Journal of Economics and Behavioral Studies
Vol. 4, No. 8, pp. 449-456, Aug 2012 (ISSN: 2220-6140)

Zakat Distribution and Growth in the Federal Territory of Malaysia

*Mohammed B. Yusoff[1], [2]Sorfina Densumite
[1]International Islamic University Malaysia, Malaysia
[2]Center for Conflict Studies and Cultural Diversity Prince of Songkla University, Thailand
*mohammed.yusoff@iium.edu.my

Abstract: This research paper aims to examine the impact of *zakat* distribution on growth in the Federal Territory Malaysia. Specifically, an econometric study is carried out to examine the ability of *zakat* expenditure to affect real economic growth in the Federal Territory Malaysia by employing various econometric procedures such as the unit root tests, the cointegration tests, the vector error-correction model (VECM), and the Granger causality tests. The findings of the study suggest that *zakat* expenditure has a positive relationship with real GDP in the long-run. The Granger causality test indicates that *zakat* spending causes real economic growth with no feedback. In other words, *zakat* expenditure could boost GDP in the Federal Territory Malaysia both in the short-run and long-run.

Keywords: *Zakat, growth, GDP, Malaysia*

1. Introduction

Islam is a religion built upon five pillars, namely: the testimony that there is no god except *Allah* and Muhammad is the messenger of *Allah*, establishing prayer, paying *zakat*, fasting in the month of *Ramadhan*, and performing pilgrimage. Every Muslim must establish themselves on these five pillars. Therefore, it is compulsory for them to fully and correctly understand each of the pillars. *Zakat* is one of the five pillars of Islam. Z*akat* means growth or increase and by paying *zakat* we purify and clean our wealth and heart. All Muslims whose wealth is above the minimum *zakatable* limit (*nisab)* are required to pay *zakat*. The *zakat* payment can only be given to specific groups of people as stated in the *al-Qur'an*. There are eight categories of *zakat* recipients, namely the needy (*fakir*), poor (*Miskin*), *zakat* official (*Amil*), those whose hearts are reconciled to Islam (*Muallaf*), slaves and captives (*al-Riqab*), debtors (*al-Gharimin*), for the cause of *Allah* (*Fisabilillah*), and travelers (*Ibnu Sabil*). The rationale for imposing *zakat* is to prevent the concentration of wealth in a few hands, which is clearly stated in *al-Qur'an* in *Surah al-Hashr*, verse 7. *Zakat* also plays an important role in Islamic social welfare system to alleviate poverty in Muslim nations. In Malaysia, *zakat* administration is under the Islamic Council of each state, which has the authority to organize the collection and distribution of *zakat* on its own. Toward this end, it has developed a variety of systems such as establishing offices, employing and training officers, designing a computerised system of *zakat* collection, financial and reporting system, and general operation plan. The modern practices of *zakat* collection in Malaysia can be found at the Pusat Pungutan *Zakat* (*Zakat* Collection Centre) in the Federal Territory, which was set up in 1991 for the purpose of collecting of *zakat* with a more systematic management, including computerisation. It is now has become a model of *zakat* administration which has evolved to suit the changing environment.

The *Zakat* Collection Centre in the Federal Territory is an agency under the Majlis Agama Islam Wilayah Persekutuan (The Islamic Religious Council of Federal Territory) and is authorized to carry out its primary responsibility to collect *zakat*. This *zakat* collection centre covers the three Federal Territories, namely: Kuala Lumpur, Putrajaya, and Labuan. On the other hand, the distribution of *zakat* in the Federal Territory is done by the *Baitulmal* which was established in 1974. In the early stage, the *Baitulmal* of Kuala Lumpur focused on *zakat* collection, mainly on *zakat fitrah* (an obligatory charity imposed on every Muslim at the end of the month of *Ramadhan*), with a small focus on *zakat* in business and wealth. Currently, this institution is responsible for *zakat* fund management and disbursement in the Federal Territory. It distributes *zakat* funds to *zakat* recipients through the various programmes in education, health and quality of life, and economic development. Z*akat* is supposed to be the major source of revenues in an Islamic state. And therefore the

main objective of this paper is to analyze the trends of *zakat* management, particularly on the collection and distribution. Specifically, the objective of this study is to determine the effects of *zakat* distribution on economic growth in the Federal Territory of Malaysia. There have been very little empirical studies to determine the effects of *zakat* on an economy like a study that has been done by Yusoff (2010) although there are a number of works have been done on the effects of *zakat* in alleviating poverty at micro level. We hope that this present study will throw more light on the importance of *zakat* in improving the standard of living of *ummah* and will spur for more empirical studies on *zakat* at macro level.

Types of Zakat in the Federal Territory Malaysia: The *zakat* collection in the Federal Territory is under the management of *Zakat* Collection Centre, which is an organisation under the Islamic Religious Council of Federal Territory of Malaysia.

Zakat Collection in the Federal Territory: There are several types of *zakat* collected in the Federal Territory, namely *zakat* on salaries, businesses, savings, and assets. Table 1 presents the statistics of *zakat* collection for each type in the Federal Territory during 2006-2008.

Table 1: *Zakat* Collection by Types (2006-2008)

Types	2006 (RM)	%	2007 (RM)	%	2008 (RM)	%
Salaries	89,123,574.90	62.19	109,800,306.20	64.89	137,571,807.25	66.70
Business	22,790,507.33	15.90	23,326,234.39	13.78	28,702,947.32	13.92
Saving	11,987,893.12	8.37	13,670,863.27	8.08	15,063,180.16	7.30
Asset	18,758,590.82	13.09	21,500,920.34	12.70	23,680,791.26	11.48
Qadha *Zakat*	279,414.86	0.19	281,230.27	0.17	545,092.67	0.26
Others	364,422.05	0.26	637,679.18	0.38	697,328.62	0.34
TOTAL	143,304,403.08	100	169,217,233.65	100	206,261,147.28	100

Source: Annual Report, Pusat Pungutan Zakat (PPZ), Majlis Agama Islam Wilayah Persekutuan (MAIWP).

Table 1 shows that the largest amount of *zakat* collection in ringgit Malaysia(RM) is the *zakat* on salaries which has accounted for more than 60% annually, followed by *zakat* on business, assets, saving, other collections, and *qadha zakat*. Specifically, z*akat* on salaries accounted for 62 percent of the total *zakat* collection in 2006 which increased to 65 percent and 67 percent in 2007 and 2008, respectively. In contrast, *zakat* collection on business slightly declined over these three years. In 2006, it accounted for 15.90 percent but decreased to 13.78 percent in 2007 and 13.92 percent in 2008. However, the total *zakat* collection has been increasing every year.

Channels of Zakat Payment: The *Zakat* Collection Centre has introduced a number of products and it also cooperates with the relevant agencies to facilitate the payment of *zakat* in the Federal Territory. Z*akat* payments can be made through the counter, internet, ATM, phone-banking, and credit card provided by a number of banks. *Zakat* payments also can be made directly through the *Zakat* Collection Centre counters which offer many modes of payment such as by cash, check, Islamic credit card, and Debit card. There are also other channels available such as through the post office counters, salary deduction, SMS-*Zakat* (Mobile Money) and Kiosk machines at the gas stations. In addition to the *zakat* payment service through kiosks at the gas stations, *zakat* payers can also pay *zakat* via kiosks placed in several Petronas service stations around the capital city. Similarly, *zakat* can be paid through multipurpose kiosks in the Road Transport Department and the Department of Immigration. The *Zakat* Collection Centre also collaborates with the Malaysia Association of Tax accountants which appoint some selected firms as *zakat* collection agencies. Besides, the *Zakat* Collection Centre also works together with the Malaysian Administrative Modernization and Management Planning Unit (MAMPU) to implement the online *zakat* payment through a system called My Bayar which has become a successful service to *zakat* collection agents. Table 2 shows the *zakat* collection of each channel during 2006-2008. The table shows that during 2006-2007 periods, the highest amount of *zakat* collection came from the salary deductions which contributed to more than 50 percent annually, followed by payment through PPZ-MAIWP counter, postal order, and bank counters. Nonetheless, in 2008, the collection through bank counters was higher than the postal order. On the other hand, in 2006 and 2007, there were no payments through money mobile, collection agents, and kiosk, however in 2008, the number of payments through these channels started to trickle in. *Zakat* collection through salary deduction accounted for 52

percent in 2006 and increased to 53 percent and 56 percent in 2007 and 2008, respectively; whereas *zakat* collection through the PPZ-MAIWP counters contributed 44 percent, 41 percent and 39 percent in 2006, 2007 and 2008, respectively. In addition, postal order, bank counters, post office counters accounted for only a marginal amount of the total *zakat* collection. The *zakat* collection through postal order was at 2.6 percent in 2006 and declined in 2007 and 2008, while bank counters accounted for only 1 percent in 2006 and 2 percent in the following two years. The post office counters contributed only 0.2 percent over the three years. Therefore, these channels of *zakat* payment provided by the Zakat Collection Centre can effectively improve the total *zakat* collection.

Table 2: Statistics of *Zakat* collection through Channels (2006-2008)

Channels	Collections (RM)					
	2006 (RM)	**%**	**2007 (RM)**	**%**	**2008 (RM)**	**%**
Salary Deduction	74,689,998.93	52.12	91,009,773.02	53.78	115,429,577.27	55.96
PPZ-MAIWP Counter	62,716,904.12	43.76	69,818,950.23	41.26	81,057,035.38	39.30
Postal Order	3,710,877.26	2.59	4,200,747.02	2.48	3,190,877.29	1.55
Bank Counters	1,832,255.91	1.28	3,655,645.88	2.16	5,072,702.82	2.45
Post Office Counters	305,264.86	0.22	337,363.75	0.20	506,335.38	0.25
Credit Card	17,993.00	0.01	11,610.00	0.01	12,710.00	0.01
Cheque Deposit	31,109.00	0.02	183,058.75	0.11	83,799.08	0.04
Machine	0.00	0.00	85.00	0.00	362.57	0.00
Money Mobile	0.00	0.00	0.00	0.00	879,308.72	0.43
Collection Agents	0.00	0.00	0.00	0.00	28,438.77	0.01
Kiosk						
Total	143,304,403.08	100	169,217,233.65	100	206,261,147.28	100

Notes: Bank counters include payments through Internet Banking, ATM and Phone Banking.
Source: Annual Report 2006-2008, Pusat Pungutan *Zakat* (PPZ), Majlis Agama Islam Wilayah Persekutuan (MAIWP).

Zakat Distribution: *Zakat* payment is compulsory for individuals who fulfil the *nisab* and there are also specific groups of individuals who are qualified to receive it. Therefore, it is important to fully understand the whole system of *zakat,* including *zakat* payers and *zakat* recipients, in order to implement *zakat* collection and distribution more efficiently and justly. This section shall briefly explain the eight categories of *zakat* recipients, namely *faqir, miskin, amil, muallaf, al-riqab, al-gharimin, fisabilillah*, and *ibnu sabil*.

***Zakat* Recipients:** The testimony of *zakat* recipients is based on the principle of *al-Qur'an*, verses 60 of S*urah at-Tauba*: "Alms are for the poor and the needy, and those employed to administer the (funds); for those whose hearts have been (recently) reconciled (to Truth); for those in bondage and in debt; in the cause of *Allah* and for the wayfarer; a duty ordained by *Allah*, and *Allah* is full of knowledge and wisdom" (*at-Tauba*: 60). This verse clearly says that *zakat* should only be spent on eight categories of recipients, namely: *Faqir, Miskin, Amil, Muallaf, Al-Riqab, Al-Gharimin, Fisabilillah*, and *Ibnu Sabil*. We shall briefly explain each one of them.

Hardcore Poor (Faqir) A *faqir* is a person who has no assets or job or when his/her total income is less than 50 percent of his/her daily needs as well as the needs of the people under his/her care. Referring to the Islamic Law, the minimum standards of the needs for life are food, clothing, and shelter, also basic education and medical care.

Poor (Miskin) This is a person who has a job but his/her income only fulfils a part of his/her basic needs, and is still not sufficient to fulfil his/her daily needs and the needs of people under his/her care.

The Zakat Administrator (Amil) A person or organization directly associated with the *zakat* institutions to manage and administer matters related to *zakat* in terms of *zakat* collection, distribution and finance. For instance, those who qualify for *zakat* assistance are the collectors, distributors, custodians, clerks, accountants, informers, and officers.

Those Whose Hearts are Reconciled to Islam (Muallaf) A person whose heart has softened or who hopes and tends to accept Islam, or a person who has embraced Islam, but the Islamic faith still remains weak. Thus, they are divided into two types, namely: one who has just embraced Islam and a non Muslim who can be persuaded to embrace Islam and not cause any danger to Muslims. *Zakat* is provided to *Muallaf* as a way to assist and enable them to start a new life in the way of Islam.

Slaves and Prisoners (Al-Riqab) These are the Muslims who are in the grips of slavery, dominated physically or mentality and have fallen into the hands of the enemies. Thus, *zakat* can be given for the redemption of prisoners. Most of the Islamic scholars concur that *zakat* may be used to release slaves whose masters are either Muslim or non-Muslim.

The Debtors (Al-Gharimin): These are people who are in debt but need to fulfil their basic needs for survival. The debt, in this case, must be for a lawful purpose or not violate the Islamic law. According to Imam Shafie, a person who is indebted for helping the society, making peace or for pure Islamic purposes are allowed to receive *zakat* to discharge his/her debt. But *zakat* is not to be distributed to a person who is indebted for unlawful purposes such as gambling, the use of intoxicants, and other immoral activities. But the debtors must do their best to settle the debt by themselves first.

For the Path of Allah (Fisabilillah) *Fisabilillah* refers to a person or group involves in an activity in order to encourage, defend or preach Islam. Imam Abu Hanifa and Abu Yusuf explain that *fisabilillah* refers to fighters who defend Islam and Muslim communities, so *zakat* should be given to them even if they are rich.

The Wayfarer (Ibnu Sabil) An *ibnu sabil* is a person who is travelling from any country and need assistance during his/her journey even if he is rich. This is the special provisions for protection the welfare of a Muslim traveller. Nevertheless, the purpose of travelling must not contradict the Islamic laws. However, before asking the *zakat* assistance, the travellers must find other lawful means to fulfil their needs. Therefore, *zakat* will be available only when the travellers are unable to fulfil their needs to return home.

***Zakat* Recipients in the Federal Territory:** the amount of *zakat* distribution to each category depends on the circumstances and requirements. Table 3 shows that the distribution of *zakat* in the federal territory to all the categories of recipients has been increasing. The higher *zakat* disbursement will stimulate the economic activities within the federal territory.

Table 3: *Zakat* Distribution in the Federal Territory (2006-2008)

Recipients	2006 (RM)	%	2007 (RM)	%	2008 (RM)	%
Fakir	14,837,415	14.61	19,363,534	15.97	20,506,789	12.24
Miskin	13,463,592	13.26	20,675,005	17.06	22,616,745	13.50
Amil	25,685,080	25.29	16,249,998	13.40	31,643,535	18.89
Mualaf	3,125,683	3.08	3,796,131	3.13	5,652,879	3.38
Al-Riqab	0.00	0.00	0.00	0.00	0.00	0.00
Al-Gharimin	1,399,151	1.38	1,395,073	1.15	1,652,908	0.99
Ibnu Sabil	340,704	0.34	382,981	0.32	399,643	0.24
Fisabilillah	42,696,782	42.04	59,361,593	48.97	85,035,345	50.76
Total	101,548,407	100	121,224,318	100	167,507,847	100

Source: Annual Report 2006-2008, Pusat Pungutan *Zakat* (PPZ), Majlis Agama Islam Wilayah Persekutuan (MAIWP)

Table 3 shows that nearly half of the *zakat* disbursements over the three years went to *fisabilillah* and the other half to the remaining *zakat* recipients, except for *al-riqab*. A quarter of the *zakat* fund went to *amil* in 2006 but the amount fell almost half of 2006 in 2007 and increased a little in 2008 to 18.89 percent. The percentage of *zakat* distribution to *fakir* and *miskin* slightly increased from 2006 to 2007 but declined in 2008; however, in terms of volume, it has increased every year. The general criteria of the recipients of *zakat* in the Federal Territory of Malaysia are that the recipients must be Muslims, Malaysians, and living in the Federal Territory for at least one year.

2. Zakat and Economic Growth

This section examines the relationship between *zakat* and economic growth. It is postulated that *zakat* expenditure could increase economic activities, employment, and productivity of the poor. Besides that, *zakat* could also be a tool to alleviate poverty. Many Muslim countries have established *zakat* institutions to collect and distribute *zakat*; however, in practice each country may have different approaches of collecting and distributing the *zakat* fund. There are many studies on *zakat*. Ahmed (2004) studies the role of *zakat* in poverty alleviation in twenty four idb countries. He compares the estimated funds needed to alleviate poverty and the expected *zakat* proceeds in order to see the scope of *zakat* in poverty alleviation. He finds that for countries with low per capita income and high poverty concentration, *zakat* collection may not be able to support all the poor in the country. Ibrahim (2006) study using panel data in selangor, Malaysia shows that *zakat* distribution has reduced poverty incidence while the extent of poverty and severity of poverty have decreased after the distribution of *zakat*. Hassan (2010) proposes a model to integrate *zakat* and *awqaf* with Islamic micro-finance for the purpose of poverty alleviation. The model incorporates *zakat* as a source of fund which can be distributed to fulfill basic consumption needs for the hard-core poor and provides the *zakat* initial fund for capital investment or business for the poor. Hassan also suggests that *zakat* proceed can replace government expenditure, as in the case of Bangladesh, which shows the potential ability of *zakat* proceed to replace foreign aid if the *zakat* fund is properly managed. Yusoff (2006) argues that *zakat* can be used as a tool of stabilization policy. He elucidates his arguments by introducing a model which incorporates *zakat* into a simple macroeconomic model of an Islamic economy and analyzes the role of *zakat*. Conceptually, the result shows that an increase in *zakat* expenditure will increase economic activities. Based on this result, he argues that *zakat* can be used as discretionary and non-discretionary fiscal policy. Yusoff (2010) extends his analysis by testing Malaysian *zakat* expenditure on real output using panel data. The results indicate that *zakat* expenditure could significantly explain the variation of output.

Yusoff (2011) investigates the impact of *zakat* spending and school enrollment on economic growth using panel data represented by the fourteen states of Malaysia. The results of this study support the hypothesis that *zakat* spending and school enrollment are important determinants of economic growth in Malaysia. The *zakat* spending and student enrollment could significantly explain the variation in the growth of real output represented by the growth of real GDP. Therefore, it is suggested that all Muslim countries must improve the efficiency of *zakat* collection and spend it prudently. A more serious effort has to be made to formulate better strategies, planning, and effective policy actions to provide the needed infrastructure and to increase the stock of human capital in accordance to the need of the nations to generate growth and sustain the development of Muslim society. Kahf (1995) investigates *zakat* institution in various Muslim countries. He finds that there are various patterns and models of *zakat* institutions in term of *zakat* collection and distribution with and without legal obligation. Salama (1995) conducts an empirical study of voluntary and compulsory *zakat* in Sudan during 1980-1990 periods. Before imposing *zakat* as a legal obligation, the growth of *zakat* proceed was sluggish. In contrast, the growth of *zakat* collection had dramatically increased after *zakat* was made compulsory. Another study by Guermat *et al*. (2003) shows that people in 4 GCC countries (Saudi Arabia, Kuwait, UAE, and Bahrain) favor paying *zakat* to charitable organisations and directly to the recipients of *zakat* rather than paying *zakat* through the government. Guermat *et al.* (2003) also study the collection of *zakat* in Sudan and found that *zakat* collection was small compared to the GDP during 1980-1990 periods. Similar results are obtained by Kahf (2000) when he finds that the official *zakat* collections in Jordan, Egypt, and Kuwait were small relative to GDP, except for Pakistan. *Zakat* disbursement was large in Jordan but others withheld the *zakat* balance for the purpose of emergency reserve. Kahf also finds that the governments of these four countries paid for the cost of administration rather than utilizing the *zakat* fund, and thus only a little of *zakat* fund was spent for administrative cost. For Sudan, Salama's study (1995) finds that there was a high portion of *zakat* expenditure went to the administrative expenditure.

3. The Model

There have been very few studies on the modelling of *zakat*. Yusoff (2006) develops a *zakat* model and uses it to conceptually elucidate the role of *zakat* on the economic activities. Then, Yusoff (2010) extends the model to analyze the effect of *zakat* distribution on the real GDP, conceptually and empirically. In this current study, we specify our model as

$$GDP_t = \beta_0 + \beta_1 GZ_t + \beta_2 X_t + \varepsilon \qquad (1)$$

where *GDP* is the real Gross Domestic Product in the Federal Territory measured in Ringgit Malaysia (RM), *GZ* is the nominal *zakat* expenditure in the Federal Territory measured in Ringgit Malaysia (RM), X are other independent variables which determine GDP, *β's* are the parameters to be estimated, and *ε* is the disturbance term. We have to drop the variables *X* in the final model to be estimated due to the difficulty in obtaining the relevant time series data with sufficient number of observations. It is hypothesised that the relationship between *zakat* distribution and real total output is positive. The model is estimated in log form. In this study, equation (1) is written in vector error-correction model (VECM) as suggested by Engle and Granger (1987):

$$\begin{bmatrix}\Delta GDP_t\\ \Delta GZ_t\end{bmatrix} = \begin{bmatrix}\alpha_0\\ \beta_0\end{bmatrix} + \sum_{i=1}^{m}\begin{bmatrix}\alpha_i\\ \beta_i\end{bmatrix}\begin{bmatrix}\Delta GDP_{t-i}\\ \Delta GZ_{t-i}\end{bmatrix} + \begin{bmatrix}\theta_1\\ \theta_2\end{bmatrix}\begin{bmatrix}ECT_{1t-1}\\ ECT_{2t-1}\end{bmatrix} + \begin{bmatrix}\mu_{1t}\\ \mu_{2t}\end{bmatrix} \qquad (2)$$

Where Δ is the first difference operator, $\alpha_{i,}$ and $\beta_{i,}$ (i = 1, 2) are the short-run coefficients. m is the lag length chosen on the basis on Akaike information criterion. ECTs are the error-correction terms which are the stationary residuals generated from the long-run co-integrating regression of Johansen multivariate process . In other words; the error-correction terms represent the adjustment of variables towards to a long-run equilibrium value. The coefficients $\theta_1$and θ_2 are expected to be negative representing the short-run adjustment coefficients towards the long-run equilibrium value, while μ_i are the residuals distributed with zero-mean and constant variance. A VEC model is a restricted VAR model. The VEC specification restricts the long-run behaviour of the endogenous variables to converge to their long-run equilibrium relationships and allow the short-run dynamics. In other words, the vector error correction model (VECM) identifies the short-run dynamics of each variable in the system, and in a framework that anchors the dynamics to the long-run equilibrium relationships.

Sources of Data: This study uses the annual data from 1992 to 2007. The *zakat* distribution data in the Federal Territory are collected from the Annual Report of *Zakat* Collection Centre, Federal Territory of Malaysia and the data of Gross Domestic Product (GDP) in the Federal Territory are gathered from the Department of Statistics of Malaysia. The time series for the *zakat* spending of the Federal Territory prior to 1992 are not published.

Estimation Techniques: The econometric procedures used for this study include the unit root tests, the cointegration tests, the vector error-correction model (VECM), and the vector error-correction Granger causality with block exogeneity Wald tests. The unit root test is carried out on the time series data to check the stationarity of the variables in order to avoid the spurious regression. A time series is considered stationary when the mean and variance of the series are constant over time, while the value of the covariance between the two periods depends only on the gap between the periods and not on the actual time at which the covariance is considered. But, if one or more of the abovementioned conditions are not fulfilled, then the series is non-stationary. This study uses the Augmented Dickey-Fuller denoted as ADF (Dickey & Fuller, 1979) test to examine the presence of unit roots in levels and first differences. Once the series are stationary in first differences, the next step is to apply the Johansen and Juselius (1990) techniques to test for cointegration between the variables using the VEC model. The Granger causality test considers the cause and effect between the variables. This test assumes that the information is relevant to the prediction of the variables. We will examine the short-run causality between *zakat* expenditure and GDP by using the VECM residuals. The lag length for this test is based on Akaike's minimum final prediction error (FPE) criterion.

4. Results and Discussion

This section presents the empirical results of the unit root test, cointegration test, VECM, and the Granger causality test. The first step that must be conducted before estimating the model is to inspect the time series data by testing the unit root in order to check the stationary of the variables to avoid the spurious regression results. Table 4 reports the results of Augmented Dickey-Fuller tests using lag length k = 0 for GDP and k = 2 for GZ as suggested by the Akaike Information Criterion (AIC). All the tests are conducted with intercept. The ADF test concludes that the series are non-stationary in level and stationary in first differences at 5 percent significant level.

Table 4: Results of ADF Tests for Unit Root

Variable	Level	First Difference
GDP	-0.838827	-3.834196**
GZ	-0.346118	-3.947402**

Note: ** indicates significance at 5% level.

Table 5 provides the Johansen-Juselius cointegration test results. The number of lags is 2 as suggested by Akaike information criterion. Both the trace and maximum eigen statistics suggest that there exists a unique long-run relationship between *zakat* spending and GDP. The Johansen test statistic should be adjusted for the degree of freedom in the case of small sample as the Johansen procedure tends to over-rejects when the null is true. Reinsel-Ahn (1988) suggests an adjustment for the degrees of freedom by replacing T in the equations of test statistic with (T- nk) where T is the sample size, n is the number of variables included in the model and k is the number of lags.

Table 5: Johansen's Test for the Number of Cointegrating Vectors (2 lags)

Test Statistics	Trace		Maximal Eigen Value	
	Null Statistic	5% CV	Statistic	5% CV
r = 0	34.3358** (25.7518)	20.2618	25.3031** (18.9773)	15.8921
r ≤ 1	9.0326	9.1645	9.0326	9.1645

Notes: ** significant at 5% level, CV = critical value. The figures in the parentheses are the adjusted test statistics.

The estimated long-run equation is

$$GDP_t = \underset{(22.0078)}{12.7388} + \underset{(19.5801)}{0.6279}\, GZ_t$$

where the values in the parentheses are the t-statistics. The long-run equation shows a positive relationship between *zakat* expenditure and the real GDP. *Zakat* spending could significantly explain the variations in the real GDP at least at the one percent level. Hence, a 1 percent increase in *zakat* expenditure would lead to an increase in the real GDP by 0.6 percent in the long-run, suggesting that *zakat* expenditure is an important determinant of real GDP in the Federal Territory. The VECM results with 2 lags are given as:

$$\Delta GDP_t = \underset{(4.6554)}{0.1141} + \underset{(3.5981)}{0.4132}\, ECT_{t-1} + \underset{(2.6348)}{0.1280}\, \Delta GZ_t$$

where the values in the parentheses are the t-statistics. The diagnostic tests suggest that the VECM residuals are normally distributed as indicated by the Jarque-Bera statistic = 0.6264(0.7311) and the Q-statistic (lag 6) = 17.5753(0.1399) of Portmanteua test for autocorrelation suggests that there is no autocorrelation in the residuals where the figures in the parentheses are the probabilities. The results indicate that *zakat* expenditure is an important determinant of GDP in the short-run, and is significant at five percent level. The coefficient of the *zakat* expenditure is positive suggesting that a one percent increase in the growth of *zakat* expenditure will increase GDP growth by 0.12 percent in the short-run. The Granger causality test with 2 lags is used to examine the direction of causality between GDP and *zakat* expenditure in the short-run. The results in Table 6 suggest that *zakat* expenditure causes GDP with no feedback.

Table 6: Granger Causality Tests

Variables	ΔGDP*	ΔGZ[a]	ECT[b]
ΔGDP	-	17.43032 (0.0002)	0.413227 (3.59807)
ΔGZ	1.579084 (0.4541)	-	3.190196 (3.42249)

Notes: [a] Chi-square statistics, the values in parentheses are the probability.
[b] The values in parentheses are the t-statistics.

The results suggest that *zakat* expenditure has a significant role in income determination; the higher the *zakat* expenditure the higher the economic activities represented by the real GDP.

5. Conclusion

The empirical results suggest that *zakat* spending has the ability to influence economic activities, represented by the real GDP, suggesting that *zakat* could be employed as an important tool to stimulate economic growth. This implies that zakat could also reduce the inequality of income distribution and wealth, decrease the gap between rich and poor, which could lead to the economic development of the u*mmah* in the long-run. However, in practice, a lot more has to be done to improve *zakat* management to make *zakat* collection and distribution more efficient and effective.

References

Ahmed, H. (2004). Role of Zakat and Awqaf in Poverty Alleviation. Occational Paper, No. 8. Jeddah: Islamic development bank group and Islamic Research & Training Institute.

Dickey, D. & Fuller, W. (1979). Distribution of the Estimators for Autoregressive Time Series with a Unit Root. *Journal of American Statistical Association,* 74, 427-431.

Engle, R. F. & Granger, C. W. (1987). Co-integration and Error-correction: Representation, Estimation and Testing. *Econometrica*, 55, 251-276.

Ibrahim, P. (2006). The Economic Role of Zakat in Reducing Income Inequality and Poverty in Selangor, PhD Thesis, Faculty of Economics & Management, University Putra Malaysia.

Guermat, C., Al-Utaibi, A. T. & Tucker, J. P. (2003). The Practice of Zakat: An Empirical Examination of Four Gulf Countries. Discussion Papers in Economics, the School of Business and Economics, University of Exeter.

Hassan, M. K. (2010). An Integrated Poverty Alleviation Model Combining Zakat, Awqaf, and Micro-finance. Bangladesh: Seven International Conference - The Tawhidi Epistemology Zakat and Waqaf Economy.

Johansen, S. & Juselius, K. (1990). Maximum Likelihood Estimation and Inference on Cointegration with Application to the Demand for Money. *Oxford Bulletin of Economic Statistics,* 52, 169-210.

Kahf, M. (1995). Applied Institutional Models for Zakah Collection and Distribution in Islamic Countries and Communities. In El-Ashker and Sirajul Haq (Ed.). Institutional Framework of Zakah: Dimensions and Implications. Jeddah, Islamic Research and Training Institute, Islamic Development Bank.

Kahf, M. (2000). Zakah Management in Some Muslim Societies, Background Paper No. 11, Islamic Research and Training Institute (IRTI), Jeddah.

Laporan Zakat (Zakat Report). Pusat Pungutan Zakat Majlis Agama Islam Wilayah Persekutuan (*Zakat* Collection Centre, Federal Territory of Malaysia), Kuala Lumpur (various issues).

Reimers, H. E. (1992). Comparisons of Statistical Tests for Multivariate Cointegration. *Statistical Papers,* 33, 335-59.

Reinsel, G. C. & Ahn, S. K. (1988). Asymptotic Properties of the Likelihood Ratio Test for Cointrgration in the Nonstationary Vector AR Model. Technical Report, Department of Statistics, University of Wisconsin, Madison.

Salama, A. A. (1995). Empirical Economic Effects of Obligatory and Non-obligatory Payment of *Zakah* to the State. In El-Ashker and Sirajul Haq (eds.), Institutional Framework of Zakah: Dimensions and Implications, Islamic Research and Training Institute, Jeddah.

Yusoff, M. B. (2006). Fiscal Policy in an Islamic Economy and the Role of Zaka. *IIUM Journal of economic and management*, 14(2), 117-145.

Yusoff, M. B. (2010). An Analysis of Zakat Expenditure and Real Output: Theory and Empirical Evidence. *IIUM Journal of Economics and Management*, 18(2), 139-160.

Yusoff, M. B. (2011). Zakat Expenditure, School Enrollment, and Economic Growth in Malaysia. *International Journal of Business and Social Science*, 2(6), 175-181.