

CHAPTER III

RESEARCH METHODS

A. Research Approach

Judging from its purpose, this research is including applied research because it is directed to obtain information that can be used to solve problems is to use a combined approach that is a combination of quantitative and qualitative approaches. The basic theory used in this research is the theory of economic growth using an institutional approach. A qualitative approach is used to dig deeper information; this is done to get more accurate information in determining the right combination of strategies.

B. Data

Data collection is carried out in a study that uses two types of data, namely primary data and secondary data. The primary data and secondary data used in this study are as follows:

1. Primary data

Primary data is data obtained directly from the object of research in accordance with the problem and objectives to be achieved from this study. In this study the primary data used in this study is to conduct interviews with academics and stakeholders. In addition, data was also obtained by distributing questionnaires to customers and the public.

2. Secondary data

Secondary data in the form of written documents and literature were obtained from the library (library research) and the field (field research) was obtained from relevant institutional documents. Therefore, the data sources used include sources of literature, documents and information. Through literature sources, secondary data is traced in the form of literature on various data about the condition of Islamic banking. This study uses more secondary data, namely data from Bank Indonesia, the Financial Services Authority, and publication reports from each Islamic bank.

This study uses regression analysis to panel data. The data used are yearly data from 2004 to 2018, by including eight members of Developing-8. The members are Bangladesh, Egypt, Indonesia, Iran, Malaysia, Nigeria, Pakistan, and Turkey.

C. Samples

To answer the third research objective, namely whether the D-8 organization has an influence on the economic growth of its member countries, eight D-8 member countries and eight OIC member countries that are not members of the D-8 will be used. The countries that are the objects of this research can be seen in Table 3.1.

Table 3.1.
Object of Research

No.	D-8 Countries	Non-D8 Countries
1	Bangladesh	Algeria
2	Egypt	Brunei Darussalam
3	Indonesia	Iraq
4	Iran	Kazakhstan
5	Malaysia	Kuwait
6	Nigeria	Morocco
7	Pakistan	Saudi Arabia
8	Turkey	Tunisia

D. Methods

Descriptive Statistics

To find out the economic development in each D-8 member country, descriptive-qualitative analysis method will be used. This analysis method is also used to strengthen the quantitative findings found in this study, so that quantitative empirical results will be the initial results that are then strengthened by descriptive qualitative methods. In addition, it is hoped that this method will be able to formulate ideal strategies and policies related to economic development in D-8 member countries.

Panel Regression

The data source for growth, export, human development index, population, and inflation is using World Bank data. The proxy for political stability is using political risk components that publish by international country risk guide (ICRG) data. The political risk has twelve components, such as government stability, socio-economic conditions, investment profile, internal conflict, external conflict, corruption, military in politics, religion in politics, law and order, ethnic tensions, democratic accountability,

and bureaucracy quality. In general, if the overall value is less than 50%, it can be categorized as a very high risk. If the range of values is between 50-60%, then it is categorized as high risk, the range is 60-70% as moderate risk, in the 70-80% range as a low risk, and in the 80-100% range as very low risk.

To examine the impact of export and political stability to growth is using panel regression. The mathematical equation proposed in this research is:

$$\text{Growth}_{it} = \alpha + \beta_1 \text{Ln_Exp}_{it} + \beta_2 \text{PolStab}_{it} + \beta_n Z_{it} + \varepsilon_{it}$$

Where:

$$Z = \beta_3 \text{HDI}_{it} + \beta_4 \text{Pop}_{it} + \beta_5 \text{Inf}_{it}$$

So, the model became:

$$\text{Growth}_{it} = \alpha + \beta_1 \text{Ln_Exp}_{it} + \beta_2 \text{PolStab}_{it} + \beta_3 \text{HDI}_{it} + \beta_4 \text{Pop}_{it} + \beta_5 \text{Inf}_{it} + \varepsilon_{it}$$

where:

Growth_{it} = economic growth of D-8 members;

Ln_Exp_{it} = amount of export from D-8 members;

PolStab_{it} = political stability index from D-8 members;

HDI_{it} = human development index from D-8 members;

Pop_{it} = population from D-8 members;

Inf_{it} = inflation rate -based on consumer price index- from D-8 members;

To estimate the parameter of the model using panel data regression. Several techniques can be used, such as First, ordinary least square. The second model is the fixed-effect model. Next, the third model is the random effect model. This research is using panel regression with a fixed-effect model because we assume that the intercept is not constant.

The technique of analysis to estimate the parameter of this research is by using a panel data regression. Several models can use, such as First, the pooled regression model. This model is one type of model that has constant coefficients, referring to both intercepts and slopes. For this model researchers can pool all of the data and run an ordinary least squares regression model. The second model is fixed effect model. The fixed effect model is the differences across cross-sectional units that can be captured in differences in the constant term and the intercept term of the regression model varies across the cross sectional units. In this model, α_j is the intercept term that represents the fixed country effect. The third model is random effect model. In the random effect

model, the individual effects are randomly distributed across the cross-sectional units and in order to capture the individual effects, the regression model is specified with an intercept term representing an overall constant term. On this research is using panel regression with fixed effect model, because we assume that the intercept is not constant (Hiestand, 2005).

There are several steps in this research, such as: first, run the estimation using the fixed-effect model. Second, do the Chow-test to choose between pooled ordinary least square or fixed-effect models. Third, do the Hausman-test to select between fixed effect model and random effect model.

Panel Regression with Dummy Variable

To answer the third research objective related to the impact of the D8 organization on the economic growth of its member countries, a panel regression with dummy variables will be used. Adding eight OIC countries that are not members of D8 does the dummy variable. It aims to determine whether there are differences in economic growth between D8 member countries and non-D8 member countries. The mathematical equation proposed to answer the purpose of this study is:

$$\text{Growth}_{it} = \alpha + \beta_1 \text{D_members}_{it} + \beta_2 \text{Pol_Stab}_{it} + \beta_3 \text{Ln_population}_{it} + \beta_4 \text{Ln Export}_{it} + \beta_5 \text{HDI}_{it} + \varepsilon_{it}$$

Where:

Growth_{it} = economic growth of D-8 members;

D_members = dummy variables for members countries, which:

0 : non-D8 member countries

1 : D8 member countries

PolStab_{it} = political stability index from each countries;

Ln_Pop_{it} = population from each countries;

Ln_Exp_{it} = amount of export from each countries;

HDI_{it} = human development index from each countries;