Ethical considerations when conducting investment in Islamic Stocks Markets

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Ethical considerations when conducting investment in Islamic Stocks Markets

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Abstract

Stock Market have shifted investor's behaviour in conducting investments in Islamic Finance and taken form in adapting from traditional investing to modern digital form. The purpose of this study is to explore and analyze the impact of ethical considerations of fellow Malaysians in conducting their investment behaviour in the realm of Islamic Finance to explain how important ethics and Shari`ah compliances are. This research was conducted using factor analysis by applying the Principal Component Analysis (PCA) approach as a measurement model to measure the validity and the regression model for analysis and determining the relationships between factors that are implemented in this paper. The research findings on the insights of how Malaysians navigate through the complex stock markets are influenced by these factors, which are principles of investments, challenges faced and factors affecting performance towards risk profile. This research can provide essential information and obtain critical overview on the significance impact of investors in improving their decision-making process in developing the right strategy for investment behaviour in the future.

1 Introduction

Ethics has always been a factor in conducting investments throughout the century. For the past 30 years, the world had witness the emergence of Islamic Finance as a coherent system of thought and practice. (Ahmed, W.M, 2018) With such a fast growing and niche industry in the finance sector, investments towards Islamic finance had gained not just Muslim-majority region, but also has reached towards world-wide. Islamic financial products and services are anchored to a few principles, mainly Shari`ah compliance and Riba, which are the teaching of Holy Quran and Sunnah which prohibits the interest-rate profit. (Ahmed, W.M, 2018) According to 2017 Islamic finance outlook report by Standard and Poor's Global Ratings, a total of $1.52 trillion of asset gained just from year 2015 to the end of 2018. This shows that the demand in the Islamic market between this period is significantly high as it contributes to the development of Islamic market and also the United Nation's Sustainable Development Goals (UN SDGs).

Islamic finance can be even proved more of an importance where a phenomenal growth back in 2011 estimated reaching $1.3 trillion in the last five years, growing nearly 500% in assets-based in Islamic industry. (Ajmi, et al, 2014) argues that Islamic equity market way back was hindered by the lack of secondary market, preventing the market to reach out globally to different regions of the world. And so they conclude in conventional market tools to hedge against these risk to deal with cross market spillovers.

These statistics brings out innovations towards people nation-wide, especially Malaysians which are united from different races in that country. Based on the behaviour of the market trend, Malaysians often found culture and beliefs can influence how individuals makes economic decisions and investing decisions. (Mohamed Albaity, Rahman, M., 2012). Even though Islamic finance has revolutionized siginificantly and influenced Malaysian investors, some minority still stands for what they belief and thinks that the principles of Islamic way of doing investments do not affect their investing behaviour. Therefore this study aims to seek out the percentages of Malaysians in tackling their own investment portfolios in the Islamic markets with an analysis of : "How do Malaysians perceive the principles of Islamic investments and the factors affecting their decision-making in investing behaviour, and what methods do they implement to improve their portfolio even further?". With a survey/questionnaire conducted throughout this paper, responses are constructed into parts for research methodology, design sepcifications, implementation, evaluation, and conclusions. (Tahir et al., 2011)

2   Related Work

2.1 Principles when conducting investment in Islamic Finance

Principles is the key element to conduct any investments in Islamic Finance. They play a crucial role as Islamic bankers are driven to prohibit from dealing with interest in any activities. Islamic equity investments have Shari`ah (Islamic law) based principles screened that restrict investment in many industries and favor growth and small cap stocks. Therefore all Islamic finance activities, including investments, must comply with the principles and rulings of Shari`ah as interpreted by qualified Islamic scholars.

The Islamic finance is also guided by principles embedded in Shari`ah law, which prohibits certain activities such as gambling (maisir), and investing in business that are considered unethical or harmful. Islamic finance prohibits transactions that involve excessive uncertainty, risk, or speculation. These transactions that yield high uncertainty must have a clear and transparent structure with minimal ambiguity. Islamic finance also encourages investments that are in line with Islamic principles and values, therefore the need to avoid industries or activities such as gambling, alcohol, or weaponry. Through Islamic finance, these uncertainties could be

overcome by profit and loss sharing where investees and partnerships promotes and share the risks and rewards with full disclosure of information. (Wilson and Rodney, 1997)

(Rodney Wilson, 1997) explains that the implication of company gaining capital in Islam and the evaluation of the conduct market participants should be discussed beforehand to avoid criteria such as haram or halal investment. These include riba free bank deposits, investments in Islamic unit trusts and investment companies. Islamic finance prohibits the charging or paying of interest on loans and financial transactions, and must be structured in a way that avoids interest-based arrangements.

2.2 Challenges Faced by Malaysian Investors

Key challenges faced by many Malaysian investors today especially retail investors, have limited knowledge and understanding of financial concepts, investment products, and investment strategies. This lack of financial literacy can lead to poor investment decisions. (Albaity et al., 2012)

In addition, (Guiso et al., 2006 and 2008) argues that one's trust highly depends on his ethnic origin and religious background indicating the relationship between religion background, ethnic origin and risk taking behavior. Therefore, it will be interesting to know what relationship exists in Malaysia within its multi racial people along with various religious beliefs.

Indeed, in many situation people make investment decision by relying on their luck as well. They often take risk when the situation is more uncertain leading to high outcome. Since some people tries to fulfill their desire by the best possible outcome, therefore taking risk due to the expectation of higher returns, they often engage in speculative investments that can lead to significant financial gains or losses, highlighting the delicate balance between risk and reward in financial decision-making (Baruah et al,. 2018). Competition stands as conventional investment options may offer higher returns or more liquidity, as to making it challenging for Malaysians to endulge in Islamic investments due to its lack of competition. With this, the lack of competition lead to lower standardized benchmarks for measuring the performance of Islamic investments, as to nothing to compared with, making it difficult for Malaysian investors to assess their options. (Al-Sartawi, A.M.M, 2020)

2.3 Factors affecting Performance to Risk Ratio

Several factors affecting Malaysian to this day in Islamic investments are still the lack of awareness about Shari`ah principles, which can hinder their investment decisions and overall confidence in Islamic finance. All investments must adhere to Shari`ah principles, which limits their investment choices hence affecting returns significantly compared to conventional

investments. Second factors affecting performance to risk base could be liquidity of instruments. (Hassan Al-Tamimi, H.A, 2010) argues that many Islamic financial instruments are less liquidable and carry higher risk to lower performance potential. This can significantly impact their risk profile as investors have little knowledge on how to manage illiquidable assets.

Understanding these factors can help investors make more informed decisions and optimize their performance-to-risk ratios in Islamic investments. By doing this, investor's behaviour varies differently on various market sentiment and be able to manage their portfolios wisely. Often times investor's behaviour can lead to volatility, affecting the performance-to-risk ratio. Which is why market conditions also stands out as one of the factors for performance-to-risk ratio. Common conditions such as inflation, interest-rates flunctuations and market volatility can impact both performance and risk levels. (Mariadas et al., 2017 and Mustafa et al., 2015)

3   Research Methodology

3.1 Data Collection

To fulfill the research objectives, quanlitative and quantitative approaches will be used using a questionnaire technique to collect respondent data to measure how investors from Malaysia deal with their investment portfolio in Islamic Finance. This research was conducted upon Malaysian society using structured questionnaire through questions related to factors such as beliefs, opportunity to risk inspections, accessbility and transparency, and evaluation towards Islamic Finance.

3.2 Data Analysis

After the dataset is obtained, most of the data is processed by changing the variables measured into a Likert scale. In order to run factor analysis, data is required to be in numerical data instead of textual data. Therefore answers in the questionnaire are used to coded in numerical labelled as from 1 to 5(max). This requires SPSS format to run recoding text responses to run factor analysis. These methods are then used to indentify patterns of relationships between variables into smaller factors and strong values to determine retainable factors and variance explained by the factors in influencing behaviourial scores of investors. Factor analysis techniques also assist in reducing data complexity by identifying interrelated variables and will gain a better undertanding of the underlying structure of the data.

3.2.1 Factor Analysis

Factor analysis is used to validate the factor structure and aims to identify the factors that underlie the scale of questions in research papers to understand the internal structure and measuring instruments used to validate the process of seleting relevant variables. It also evaluate data quality, extract factors to easy assess, and to measure instrument validity

(Andersen et al., 2017). By looking at the interpretation of the results and hypothesis helps researchers in several ways that will provide higher control and confidence level in designing and testing models as to determine the relationship between variables and factors. In this paper, factor analysis provides factor loadings, communalities and variance explained by each factor.

By performing in SPSS module to run PCA, the resulting factors can be evaluated and assessed to understand how well the factors explain the variation in the data by involving the assessment of the factor coefficients which indicate how strong the contribution of the variables to each factor and provide a deeper understanding of the factor structure of the questionnaire scale. Varimax factor rotation will be applied to facilitate factor interpretation by identifying the factors that underlie the relationship between variables so that it can overcome the problem by rotating the factors in the factor space to get a high loading load. (Marsh et al., 2014)

3.2.2 Statistical Method

The Kaiser-Meyer-Olkin (KMO) statistic and Bartlett's Test of Sphericity are both used in the context of factor analysis to assess the suitability of data for such analysis. The KMO statistic measures the adequacy of sample size, with values ranging from 0 to 1; a KMO value closer to 1 indicates that factor analysis may be appropriate, while values below 0.5 suggest that the data may not be suitable. Bartlett's Test of Sphericity tests the null hypothesis that the correlation matrix is an identity matrix, indicating that variables are unrelated; a significant result ($p < 0.05$) suggests that the variables are correlated enough to perform factor analysis. Together, these tests help determine whether the data structure is appropriate for identifying underlying factors.

3.2.3 Statistical Hypothesis Test

By conducting PCA in SPSS, the first matrix to form any data table is displated in correlation coefficients between the variables found in the questionnaire. A simple correlation matrix is needed to provide a comprehensive overview of the relationships among them. Each cell in the matrix represents the correlation between two variables, typically ranging from -1 to 1. A value of 1 indicates a perfect positive correlation, meaning that as one variable increases, the other also increases; a value of -1 indicates a perfect negative correlation, where one variable increases as the other decreases; and a value of 0 suggests no correlation. Correlation matrices are commonly used in exploratory data analysis, allowing researchers to quickly identify patterns, relationships, and potential multicollinearity issues among variables, which can inform further statistical analyses or modeling approaches. After validating the matrix, KMO and Barlett's test that includes sampling measurement and estimated Chi-square test are used to test the relationship between categorical variables associated with the model factor. These are to support and prove the interpretation and validity of the proposed model are related in a way. Thus, PCA and Chi-square test work simultaneously in factor analysis to validate the factor model and evaluate the relationship between the variables by distributing of frequencies in data observation.

3.2.4 Principal Component Analysis

Principal Component Analysis (PCA) and Factor Analysis (FA) are both multivariate statistical techniques used to reduce data dimensionality and identify underlying structures. PCA is a statistical method used to reduce the dimensionality of a dataset while retaining as much variability as possible. Principal Component Analysis (PCA) is a dimensional reduction technique used to identify patterns in data and reduce its complexity while preserving as much variance as possible. In PCA, the data is transformed into a new set of variables called principal components, which are linear combinations of the original variables. PCA mainly focuses on maximizing variance explained by the components and transforms the original variables into a set of uncorrelated components. It does not assume an underlying structure or latent variables. PCA uses eigenvalue decomposition of the covariance matrix to find principal components that capture the most variance. The components in PCA represent combinations of original variables that explain variance to interpret data. Variables such as Communalities, variances and component matrix.

3.2.5 Variables output and interpretation

Communalities represent the amount of variance in each original variable that is accounted for by the extracted components. High communalities indicate that a significant portion of the variable's variance is captured by the components, suggesting that the variable is well-represented in the PCA model. (Waterman, A.S., 1988)

Variances refer to the amount of variance explained by each principal component. The first component typically explains the most variance, followed by the second, and so on. The eigenvalues associated with each component quantify this variance, allowing researchers to determine how many components to retain based on the cumulative variance explained. (Searle et al., 2009)

The **component matrix** displays the loadings of each original variable on the principal components. These loadings indicate the strength and direction of the relationship between the original variables and the principal components. A higher loading (either positive or negative) suggests that the variable contributes significantly to that component. By examining the component matrix, researchers can interpret the underlying structure of the data and identify which variables are most influential in defining the principal components. (Borgognone et al., 2001)

4   Design Specification

All specifications requirements for investing behaviour in Islamic finance must include a comprehensive model called 'Islamic Finance Investment Model'. The model is incorporated in Islamic finance for any investing behavioural and it serves as main root of principles for compliances and regulations. The model first adopts two main concept which is widely known

as the compliance with Shari`ah principles and the prohibition of interest (*RIBA*). The model implemented is run by the governance and oversight over Shari`ah Board to establish independent oversight. The implementation is to form Shari`ah boarding where they compromise qualified Islamic scholars to oversee the compliance. This is to provide transparency over the Islamic boarding to maintain clear reporting such as detailed reports of investment activities to stakeholders.

Ethical considerations is one of the model's principle where it is designed for social responsibility and environmental responsibility. The implementation is to consider promoting social welfare at the same time to positive environmental impact. This is where due to projects focusing on positive impacts such as healthcare, educations and porverty alleviation, and at the same time stays within sustainable and environmental friendly. The reward-based outcome of the model for Islamic finance can be measured using risk-to-performance measurement. Tools to mitigate risk is used for Islamic risk management in terms of managing any associated risk with investments. Companies with high profile and stable financial performance can be easily assessed to calculate financial returns, such as regularly evaluating ratios such as profitability ratio, ROI, or even growth potential gain in the future.
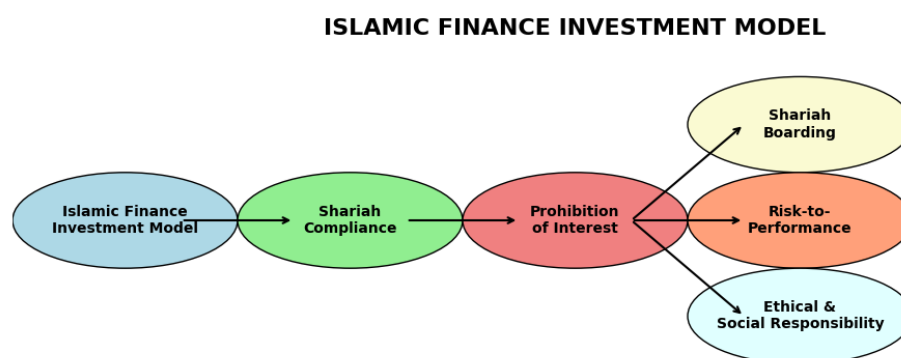
Figure 1 : Islamic Finance Investment Model

5 Implementation

In the implementation process, the survey data is obtained in from Google Docs., where the survey is prepared and sent through emails and invitations. Google Docs also provides responses summary and can be downloaded and viewed in excel sheets for data cleaning. In order to achieve expected results and prepare for statistical analysis using Principal Component Analysis(PCA) method as the main approach for assessing measurement models and determining the relationship between variables. Correlation Matrix to analyse factor loading, communalities then explains the variance, which implies how well the variables are explained by the factors.

The purpose of PCA is to test and validate measurement models that have been designed previously based on research hypotheses to provide a better understanding of the suitability of the next measurement model, namely Factor Analysis. PCA produces various outputs that provides an indication of the extent to which items in a scale are correlated with a score between 0 to 1 where a high value indicates a satisfactory level of internal reliability, and a low value indicates a disatisfactory level. After the data is considered reliable, the data will be processed using the statistical factor analysis method to identify patterns and structures in data studied. The main objective is to see the relationship between the **most representative variables** and **identified factors** to understand the underlying structure of the dataset. The evaluation includes several stages, namely:

- Performing Correlation Matrix to summarize the relationship between multiple variables. Correlation Matrix serves as a powerful tool for data analysis to aid in understanding and interpreting relationships in a dataset by indicating relationship whether it is positive or negative values, and identify which variables are mostly strongly correlated.
- Performing the Kaiser-Meyer-Olkin suitability index (KMO), which is an index to measure the fit and suitability of data for factor analysis with values ranging from 0 to 1 and high values indicating better suitability for factor analysis. Bartlett's Test is also used to test the basic assumption in factor analysis that the correlation of the variables is not a null hypothesis or does not have a correlation between tests.
- Extracting Communalitiles to represent the proportion of each variable's variance. They indicate how well factors are taken into account for variance in all variables, with higher values stating larger portion of the variable's variance is explained by the related factors, and vice versa.
- Measuring Eigenvalue in the scree plot which aims to determine the number of significant factors in the dataset. The stage helps to aid researchers in determining the number of factors to be used in factor analysis.
- Performing Component Matrix to display the factor loadings, which then can represent the correlations between the original variables and the extraction values. Each value indicates how much a variable can contribute to related factor, in helping to identify the structure and relationships between the variables in the dataset.
- Rotation by using Varimax which is a factor rotation to obtain a clearer and interpretable factor structure. The main goal of Varimax is to maximize the separation between the factors, thus making the factors more independent from one another.

Factor analysis plays an important role in revealing organised structures in complex data and helping to understand the relationships between variables to provide clear insight into the factors that significantly impact the investment behaviour in Islamic finance.

6 Evaluation

6.1 Correlation Matrix

The Principal Component Analysis(PCA) approach is carried out for the measurement analysis method by carrying out further testing and checking whether the observed variables have a relationship with the related factors. Since they are multiple variables, it is hard to identify relationships between each variables. Therefore a correlation matrix is performed to identify this relationship, which varies upon either *strongly correlated* or *weakly correlated*. This help to guide the study into further analysis and perform factor analysis.

Table 2 : Result of Correlation Matrix

	Var(1)	Var(2)	Var(3)	Var(4)	Var(5)	Var(6)	Var(7)	Var(8)
Var(1)	1.000	0.284	0.110	0.138	0.067	-0.061	-0.120	0.154
Var(2)	0.284	1.000	0.241	0.261	0.008	0.153	0.026	0.154
Var(3)	0.110	0.241	1.000	0.325	0.163	0.221	0.076	0.100
Var(4)	0.138	0.261	0.325	1.000	0.208	0.177	0.0.97	0.368
Var(5)	0.067	0.008	0.163	0.208	1.000	0.015	0.013	0.139
Var(6)	-0.061	-0.153	0.221	0.177	0.015	1.000	0.035	0.052
Var(7)	-0.120	0.026	0.076	0.097	0.013	0.035	1.000	-0.20
Var(8)	0.154	0.154	0.100	0.368	0.139	0.052	-.020	1.000

In Table 2 shows the strength and direction of relationships between pairing of variables. Running through diagonally, value (1.0) represents the correlation of each variables compared to itself, which naturally comes as a value of 1, always. Correlation values range from -1 to 1, as indicated below:

1) Positive Correlation (value close to 1) indicates a positive value where, when one variable increases will tend to affect the other variable to increase as well.

2) Negative Correlation (value close to -1) indicates a negative value where, when one variable increase, will affect the other variable to decrease.

3) No Correlation (close to 0) indicates that any value near 0 suggest that little to no linear relationship between the paired variables.

Variables 4 and 8 have a correlation of 0.368 indicating a moderate positive relationship. This mean that whenever variable 4 increase in value, variable 8 will follow to increase in parallel correlation. Vice versa, variable 3 and 7 has a correlation of 0.076 suggesting that a very weak relationship, where one value would likely to increase and the other to decrease. Variable that has close to no relationship, near 0 would be such as variables 5 and 7, indicating that two paired variables has no linear relationship to each other.

6.2 Statistical Analysis

Factor analysis is carried out to explore the basic structure of the variables in the dataset and before conducting factor analysis a Kaiser-Meyer-Olkin (KMO) measurement calculation is carried out which aims to assess the suitability of the data for factor analysis by measuring the proportion of variance in the observed variables with KMO values ranging from 0 to 1 and acceptable level > 0.60 (Kaiser, 1974). Bartlett's test is carried out to determine whether the

correlation matrix is significantly different from the identity matrix with a significant acceptable level p <0.05 indicating that the variable is suitable for factor analysis (Bartlett, 1954).

The KMO (Kaiser-Meyer-Olkin) measurement of sampling adequacy is a statistic used to assess the suitability of data for factor analysis. It ranges from 0 to 1, with higher values indicating that the data is appropriate for factor analysis.

Table 3: Result of KMO and Bartlett's Test

KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequancy	0.643
Bartlett's Test of Sphericity (Approx. Chi-Square)	58.361
Df	28
Sig.	<0.001

In Table 3, value shown above (0.643) for KMO which falls in between the segment of $0.5 < KMO < 0.7$, indicates that the sampling adequancy is moderate. This also indicates that data is suitable for factor analysis, but still a possibility of causing error in the application of analysis. By examining the correlation matrix and considering the factors that contributes to the data collection to improve the analysis, we take a look at Bartlett's test of sphericity and the p-values. In the table shows that test statistic of Chi-Square of (58.361), and a p-value that associated with the Bartlett's test statistic is less than 0.001 suggests that the result is highly significant. The correlation matrix in the dataset differs significantly from identity matrix and strongly supports the conclusion that the variables are related and is appropriate to run factor analysis in the dataset.

Next, communalities is carried out to represent the proportion of each variable's variance that can be explained by extracted factors, 'Extraction'. The values provide insights into how much of the variance in each variable is accounted for by the factors identified in the analysis.

Table 4: Result of Communalities

	Initial	Extraction
Var (1)	1.000	0.640
Var (2)	1.000	0.617
Var (3)	1.000	0.473
Var (4)	1.000	0.604
Var (5)	1.000	0.583
Var (6)	1.000	0.524
Var (7)	1.000	0.385
Var (8)	1.000	0.473

Extraction Method : Principal Component Analysis

In Table 4, initial communalities of (1.0) are set as standard value for all variables. This is to assumed that each variables is perfectly explained by the factors in the questionnaire provided, indicating all variance is accounted for in relation to the factors. Extracted communalities are the recalculation of the actual data based on the identified factors involved. Each values indicates the proportion of the varible's variance and is explain through percentage values. For example, the first variable has an extraction communalities of 0.640, which means 64% of its variance is explained by the factors, and 36% of the remaining is unexplained.

Variables 1, 2 and 4 shows a strong communalities value, indicates that large portion of the variable's variance is explained by the factors, suggesting that the variables are well-presented by the PCA. Variable 7 which falls below 40% margin indicates that variable's variance is not explained by the factor. This could be explained by the variable may not fit well within the factorial structure or it could be meant for a different measurement.

Table 5: Result of Total Variance Explained

Component	Total	Ini. EigenValues of Var (%)	Cumulative (%)	Total Extraction	Sum of Var. Squared(%)	Loadings Cumulative (%)
1	2.021	25.260	25.260	2.021	25.260	25.260
2	1.210	15.121	40.382	1.210	15.121	40.382
3	1.069	13.367	53.749	1.069	13.367	53.749
4	0.942	11.780	65.529			
5	0.892	11.145	76.674			
6	0.695	8.687	85.361			
7	0.626	7.822	93.182			
8	0.545	6.818	100.00			

Extraction Method : Principal Component Analysis

In Factor Analysis, total variance refers to the overall amount of variability in the dataset. It can be explained by factors extracted during the analysis and is assessible through eigenvalues, which represent amount of variance accounted to each factor.
Table 5 can be explained:
- Component 1 can be explained by capturing the most significant pattern in the dataset, featuring the highest eigen values of variance of 25.260%.
- Component 2 and 3 further adds more information, capturing additional variance not explained in Component 1. When cumulative of (53.749%) is hit on the third component, over half of the variance in the dataset is explained.
- Component 4 to 8 have eigenvalues less than 1. This indicate that each components explains less variance than the individual original variable. Therefore it has no value and are not retained or considered in the final PCA model.
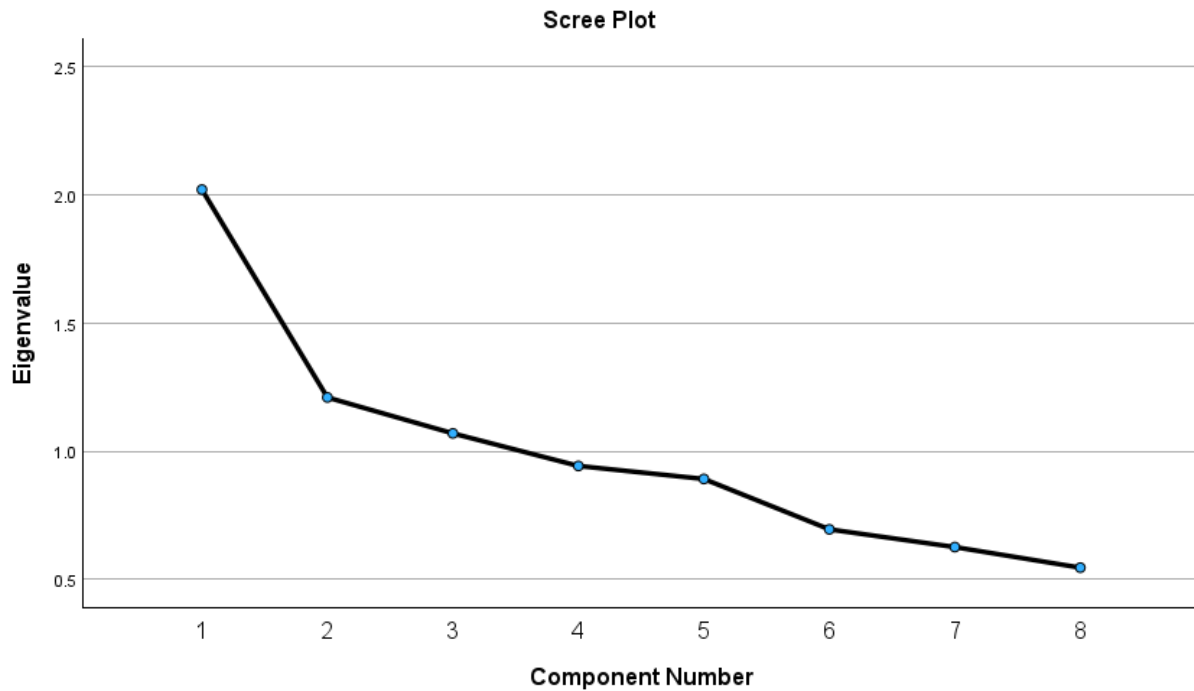
Figure 6: Scree plot showing the Eigenvalue to Component Number

The scree plot in Figure 6 displays the eigenvalues of each factor with the x-axis showing the component number, while the y-axis shows the eigenvalues of each factor. Scree plots are used to help determine the number of significant factors to be extracted in factor analysis and this plot shows a slight curve downwards where the eigenvalues starts to decline slowly. Components 1 to 3 indicates a higher value of eigenvalue (>1), while lower eigenvalue (Component 4 to 8) will be ignored because they do not have substantial interpretation in research value.

Table 7: Result of Component Matrix

	Component 1	Component 2	Component 3
Var (1)	0.406	-0.662	-0.190
Var (2)	0.591	-0.176	-0.487
Var (3)	0.618	0.271	-0.137
Var (4)	0.745	0.108	0.193
Var (5)	0.363	0.028	0.671
Var (6)	0.363	0.489	-0.392
Var (7)	0.090	0.608	0.090
Var (8)	0.546	-0.215	0.359

Extraction Method : Principal Component Analysis (a. 3 components extracted)

Table 7 shows the correlations between original variables (Var 1 to 8) and principal components (Component 1, 2 and 3). The matrix shows values that indicates how strongly a particular variable is correlated with a given component. For Component 1, variable 3 and 4

have highest positive loadings, indicating they are most strongly associated with the related component, while variable 7 has the lowest loading. Component 2 has a wide variable score between Var 1 (-0.662) and Var 7 (0.608). The respective loadings have both positive and negative value, suggesting that these variables are strongly associated with Component 2 but in opposite directions. While Component 3 has a relatively high loadings for both variables 5 and 8, indicating both variables contribute to Component 3 significantly.
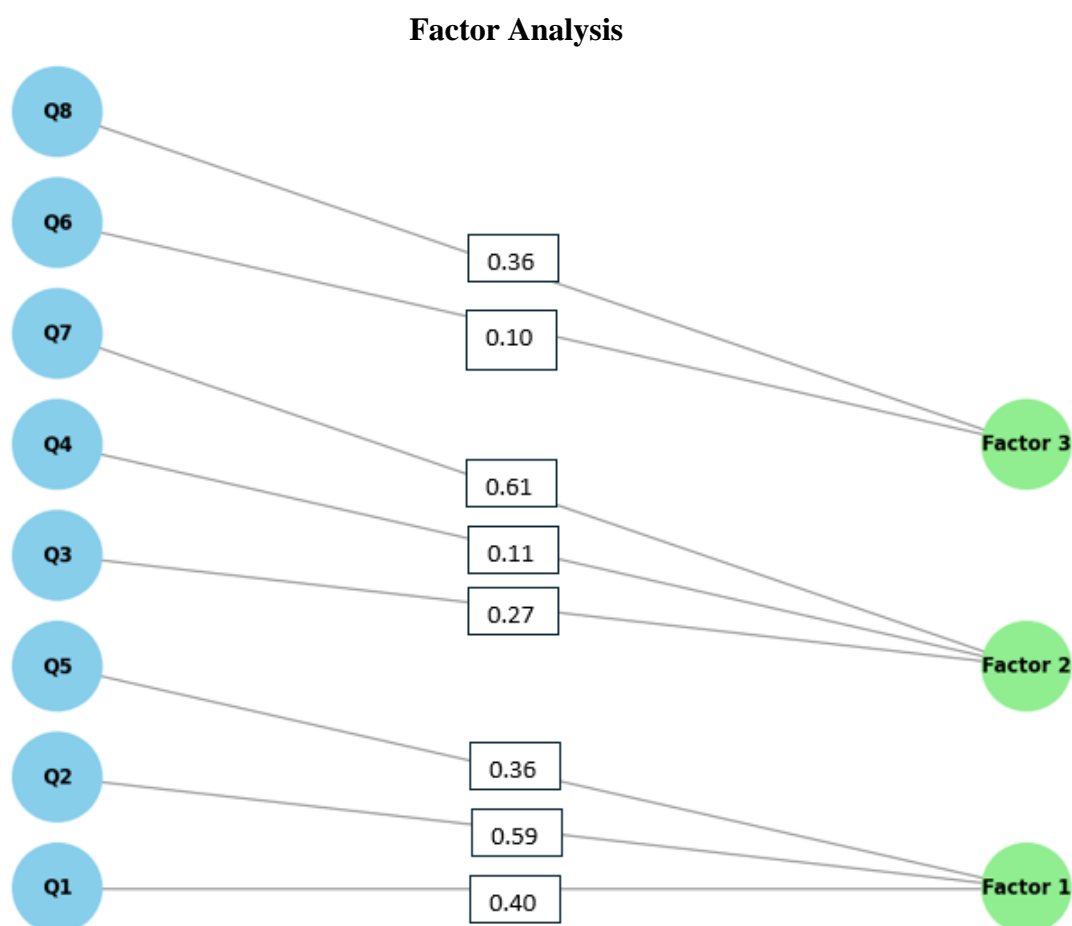
Factor Analysis

Figure 8: Rotated Factor Analysis using Varimax

In Figure 8 shows that the factors associated with the variables in the questionnaire related to the investment behaviour in Islamic finance. The three factors, namely principles when conducting investment in Islamic finance (Factor 1), challenges faced by Malaysian investors (Factor 2) and factors affecting performance to risk ratio (Factor 3). The value shown in the figure represents the relationship how well these variables fit into the responsive factor, indicating positive value shows the strong relationship for factor analysis. These variables provide crucial information related to factors that helps to understand investment behaviours and explain what the Malaysian standards are in Islamic finance.

- Factor 1 is explained by the loading of belief in ethical considerations, social reponsibility prioritization, and the level of importance for transparency in financial transactions in Islamic finance.

- Factor 2 is explained by the loading of assessibility of ethical compliances, the consideration of evaluation investment opportunity, and measurements taken when practicing invesment for transparency and accountability.
- Factor 3 is explained by the loading of guidance from scholars or advisors on how to investment decisions and the potential risk taken for exchanging investment to align with ethical behaviour.
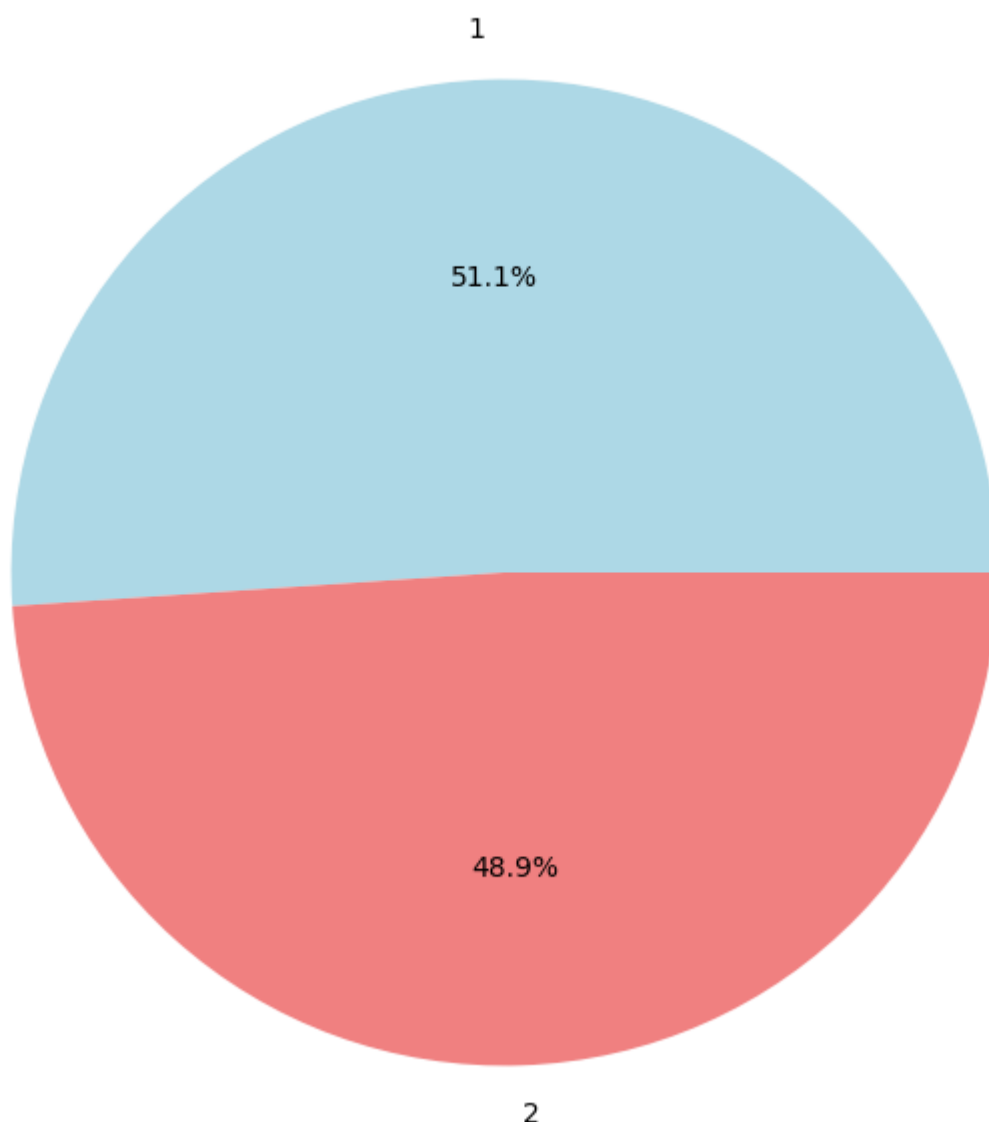
Figure 9: Pie-chart for Qualitative Responses

In Figure 9, based on the qualitative question asked in the survey, a pie-chart is drawn to show the percentage of the participants who voted for (Yes = 1 , No = 2). The question asked was: 'How important is it for you to align your investment decisions with ethical guidelines in Islamic finance? Please state your answer (Yes/No) following by the reason.' The result came back with nearly similar results between the two variables. A slight advantage towards participants who vote yes came out on top with just 2.2% difference. Based on the results,

many participants whom voted yes for the importance to align their investment portfolios were Muslims guided by the Islamic guidance. It is crucial for them as to ensure their investments are compliant with Shari`ah principles and do not contribute to activities that are considered unethical. Other states that it is important to align their investment decisions with ethical guidance and also be socially responsible and contribute for the greater good. On the other hand, participants whom vote no do share an opinion where they could not find the balance between financial returns and social responsibility in the Islamic finance.

6.3 Discussion

Principal Componenet Analysis (PCA) was carried out for the measurement model for the dataset to be analysed to show that each variable in the dataset had a good correlation with each other. From the correlation matrix, most of the correlations are close to zero, indicating that many pairs of variables do not have a strong linear relationship. This imply that each of the variable serves their own purpose to fit well independently and their relationships are unique and more complex. A variable of KMO (0.64) indicates a moderate correlation and sets an approval for continouos of factor analysis. Bartlett's test shows that the correlation matrix in the dataset has significant relationships among the variables. This can be proved by significant (Chi-square value of 58.361 and p-value is <0.001) indicates that the Chi-square value is statistically significant. Therefore it strongly supports the conclusion that the variables are related and the factor analysis is appropriate for the dataset.

The results of varimax rotation on factor analysis shows that it can extract all variables upon 3 different factors (principles when conducting investment in Islamic finance, challenges faced by Malaysian investors, and factors affecting performance to risk ratio) which can be explained by the variability in the data and has a positive weight value so that it shows strong relationship between variables and factors.

All three factors are confirmed by the 'Islamic Finance Invesment Model' that all factors aligned with the principles of Islamic finance. The first factor regarding principles in Islamic finance is very important where all transactions and payments surrounds the principles of Shari`ah. It is crucial for all Islamic transactions and business to be transparent and be responsible for the rules and regulations whenever they conduct activities or interact with any business regarding Islamic finance. Researchers propose to imply concepts such as risk sharing to emphasize on shared risk and rewards, at the same time promote fairness and equity (Bacha et al., 2015)

The second factor regarding challenges faced by Malaysian investors underline the importance of how Malaysian stands a majority in Islamic financial world. As Islamic finance starting to bloom, Malaysians are more encouraged to conduct and divert their investment portfolio towards Islamic finance. Relatively, challenges arised for Malaysians as market competition starts to propel in the Islamic finance sector compared to conventional finance, which may offer more unique and accessbile products, making it more attracting to customers than Islamic products. (Jawadi et al., 2014) Another challenge faced is a lack of understanding or awareness

among customers and consumers regarding Islamic finance principles and products, hindering their thought towards bearing such a risk to conduct any business in Islamic market. Researchers imply that promoting financial literacy programs that focus on Islamic finance principles to help improve understanding among consumers and business owners, leading to greater acceptance and utilizing Islamic financial products in a better way. (Rahim et al., 2016)

The third and last factor consider the factors affecting performance to risk ratio, and the discovery of how profits can manipulate how Malaysians behave in investments, has set a negative effect towards Islamic finance. On a large scale of popularity, the sole purpose of investment is to bring profits and gains in the shortest time period possible. The risk of bearing Islamic products and services often rotates around Shari`ah compliance, suggesting that any non-interest-rates related products are often a call-off for an investor point of view. Besides that, risks are often higher than usual as Islamic products are many times illiquidable. This is due to the technology development implied within Shari`ah principles that most of the products still trying to adapt to more advanced technology environment that operates efficiently and facilitate better product offerings to improve risk assessment.

7 Conclusion and Future Work

The purpose of this study is to analyse the investment behaviour of fellow Malaysians in Islamic finance through a survey/questionnaire methodology. This research uses factor analysis and principal component analysis (PCA) models to design specification for a general principal of Shari`ah Compliance, a framework within Islamic Finance Investment Model to answer the research question and achieve an objective by the end of the study. The result of this stidy reveals that there are 3 factors affecting the investment behaviour significantly in Malaysian culture, namely principles when conducting investment in Islamic finance, challenges faced by Malaysian investors and factors affecting performance to risk ratio. The findings of principles for Islamic investments falls within belief, ethical and social responsibility practices. They emphasize on the principles governing Islamic finance and play crucial role in shaping investment strategies and behaviour. (Kayode et al., 2012) The challenges faced by Malaysian factor offers a lack of awareness, limited product offerings and regulatory complexities that can hinder their participation in the Islamic finance market. Furthermode, factors that affecting performance-to-risk ratio can be explained by asset class diversification, market conditions, and Shari`ah compliance rules. Although from the results of this study argues that investors still hope that their investments still need to be maximized regardless of principles of Shari`ah compliance.

From these findings it can be concluded that by understanding the behavioural score of Malaysians on Islamic finance, investors must consider several factors that have been described in order to develop the right strategy in mind for Islamic finance in the future. These findings would theoretically contribute to the Islamic finance by strengthening the concept and literature of investment behaviour through the model. For future research several recommendations can be considered such as enhancing investor's education to bridge

knowledge gaps, at the same time expanding the range of Shari`ah compliance products. By improving regulatory frameworks surrounding Shari`ah compliance can help foster a more conducive investment environment for not only Malaysians but world-wide. Additionally, on-going research into the performance metrics and risk management strategies can be essential in the future to optimize investment outcomes and hopefully attract more investors to the Islamic finance sector in Malaysia.

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