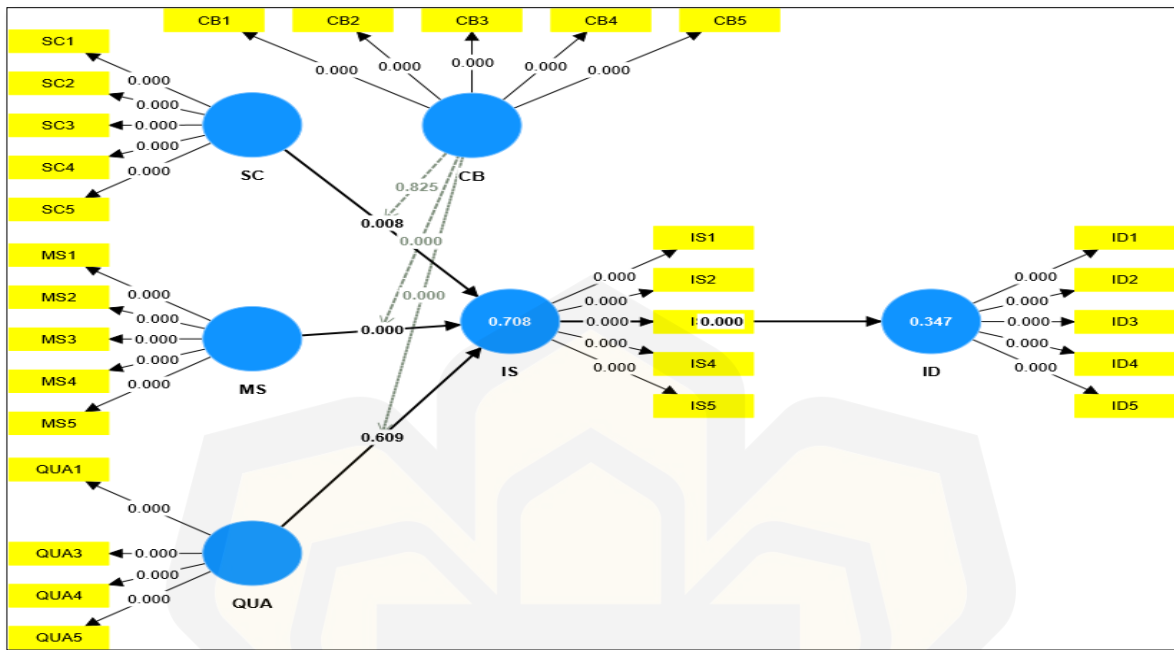
Table 4. HTMT matrix

		1	2	3	4	5	6
Cognitive Biases	1						
Investment Decision	2	0.667					
Institutional Structure	3	0.605	0.589				
Market Structure	4	0.538	0.576	0.762			
Quality of Underlying Asset	5	0.506	0.455	0.593	0.656		
Shariah Compliance	6	0.462	0.479	0.640	0.675	0.531	

#### 4.5. Model fit indices

In Smart-PLS, the measure of fit is indicated by the values of SRMR, NFI, d-ULS, and chi-square. The values of SRMR should be less than 0.08. d-ULS can be indicated in inferential statistics for assessment. All the values of the model fit indices are in the threshold values.





4.6. Regression analysis

The structural model assessment (SEM) of the research project, utilizing path coefficients () and t-statistics (Table 5) through bootstrapping, revealed various outcomes (Table 6). Hypotheses were considered accepted if the two-tailed t-value exceeded 1.96 at a 5% significance level. 'Institutional Support -> Investment Decision' (p = 0.001, t = 3.380) supports H1. However, 'Shariah Compliance -> Cognitive Biases & Institutional Support' (p = 0.825, t = 0.221) indicates a weak association. 'Market Structure -> Institutional Support' (p = 0.000, t = 11.436) is accepted, while the relationship between 'Quality of Underlying Asset' and outcomes is statistically insignificant (p = 0.609, t = 0.159). 'Market Structure -> Cognitive Biases & Institutional Support' (p = 0.000, t = 3.579) is positively connected, and 'Quality of Underlying Asset -> Cognitive Biases & Institutional Support' (p=0.000, t=3.522) demonstrates a significant relationship, leading to the acceptance of the corresponding hypothesis.

Table 5. Model fit indices

Test	Saturated model	Estimated model
SRMR	0.069	0.088
d_ ULS	2.091	3.333
d_ G	119.628	119.719
Chi-Square	1761.112	1761.112
NFI	0.82	0.87

Table 6. Hypothesis testing

	Path Analysis	Beta	Std. Dev	T-Stat	P-Value	Decision
H1	Cognitive Biases → Institutional Structure	0.237	0.070	3.380	0.001	Supported
H2	Institutional Structure → Investment Decision	0.589	0.052	11.436	0.000	Supported
H3	Market Structure → Institutional Structure	0.538	0.077	6.956	0.000	Supported
H4	Quality of Underlying Asset → Institutional Structure	-0.035	0.069	0.512	0.609	Supported
H5	Shariah Compliance → Institutional Structure	0.150	0.057	2.660	0.008	Supported

H6	Cognitive Biases*Shariah Compliance→Institutional Structure	-0.013	0.058	0.221	0.825	Supported
H7	Cognitive Biases*Market Structure -> Institutional Structure	0.265	0.074	3.579	0.000	Supported
H8	Cognitive Biases*Quality of Underlying Asset →Institutional Structure	-0.210	0.060	3.522	0.000	Supported

#### 4.7. Mediation effect

Table 7 indicates the mediating effect of the variables. In this study, Cognitive Biases and Institutional Support is the mediating variable between Shariah Compliance and Investment Decision. The existence of mediation explains the relationship between the other variables.

Table 7: Mediation effect

	Path Analysis	Beta	Std.Dev	T stat	P values	Decision
H9	Quality of Underlying Asset → Institutional Structure → Investment Decision	-0.021	0.041	0.506	0.613	Not Supported
H10	Market Structure → Institutional Structure → Investment Decision	0.317	0.050	6.390	0.000	Supported
H11	Shariah Compliance → Institutional Structure → Investment Decision	0.089	0.035	2.541	0.011	Supported
H12	Cognitive Biases → Institutional Structure → Investment Decision	0.140	0.047	3.003	0.003	Supported

The following Tables indicate that the indirect effect is positive in the five variables; Market Structure -> Institutional Support & Investment Decision, Cognitive Biases & Quality of Underlying Asset -> Institutional Support -> Investment Decision. Cognitive Biases and Market Structure -> Institutional Support -> Investment Decision, Shariah Compliance -> Institutional Support -> Investment Decision as their values are significant at level > 0.05 it indicates that a mediation relationship exists. Additionally, the variables; Cognitive Biases & Shariah Compliance -> Institutional Support -> Investment Decision and Quality of Underlying Asset -> Institutional Support-> Investment Decision explains no mediation effect, as their values are above the significant values.

#### 4.8 Assessment of unobserved heterogeneity

Following the systematic approach outlined by Sarstedt et al. (2020) for identifying and, if necessary, addressing unobserved heterogeneity in PLS path models, we conducted the FIMIX-PLS procedure on the dataset. As recommended by Matthews et al. (2016), we commenced the procedure by assuming a one-segment solution, utilizing default settings for the stop criterion ( $1010 \times 1.0E10$ ), maximum iterations (5000), and repetitions (10). To determine the optimal number of segments to extract, we initially calculated the minimum sample size needed to estimate each segment, as suggested by Sarstedt et al. (2020). A subsequent post hoc power analysis, assuming an effect size of 0.15 and a power level of 80%, indicated a minimum sample size requirement of 85, allowing for the extraction of up to five segments. Consequently, we performed additional runs of FIMIX-PLS for two to five segments, maintaining the same settings as in the initial analysis.

Table 8: Assessment of endogeneity test using the Gaussian Copula Approach

Tests		Construct	Co-efficient	P value
Gaussian copula of model	1	SC	-0.069	0.004
		MS	1.136	0.008
		QUA	-0.769	0.002
		IS	-1.28	0.027
		<sup>c</sup> SC	0.883	0.096

Tests		Construct	Co-efficient	P value
Gaussian copula of model Model	2	SC	-1.99	0.243
		MS	-0.055	0.678
		QUA	-0.193	0.189
		IS	0.7	0.965
		MS	0.323	0.074
Gaussian Copula of Model.	3	SC	-0.691	0.428
		MS	-0.691	0.074
		QUA	-0.346	0.094
		IS	-0.428	0.069
		QUA	0.266	0.538
Gaussian Copula of Model.	4	SC	-0.42	0.074
		MS	-0.074	0.368
		QUA	-0.074	0.538
		IS	0.782	1.565
		IS	-0.094	0.074
Gaussian Copula of Model.	5	SC	-0.074	0.074
		MS	0.109	0.109
		QUA	-1.032	0.437
		IS	-0.074	0.176
		SC	0.437	0.523
Gaussian Copula of Model.	6	MS	-0.157	1.321
		SC	0.027	0.78
		MS	-0.074	0.534
		QUA	0.178	1.656
		IS	0.523	0.074
Gaussian Copula of Model.	7	SC	-0.157	0.074
		QUA	0.279	0.178
		SC	0.536	0.78
		MS	0.008	0.521
		QUA	-0.074	2.842
Gaussian Copula of Model.	8	IS	0.102	2.08
		SC	0.184	0.074
		IS	0.109	0.109
		SC	-0.074	0.074
		MS	0.027	0.055

Tests		Construct	Co-efficient	P value
		QUA	-0.157	0.176
		IS	1.047	0.074
		MS	-0.176	0.096
		QUA	-0.157	0.074
Gaussian Copula of Model.	9	SC	0.279	0.008
		MS	0.279	-0.176
		QUA	0.355	0.008
		IS	0.178	0.178
		MS	-0.678	0.074
		IS	-2.242	0.008
Gaussian Copula of Model.	10	SC	-0.074	0.178
		MS	0.027	0.012
		QUA	-0.157	0.277
		IS	0.027	0.42
		QUA	0.538	0.074
		IS	-0.055	0.43
Gaussian Copula of Model.	11	SC	-0.074	0.353
		MS	1.14	0.698
		QUA	-1.999	0.521
		IS	-0.157	2.76
		SC	0.178	0.931
		MS	-0.157	1.998
		QUA	0.027	0.074
Gaussian Copula of Model.	12	SC	-0.157	0.004
		MS	0.197	0.046
		QUA	-0.176	0.005
		IS	-0.176	0.064
		SC	-0.881	0.855
		MS	1.306	0.055
		IS	0.437	0.094
Gaussian Copula of Model.	13	SC	-2.45	0.018
		MS	0.008	0.008
		QUA	-0.055	0.024
		IS	-1.386	0.074
		MS	0.178	0.054
		QUA	-0.773	0.167
		IS	0.008	0.279
				0



Tests		Construct	Co-efficient	P value
Gaussian Copula of Model.	14	SC	0.09	0.094
		MS	0.027	0.074
		QUA	-0.074	0.178
		IS	0.178	0.074
		SC	0.096	0.349
		MS	-0.176	0.074
		QUA	-0.258	0.074
		IS	0.184	0.26

The fit indices for one- to five-segment solutions present a nuanced perspective, with AIC3 suggesting a five-segment solution while CAIC favours a two-segment solution. Despite AIC4 and BIC advocating for a two-segment solution, aligning with dense clustering observed by the EN criterion, MDL5 also supports this, although it tends to underestimate segment numbers. The analyses do not converge on a specific segmentation solution due to the discrepancy between AIC3 and CAIC and MDL5 aligning with AIC4 and BIC. While not reaching unanimous agreement, the overall findings suggest that unobserved heterogeneity is not at a critical level, emphasizing the robustness of the dataset analysis.

Table 9: Fit Indices for the one-to five-segment solutions

Information Criteria	1	2	3	4	5
AIC (Akaike's Information Criterion)	6678.62	3337.02	2248.12	2088.21	<b>1485.77</b>
AIC3 (Modified AIC with Factor 3)	6685.62	3352.02	2271.12	2119.21	<b>1524.77</b>
AIC4 (Modified AIC with Factor 4)	6692.62	3367.02	2294.12	2150.21	<b>1563.77</b>
BIC (Bayesian Information Criteria)	6716.00	3417.14	2370.96	2253.78	<b>1694.06</b>
CAIC (Consistent AIC)	6723.00	3432.14	2393.96	2284.78	<b>1733.06</b>
HQ (Hannan Quinn Criterion)	6692.53	3366.83	2293.82	2149.81	<b>1563.26</b>
MDL5 (Minimum Description Length with Factor 5)	6921.55	3857.59	3046.32	3164.04	<b>2839.23</b>
LnL (LogLikelihood)	-3332.31	-1653.51	-1101.06	-1013.11	-703.88
EN (Entropy Statistic (Normed))		0.91	0.88	0.87	0.86
NFI (Non-Fuzzy Index)		0.94	0.90	0.87	0.84
NEC (Normalized Entropy Criterion)		141.14	184.88	202.84	222.54

Notes: AIC: Akaike's information criterion; AIC3: modified AIC with factor 3; AIC4: modified AIC with factor 4; BIC: Bayesian information criteria; CAIC: consistent AIC; HQ: Hannan Quinn criterion; MDL5: minimum description length with factor 5; LnL: Log Likelihood; EN: entropy statistic; NFI: non-fuzzy index; NEC: normalized entropy criterion; na: not available; numbers in bold indicate the best outcome per segment retention criterion.

#### 4.9 Analysis

In this study, we explored the impact of investor characteristics on Ijarah Sukuk investment decisions in the context of Islamic banking. Our findings reveal a positive association between Shari'ah-compliant attitudes of investors and their inclination towards Ijarah Sukuk investments (H1). Importantly, Shari'ah-compliant features strongly correlate with Institutional Support, affirming the influence of institutional backing on investor characteristics (H2). Investors, particularly those valuing Islamic investments, warmly acknowledge the efforts of state banks, even with lower returns compared to conventional options (H2). A robust market structure is crucial for investors, as affirmed by the acceptance of H3, underscoring the significance of a comprehensive market structure for successful Islamic securities (Surachman et al., 2023). Contrarily, the rejection of H4 indicates that investors prioritize institutional support and market structure over the quality of underlying assets in their decision-making processes (Naeem et al., 2023). H5 is accepted, highlighting a

strong association between Shari'ah Compliance and Institutional Support (Delle Foglie and Keshminder, 2022), emphasizing the pivotal role of institutional backing for Shari'ah-compliant products. However, H6 and H7, concerning the mediation of cognitive biases and institutional support in certain relationships, are rejected. Notably, H8 is accepted, revealing that cognitive biases consistently strengthen the relationships between market structure, Shari'ah compliance, institutional support, and investment decision. The Theory of Planned Behavior (TPB) elucidates the connection between an individual's attitude, subjective norms, perceived behavioral control, and their intention to perform a behaviour, applicable to diverse contexts like health, finance, and the environment. In the context of the COVID-19 pandemic, TPB could elucidate why some countries implemented financial measures to alleviate economic challenges while others did not. Nations adopting such measures likely exhibit a positive attitude towards government intervention, perceiving it as necessary for economic control and equity enhancement. In contrast, countries refraining from such measures may have negative views, fearing ineffectiveness or harm, and expressing concerns about increased national debt and inflation. This highlights how TPB can be employed to understand the underlying attitudes shaping economic responses during a crisis.

The theory could also be used to explain why the problem of concentration of wealth has not been solved by the financial measures that have been implemented (Ibrahim et al., 2022). The theory suggests that intention is not the only factor that determines behaviour. Perceived behavioral control is also important, and it is possible that individuals and businesses do not believe that they have the control to change their financial situation (Ali et al., 2023). This could be due to several factors, such as the lack of access to credit, the high cost of living, or the lack of job opportunities. The ITPB is a useful tool for understanding the factors that influence individual behaviour (Ramdhani et al., 2022). It could be used to help countries develop more effective financial policies to address the economic problems that have been exacerbated by the COVID-19 pandemic.

## **5. Conclusion and Recommendation**

The success of Meezan Bank's 2002 Ijarah Sukuk issuance in Pakistan has significantly heightened awareness of Islamic finance, leading to a surge in demand for Shari'ah-compliant investment products and subsequent issuances of similar instruments. The bank's strong track record played a pivotal role in building investor confidence and contributing to the overall success of the sukuk issuance. In the context of economic development in Pakistan, a study focusing on the GoP Ijarah Sukuk initiated by Meezan Bank reveals valuable insights into the driving factors behind investor decision-making and economic growth. The research emphasizes the paramount importance of Shari'ah compliance, followed by market structure and the quality of underlying assets in the recently reorganized Islamic market of Pakistan. The study, a pioneering effort in the country, holds potential value for nations establishing Islamic banking cultures, offering beneficial insights for policymakers aiming to broaden the range of Islamic instruments available to investors. The research contributes to the theoretical understanding of how institutional support influences economic development, specifically in the context of GoP Ijarah Sukuk. By examining the specific mechanisms through which institutional support drives economic development, the study shed light on the importance of supportive structures such as Institutional Support, Market Structure and quality of underlying asset fostering economic growth. Islamic Economic System focuses on social well-being rather individual benefit. The countries where the culture is founded on strong religious basis, people prefer lessor benefit rather than Haram benefit. State is responsible to develop such structures, economic policies which cater each person living in society. So, every person can work and enjoy what he or she strives for. It will also help the economy to maintain the balance of wealth. The study also provide theoretical insights into how supportive structures, resources, and networks can spur economic growth, job creation, and sustainable development.

The practical implications of this study involves actionable recommendations to enhance institutional support and drive economic development. These include establishing dedicated support units, providing tailored assistance, educational programs, investment guides, and networking opportunities. Strengthening communication and transparency about the types of support, eligibility criteria, and expected outcomes is crucial to building trust and confidence among investors. Collaborative partnerships with regulatory bodies, industry associations, financial institutions, and government agencies are recommended to leverage resources and networks for comprehensive support. Capacity-building programs focusing on investment literacy, risk management, financial analysis, and Shari'ah compliance can empower investors and contribute to informed

decisions. Establishing practical feedback mechanisms, such as surveys and consultations, allows institutions to gather input, address concerns, and enhance the effectiveness of support programs.

The study acknowledges several limitations that may guide future research. Firstly, it concentrated on Ijarah Sukuk and the influence of institutional support on investor perspectives in the Islamic market of Pakistan, suggesting the need for extending the analysis to various Sukuk and investment products for a broader understanding. Secondly, the research utilized a questionnaire-based approach for data collection, emphasizing the potential for future studies to explore additional sources and qualitative methods to delve deeper into investor decision-making dynamics and the role of institutional support. Thirdly, the focus on Shari'ah compliance, market structure, and quality of underlying assets in influencing investor behaviour suggests potential for future research to incorporate other factors like macroeconomic indicators, global financial trends, and political stability. Lastly, while providing insights into the impact of institutional support on economic development, further research could delve into specific mechanisms and policies institutions can adopt to enhance their support structures, fostering sustainable economic growth through Shari'ah-compliant investments.

Islamic financial instruments play a pivotal role in linking a nation's GDP with assets available for asset-backed Sukuk structures, emphasizing the importance of aligning these instruments with overall national productivity to avoid resource overutilization and potential economic challenges. In Indonesia, the corporate sukuk market size lags significantly behind Malaysia, representing less than 10% of total private-sector capital-market debt outstanding. Despite a 60% decrease in new Sukuk issuance in 2020, the potential for expanding the corporate Sukuk market is substantial, contingent on addressing structural barriers. The research underscores the crucial role of "institutional support" in the Pakistan financial sector, highlighting the need for Central Bank to lead structural changes in collaboration with other national institutions, public and private banks, and advocating for the complete elimination of the conventional sector, both domestically and internationally.

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## **Appendix**

### **Role of Institutional Support in the Economic Development: Investor Perspective. A Case of GoP Ijarah Sukuk.**

Dear Respondent,

We are humbly inviting you to partake in a research survey with regards to exploring and validating various confidence-building measures. We assure you that your answer will not be recognized with you personally. This research is purely academic and any information given will be used only for our research purpose. We pledge the confidentiality of the information given.

The completion of this survey takes about 10–15 minutes. We hope you will take few minutes of your valuable time to fill this questionnaire and return it to us. We are obliged to you.

Thanks, and best regards.

#### **Gender**

- Male
- Female

#### **What is your age?**

- 20– 29
- 30 – 45
- 46 – 59
- Over 60

#### **Educational Qualification:**

- Graduate
- Postgraduate

#### **Designation:**

- Corporate Manager
- Entrepreneur
- Director
- Portfolio Manager

#### **Experience**

- Less than 3 Years
- 5-10 Years
- 10-15 Years
- 15-20 Years
- More than 20 Years

#### **Investment Experience.**

- Beginner.
- Intermediate.
- Experienced investors.

#### **Religious Affiliation:**

- Practicing Muslim
- Non-Practicing Muslim
- Converted Muslim

#### **1. Shariah Compliance**

- Rate the importance of investing in Shariah-compliant assets in your investment strategy.
- Not important at all
- Slightly important
- Moderately important
- Very important
- Extremely important

Please indicate your level of confidence in identifying Shariah-compliant investment options.

- Not confident at all
- Slightly confident
- Moderately confident
- Very confident
- Extremely confident

To what extent do ethical considerations influence your investment decisions?

- Not at all
- Slightly
- Moderately
- Significantly
- Extremely

How frequently do you refer to Shariah guidelines when evaluating potential investments?

- Rarely
- Occasionally
- Sometimes
- Often
- Always

Please rate your level of familiarity with different types of Shariah-compliant investment products.

- Not familiar at all
- Slightly familiar
- Moderately familiar
- Very familiar
- Extremely familiar

## 2. Quality of Underlying Asset

Please rate the importance of conducting a thorough evaluation of the quality of underlying assets before investing in Sukuk.

- Not important at all
- Slightly important
- Moderately important
- Very important
- Extremely important

To what extent do you believe that the quality of underlying assets affects the risk and return profile of Sukuk investments?

- Not at all
- Slightly
- Moderately
- Significantly
- Extremely

How confident are you in assessing the quality and financial performance of the underlying assets backing Sukuk investments?

- Not confident at all
- Slightly confident
- Moderately confident
- Very confident
- Extremely confident

Please rate the level of due diligence you typically undertake to evaluate the quality of underlying assets before investing in Sukuk.

- Minimal due diligence
- Limited due diligence
- Moderate due diligence
- Extensive due diligence

- Comprehensive due diligence

Considering the potential risks associated with Sukuk investments, how important is it to you that the underlying assets are of high quality and meet stringent criteria?

- Not important at all
- Slightly important
- Moderately important
- Very important
- Extremely important

### 3. **Market Structure**

Please rate the importance of understanding the market structure of the Sukuk market before making an investment.

- Not important at all
- Slightly important
- Moderately important
- Very important
- Extremely important

To what extent do you believe that the market structure of the Sukuk market impacts the risk and potential returns of investments?

- Not at all
- Slightly
- Moderately
- Significantly
- Extremely

How confident are you in your knowledge and understanding of the market structure of the Sukuk market?

- Not confident at all
- Slightly confident
  - Moderately confident
  - Very confident
  - Extremely confident

Please rate the level of importance you assign to factors such as market liquidity, transparency, and regulatory oversight when considering investments in the Sukuk market.

- Not important at all
- Slightly important
- Moderately important
- Very important
- Extremely important

Considering the potential risks and opportunities in the Sukuk market, how important is it to you that the market structure is well-established and supports investor confidence?

- Not important at all
- Slightly important
- Moderately important
- Very important
- Extremely important

### 4. **Institutional Support**

Please rate the importance of having strong institutional support, such as regulatory bodies and industry associations, in the Sukuk market.

- Not important at all
- Slightly important
- Moderately important
- Very important
- Extremely important



To what extent do you believe that robust institutional support enhances investor confidence in the Sukuk market?

- Not at all
- Slightly
- Moderately
- Significantly
- Extremely

How confident are you in the effectiveness of regulatory frameworks and investor protection mechanisms in the Sukuk market?

- Not confident at all
- Slightly confident
- Moderately confident
- Very confident
- Extremely confident

Please rate the level of importance you place on the availability of reliable information, research, and market analysis provided by industry associations or reputable institutions in the Sukuk market.

- Not important at all
- Slightly important
- Moderately important
- Very important
- Extremely important

Considering the potential risks associated with investing in Sukuk, how important is it to you that there is a supportive infrastructure in place to facilitate efficient issuance, trading, and settlement processes?

- Not important at all
- Slightly important
- Moderately important
- Very important
- Extremely important

## **5. Cognitive Biases**

To what extent do you believe that cognitive biases can influence investment decisions in the Sukuk market?

- Not at all
- Slightly
- Moderately
- Significantly
- Extremely

How aware are you of cognitive biases that may affect your decision-making process when investing in Sukuk?

- Not aware at all
- Slightly aware
- Moderately aware
- Very aware
- Extremely aware

Please rate the level of influence cognitive biases have on your investment decisions in the Sukuk market.

- No influence at all
- Slight influence
- Moderate influence
- Significant influence
- Strong influence

To what extent do you actively try to mitigate the impact of cognitive biases on your investment decisions in the Sukuk market?

- Not at all
- Slightly
- Moderately

- Significantly
- Extremely

How important is it for you to seek external opinions or conduct thorough research to counteract potential cognitive biases when investing in the Sukuk market?

- Not important at all
- Slightly important
- Moderately important
- Very important
- Extremely important

## **6. Investment Decision**

Please rate the importance of conducting thorough research and analysis before making Sukuk investment decisions.

- Not important at all
- Slightly important
- Moderately important
- Very important
- Extremely important

To what extent do you consider the risk-return profile of Sukuk investments when making investment decisions?

- Not at all
- Slightly
- Moderately
- Significantly
- Extremely

How confident are you in evaluating the creditworthiness and financial health of issuers before investing in Sukuk?

- Not confident at all
- Slightly confident
- Moderately confident
- Very confident
- Extremely confident

Please rate the level of importance you place on factors such as the type of Sukuk, tenure, and pricing when considering Sukuk investment opportunities.

- Not important at all
- Slightly important
- Moderately important
- Very important
- Extremely important

Considering your investment objectives, how well do Sukuk investments align with your financial goals?

- Not well at all
- Slightly well
- Moderately well
- Very well
- Extremely well

## **7. Investor confidence in investing in Pakistan Ijara Sukuk and assess their perception of promised institutional facilities.**

Please rate your overall confidence in investing in Pakistan Ijara Sukuk.

- Not at all confident.
- Slightly confident.
- Moderately confident.
- Very confident.
- Extremely confident.

Are you aware of the promised institutional facilities associated with investing in Pakistan Ijara Sukuk?

- Yes
- No
- Maybe

How confident are you that the promised institutional facilities are provided?

- Not at all confident.
- Slightly confident.
- Moderately confident
- Very confident.
- Extremely confident.

How likely are you to recommend investing in Pakistan Ijara Sukuk to others?

- Very unlikely
- Unlikely
- Neutral
- Likely
- Very likely

How confident are you that the promised quality of underlying asset are provided?

- Not at all confident.
- Slightly confident.
- Moderately confident.
- Very confident.
- Extremely confident.

How confident are you that the promised market structure is provided?

- Not at all confident.
- Slightly confident.
- Moderately confident.
- Very confident.
- Extremely confident.

Which of the following the most important factor inclined you to invest in sukuk market.

- Shariah Compliance.
- Market Structure.
- Quality of Underlying Asset.
- Institutional Support.
- Cognitive Biases