

ISLAMIC BANKING FOR THE POOR:
THE DETERMINANTS OF TOTAL *ZAKAT*
COLLECTION FROM ISLAMIC BANKING
PERSPECTIVE

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DECLARATION

We hereby declare that:

- (1) This undergraduate research project is the end result of our own work and that due acknowledgement has been given in the reference to ALL sources of information be they printed, electronic, or personal.
- (2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institute of learning.
- (3) Equal contribution has been made by each group member in completing the research project.
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DEDICATION

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LIST OF ABBREVIATIONS

BAZ	Badan Amil <i>Zakat</i>
BIMB	Bank Islam Malaysia Berhad
BLUE	Best Linear Unbiased Efficient
CFPA	China Foundation for Poverty Alleviation
CPI	Consumer Price Index
DIB	Dubai Islamic Bank
IDB	Islamic Development Bank
JB	Jaque-Bera
LAZ	Lembaga Amil <i>Zakat</i>
LTH	Lembaga Tabung Haji
MYR	Malaysia Ringgit
ND	Natural Disaster
NGOs	Non-Government Organization
Obs	Observations
OLS	Ordinary Least Square
PPZ	Pusat Pungutan <i>Zakat</i>
R^2	Coefficient of Determination
RCSC	Red Cross Society of China
SOL	Standard of Living

TA	Total Assets
TI	Total Income
UTAR	University Tunku Abdul Rahman
VIF	Variance-Inflating Factor

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PREFACE

Islamic banking defined as a banking system that complies with Islamic law which is also known as Shariah law. Islamic banking has played a major role in Malaysia since 1983. Islamic banking combined with *Zakat* is a tool to provide *Zakat* funds for the poor in order to reduce poverty. *Zakat* is an obligation for every Muslim to pay a specific portion of their wealth to the poor. Thus, the main idea of this study is to identify the determinants that affect total *Zakat* collection from Islamic banking perspective. The motivation factor to carry out this study is because there are not many researches that have been conducted on total *Zakat* collection which focuses more on Islamic banking perspective.

Generally, there are four important variable factors that have close linkage with total *Zakat* collection, which are total income, total assets, standard of living and natural disaster. This study includes four of these determinants to examine whether they are significantly affecting the total *Zakat* collection. In short, this study further discuss on the research background of Islamic banking, research objective, determinants and its effect, data analysis, empirical findings and implication as well as the recommendation.

ABSTRACT

Zakat is a type of Islamic donation that aims to help the poor and needy Muslim's and contributes to economic growth. This study will determine how Islamic banking contributes to *Zakat*. Islamic banking had done well compared to others during financial crisis. In addition, previous researchers only done their study based on wide perspectives (from country perspective) and the result might be unable to apply to a narrow perspective like company. Islamic banking is an Islamic financial institution in Malaysia and paying *Zakat* is an obligation of Islamic banking. This study had included the independent variables that were omitted by previous researchers like natural disaster, standard of living, total income and total assets.

CHAPTER 1: RESEARCH OVERVIEW

1.0 Introduction

In chapter one, this research study the overall background of national's Islamic banking as well as Malaysia's Islamic banking. Besides, this research further study on the *Zakat* in Islamic banking and Total *Zakat* Collection in Malaysia. The organization of this chapter is as follow: Research Background, Problem Statement, Research Objectives, Research Questions, Hypotheses and Significance of Study, and finally Chapter Layout.

1.1 Research Background

According to Iqbal and Molyneux (2005), they would never hear about Islamic banking. However, A.Mokhtar, Abdullah, Alhabshi (2008) stated that the Islamic banking has existed since the seventies and it grows tremendously after the seventies. During the early 1970s, the first commercial Islamic bank was established after the launch of the First International Conference on Islamic Economics organized by King Abdul Aziz University in Makkah, Saudi Arabia, Dubai Islamic Bank (DIB) in the United Arab Emirates followed by the establishment of the international Islamic Development Bank (IDB) in Jeddah, Saudi Arabia. It establish some other types of commercial Islamic financial institution such as private and semi-private in other countries around the world such as Egypt, Sudan, Kuwait and Bahrain. The establishment of Islamic banking itself helped more efficient undertaking in the financial intermediation.

Islamic banking is not operated only in Arab and Muslim countries but it has also extent their operation to Indonesia, Malaysia, Bahrain, Europe and American. Now, there are around 240 Islamic banks which are operating Islamic banking and may contain total combined assets which exceed the amount of \$200 billion over 48 countries (Hawary, Grais and Iqbal, 2004). In recent years, there are many investors from the world's leading conventional financial centers which include London, New York, Hong Kong and even Western countries have also started to practice Islamic banking and significantly increase their consideration for investing in Islamic banking products (Iqbal and Mirakhor, 2013).

1.1.1 Islamic Banking in Malaysia

A study by Sufian (2009) stated that in 1963, Malaysia government established the Pilgrims Fund Board or *Lembaga Tabung Haji* (LTH) which provided a saving mechanism for Malaysian Muslim to save their money to cover the expenses of performing the annual pilgrimage in Mecca and Medina. The Islamic banking product is also available for the non-Muslim. *Lembaga Tabung Haji* is the first Islamic financial organization in Malaysia and also a foundation for Islamic banking sector. Besides, the author also stated that there is special setting for banking system in Malaysia where the conventional banks are allowed to provide Islamic banking product along with the conventional products also called dual banking system in banking system. Malaysia is the first national executive dual banking system over the world. In addition, there are other researchers who are Mokhtar, Abdullah and Alhabshi (2008) whom also stated that the first Islamic bank is Bank Islam Malaysia Berhad (BIMB) that was established in July 1983. BIMB is the full-pledged Islamic bank under the Banking Act 1983. BIMB's business has been growing stronger and stronger over the years since the population of Muslims in

Malaysia keep increasing, it will lead BIMB to have more demand from customers. From the initial capital of only RM 80 million it rose up to RM 2.5 billion as at December 2010 and they also claimed that the government allowed the conventional bank to provide Islamic banking services or “Islamic window” and the dual banking system can improve performance to efficiently enhanced the Islamic banking industry and also lead the banking industry to become more competitive. In Malaysia, the number of branches of BIMB had more than 100 and the number of self-services terminals such as Automated Teller Machine had exceeded 1000 (Bank Islam Malaysia). In 12 November 2009, there were 16 Islamic banks in Malaysia. 10 of the banks were domestic Malaysia Islamic banks. However, the other 6 were the subsidiary of foreign Islamic banks. The Islamic banks are as follow: Affin Islamic Bank Berhad, Alliance Islamic Bank Berhad, AmIslamic Bank Berhad, CIMB Islamic Bank Berhad, Hong Leong Islamic Bank Berhad, Maybank Islamic Berhad, Public Islamic Bank Berhad, Asian Finance Bank Berhad, HSBC Amanah Malaysia Berhad and others. (Bank Negara Malaysia, 2013)

1.1.2 Introduction of *Zakat*

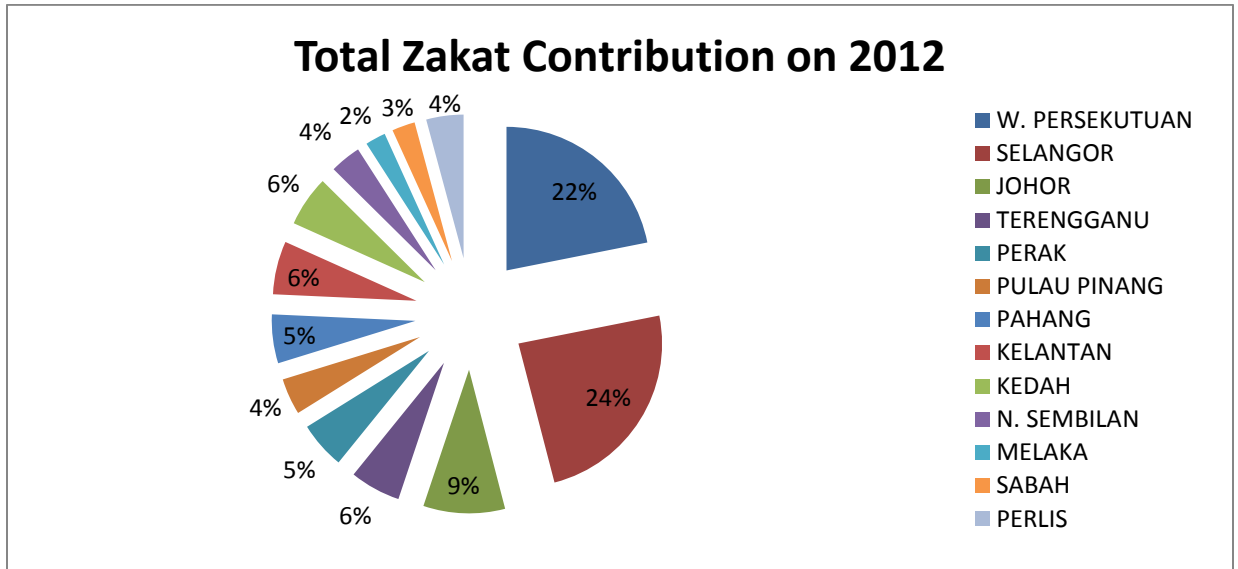
In Islam, every man is required to give the needy a specified portion of his wealth (Sarea, 2012). This contribution is called *Zakat*, a compulsory payment which is levied on certain categories of wealth of the Muslim members. *Zakat* is literally means of “growth”, “purification” as well as “increase”. The importance of *Zakat* is that it is one of the five pillars which is related to the wealth and welfare of the society. *Zakat* is usually around 2.5 per cent depending on an individual’s wealth. The principle of *Zakat* is to collect funds from the rich and give it to the poor. Therefore, *Zakat* is essential as a financial tool to narrow the gap between the rich and the poor in order for the

poor to break the cycle of poverty and hence improve their standard of living (Wiliasih et al, 2011).

According to A.Bakar and A.Ghani (2011), *Zakat* is an act of worship as a symbol of Islamic economy justice in which they believe that wealth is a gift from *Allah*. This is a financial obligation for Muslims in order to perform prayers as stated in the *Holy Quran*. A proper and transparent distribution of *Zakat* is required to ensure the equitable distribution of wealth in the Muslim community. However, *Zakat* have its practices and management that are different from other countries. In the early Islamic states, *Zakat* funds are being accommodated and managed by different states.

In Malaysia, Selangor a progressive state that contributes the highest amount of total *Zakat* collection has an amount of RM 451 million; this totally exceeded the target set (*Pusat Pungutan Zakat*, 2013). Among the existing theoretical studies on the total *Zakat* collection by the state, there is little empirical research done on the influential factors that play significant role in determining the *Zakat* contribution in Islam community. Therefore, this research aims to study the factor variables affecting the Muslim's motivation for paying *Zakat*. The findings of this study are explaining the relevant determinants from different aspects that influence the *Zakat* contribution in order to boost the *Zakat* collection.

Graph 1: Total Zakat Contribution from each States of Malaysia



Source: *Pusat Pungutan Zakat (2012)*

1.2 Problem Statement

Zakat is a very important benchmark that can be used to evaluate economic growth and *Zakat* also contributes much on poverty alleviation (Sarea, 2012). An increase in the *Zakat* collection indicates that the economic condition is improving and enables more people to fulfill their obligation to pay *Zakat*. One of the examples is the total *Zakat* collected from *Pusat Pungutan Zakat* (PPZ) Selangor is RM 451 million which is exceeding the target set in year 2012. These total collections have also shown improvement compare with year 2011 which is only RM 394.1 million. This indicates that the economic in Malaysia grows continuously during the year.

There are many studies that carry out by many researchers about *Zakat*. Most of their studies are focused on a wide perspective like Islamic countries and community. There is a research carried out by Yusoff (2006) in Malaysia which objectives are to study about Fiscal Policy in an Islamic economic and the role of *Zakat*. There are only several researchers carried out their research based on a narrow perspective for example from a company's perspective. This study will focus on Islamic banking perspective which is a much more narrow view compare with the previous researches. This is because the variables suitable to apply in the wide perspective like Islamic countries may not be suitable to apply to a specific industry like Islamic banking which measures in a narrow view.

The reason to focus on Islamic banking perspective is because Islamic bank is a form of financial institution which compliance with *Shariah* law. One of the main objectives of Islamic banking is to achieve equalities between the rich and the poor. Islamic bank plays an important role to become the model for others to fulfill their obligation to pay *Zakat*. This research will examine the variables that will affect Islamic bank to pay *Zakat*.

1.3 Research Objectives

One of the obligations that Islamic banks should fulfill is to pay *Zakat*. There are several determinants that will affect the total *Zakat* collection from Islamic banks.

1.3.1 General Objective

To determine the Islamic banking contribution to the total *Zakat* collection in Malaysia is the general objective of the study.

1.3.2 Specific Objectives

Specific objectives are the objectives that had been narrowed down from the general objective. Specific objective will provide a clearer objective to carry out this study. There are three specific objectives in this study which are:

- a. To determine the factors that affect total *Zakat* collection from Islamic banks in Malaysia such as total income, total assets, standard of living and natural disasters.
- b. To determine the relationship between the determinants and total *Zakat* collection from Islamic banks in Malaysia.
- c. To determine the level of contribution of Islamic banks to *Zakat* collection in Malaysia.

1.4 Research Questions

In order to meet the objectives of the research, there are few research questions that are conducted in this research. The following are the research questions of this research:

- a. What is the level of contribution of Islamic banks to total *Zakat* collection in Malaysia?
- b. What are the factors that affect total *Zakat* collection from Islamic banks in Malaysia?
- c. What is the relationship between the determinants and total *Zakat* collection from Islamic banks in Malaysia?

1.5 Hypotheses of Study

1.5.1 Total income is the determinant that will affect total *Zakat* collection from Islamic banks in Malaysia.

H_0 : There is no significant relationship between total income earned and total *Zakat* collection among Islamic banks

H_1 : There is a significant relationship between total income earned and total *Zakat* collection among Islamic banks

1.5.2 Total assets owned is the determinant that will affect total *Zakat* collection from Islamic banks in Malaysia.

H_0 : There is no significant relationship between total assets owned and total *Zakat* collection among Islamic banks

H_1 : There is a significant relationship between total assets owned and total *Zakat* collection among Islamic banks

1.5.3 Standard of living is the determinant that will affect total *Zakat* collection from Islamic banks in Malaysia.

H_0 : There is no significant relationship between standard of living and total *Zakat* collection among Islamic banks

H_1 : There is a significant relationship between standard of living and total *Zakat* collection among Islamic banks

1.5.4 The presence of natural disasters is the determinants will affect total *Zakat* collection from Islamic banks in Malaysia.

H_0 : There is no significant relationship between the presence of natural disasters and total *Zakat* collection among Islamic banks

H_1 : There is a significant relationship between the presence of natural disasters and total *Zakat* collection among Islamic banks

1.5.5 Total income, Total assets, Standard of living and the presence of natural disasters are the determinants that will affect total *Zakat* collection from Islamic banks in Malaysia.

H_0 : There are no significant relationship between Total income, Total assets, Standard of living and the presence of natural disasters and total *Zakat* collection among Islamic banks

H_1 : There are significant relationship between Total income, Total assets, Standard of living and the presence of natural disasters and total *Zakat* collection among Islamic banks

1.6 Significance of Study

This research concerned on the determinants that will affect Islamic banks in Malaysia in total *Zakat* collection. This study had narrowed the view to an Islamic banking perspective rather than Islamic countries or community. This is because most of the previous studies done by previous researchers were focused on a wide perspective like Islamic countries. Their result only indicated the effect of determinants on total *Zakat* collection in a macro view. However the applicability of the result in narrow view is still a question. This is because it might have some other factors that also will bring significant effect on *Zakat* collection that come from micro view. This is the rationale why this study focuses on Islamic bank perspective.

Besides, based on the result of this study, the determinants that will affect total *Zakat* collection will also be determined. The determinants may only be significant in the micro view but not in macro view. However, these determinants are very important because it will bring effect to the *Zakat* collection from the Islamic banks or micro perspective. The relationship between the determinants and total *Zakat* collection from Islamic banks will also be examined.

Based on the results of this study, Islamic bankers, *Pusat Pungutan Zakat (PPZ)* or other relevant parties may improve the total *Zakat* collection by improving the determinants. When the result indicates that total income have significant and positive relationship with total *Zakat* collection, the PPZ can come out a strategy to help Islamic banks to increase their income in order to increase the total *Zakat* collection. PPZ can also organize a campaign to increase the awareness of people about the advantages of purchasing Islamic banking product. By this way the income of the Islamic banks will increase and indirectly the total *Zakat* collection from Islamic banks will also increase.

Last but not least, this study also includes some independent variables that were rarely included or omitted by previous researchers. The independent variables are standard of living and natural disasters. These variables might have a significant relationship with total *Zakat* collection. The results of this study will be more reliable compare to the studies that were done by previous researchers in which they may omit some important variables.

1.7 Chapter Layout

The organization of this paper is from Chapter 1 which had done and follows by Chapter 2 which includes the literature review. After that, discussion on the methodology of this study will be presented in Chapter 3 and follow by results and interpretation in Chapter 4. Summary of study, implication of findings, limitations of the study and recommendation will be included in Chapter 5.

1.8 Conclusion

In Chapter 1, this study had discussed about Islamic banking and *Zakat* collection then further developed them into problem statement, research questions, hypotheses and significance of the study. In short, this study will further discuss on the title, “Islamic banking for the poor: the determinants of total *Zakat* collection from Islamic banking perspective”.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

This chapter consists of the review of relevant research related to total *Zakat* collection from Islamic banking perspective. Besides, review of journals which included in this chapter will be concerning the determinants that affect the total level of *Zakat* collection among Muslims. This chapter would review the relevant theoretical model and later recommend a conceptual model. Then, testable hypotheses would be developed.

2.1 Review of Literature

Total *Zakat* collection is a kind of donation in Muslim society. Total assets and total income of the Islamic bank; standard of living and natural disaster in Malaysia would affect the *Zakat* collection. Therefore, many researchers are interested to identify the significant effects between the total assets, total income, standard of living and natural disaster with the total *Zakat* collection. Due to the differences in countries and cultures, the researchers found different relationships between variables and total *Zakat* collection. For example, Muda, Marzuki and Shahrudin (2006) examine the factors that affected a person's decision in *Zakat* contribution in order to provide them a clear point of view to their motivation.

Besides, Md.Shariff et al (2011) stated that the salaries or income earned by Islamic people that reached *Nisab* after deducting from the proposal expenses are *Zakatable*. In addition, Sari, Bahari and Hamat (2013) stated that *Zakat* was paid to *Badan Amil Zakat* (BAZ) or *Lembaga Amil Zakat* (LAZ) that reduced from the total gains or income from tax payers.

Based on the previous researchers and until present, there are no studies on these combinations (total assets, total income, standard of living and natural disaster) on the effect on total *Zakat* collection in Malaysia. Therefore, this study attempts to figure out the relationships between these variables and total *Zakat* collection in Malaysia.

2.1.1 Total *Zakat* Collection

Md.Shariff et al (2011) conducted a research to examine the current *Zakat* contribution towards poverty alleviation that had wide impact on socio-economic development of a nation. In their study, *Zakat* played a major role in poverty alleviation and socio-economic development in Islam. They stated that Malaysia, one of the most progressive Muslim countries, had opportunity to benefit from the *Zakat* system in future. But, they had not specifically discussed the determinants of *Zakat* contribution in certain sector especially Islamic banking. This meant that previous researchers had little awareness of the factors which have its overall impacts on the *Zakat* collection in Islamic banking.

However, some researchers intended to examine the factors of *Zakat* collection towards the Islamic banking perspective. Muda,Marzuki,

Shaharuddin (2006) did a research to examine the factors that affected someone's decisions in *Zakat* contribution in order to provide them a clear point of view to their motivation. Based on the study, the variable used provided insights to determine the participations of *Zakat* payers. The researchers also stated that this paper may have significant impacts on the personal financial planning and development of Islamic economic system. The result showed that the factor analysis had significant relationship with the distinct factor, describing religion, self-satisfaction and organization.

Junaidi and Rizkiyah (2011) carried out a research investigate the factors that affect the *Zakat*, *Infaq* and *Shadaqah* payment through Islamic financial and charity institution. This paper specifically discussed the relationship between the contract type or mode of financing and the amount of *Zakat*, *Infaq* and *Shadaqah* donation. The result showed that type of contract and mode of financing had no significant relationship with the *Zakat*, *Infaq* and *Shadaqah* of Islamic finance customers.

On the other hand, A.Bakar and A.Rashid (2010) conducted a research that aimed to examine factors that affected the Muslim behavior towards *Zakat* on income level. According to the research, the level of certain factors of *Zakat* payers had significant impact on the *Zakat* payment based on income. The results stated that there was a significant percentage if respondent paid to *Zakat* based on their income level.

2.1.2 Independent Factor

Independent factor is the variable that affects the total *Zakat* collection. The independent factors of this study are total income, total assets, standard of living and natural disaster.

2.1.2.1 Total Income

Income is one of the most important variables that have relationship with *Zakat*. According to Yusoff (2006), income received can be divided into three categories made up of wages and salaries, profits and income from assets (wealth). He had further discussed the different categories of the income. Wages and salaries were closely related to the labor that had put their effort and time in producing goods and services. The level of income received by them mostly was determined by the industry involved, working experiences and education level. For the second category of income, which was income from assets, it consisted of the rental income received by the owner of their properties and payment from financial institution to depositors for their saving account. The last type was profits which were refer to the reward to the factor of production due to the entrepreneurial ability in risk taking and innovation.

According to Al-Jarhi and Zarqa (2007), the basic goal of distribute justice of Islam was to reduce inequalities in income and wealth, fulfill the basic needs of everybody and purify the donors inner self and wealth. *Zakat* system was very important to play the role in reduction the inequalities of income and

wealth. The statement indicated that *Zakat* and income had a significant relationship. Based on their research, the total collection of *Zakat* was paid based on the income proportion of the people. The personal distribution of income indicated that the portion of the national output based on consumption goods and services and the total of investment. A country would achieve economic growth only when they had an increase in national output. The number of people that pay *Zakat* would increase due the increase in number of investment and economic growth. When the number of people who are able to pay *Zakat* increased, it also indicated that there was a reduction in the *Zakat* recipients and thus there would be achievement of *Zakat* surplus.

In addition, another researcher also found the same result which stated that *Zakat* could be used as a benchmark to evaluate economic growth (Sarea, 2012). The statement meant that income and *Zakat* had significant relationship since economic growth was closely related to *Zakat*. Based on the research, the author also found that using *Zakat* system could reduce the phenomenon of inflation as well as poverty problem. Redistribution of income and wealth would make the economic better and the number of *Zakat* would increase. This was because of during the good economic condition, the poor people had more opportunities to get jobs and able to generate income by themselves. As a result, *Zakat* would increase when poverty reduced as well as the number of poor people who are able to generate income increased. When this process or cycle kept on running, *Zakat* surplus would exist because the *Zakat* payers were increasing while *Zakat* recipient decreasing.

Besides, according to Sarif and Kamri (2009) the use of *Zakat* as income generator was a way to help the eligible recipients to generate their income so that they could be more independent in the future. They had proved that *Zakat* and income had significant relationship. The general meaning of income

generation was referred to gaining of income. The objectives of income generation were to improve the standard of living and the capacity of the people to produce goods and services to increase their income. When there was an increase in income, then they would only pay more *Zakat* and this had shown that there is a relationship between *Zakat* and income. When *Zakat* was used for income generation, such problems like poverty and unemployment would be solved besides of implement other economies strategies such as Expansionary Policy. By appropriately using *Zakat* funds, the small and medium industries would have improvement by providing related courses or training to train them to become more efficient in their industries. This way, the income was generated by them would increase and finally the collection of *Zakat* would also increase. The poverty and unemployment problem would also be solved.

After that, based on the research done by Md.Shariff et al (2011), the salaries or income earned by Islamic people reached *Nisab* after deducted from the personal expenses were *Zakatable*. *Zakat* was different compared to tax on income. This was because tax on income was the compulsory expense which everyone needed to pay. However, *Zakat* paid on that income was done on voluntary basis, which meant that the total of *Zakat* needed to be paid was not fixed and based on peoples' personal decision. In order to attract more Muslims to pay *Zakat*, an efficient alternative had been implemented, which was tax rebate. Tax rebate was given to Muslims who paid *Zakat*. The total amount of tax would be deducted based on the amount that the people pay *Zakat*. In addition, this also suggested that there was a need to implement a new law which made the *Zakat* on income as compulsory obligation for all *Zakatable* Muslims. Based on the study, the researchers had proved that there was a significant relationship between *Zakat* and income.

Another researcher also found that *Zakat* and income had significant relationship in their study. *Zakat* was paid to *Badan Amil Zakat (BAZ)* or *Lembaga Amil Zakat (LAZ)* that reduced from the total gains or income from taxpayer (Sari, Bahari and Hamat, 2013). BAZ and LAZ was the centre of *Zakat* collection in Indonesia and their study was carried out in Indonesia. The findings of these researchers were similar to the finding of researchers above. They found that Muslim communities felt overburdened with the system that they needed to pay both *Zakat* and tax. This was because in Indonesia, the payment of *Zakat* can only be reduced from the total earning that was subjected to tax. In order to solve this problem, Indonesian government had implemented a new regulation related to *Zakat* and tax. Tax rebate was allowed or *Zakat* could be reduced from gross income. Based on their research, if the total income is 300 million Rupiah per year and the rate of *Zakat* was 2% then the amount of *Zakat* paid was 6 million Rupiah. The income tax would only charge on the remaining earning which was 294 million Rupiah. If the tax rate was 10% then the total amount of tax needed to pay was 29.4 million Rupiah. This way, the *Zakatable* Muslims would not feel overburdened when they wanted to fulfill their obligation to pay *Zakat*.

Zakat is preserved by legal law so that it enables everyone, who earns much income, to fulfill their obligation to pay *Zakat* (Kusama and Sukmana, 2010). People who are rich mostly are the one to have large business and they are representing the largest part of *Zakat* payers. *Zakat* payers transfer their excess income to the poor and this is indirectly transferred to the consuming power of the poor. When the poor are able to consume more, the amount of aggregate consumption in the economy will increase and cause the *Zakat* payers to invest more through their investment and finally the economy will grow. Everyone will benefit when the economy becomes better. From the *Zakat* payers' perspective, they will earn more income from their investment and *Zakat* recipients are able to find jobs and earn income. Based on all these

signs, it is indicated that the total amount of *Zakat* collection will increase. Because of this, at the end of the research, the researchers suggest that the government should implement some important policies or actions to promote the level of income in either the productive household that lack of opportunities to earn decent income level or the non-productive household that lack of resources.

Education, occupation and income are important variables which influence the *Zakat* payers to pay *Zakat* (Fidaus et al, 2012). According to the research, it found that income was one of the important factors that influenced the *Zakat* payers when they paid *Zakat*. Because of that, they had also proved that *Zakat* and income had a significant relationship. Actually, all three factors could be linked together. This was because education would affect occupation and occupation would affect income. People with different level of education would be involved in different profession. These researchers had divided the profession into two groups. The first group was the profession that did not depend on other parties or self-employed such as lawyer and tailor. The second group was the profession that depended for other parties such as the employees of the company. The ability of people to generate income by themselves was usually higher than people who worked with others. People with higher educational level would also able to earn more income and they would have more awareness on paying *Zakat*; thus, the total amount of *Zakat* collection from them were usually higher compare to people who earned lower income. For example, the rate of *Zakat* that must be paid was equal to 2.5 percent on annual basis because it was based on general verses and *hadiths*, which imposed *Zakat* on gold and silver. Due to this, there was no difference between both groups.

2.1.2.2 Total Assets

According to Al-Jarhi and Zarqa (2007), different assets had different rate of *Zakat*. They further classified the assets in Islamic economy into three categories. The first category was unproductive but potential income earning assets. Initially, this category was limited to monetary assets such as debt and cash. However, based on the author's opinion, they would like to include jewelry, precious metals and stones as well as artwork as further expansion. The financial assets and real assets fell in the second category. The *Zakat* rate for the first category was 2.5 percent. However, the *Zakat* rate for the second category was higher than first category which was 2.5 percent as mentioned above because they set 2.5 percent at par compare with the first group. As an example, *Zakat* rate for agricultural products was 10 percent for rain fed land and 5 percent for irrigated land. In addition, the authors indicated that human capital as the third category. The *Zakat* collection was based only on their income such as wages and salaries. There were two ways of *Zakat* collection for this category. The first way was to collect 2.5 percent of *Zakat* rate based on the amount of income they received. In the second way, the payment of *Zakat* was collected based on the money left unspent at the end of year. The example of money unspent was savings that was able to generate income (investment from monetary, financial and real assets).

According to the study by Halkos and Salamouris (2004) and Adan and A.Bakar (2009), the higher the volume of total assets would lead to the higher efficiency of a bank and obligate to pay *Zakat* arise when the assets achieved certain *Nisab* rate. This indicated that assets had positive relationship with the total *Zakat* Collection. This implied that when the assets increased, it would lead the total *Zakat* collection increase as well. This research reported that average size of total assets increased from 1,302,380 in 1997 to 2,353,679 in

1999 while the average efficiency increased from 0.78 in 1997 to 0.83 in 1999. This implied that larger banks are more efficient than a smaller bank. Moreover, it also stated that when smaller bank has completed its merger and acquisition exercise, it gave rises to the total assets and also tends to increase the efficiency of the bank. Thus, it was announced that the number of banks in 2000 was less than in year 1999.

In term of *Zakat* accounting assessment, Awang and Mokhtar (2012) examined that the amount of *Zakat* collection could be based on two methods: current cost accounting and historical cost accounting. Basically, current cost accounting was calculated based on the current acquisition price of the assets, while historical cost accounting was based on the original purchase price of those assets. These two methods produced different amount of *Zakat* collection to the poor, but current cost accounting was more preferable. As proved in this study, the use of historical cost data produced a lower *Zakat* assessment of RM 98,448 as compared to the use of current cost data, which yield a greater *Zakat* assessment of RM 185,505.50. Besides, the historical cost approach would tend to lower the value of *Zakatable* assets during the inflation time which reduced the benefits for *Zakat* recipients. As a result, it is important to determine the method that uses to assess the value of *Zakatable* assets as it has a direct impact on the total *Zakat* collection.

However, Yusoff (2006) stated that there was negative relationship between the total assets and the total *Zakat* collection. This was because the assets holding have a direct and positive impact toward the consumption spending. He further explained that the spending increase when assets holding increased since the researcher mentioned that the household would be encourage to spend more if they had high assets holding. The *Zakat* payer who held more assets would feel that they were rich; hence they would spend more on their

income. They would liquidate their assets when facing liquidity problem or use assets as collateral to borrow money when there was shortage of money. When the spending increased, the income would become lesser and this would lead the total *Zakat* collection decrease.

2.1.2.3 Standard of Living

According to Anas and Mounira (2009), the objective of Islamic Bank was seek to reduce the inequalities between poor and rich, establish the social justice of the business transaction and allocates the society's resources to help to improve the standard of living of poor and needy. Based on the research by Anas and Mounira, there was a positive relationship between *Zakat* and standard of living. In order to allocate those society's resources for the improvement life of needy or poor, Islamic bank used *Zakat* system to help to collect the *Zakat* fund. *Zakat* fund was contributed by those rich investors and depositors and these would be distributing to the poor. The collection of *Zakat* would increase through the increase of resources mobilization that would provide the basic needs for the poor. Since the poor could fulfill their basic needs, they would be able to work and generate more income to enhance their living standard. The improvement of standard living of poor would increase the *Zakat* collection because they were able to generate their income to the *Zakat* collection after they improved their standard of living.

In addition, there was also another research done by A.Bakar and A.Rahman (2007) stated that *Zakat* not only intended to attain the religious merit but also to reduce the inequalities between rich and poor and improving the standard of living of the poor. Since *Zakat* was paid by those who had income surplus to

the poor, the gap between poor and rich could be narrowed. As the poor's purchasing power was improved through the amount of *Zakat* they received, the demands on goods would also be increased and this would lead to higher standard of life. Based on the research paper, the authors found that there was a significant relationship between *Zakat* and standard living of people. They indicated that *Zakat* would boost the economic growth in order to enhance the standard of living of poor and thus enhanced the *Zakat* collection as well. Besides, they stated that *Zakat* had a multiplier effect to the economy. This was because some of the Muslim economists think that *Zakat* funds that invested to the economy would provide advantages especially to the poor and economy through the multiplier effect on income and employment. The employment and income would be increased in the economy and thus improve the standard of living of the needy. In the end, it would increase the total amount of *Zakat* collection as standard of living improved.

Furthermore, according to Ahmed (2004), there had a significant relationship between *Zakat* and standard of life. The objective of *Zakat* was to eliminate the poverty by enriching the poor which often used in *Fiqh* literature. Enriching the poor was an important guide to identify the standard of *Zakat* distribution to the poor or needy. The ordinary rules of distribution for a *Fiqh* position was that aims on poverty was whoever capable to work was given to the person about what he or she need to become a productive earner so as to earn more income to satisfy their needs. As their income increase, this would bring them to a higher standard of living. A new standard of rules established by the International Shariah Board of *Zakah* of the *Zakah* House of Kuwait that could be suffice by paying *Zakat*. By implement this new standard of rules, the standard of living of the poor would be improve when they receive *Zakat*. This was because their basic needs could be fulfilled and they would able to earn income by them. As the standard of life is enhanced, there would be more income can be generate to *Zakat* collection.

Besides, there was another researcher stated that the use of *Zakat*, provide the funds that allocate from the rich for those needy or poor to benefit the whole community and society (Qardawi). The author indicated that there was a significant relationship between *Zakat* and standard of living. The Islamic state charged the Muslims to pay the *Zakat* and Islamic state would responsible on distributing it to the poor or needy. In fact, *Zakat* was not only temporarily help in remission of the intermediate needs by the poor but also could help him to leave from poverty in long run. As the author mentioned, *Zakat* was used to raise the level of living of the poor. *Zakat* used to provide the poor adequate financial support which means to allow them to work and putting their own efforts in order to achieve self-sustenance and to earn more income. Hence, they could improve their standard of living and able to generate their income to increase the *Zakat* collection.

Moreover, according to A.Bakar and Ghani (2011), *Zakat* and standard of living had a relationship. *Zakat* was one of the most effective institutions to promote the Muslims' economic activities and to ensure that the poor could attain a minimum standard of life through the *Zakat* funds receive. *Zakat* fund was an incentive to the poor and the needy to help and support them to become economically productive recipients and it could free them from situation of poverty. As the poverty among the poor was reducing, their living standard of poor could be improved as well which was from a *Zakat* recipients transform to a *Zakat* payers. The enhancement of standard living through *Zakat* distribution need to ensure that the allocation of *Zakat* funds for *Zakat* recipients not only to sacrifice their basic needs but also need to be sufficient for the expansion of their *Zakat* fund. So, there would have a surplus *Zakat* funds because the recipients of *Zakat* was reduce; thus, *Zakat* payer would increase. Therefore, the *Zakat* collection would increase as the *Zakat* payer increase.

2.1.2.4 Natural Disaster

Recently the climate was changed and caused all the people in the world facing the same problem which was climate related natural disasters like hurricanes and flood. There were several examples of natural disasters that happened, such as Typhoons in 2006 in China and 2004 India Ocean Earthquake. Due to that there were many researchers carried out their research to find out the relationship between natural disaster and *Zakat* to determine whether natural disasters would give an effect on total amount of *Zakat* collected. The meaning of *Zakat* was Islamic donation. The total amount of donation would be affected during natural disaster. This was because natural disasters cause many people suffering losses or even death. All the victims need a helping hand from others people. Due to that reason, the other people that had ability to lend a helping hand would donate money to help the victims to solve the problems. In the research of Firdaus et al (2012), *Zakat* collection growth in Indonesia had achieved 96.9 percent in the year 2005. This was because during year 2005 there was a Tsunami happened in Aceh and this had triggered the Indonesian people to pay more *Zakat* in order to help the victims.

Oosterhof, Heuvelman and Peters (2008) had carried out a research to study the social cognitive factors that would affect the donation to natural disasters relief campaigns. Although their study was not direct study on the relationship between *Zakat* and natural disasters but from their result they had indirectly proved the significant relationship between *Zakat* and natural disasters. Their model of social cognitive factors was proved to be useful for explaining the intention of donate to natural disasters relief campaign. The study indicated that there was a positive relationship which tent to donate to natural disasters relief. It means that when there was the presence of natural disasters and it would cause the intention of people to donate to increase. When their

intention increased then the total amount of donation would also increase during natural disasters. Because of that, it could be concluded that there was a relationship between *Zakat* and natural disasters and it was significant. In the research, the researchers also found that the intention to donate was indirectly and positively affected by moral obligation to donate, awareness of donation and the need of donation which meant that natural disasters may be are not the only one factor that would affect total amount of donation.

There was another group of researchers also study on the relationship between donations and natural disasters. Brown, Harris and Taylor (2012) had carried out their research to explore the relationship between donations to victims of the 2004 Indian Ocean tsunami natural disaster. Based on their study, there were several result found. There was an evidence to prove that there was a positive relationship between total amount of donations and the natural disasters. Firstly, the unexpected donation had increase due to unexpected event of natural disasters. Secondly, life cycle effect might influence the level of donation giving to the victims of the tsunami which indicate that people at different aging might donate different amount of fund based on their perception. Based on all the result found from the study, it could conclude that the relationship between donations and disaster were significant and positive. However there might be some others factors like life cycle would also bring some effect to total amount of donations.

In addition, Bin and Edwards (2009) had carried out their research to study the relationship between donation and natural disasters based the social capital and business perspective which refer to the way the businesses giving the donations. Their objective was to examine the relationship between a business's social capitals to the extent of participation in natural disaster relief campaigns. Their study had utilizes the unique data on local business in Pitt

Country located in North Carolina. This was because the previous research only focuses on corporate philanthropy and corporate social responsibilities perspective but do not study about local business giving. Due to that, the result of their study was able to provide valuable information on local business philanthropy. In their result, they found that business owners or managers who always involve themselves in religious service would probably repeat their cash donation especially during natural disaster, the probability of donation would increase. This result had indicated that during natural disaster the total amount of donations of local businesses would increase. Therefore, this study indicated that there was a significant relationship between donations and natural disasters.

Besides there was also another researchers from China had also study on the relationship between donation and natural disaster based on businesses perspective. Gao (2010) had used Wenchuan earthquakes as example to study the different between the total amount of donations of firm that have political ties and without political ties during natural disasters. He had indicated that the awareness of many Chinese companies to involve in natural disaster relief donation was increase after the earthquakes. The way they donate was by either paying cash or materials or both. The bodies that the companies usually commit with are Red Cross Society of China (RCSC), China Foundation for Poverty Alleviation (CFPA) and so on. All of the bodies stated as example are non-government organizations (NGOs). The results of their research show that large firm would pay more compare to smaller firms due to high pressure from the government during natural disasters. This had indicated that both types of companies would increase their donation during natural disasters but the percentage increase in large firm was larger than the percentage increase in small firm. Because of that, it could be conclude that there was a positive relationship between total amount of donations and natural disasters.

2.2 Review of Relevant Theoretical Model

Based on the research by Yusoff (2006), the *Zakat* collection from individuals' wages and salaries had direct linkage to *Zakatable* income. The model was:

$$Z_w = z_w (Y_w - C_{0w} - C_{0n})$$

Where:

Z_w - *Zakat* collection from individuals' wages and salaries

z_w - Fixed *Zakat* rate

Y_w - Income from wages and salaries

C_{0w} - Exemption given to *Zakat* payers to cover the basic needs

C_{0n} - Fixed *Nisab* rate and minimum amount of consumption that an individual must have in an Islamic state

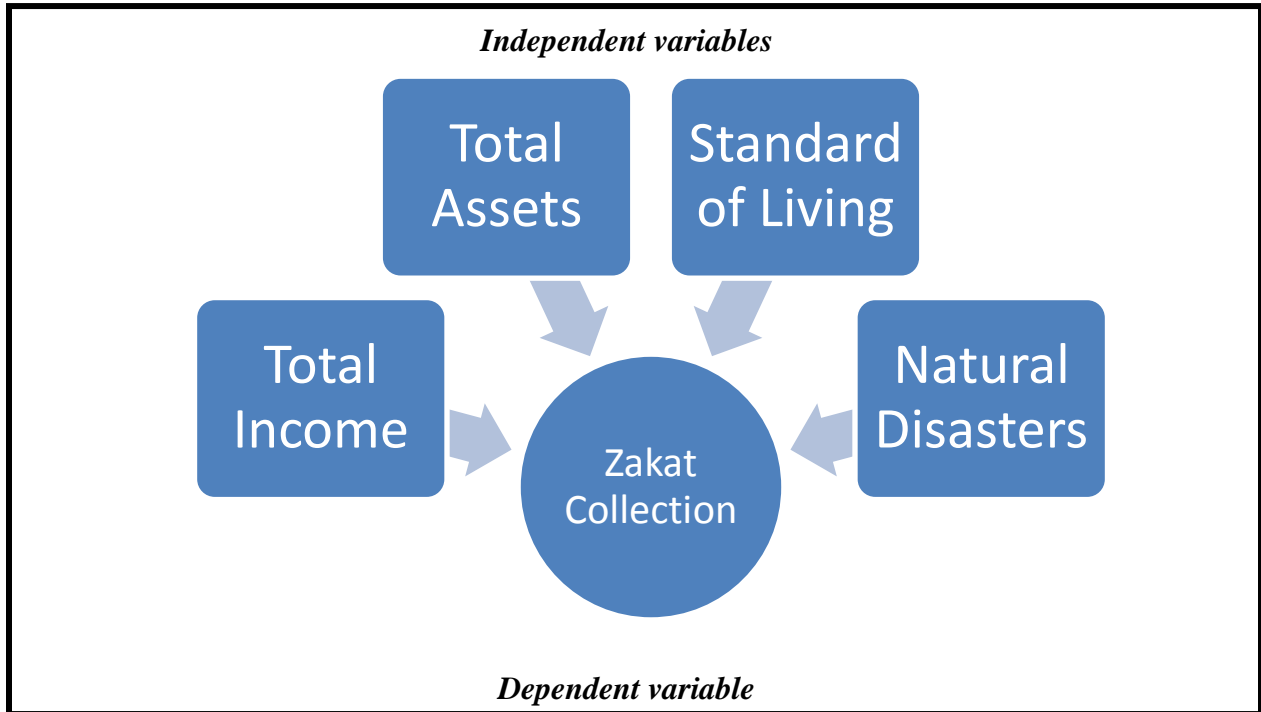
The basic needs include food, shelter, clothing, medicine (health-care), furniture, tools of craftsman, transportation and book for students or scholar. These all items were category as *Zakatable* income. However, the *Zakat* collection could be change to certain level due to the changing in exemption level. The exemption level could be decided by center of *Zakat*. For instance, the exemption level would increase because the inflation or recession that occurs in the country that would lead to the increasing of cost of living. There was another researcher was also using the same model in his study. According to Md. Shariff et al (2011), the income earned by Muslims were obligated to pay *Zakat* once achieve certain *Nisab* rate. Therefore, it could conclude that income have relationship with total *Zakat* collection.

2.3 Proposed Theoretical/Conceptual Framework

This research will not study the determinants of *Zakat* collection from a wide perspective. The scope of this study will only study how the determinants affect Islamic banking to pay *Zakat* in Malaysia which is in a narrow perspective. The reason this study to carry out is because most of the study that done by the previous researchers in the literature review above are only focus on how the community or companies contribute to *Zakat* but no researchers had further study the collection of *Zakat* from the Islamic banking perspective. In general, Islamic banking was compliance with Islamic concept and one of the objectives is emphasizes on equalities between the poor and rich. Due to that, Islamic banking industry plays an important role in contribution to total *Zakat* collection. Because of that this study will carry out to determine whether the determinants stated in literature review are applicable to Islamic bank or not.

From the previous study, the determinants like income earned by *Zakat* payers are significantly affect the total *Zakat* collection. Thus, this study will apply the previous studies concept in Islamic banking perspective which is using total income as one of the independent variable that affect total *Zakat* collection from Islamic banks. Based on previous studies, total assets hold by somebody also would give an effect on total *Zakat* contribution. Thus, this study uses total assets as an indicator of bank size. The bigger the bank the more efficient they are. Customer is also one of the important parties that close related with banking institution. When they have better standard of living then the possibility they consume Islamic banking product is higher. Thus, standard of living are using as one independent variable in this study. In addition, *Zakat* is one type of donation. Due to that, it has close relationship with natural disaster. So, natural disasters are used as one of the independent variable in this study. Therefore, the following model had been design:

Diagram 1: Proposed model



Proposed model:

$$Z_c = (Y_w - C_{ow} - C_{on}) + TA + SOL + ND(x_1)$$

Where

Z_c - *Zakat* collection

Y_w - Income from wages and salaries

C_{ow} - Exemption given to *Zakat* payers to cover the basic needs

C_{on} - Fixed *Nisab* rate and minimum amount of consumption that an individual must have in an Islamic state

TA -Total Assets

SOL -Standard of Living

$ND(x_1)$ - Natural disaster (if presence $x_1=1$, otherwise 0)

In this study, the main objective is to determine whether total income, total assets, standard of living and the presence of natural disasters can affect the total *Zakat* collection from Islamic banking perspective. Due to that, the model that proposed in this study was modified from the model that done by Yusoff (2006).

2.4 Hypothesis Development

For the hypothesis development, the new hypothesis will be designed to test whether the new variables added in this study is significant or not. The new hypothesis will be design based on the research done by previous researchers.

I. Total income

According to Al-Jarhi and Zarqa (2007), the total collection of *Zakat* was paid based on the income proportion of the people.

H_0 : There is no significant relationship between total income earned and total *Zakat* collection among Islamic banks

H_1 : There is significant relationship between total income earned and total *Zakat* collection among Islamic banks

II. Total assets

A study by Halkos and Salamouris (2004) stated that the higher the assets available to earn income lead to the higher the *Zakat* collection.

H_0 : There is no significant relationship between total assets owned and total *Zakat* collection among Islamic banks

H_1 : There is significant relationship between total assets owned and total *Zakat* collection among Islamic banks

III. Standard of living

According to Abu Bakar and Abdul Rahman(2007), they stated that the improvement for standard of living could increase the total *Zakat* collection.

H_0 : There is no significant relationship between standard of living and total *Zakat* collection among Islamic banks

H_1 : There is significant relationship between standard of living and total *Zakat* collection among Islamic banks

IV. Natural disasters

There is an evidence to prove that there is a positive relationship between total amount of donations and the natural disasters (Brown, Harris and Taylor, 2012)

H_0 : There is no significant relationship between natural disasters and total *Zakat* collection among Islamic banks

H_1 : There is significant relationship between natural disasters and total *Zakat* collection among Islamic banks

V. Total income, Total assets, Standard of living and Natural disasters

H_0 : There is no significant relationship between Total income, Total assets, Standard of living and the presence of natural disasters and total *Zakat* collection among Islamic banks

H_1 : There is significant relationship between Total income, Total assets, Standard of living and the presence of natural disasters and total *Zakat* collection among Islamic banks

2.5 Conclusion

Overall, this chapter has reviewed those journals that done by previous researchers and also further study on dependent (Total *Zakat* collection) and independent variables (Total income, Total assets, Standard of living and Natural disaster) which are used in this research. In addition, this chapter has not only reviewed those relevant theoretical models but also recommended a conceptual model. The construction of hypotheses for this study will be used in the following chapter which is methodology.

CHAPTER 3: METHODOLOGY

3.0 Introduction

This chapter will discuss about the methodology of the research. Through the research methodology, this study will discuss about the way to collect data. According to the data that had been collected, secondary data has been chosen as the main resource. Data that were used in this study were gathered from different sources which are the financial statements or annual reports of different Islamic Banks, UTAR database and *Pusat Pungutan Zakat* (PPZ). Eviews program is used to analyze the data and Ordinary Least Square (OLS) method is also applied in this research.

3.1 Research Design

This research will study on how Islamic financial institutions affect the total *Zakat* collection in Malaysia. Data from year 2007 to year 2012 had been included in this research. Besides, all of the data that were used were collected from the annual reports of the Islamic financial institution in Malaysia. Through the annual reports, profit and total assets are able to be found. After that, the research used consumer price index (CPI) that was gathered from UTAR database to measure the cost of living. Moreover, the data of natural disaster was gathered from the International Disaster Database. Last but not least, the total *Zakat* collection data had been provided by *Pusat Pungutan Zakat* (PPZ). By the way, all of the data are representing

dependent and independent variables in the research. These data are very important to use to determine how the independent variables affect total *Zakat* collection from Islamic institution in Malaysia to provide a reliable evidence to support the study.

3.2 Data Collection Methods

The annual reports of selected Islamic financial institutions from year 2007 and year 2012 had been reviewed. These data are considered as secondary data. Besides, data from UTAR database regarding the Consumer Price Index (CPI) from year 2007 to year 2012 were gathered to support the study. For natural disaster, the data were collected from the International Disaster Database to support the study. In order to make sure the reliability of the dependent variable which is the total *Zakat* collection, *Pusat Pungutan Zakat (PPZ)* has provided the amount of total *Zakat* collection from the Islamic financial institutions.

3.3 Sampling Design

In this study, the tool that was used to determine the sample size is through random sampling technique which is randomly choosing 7 banks out of 16 Islamic banks in Malaysia. The year involved were 6 years from 2007 to 2012. Thus, the number of observation for this study is 42.

3.3.1 Target Population

In this study, the target population is Islamic banking in Malaysia. This is because this study is to focus on how total *Zakat* collection is affected by the financial institution or another way to express which are the factors that affecting contribution of financial institutions to total *Zakat* collection. To support the data, 16 Islamic financial institutions are being reviewed. Out of the 16 Islamic financial institutions, the research has randomly chosen 7 Islamic financial institutions as the secondary data in order to run the test.

3.3.2 Sampling Frame and Sampling Locations

Secondary data are used in this research on total *Zakat* collection from Islamic financial institutions. Due to that, annual reports of 16 Islamic financial institutions had been reviewed. The 16 Islamic financial institutions consist of:

1. Affin Islamic Bank Berhad
2. Al Rajhi Banking & Investment Corporation (Malaysia) Berhad
3. Alliance Islamic Bank Berhad
4. AmIslamic Bank Berhad
5. Asian Finance Bank Berhad
6. Bank Islam Malaysia Berhad
7. Bank Muamalat Malaysia Berhad
8. CIMB Islamic Bank Berhad

9. Hong Leong Islamic Bank Berhad
10. HSBC Amanah Malaysia Berhad
11. Kuwait Finance House (Malaysia) Berhad
12. Maybank Islamic Berhad
13. OCBC Al-Amin Bank Berhad
14. Public Islamic Bank Berhad
15. RHB Islamic Bank Berhad
16. Standard Chartered Saadiq Berhad

Out of the 16 Islamic financial institutions, the data from 7 Islamic financial institutions had been chosen as secondary data in this study in order to run the test. The 7 Islamic financial institutions are:

1. Affin Islamic Bank Berhad
2. Alliance Islamic Bank Berhad
3. Bank Islam Malaysia Berhad
4. Bank Muamalat Malaysia Berhad
5. Hong Leong Islamic Bank Berhad
6. Kuwait Finance House (Malaysia) Berhad
7. Maybank Islamic Berhad

From the 7 Islamic financial institutions selected, there are 6 financial institutions originally from Malaysia and Kuwait Finance House (Malaysia) Berhad is the subsidiary of foreign bank in Malaysia. This foreign subsidiary has been included due to this bank also contribute to *Zakat* collection in Malaysia. Besides, it also offers the same Islamic banking products as local banks.

3.4 Data Analysis

Eviews program will be used to analyze the data of this study. Ordinary Least Square (OLS) method will be applied when running the test. The data that were used was panel data because observation can be increased by this way in order to make sure that the result are more reliable.

T- test will be used to test the relationship between the individual independent variables with the dependent variable to test whether it will significantly affect the dependent variables or not. When the significance level is 0.05 and if the probability of t-test is lower than the significance level, then the independent variable can be considered as significantly affecting the dependent variable.

There are also three major problems that may consist in the model which are Multicollinearity, Autocorrelation and Heteroscedasticity. In order to check Multicollinearity problem, find out the value of VIF. In addition, White test will be run to detect Heteroscedasticity problem. Last but not least. Breuch-Godfrey LM test will also run to detect autocorrelation problem. If the model does not consist of these three problems, then it can be considered as a reliable model.

3.4.1 Ordinary Least Square (OLS)

OLS method is a well-known method of regression analysis due to its powerful function and it can provide the smallest total sum of least-squared residuals which can also conclude as minimizing the error in the regression model. There are several fundamental assumptions for OLS. These include no autocorrelation, homoscedasticity, linear regression model and the number of observation must be greater than the number of explanatory variables. All the assumptions are to make sure that the regression model do not consist of any problems and make sure that it is reliable. If the regression model is able to fulfil all the assumptions then it can be concluded as the Best Linear Unbiased Efficient estimators (BLUE).

3.4.2 Normality Test

Normality test is one of the tests to ensure that the error terms in the regression model are normally distributed. To ensure that the regression model is normally distributed, Jarque-Bera (JB) Test of normality will be applied. There are some assumptions for normality test which are the mean of the error term are zero (the positive error term offset the negative error term), constant error variances (homoscedasticity), no autocorrelation and the error terms are normally and independently distributed.

3.4.3 Multicollinearity

Multicollinearity arises if all or some of the independent variables are highly correlated with one another. If it is present, it is hard to know which independent variables are influencing the dependent variable in the model. However, OLS estimators are still considered as Best Linear Unbiased Efficient estimators (BLUE) if the level of multicollinearity problem is not serious. There are two methods to detect the problem of multicollinearity. First, the method of high pair-wise correlation coefficients is used to detect the multicollinearity problem. If the pair-wise correlations between two particular independent variables are high, then multicollinearity is a potential problem. If the value of pair-wise correlation coefficients exceeds 0.8, then it is considered as high pair-wise correlation coefficients. Lastly, variance-inflating factor (VIF) is used to test whether there has multicollinearity problem exist in the regression model. Formula of VIF as stated below is used to detect the strength of multicollinearity:

$$VIF = \frac{1}{1-R^2}$$

By using E-Views, R^2 is determined by the auxiliary model regarding the relationships of 2 independent variables. Normally, the independent variables which have high pair wise of correlation coefficients will be used for the calculation of VIF in order to confirm the degree of multicollinearity. If the degree of VIF is higher than 10, it shows that there is serious multicollinearity while if the degree of VIF equals to one, it means that there is no multicollinearity problem found in the model. If the degree of VIF is less than 10, it can be concluded that there is no serious multicollinearity problem.

3.4.4 Heteroscedasticity

Heteroscedasticity happens when the variances of error term are not constant. In order to determine whether the model has contained heteroscedasticity problem or not, White's Test can be applied. This test is proposed by White (1980) to obtain consistent estimators of the variances and covariance of the OLS estimators. For this test, the null hypothesis is there is no heteroscedasticity problem. The decision rule would reject null hypothesis when P-value is lower than the significance level, α . Otherwise, do not reject it. Then, output will be generated by using E-Views and based on the test statistics value or P-value to see whether the model contain heteroscedasticity problem or not.

3.4.5 Autocorrelation

Autocorrelation means that the independent variable is correlated with the error term and it is most likely to occur in time series data. If the error term is autocorrelated, OLS estimators will be no longer BLUE and the OLS procedure will become inappropriate. To detect the problem of autocorrelation, Breusch-Godfrey LM Test will be use. There are some requirements which have to be fulfilled before carrying out Breusch-Godfrey LM test which is to make sure that if Durbin-Watson Test and Durbin's h Test cannot be used to test for the regression model then only can proceed to Breusch-Godfrey LM Test. Breusch-Godfrey LM Test is much better than Durbin-Watson and Durbin h-tests because it takes into consideration higher order of serial correlation and the lagged dependent variable. The null hypothesis is there is

no autocorrelation problem. The decision rule would be reject null hypothesis when P-value of F-statistics is lower than the significance level, α . Otherwise, do not reject it. After that, the output will be generated by using E-Views and find out the P-value to see whether the model contain autocorrelation problem or not.

3.4.6 Regression Specification Error Test (Ramsey's RESET)

RESET Test was developed by Ramsey in year 1969. Its purpose is to test the model specification like functional form of independent and dependent variables only. For this test, the null hypothesis is model specification is correct. The decision rule would be reject null hypothesis if P-value of F statistic is lower than level of significance, α . Otherwise, do not reject it. Hence, based on the P-value and level of significance, α , it will provide the result whether there is model specification error or not.

3.4.7 T-test

The purpose of T-test is to test the hypothesis about an individual partial regression coefficient. T-test will show the relation between the individual independent variables with the dependent variable. There are some requirements that must be taking aware of before carrying out T-test which is to make sure the error terms are normally distributed because T-test procedure is based on the assumption that the error terms follow the normal distribution.

Thus, JB test will run first before T-test. If the error terms are normally distributed, then only T-test can be carried out.

3.4.8 F-test

The purpose of F-test is to test the overall significant of the estimated multiple regression. It can be used to measure how the dependent variable will be affected by the independent variables. This test will be carried out after T-test because it is better to test the individual significant level of the independent variable in the model first then test the significant level of whole model. If the result of F-test is significant, then the whole model can be concluded as a good and reliable model.

3.5 Conclusion

In this chapter, the sources of data had been discussed. There are 7 Islamic financial institutions in Malaysia to conduct in this study. Eviews program will be used to analyze the data. The next chapter of this study will discuss about the data analysis such as the result of the regression model and major findings.

Chapter 4: DATA ANALYSIS

4.0 Introduction

Through the data collected, model specification and process of the data in previous chapter, analysis of results that obtained from OLS regression will be conducted in this chapter. This study will further discussed about the results for the tests which include Normality Residuals (Errors) Test, Variance-Inflating Factor (VIF) Test, White's Test, Breusch-Godfrey LM Test, and, Ramsey's RESET Test. Thus, the diagnostics checking will be conducted in section 4.1. Moreover, summary and interpretation of the result will be conducted in section 4.2.

4.1 Diagnostics Checking

There are several tests will be conducted in this study in order to check the reliability of this study. The tests included in this part are Jarque-Bera Test, Pair-Wise Correlation Coefficients, Variance-Inflating Factors, White's test, Breusch-Godfrey LM test, Ramsey RESET test, F test and T test. If the model passed the entire test then the model can be considered as reliable.

4.1.1 Normality Test

Table 1: Jarque-Bera Test

Normality Residuals (Errors) Test	
Jarque-Bera Test = 1.543677	Probability = 0.462163

In order to test whether the error term is normally distributed, normality test have to be carried out. The null hypothesis of Jarque-Bera Test is error term is normally distributed. The decision rule would reject null hypothesis when P-value is lower than the level of significance, 0.05. Since P-value is 0.462163 which is higher than the level of significance, 0.05. Therefore, there is sufficient evidence to conclude that the error term in the model is normally distributed.

4.1.2 Multicollinearity

Table 2: Pair-Wise Correlation Coefficients

	TZ	TI	TA	SOL	ND
TZ	1.000000				
TI	0.812732	1.000000			
TA	0.156889	0.367415	1.000000		
SOL	0.285887	0.200526	0.261127	1.000000	
ND	-0.194377	-0.126388	-0.134834	-0.766378	1.000000

Based on table 2, there are two high pair-wise correlation coefficient which is ND and SOL (-0.766378) and TI and TA (0.367415). Based on the correlation coefficient, there is a possibility that Multicollinearity problem may exist. Therefore, Variance Inflation Factor (VIF) will be conducted to further estimate the level of Multicollinearity.

Table 3: Coefficient of determination (R^2) and Variance – Inflating Factor (VIF)

Pair of Independent Variables and its Correlations	R^2	$VIF = \frac{1}{1-R^2_{Xi,Xj}}$
Correlation (ND,SOL) = -0.766378	0.587335	2.4233
Correlation (TI,TA) = 0.367415	0.134994	1.1561

For the independent variables which are ND and SOL, the pair-wise coefficient correlations and the R^2 (0.587335) are significantly higher than the second pair of independent variables which are TI and TA (0.134994). However, both pairs of independent variables are facing no serious Multicollinearity problems. This is because the VIF are 2.4233 and 1.1561 which is lower than 10. Due to that, the level of Multicollinearity problem that exist in the model can be concluded as low. In this case, the estimated parameter is still unbiased, efficient and consistent. In conclusion, no action will be taken to overcome Multicollinearity problem because it is very difficult to make sure the model become completely free from Multicollinearity problem.

4.1.3 Heteroscedasticity

Table 4: White's Test

White's Test (Heteroscedasticity test)	
F-statistic = 2.070955	Prob. F(12,29) = 0.0537

In order to detect whether there is Heteroscedasticity problem in the model, White test have to be conducted. Based on the output of Eviews, the result is summarized in table 4. The F- statistic value is 2.070955 and the p-value is 0.0537. The null hypothesis for White's test would be there is no Heteroscedasticity problem. The decision rule would reject null hypothesis if p-value is lower than the level of significance which is 0.05. Otherwise, do not reject null hypothesis. Based on the Eviews results, the p-value is 0.0537 is higher than the level of significance 0.05. Therefore, there is sufficient evidence to conclude that there is no Heteroscedasticity problem in the model. Based on the result, the model is free from Heteroscedasticity problem and it can be conclude as unbiased, efficient and consistent.

4.1.4 Autocorrelation

Table 5: Breusch-Godfrey LM Test

Breusch-Godfrey LM Test	
F-statistic = 3.642722	Prob. F(2, 35) = 0.0365

In order to test whether the Autocorrelation problem exist in the model, Breusch-Godfrey LM test has to be carried out. For LM test, the null hypothesis is there is no autocorrelation problem in the model. The decision

rule would reject null hypothesis if p-value is lower than the significance level 0.05. Based on the E-views results, the F-statistics value is 3.642722 and the p-value is 0.0365. Due to the p-value of this test is 0.0365 which is lower than the level of significance 0.05, therefore there is sufficient evidence to conclude that autocorrelation problem exists in the model. The estimated parameter will become biased, inefficient and inconsistent due to pure autocorrelation. The variance of error term is not achieved at the optimal level which affects the accuracy of T and F-test statistics value when conducting hypothesis testing. Thus, the P-value and confidence interval for the independent variable will be inaccurate as well.

4.1.5 Model Specification Test

Table 6: Ramsey's RESET Test

Ramsey's RESET Test	
F-statistic = 3.438353	Prob. F (1,36) = 0.0719

For the RESET Test, it is used to test the functional form of independent and dependent variables only. The number of fitted terms was set as 1. The null hypothesis for this test is the model specification is correct. The decision rule would reject null hypothesis if P-value is lower than the level of significance, α . Otherwise, do not reject it. Based on the P-value = 0.0719 which is shown above, it shows that the value is higher than the level of significance, $\alpha = 0.05$. In other words, there is no sufficient evidence to reject null hypothesis. Therefore, it can be concluded that the model is correctly specified and do not have model specification problems.

Overall, based on the diagnostic checking above, Model 1 has no serious multicollinearity, no heteroscedasticity and pure autocorrelation problems.

4.2 Output

$$TZ = -18710.47 + 0.006773TI - 2.63E-05TA + 196.4377SOL + 379.8237ND$$

Dependent Variable: TZ

Number of observations: 42 obs

Table 7: Eviews output

TI	0.006773 *(8.893689)
TA	-2.63E-05 *(-2.071675)
SOL	196.4377 (1.366447)
ND	379.8237 (0.256561)
Intercept	-18710.47 (-1.299647)
Overall Significance (F-test)	0.0000
R ²	0.709944
Adjusted R ²	0.678587

Note: The value in parentheses is the T-test statistics value. Indicate * significant at 0.05 level of significance.

4.2.1 F-statistics

H_0 = All independent variable is not important in explaining the dependent variable.

H_1 = At least one independent variable is important in explaining the dependent variable.

Levels of significance is 5%

Reject H_0 if the probability value of F tests is less than 0.05, otherwise do not reject H_0 .

Reject H_0 since the probability value of F test is 0.0000 less than 0.05 and it concludes that at least one independent variable is important in explaining the dependent variable.

4.2.2 Coefficient of determination (R^2)

Coefficient of determination of the model is 0.709944. Meanwhile, it means 70.9944% of the variation in dependent variables can be explained by the variation in the independent variables.

4.2.3 Total Income

H_0 = Total income is not significant in explaining the contribution to *Zakat*.

H_1 = Total income is significant in explaining the contribution to *Zakat*.

Reject H_0 when probability for t-statistic is less than 5% level of significance.

Otherwise, do not reject H_0

Reject H_0 since the probability for t-statistic is 0.0000 which is less than significance level, 0.05 and it concludes that total income is statistically significant in explaining the contribution to *Zakat*.

When total income increases by 1 thousand MYR, *Zakat* contribution will increased by 0.006773 thousand MYR, by holding other variables constant.

4.2.4 Total Assets

H_0 = Total assets is not significant in explaining the contribution to *Zakat*.

H_1 = Total assets is significant in explaining the contribution to *Zakat*.

Reject H_0 when probability for t-statistic is less than 5% level of significance.

Otherwise, do not reject H_0 .

Reject H_0 since the probability for t-statistic is 0.0453 which is less than 0.05 significance levels and it concludes that total assets are statistically significant in explaining the contribution to *Zakat*.

When total assets increase by 1 thousand MYR, *Zakat* contribution will decreased by -2.6300000000005 thousand MYR, by holding other variables constant.

4.2.5 Standard of living

H_0 = Standard of living is not significant in explaining the contribution to *Zakat*.

H_1 = Standard of living is significant in explaining the contribution to *Zakat*.

Reject H_0 when probability for t-statistic is less than 5% level of significance. Otherwise, do not reject H_0 .

Do not reject H_0 since the probability for t-statistic is 0.1800 which is more than 0.05 significance levels and it concludes that standard of living is statistically insignificant in explaining the contribution to *Zakat*.

When standard of living increases by 1 percentage point, *Zakat* contribution will increased by 106.4377 thousand MYR, by holding other variables constant.

4.2.6 Natural Disasters

$H_0 = \beta_{ND} = 0$ Natural disasters is not significant in explaining the contribution to *Zakat*.

$H_1 = \beta_{ND} \neq 0$ Natural disasters is significant in explaining the contribution to *Zakat*.

Reject H_0 when probability for t-statistic is less than 5% level of significant. Otherwise, do not reject H_0 .

Do not reject H_0 since the probability for t-statistic is 0.7989 which is more than 0.05 significance levels and it concludes that disaster is statistically insignificant in explaining the contribution to *Zakat*.

If the natural disasters exists, *Zakat* contribution will increased by 379.8237 thousand MYR, by holding other variables constant.

4.3 Conclusion

Chapter 4 had discussed about empirical results. In addition, the empirical results included F-statistics, T-test and testing of each independent variable. The implications, recommendation and conclusion of the study will be discussed in next chapter.

Chapter 5: DISCUSSION, CONCLUSION AND IMPLICATIONS

5.0 Introduction

Chapter 5 will conclude the major findings of this research paper. In chapter 5, the summary of statistical analyses, major finding of results, implications and limitations of study will be included. Finally the recommendation for future research based on the limitations in this research paper will also be included. The organisation of this chapter is as follow: summary of statistical result, implication and limitation of the study, and finally recommendation.

5.1 Summary of statistical analyses

Table 5.1 is shows the summary of results for the diagnostic checking. From the table, it could be seen that Multicollinearity problem did not exist within any independent variables that had been tested in the research. Besides, Heteroscedasticity problem also did not exist in the regression model; this means that the variances of the error term were constant. However, autocorrelation problem was present in the regression model. This means that the error term in the model was correlated. The error term of the model is normally distributed because the result of Jarque-Bera test showed that the error term was normally distributed. Finally, the model also did not have model specification error problem. This is because the result shown by the Ramsey's

RESET test indicated that there was no sufficient evidence to reject null hypothesis. So, model specification error problem did not exist in the model.

Table 8: Summary of statistical tests of Eviews

Test	Result
1. Multicollinearity	Non-Existent
2. Heteroscedasticity	Non-Existent
3. Autocorrelation	Existent
4. Normality	Non-Existent
5. Model Specification Error	Non-Existent

5.2 Discussion on Major Findings

There were four variables: total income, total assets, standard of living and natural disasters. These variables were selected to evaluate the determinants of total *Zakat* collection. The findings are summarized in the table 5.2 below.

Table 9: Major findings developed from Eviews

Independent Variable	Relationship with Total <i>Zakat</i> Collection	Significance
Total Income (TI)	Positive	Significant
Total Assets (TA)	Negative	Significant
Standard of Living (SOL)	Positive	Insignificant
Natural Disaster (ND)	Positive	Insignificant
R ²	0.709944	
Prob (F-statistic)	Significant	

5.2.1 Total Income

Based on the empirical result, total income has a significant and positive relationship with total *Zakat*. The result is supported by a research by Al-Jarhi et al. (2007), which indicates that the number of people who pay *Zakat* will increase during economic growth. This is because during economic growth the income earned by the people will increase and due to this people will become more willing to pay the requested *Zakat* or even pay more. Economic growth will result in the increase in number of *Zakat* payers and a decrease in number of *Zakat* recipients. The total *Zakat* collection will increase significantly as well. In addition, according to Sarea (2012), *Zakat* can be used as a benchmark to evaluate economic growth. *Zakat* plays an important role in redistributing the income to the economic and makes economy become better. When the economy becomes better, poor people will be able to find a job and earn income by themselves. The total *Zakat* collection will increase when poor people who are *Zakat* recipients are able to earn income and contribute to *Zakat* collection eventually.

5.2.2 Total Assets

Total assets are found to have a significant positive relationship with the total *Zakat* collections. This result is consistent with research done by the previous researcher Halkos and Salamouris (2004) and Adnan and Bakar (2009). Their researches stated that the higher size of total assets would lead to the higher efficiency of a bank and they are obliged to pay *Zakat* once the assets achieve the *Nisab* rate. This indicated that larger banks which hold more assets are more efficient than the smaller banks. Thus, smaller banks have merged with other banks to increase the total assets and ultimately lead the efficiency of the bank increase as well. This is further proved by the number of banks in 2000 which was less than the number of banks in year 1999 since the small banks merged with other banks.

However, the empirical results indicated that there is a significant negative relationship between total assets and total *Zakat* collection. This result can be further supported by Yusoff (2006), who stated that *Zakat* payers would feel wealthier once the assets holdings increased. Thus, they will spend more on their income and this will lead to a decrease in their income level. Sarif and Kamri (2009) indicated that, the lower the income level, the total *Zakat* collection also will become lower. Therefore, it showed that assets and total *Zakat* collection have an indirect relationship.

5.2.3 Standard of Living

The standard of living (SOL) showed a positive relationship with the total *Zakat* collection, but the result is insignificant to explain the total *Zakat* collection. This positive relationship is consistent with the expected results and supported by the research of Anas and Mounira (2009). These researchers indicated that *Zakat* fund will become higher due to the contribution of those are rich who have higher standard of living. *Zakat* can help the poor to fulfill their basic needs, hence they are able to work and generate more income. As a result, the increase of standard of living will increase the total *Zakat* collection.

In addition, *Zakat* will boost the economic growth and improve the standard of living, which will increase the total *Zakat* collection, as reported in a study by A.Bakar and A.Rahman (2007). They also stated that *Zakat* has a multiplier effect on employment and income, thus increasing the employment and income and leading the total *Zakat* collection increase as well. Moreover, Ahmed (2004) mentioned that a new standard of rules, established by the International Shariah Board of *Zakah* of Kuwait, can be met by paying *Zakat*. The implementation of this rule will increase the number of people that pay *Zakat* and the standard of living of the poor people who receive *Zakat* will increase. This is because once their basic needs are fulfilled; they are able to earn income by themselves.

However, as mentioned before standard of living (SOL) is insignificantly but positively correlated to the total *Zakat* collection in the sample. According to Yang (2005), the economic growth will lead to the higher standard of living. In addition, the research showed that the personal saving rate in the US declined from 10.6% in 1984 to below 2% in 2000 due to economic growth.

This concluded that higher standard of living does not necessarily save more money. When they save less in the bank, they will purchase less banking products and this lead to the income of the bank to decline. As a result, Islamic bank has lesser potential to achieve higher *Nisab* rate and then they are obligated to pay less *Zakat*. In short, the relationship between standard of living and total *Zakat* collection remains subjective in the sample, which highly depends on the household behavior.

5.2.4 Natural Disasters

For natural disasters, the empirical results show that natural disasters have a positive relationship with contribution on *Zakat*. This means that the natural disasters tend to increase the contribution on *Zakat*. Once there is a natural disaster, there are many victims who need help from others who are able to donate. Therefore, *Zakat* contribution increases during natural disasters. This positive relationship is consistent with the expected results. This results also directly and indirectly further support the research of: Firdaus et al (2012), Oosterhof, Heuvelman and Peters (2008), Brown, Harris and Taylor (2012), Bin and Edwards (2009), and Gao (2010). Yet, in the empirical result, natural disasters are insignificantly explaining the contribution to *Zakat*. The result is consistent with one of the United States' case, conducted by Ruff (2005). Ruff stated that American Muslims were scared to donate after foreign Muslim terrorists attacked the World Trade Center and the Pentagon because the government was scared that the donation would become the funds for terrorist. Therefore, the government blocked the charities' assets; this made the American Muslims scared to donate to religious charities. In conclusion, the natural disasters might not be one of the most significant variables that determined the contribution on *Zakat*. In addition, this result was also

supported by Bhatti (2013). He concluded that the donors may not only be concerned about their donation in helping development and helping other to relief suffering, but they might also be concerned about the satisfaction of doing something good in the name of *Allah*.

5.3 Implication of the Study

This section will discussed about how the related institution such as Islamic financial institution, Bank Negara Malaysia, *Pusat Pungutan Zakat* (PPZ) and government can benefit from the result of this study.

5.3.1 Total Income

This study stated that there is a significant positive relationship between total income and the contribution on *Zakat*. Total income of Islamic bank is a significant variable in determining the contribution on *Zakat*. According to *Syariah*, Islamic banks are not allowed to access into high risks activities; therefore, Islamic banks should find other ways to boost their income other than investing in high risk activities. Loan is one of the important sources of income for Islamic banks. In order to increase their income, Islamic banks can offer attractive profit sharing rates and promotions to attract more customers to apply loans from Islamic banks. As a result, the income of the Islamic banks increases as more customers borrow money from these banks. Besides, Islamic banks can also increase the awareness of the public about the benefits

of consuming Islamic banking products. Islamic banks can increase the awareness of Islamic banking products by organizing more campaigns and seminars. This way, the consumers will know more about Islamic banking products and become customers of Islamic banks. Thus, the income of Islamic banks will increase. The central bank, *Pusat Pungutan Zakat* (PPZ) and government are playing important roles in total *Zakat* collection. In order to increase total *Zakat* collection, central bank can implicate a policy that requires the banks to charge *Zakat* based on the return on investment of customers to increase the collection from Muslim businesses. In addition, PPZ could set different *Nisab* rates in different places such as city areas, which involves higher income per person. This is higher than the rural areas which involves lower income per person. Lastly, government can implicate a policy that increases the portion of tax exemption. When a business pays the *Zakat*, the amount of *Zakat* paid is excluded from the portion of their tax. Due to that, the amount of *Zakat* paid will increase when the tax exemption is high because higher portion of tax is paid to *Zakat*. Besides, this policy can also enable the *Zakat* payers to choose to pay more *Zakat* or tax based on their own preferences.

5.3.2 Total Assets

Total assets of a bank also represent the size of the bank. The results found that there is a significant negative relationship between the total assets and the contribution on *Zakat*. Although the bank is big, it may not indicate that the total *Zakat* collection will increase. This is because previous researchers mentioned that the assets holders would feel that they were rich when the total assets holding increased. In this situation, the assets holders will spend more

than others. When assets holders face liquidity problem, they will realized their assets in order to solve their liquidity problem. Thus, the *Zakat* collection does not necessarily become higher when the total assets of the bank increase. Besides, the increase of total assets may cause the increase of expenses of the bank. This is because a bank may need to borrow funds from others in order to purchase assets. The interest that the bank needs to pay to the lenders is one of the expenses that will decrease the income of the bank. Thus, the bank may not pay more *Zakat* when they have more assets. To increase the total *Zakat* collection from bank, a bank should not increase their assets when they do not have sufficient funds to purchase assets. The bank can decrease their expenses by reducing the borrowing funds from others. By this way, they are not obligated to pay the interest on loan which is counted as expenses for the bank. Their income will increase by lowering the expenses. At last, they will have more income to pay *Zakat*. There are several parties that play important roles in the *Zakat* collection. First and foremost, the total *Zakat* collection can be increased when central bank decreases the required reserve rate of every bank. When required reserve rate of bank decreases, the bank will have more capital for their business. Hence, the liquidity of the bank will increase and lead the income of the bank increase as well. The *Pusat Pungutan Zakat* (PPZ) can enforce rules and regulations by imposing penalty on *Zakat* payer who tend to avoid the payment. Besides, PPZ can increase the awareness of the importance of *Zakat* payment to poor through advertisements and seminars. The government can increase the portion of tax exemption for those paying *Zakat* in order to encourage more people to pay *Zakat*. Moreover, government can provide some incentive to help the corporates that pay *Zakat* by providing them loans with low interest and giving them some advice or training when needed.

5.3.3 Standard of living

In this study, standard of living has an insignificant positive relationship with contribution on total *Zakat* collection. Although standard of living is insignificant in this study, it is still possible to affect the total *Zakat* collection. According Yang (2005), the US personal saving rate decreases with economic growth. In other words, the people will spend more during economic growth. Therefore, Islamic banks can increase their saving rate, organized campaigns and so on to attract people to spend their money in Islamic saving product such as deposit. Then, the exceeded funds from increased deposits can be lent out and the income will increase by the loan product. Eventually, Islamic banks will pay more *Zakat* due to the higher income. There are several ways for government institutions to increase collection of *Zakat*. For instance, *Pusat Pungutan Zakat* (PPZ) can enforce the rules and regulations properly and strictly to avoid people from tax exemption. Punishments or penalties can be given who are supposed to pay *Zakat* but fail to do so. Besides, PPZ can set different *Nisab* rates at different places such as cities and rural areas. The *Nisab* rates can be set in higher rate in cities because the standards of living in cities are considered better than rural areas. In this case, government can provide some incentive to the *Zakat* payers who always pay *Zakat* on time. Small and medium scale enterprises can be helped through capitals provided by government when they are facing difficulty in their business. Government can also offer some training course about business operation and strategy to the businessmen who just start their businesses. Last but not least, central bank could lower the interest rate of loan to enable more people to borrow loan.

5.3.4 Natural Disasters

Natural disasters have an insignificant positive relationship with contribution on *Zakat*. Although natural disasters showed insignificant in this study, it is still possible to affect total *Zakat* collection. *Zakat* is a type of donation. Some of the corporate social responsibilities for Islamic banks are donation, sponsorship and charity works (Bank Islam). In the case of disasters, the Islamic banks will help the victims of natural disasters. Therefore, Islamic banks will donate more by paying more *Zakat*. Eventually, the victims will recover from the natural disasters through the help of donation. They will note that the presence of Islamic banks, which helps these banks to build their company's reputation. This way, both parties can gain benefits. Besides, there are some ways for government to implement disasters precaution by increasing the *Zakat* collection. This is to enable *Zakat* foundation to be responsible and help the victims without any delay. Moreover, government can encourage the corporates to fulfill their corporate social responsibility to help victims by paying more *Zakat*. This will be benefiting the corporations through building up the reputation of the corporates. Furthermore, PPZ may impose special *Nisab* rates to *Zakat* payers during disasters. By increasing the *Nisab* rates, *Zakat* payers are eligible to pay more *Zakat* in order to help the victims. In recent years, central bank has imposed some policies to enhance *Zakat* payment. In order to increase the *Zakat* payment, central bank can make sure all the banks pay *Zakat* according to their income to make sure every *Zakat* payer pays exactly the amounts that he or she is eligible to pay. More *Zakat* payments are being encouraged in order to serve to store excess liquidity for natural disasters precaution.

5.3.5 Conclusion

The result of this study did not completely fulfill the objectives. This is because just one of the independent variables, which is total income that was able to fulfill the objective, which was positive and significant relationship. For the total assets, expected results were positive and significant relationship; however, the results indicated a negative significant relationship. In addition, the other two independent variables, which were standard of living and natural disaster, indicated a positive and insignificant relationship although it was predicted to see a positive significant relationship. Because of that, the results are unable to fulfill the objective. These three independent variables might not have fulfilled the objectives may be due to the limitations of this study.

5.4 Limitation of Study

Based on the proceedings, there are still some limitations in this study. Firstly, this research focuses on Malaysia only. There are a lot of Islamic countries all around the world: Saudi Arabia, Indonesia and Pakistan. All the Muslims in these countries are obligated to pay *Zakat*. In this research, only Malaysia was studied.

Second, the sample size in this research is considered small. This is because random sampling technique was used as the tool to determine the sample size. Although there are 16 Islamic banks in Malaysia, only 7 Islamic institutions were chosen as secondary data in this study in order to run the test. Besides, the duration of years in this study is also considered as short because the data obtained to run the test was within 6 years. The numbers of observations were only 42.

Third, all the independent variables were only focused on a specified perspective which is through banking perspective. Not only Islamic banks are obligated to pay *Zakat*, but there are still a lot of sectors to pay *Zakat*. These sectors include individuals, private companies, corporations and partnerships. However, in this research, only Islamic banks were selected as the secondary data.

Forth, lack of independent variables is one of the limitations in this study. There are some other factors that can affect the total *Zakat* payment like capital, *Nisab* and so on.

In addition, this study narrowed to how the determinants affect *Zakat*. However, there was possibility that *Zakat* could affect the determinants. This was explained by the fact that *Zakat* would help the poor and after that the poor would then contribute to *Zakat*. Due to this, this study is still unable to research into *Zakat* deeply and provide sufficient knowledge to the readers of this study.

Lastly, the result of this research might have the possibility of differentiation and inconsistency. This might be due to the different backgrounds, political stability and cultures of the Islamic institutions as the differences in different researches will cause different results.

5.5 Recommendation for Future Research

There are several recommendations for future researchers to improve the accuracy and reliability of their study. Firstly, future researchers can extend their study to others Islamic countries like Indonesia, Saudi Arabia and Pakistan. This is because the sample of this research paper only focused on Malaysia and the results of this study cannot be applied to other countries. Besides, Malaysia is not a large Islamic country compared to Indonesia, Pakistan or Saudi Arabia. So, it is recommended to research into these larger Islamic countries to find out whether the results from the other countries are similar to the results of this research paper. In addition, the results from larger countries could be more reliable and accurate.

Secondly, future researchers can increase the sample size in their study. Due to random sampling techniques, this research paper did not include all the 16 Islamic banks in Malaysia. Besides, the duration of years in this study was only 6 years. In order to make the results of future studies more reliable, it is suggested to increase the number of banks. In addition, there are also many sectors that are productive in the country. These others sectors also contribute to *Zakat* and they may have different determinants that will affect them to pay *Zakat*. If the future researchers want determine the determinants of *Zakat* collection, their study can extend to other sectors.

Thirdly, the number of independent variables should also be increased in future studies. This is because there may be others determinants to affect the total *Zakat* collection. In this research paper there were only four determinants. Some of the determinants to be included in the future study are capital of the banks, *Nisab* rate, and total liability of the bank and so on. These new suggested determinants may significantly affect the total *Zakat* collection of the banks.

Lastly, the future researchers can do their research about *Zakat* from other perspectives. They may study how *Zakat* affects the determinants, which is the opposite of this study, or the effects on *Zakat* for the poor. These new perspectives can help the future researchers to widen their views of their study. Future researchers study from other perspectives; they may be able to study about *Zakat* deeply and get different results.

5.6 Conclusion

Islamic banking has been developing and growing tremendously after 1970s. There are around 280 Islamic banks conducting Islamic banking in over 48 countries. There are 16 Islamic banks in Malaysia. The main purpose of this study is to examine the determinants which would affect total *Zakat* collection. The determinants included are total income, total assets, standard of living and natural disaster. Data from 7 Islamic banks from year 2007 to 2012 was taken and empirically tested.

Overall, the results showed that total income and total assets are significant determinants to affect total *Zakat* collection while standard of living and disaster are insignificant to impact total *Zakat* collection. Total income, standard of living and disaster are positively related while total assets are negatively related to total *Zakat* collection.

Based on the findings, the positive relationship of total income and *Zakat* collection would be explained by increased of total income which will increase the total *Zakat* collection. As standard of living improves, total *Zakat* collection will be increased too.

Zakat collection increases when disaster happens as those rich people will pay more *Zakat*. Besides, an adverse relationship in total assets states that the higher the size of assets, the lower the *Zakat* collection.

At the end of this study, the objective to identify the determinants of *Zakat* collection had been met. This paper provides the future Islamic banking practitioners the awareness about those significant variables that influence the collection of *Zakat*.

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APPENDICES

Appendix 1.1: Total Zakat collection

**TOTAL ZAKAT COLLECTION FROM STATES IN MALAYSIA
2003 - 2013**

STATES	2012	2011	2010	2009	2008
W. PERSEKUTUAN	410,411,327.58	348,882,925.85	282,676,073.93	248,803,798.22	211,364,697.68
SELANGOR	451,325,027.00	394,103,904.00	336,934,522.00	283,648,722.00	244,409,628.00
JOHOR	171,939,397.69	137,469,741.18	122,336,032.00	109,231,254.93	100,737,539.79
TERENGGANU	107,080,441.25	88,274,932.37	76,447,878.23	73,524,193.31	66,200,415.14
PERAK	99,577,582.60	86,113,585.24	69,639,500.87	67,189,291.45	56,962,446.06
PULAU PINANG	76,501,447.71	62,281,170.88	53,239,132.91	47,952,153.34	41,764,273.00
PAHANG	102,875,834.89	88,592,218.43	80,874,869.71	71,868,302.65	57,935,146.89
KELANTAN	113,163,004.70	94,083,475.87	70,373,328.79	66,522,450.31	58,167,095.10
KEDAH	106,471,950.65	106,084,292.22	76,947,139.51	67,578,342.14	53,202,300.24
N. SEMBILAN	65,352,483.87	57,917,702.28	50,201,121.23	42,275,136.39	37,409,710.68
MELAKA	43,980,976.99	37,930,757.61	34,011,770.13	30,721,955.12	26,905,934.29
SARAWAK	-NA-	44,126,087.93	39,143,055.60	36,915,094.91	36,099,969.34
SABAH	48,929,401.12	33,891,152.97	32,856,749.96	25,388,088.73	23,799,155.06
PERLIS	78,912,426.00	61,367,147.00	38,091,506.00	25,253,015.10	23,134,583.00
	1,876,521,302.05	1,641,119,093.83	1,363,772,680.87	1,196,871,798.60	1,038,092,894.24

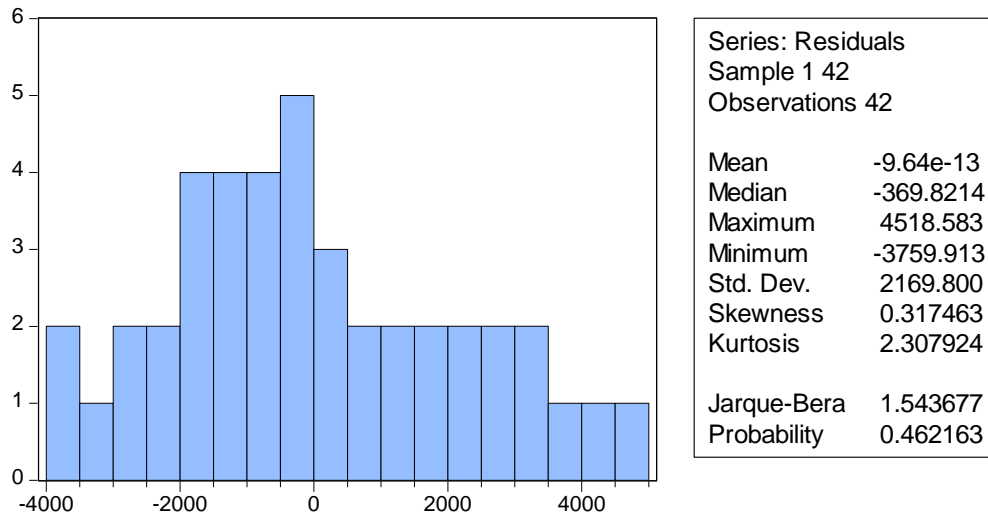
*Data of zakat's collection from state of Sarawak 2013 not available (Data collected until 2 August 2013)

Appendix 1.1: Total *Zakat* collection

STATES	2007	2006	2005	2004	2003
W. PERSEKUTUAN	173,815,154.35	147,587,898.48	130,141,209.97	110,631,584.04	96,380,801.25
SELANGOR	202,193,541.00	159,834,252.79	133,121,829.00	108,826,547.05	86,200,315.23
JOHOR	73,321,840.60	54,732,942.45	49,357,154.03	38,052,802.64	33,959,015.68
TERENGGANU	51,442,341.96	42,870,576.42	40,365,590.96	36,147,739.28	40,058,735.20
PERAK	41,276,179.92	33,848,479.38	27,543,535.48	25,724,715.39	21,698,518.02
PULAU PINANG	37,085,282.33	30,589,545.62	28,000,426.00	23,288,019.00	21,317,975.00
PAHANG	41,487,155.81	35,971,733.59	31,032,233.57	22,917,724.25	20,616,368.04
KELANTAN	40,199,886.62	35,641,537.75	29,372,551.46	22,440,931.30	18,140,371.63
KEDAH	36,692,723.92	35,227,089.74	30,185,661.45	22,205,222.54	18,559,387.21
N. SEMBILAN	29,356,271.66	25,821,205.04	23,098,180.81	19,037,286.24	16,520,810.59
MELAKA	22,067,022.30	19,464,653.26	17,692,093.97	14,238,492.58	13,037,830.48
SARAWAK	23,132,088.56	20,548,322.81	15,299,300.04	15,566,982.51	10,264,513.31
SABAH	17,514,982.50	16,648,793.71	11,314,073.92	7,784,937.74	5,102,537.00
PERLIS	16,699,600.00	11,847,141.66	6,564,465.08	6,406,109.00	6,573,224.92
	806,284,071.53	670,636,172.70	573,088,305.74	473,269,093.56	408,430,403.56

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2 August 2013

Appendix 4.1: Jarque-Bera



Source: Eviews output

Appendix 4.2: Correlation coefficient

	TZ	TI	TA	SOL	ND
TZ	1.000000	0.812732	0.156889	0.285887	-0.194377
TI	0.812732	1.000000	0.367415	0.200526	-0.126388
TA	0.156889	0.367415	1.000000	0.261127	-0.134834
SOL	0.285887	0.200526	0.261127	1.000000	-0.766378
ND	-0.194377	-0.126388	-0.134834	-0.766378	1.000000

Source: Eviews output

Appendix 4.3: Variance- Inflating Factors

Dependent Variable: SOL				
Method: Least Squares				
Date: 04/03/14 Time: 18:17				
Sample: 1 42				
Included observations: 42				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
ND	-8.128400	1.077286	-7.545258	0.0000
C	100.8367	0.439800	229.2785	0.0000
R-squared	0.587335	Mean dependent var		99.48197
Adjusted R-squared	0.577018	S.D. dependent var		4.000632
S.E. of regression	2.601893	Akaike info criterion		4.796803
Sum squared resid	270.7938	Schwarz criterion		4.879549
Log likelihood	-98.73287	Hannan-Quinn criter.		4.827133
F-statistic	56.93092	Durbin-Watson stat		1.034492
Prob(F-statistic)	0.000000			

Dependent Variable: TA				
Method: Least Squares				
Date: 04/03/14 Time: 18:19				
Sample: 1 42				
Included observations: 42				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
TI	22.45940	8.989205	2.498486	0.0167
C	18665833	6103076.	3.058431	0.0040
R-squared	0.134994	Mean dependent var		28955964
Adjusted R-squared	0.113368	S.D. dependent var		30998572
S.E. of regression	29188601	Akaike info criterion		37.26290
Sum squared resid	3.41E+16	Schwarz criterion		37.34565
Log likelihood	-780.5210	Hannan-Quinn criter.		37.29323
F-statistic	6.242431	Durbin-Watson stat		0.711676
Prob(F-statistic)	0.016682			

Source: Eviews output

Appendix 4.4: Heteroskedasticity Test: White

Heteroskedasticity Test: White				
F-statistic	2.070955	Prob. F(12,29)		0.0537
Obs*R-squared	19.38223	Prob. Chi-Square(12)		0.0797
Scaled explained SS	9.836960	Prob. Chi-Square(12)		0.6303
Test Equation:				
Dependent Variable: RESID^2				
Method: Least Squares				
Date: 04/01/14 Time: 22:15				
Sample: 1 42				
Included observations: 42				
Collinear test regressors dropped from specification				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.06E+09	1.90E+09	-0.560331	0.5796
TI	158.8275	77.11573	2.059600	0.0485
TI^2	4.57E-07	4.12E-06	0.111005	0.9124
TI*TA	2.62E-08	1.22E-07	0.214550	0.8316
TI*SOL	-1.519395	0.774934	-1.960677	0.0596
TI*ND	-16.13698	9.068964	-1.779363	0.0857
TA	1.853724	1.802774	1.028262	0.3123
TA^2	1.96E-09	1.45E-09	1.350479	0.1873
TA*SOL	-0.021101	0.019007	-1.110178	0.2760
TA*ND	-0.047519	0.160160	-0.296699	0.7688
SOL	19771689	37513650	0.527053	0.6022
SOL^2	-90735.56	185272.6	-0.489741	0.6280
SOL*ND	127791.7	138921.9	0.919882	0.3652
R-squared	0.461482	Mean dependent var		4595934.
Adjusted R-squared	0.238646	S.D. dependent var		5319829.
S.E. of regression	4641848.	Akaike info criterion		33.78780
Sum squared resid	6.25E+14	Schwarz criterion		34.32565
Log likelihood	-696.5437	Hannan-Quinn criter.		33.98494
F-statistic	2.070955	Durbin-Watson stat		1.810560
Prob(F-statistic)	0.053727			

Source: Eviews output

Appendix 4.5: Breusch-Godfrey Serial Correlation LM Test

Breusch-Godfrey Serial Correlation LM Test:				
F-statistic	3.642722	Prob. F(2,35)		0.0365
Obs*R-squared	7.236265	Prob. Chi-Square(2)		0.0268
Test Equation:				
Dependent Variable: RESID				
Method: Least Squares				
Date: 04/01/14 Time: 22:08				
Sample: 1 42				
Included observations: 42				
Presample missing value lagged residuals set to zero.				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
TI	0.000325	0.000723	0.450030	0.6555
TA	3.25E-06	1.20E-05	0.271063	0.7879
SOL	-61.83276	136.4595	-0.453122	0.6533
ND	-248.1937	1420.935	-0.174669	0.8623
C	5974.508	13650.61	0.437673	0.6643
RESID(-1)	0.341591	0.180509	1.892381	0.0667
RESID(-2)	0.171145	0.178089	0.961007	0.3431
R-squared	0.172292	Mean dependent var		-9.64E-13
Adjusted R-squared	0.030399	S.D. dependent var		2169.800
S.E. of regression	2136.565	Akaike info criterion		18.32280
Sum squared resid	1.60E+08	Schwarz criterion		18.61241
Log likelihood	-377.7788	Hannan-Quinn criter.		18.42895
F-statistic	1.214241	Durbin-Watson stat		1.877477
Prob(F-statistic)	0.322354			

Source: Eviews Output

Appendix 4.6: Ramsey's RESET Test

Ramsey RESET Test:				
F-statistic	3.438353	Prob. F(1,36)	0.0719	
Log likelihood ratio	3.831233	Prob. Chi-Square(1)	0.0503	
Test Equation:				
Dependent Variable: TZ				
Method: Least Squares				
Date: 04/03/14 Time: 16:44				
Sample: 1 42				
Included observations: 42				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
TI	0.003795	0.001767	2.147315	0.0386
TA	-2.29E-05	1.24E-05	-1.842396	0.0737
SOL	99.24545	148.7816	0.667054	0.5090
ND	-57.96404	1453.251	-0.039886	0.9684
C	-8643.044	14964.09	-0.577586	0.5671
FITTED^2	4.33E-05	2.34E-05	1.854280	0.0719
R-squared	0.735232	Mean dependent var	3235.976	
Adjusted R-squared	0.698459	S.D. dependent var	4028.829	
S.E. of regression	2212.341	Akaike info criterion	18.37305	
Sum squared resid	1.76E+08	Schwarz criterion	18.62129	
Log likelihood	-379.8341	Hannan-Quinn criter.	18.46404	
F-statistic	19.99362	Durbin-Watson stat	1.144311	
Prob(F-statistic)	0.000000			

Source: Eviews output

Appendix 4.7: OLS Regression Result

Dependent Variable: TZ				
Method: Least Squares				
Date: 04/01/14 Time: 22:04				
Sample: 1 42				
Included observations: 42				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
TI	0.006773	0.000762	8.893689	0.0000
TA	-2.63E-05	1.27E-05	-2.071675	0.0453
SOL	196.4377	143.7580	1.366447	0.1800
ND	379.8237	1480.441	0.256561	0.7989
C	-18710.47	14396.57	-1.299647	0.2018
R-squared	0.709944	Mean dependent var		3235.976
Adjusted R-squared	0.678587	S.D. dependent var		4028.829
S.E. of regression	2284.077	Akaike info criterion		18.41665
Sum squared resid	1.93E+08	Schwarz criterion		18.62352
Log likelihood	-381.7498	Hannan-Quinn criter.		18.49248
F-statistic	22.64041	Durbin-Watson stat		1.228934
Prob(F-statistic)	0.000000			

Source: Eviews output