ZAKAT DISTRIBUTION, EDUCATION, AND REAL INCOME PER CAPITA IN MALAYSIA

Mohammed B. Yusoff, International Islamic University Malaysia, Kuala Lumpur, Malaysia

ABSTRACT

This paper is multidisciplinary in nature concerning with social, economic, and religious variables. The main objective is to determine the impact of zakat distribution and education levels on real income per capita using panel data of the fourteen states of Malaysia. The results of the estimated fixed effect model are quite satisfactory in terms of correct signs, significant of variables and goodness of fit. All the independent variables are significant at 1% level supporting the hypothesis that zakat expenditure or distribution, primary and secondary school education are important determinants of real income per capita in Malaysia. The results also indicate that secondary school enrolment has the highest impact on real income per capita, followed by primary school enrolment, and zakat spending. As policy implications, it is suggested that Muslim nations must improve the efficiency of zakat collection and spend it prudently as laid out in the al-Qur'an and Hadith (sayings of the Prophet Muhammad). Policymakers should also make serious effort to construct better strategies, planning, and effective policy actions to provide conducive environment and infrastructure for the development in education to increase the stock of human capital in accordance to the need of the nations. These should help increase the real income per capita and improve the standard of living of Muslim community.

Keywords: *Zakat* Distribution, Education, Real Income Per Capita, Panel Data, Malaysia

1. INTRODUCTION

Islam is the religion of more than of a quarter of the world population. Muslims live in many parts of the world, but most of them are concentrated in Asia such as Indonesia and Pakistan. It is estimated that in 2014 there are 130 million and 255 million Muslims in China and India comprising 10% and 20% of their population respectively (http://www.muslimpopulation.com/World). Islam is *"ad-din"* which means that it is not just a religion per say but rather a complete way of life providing guidance in all aspects of life: social, political, economic, moral, and spiritual. Islam does not condemn materialism, but it always seeks to promote moderation between spiritualism and materialism. This paper is multidisciplinary in nature concerning with social, economic, and religion, specifically Islam.

The standard of living of a country is measured by dividing the real total value of goods and services produced in that country or real GDP with its population in that year. This ratio of real GDP to population is called real GDP per capita. The real GDP per capita or real income per capita is the usual measure of the standard of living. Education and training is one of the most important social investment as it will bring benefits and improve the standard of living of the people of a country in the long-run. The roles of education and training are: to produce knowledgeable, trained, and skilled workforce; to mould a disciplined, diligent, and motivated individual; to provide individuals who are innovative and knowledgeable in technology, and management. In fact the major source of knowledge in Islam is the *al-Qur'an*. The first verse revealed by *Allah* in the *al-Qur'an* is on education:

"Read! In the name of the Lord and the cherisher, Who created - created man, out of a (mere) clot of congealed blood. Read! And the Lord is the most Bountiful, - He who taught (the use of) the pen, taught the man that which he knew not." *Surah Al-Alaq* :1-7.

The stock of human capital could be accumulated through formal education, beginning with primary education, followed by secondary education, and tertiary education. Human capital could also be accumulated through on the job-training programs by the employers. The third process is through self-development where an individual himself takes an initiative to acquire more knowledge and skills through formal courses, reading, learning from others, and learning by doing. Fourth, is the capital accumulation

through the improvements in the health of the working population due to better medical and public health facilities and services. And fifth is the capital accumulation as result of better nutrition which increases the working efficiency of the working population.

The Islamic economic order has introduced a comprehensive *zakat* system. *Zakat* became mandatory on Muslims from the second year after the *Hijrah*. It is an important part of Islam and therefore Muslims must fulfill this divine obligation. *Allah* says:

"Of their wealth, take alms so you may purify and sanctify them; and pray on their behalf. Verily thy prayers are a source of security for them; and *Allah* is one who hears and knows." *Surah Al-Taubah*: 103.

Zakat is an obligatory contribution of a Muslim to be spent on a specified activities as directed by the *al-Qur'an*. The government sector collects *zakat* from the household and business sectors and disburses it to the eight categories of *zakat* recipients, namely: the poor, one who has neither material assets nor means of livelihood; the needy, one with insufficient means of livelihood to meet basic needs; the *zakat* administrator, one who is appointed to collect and administer *zakat*; the new convert, one who has converted to Islam; the slave, one who wants to free himself from bondage; the debtor, an individual who is in debt when he/she borrows money to buy basic needs such as foods, clothing, education, and healthcare; for the path of Allah, one who carries out activities for the cause of *Allah*; and finally, a wayfarer, one who is stranded in a journey.

Islam guarantees the provision of basic needs: food, clothing, shelter, education, and healthcare to all. It has its own built-in mechanism to promote equitable income and wealth distribution by eliminating the concentration of wealth in a few hands through the *zakat* system, the laws of inheritance and bequest, abolition of interest, prohibition of earning of wealth through *haram* means, and prohibition of hoarding and speculation. The *al-Qur'an* has clearly stated the eight categories of *zakat* recipients:

"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).

As mentioned in the above verses, two of the most important Islamic economic variables are *zakat* and education. Thus, the main objective of this study is to determine whether *zakat* spending and education levels have any significant impact on the standard of living in a Muslim country, Malaysia. The standard of living is represented by real income per capita. Specifically, we would like to examine whether *zakat* spending and education represented by primary and secondary enrollments have contributed to the improvement in the standard of living of the people in Malaysia. The paper begins with an introductory remark on education and *zakat*, The next section discusses the review of literature, followed by the model formulation, estimation techniques, results and discussion, and the final section is the conclusion.

2. REVIEW OF LITERATURE

Vidal & Bruninger (2000) examine the interactions between education policy and economic growth. They find that an increase in public education spending reduces private costs of education, increases the proportion of skilled individuals, and tends to promote economic growth. But education spending crowds out physical capital and reduces learning-by-doing. It is also shown that pure public education maximizes the long-run growth rate. Blankenau & Tomljanovich (2007) examine the links between public education expenditures and long-run growth. They develop a theoretical model and derive a specific growth equation to be estimated. The results suggest that there exists a positive relationship between public education expenditures and economic growth for developed countries.

Stengos & Aurangzeb (2008) attempt to determine the relationship between education and growth in Pakistan. Education, measured by gross enrollments, is broken down into primary, secondary and tertiary as well as by gender in each of the above categories. They find that secondary and higher education have strong and robust impact on growth, while at the primary level only female enrollments show a causal relationship although not a robust impact on growth.

More recently, Yusoff (2014) analyses the relationship and the role of exports, education, and foreign direct investment (FDI) on Malaysian growth of real income per capita. The cointegration results suggest

that there exists a long-run relationship between the real GDP per capita with exports, FDI, and public education expenditure. The estimated cointegrating equation shows that exports, FDI, and education expenditure could explain the variation in economic growth in the long-run where they are significant at 1% level. Both the Granger and Toda-Yamamoto causality tests also indicate that exports, FDI, and education spending cause the growth of real income per capita where it is significant at 1 % level. These imply that the export and financial liberalization and effective education planning strategy have had significantly contributed to the development of Malaysian economy.

There have not been many empirical studies on *zakat,* especially its effect on the economic development of *ummah* (Muslim society) at macro and micro-levels. Patmawati (2008) argues that *zakat* distribution has the ability to improve the economic well-being of *ummah* based on the evidences by a number of empirical studies on *zakat.* Specifically, a study by Ismail Salleh & Ngah (1980) finds that *zakat* disbursed to the rice farmers in the states of Perak, Kedah, Kelantan, and Trengganu in Malaysia were able to improve the distribution of income. Likewise, Jehle (1994) also concludes that *zakat* has the ability to improve the distribution of income in Pakistan. A more specific study on the impact of *zakat* on distribution of income for two categories of zakat recipients, the needy and the poor in a state in Malaysia, Selangor, was carried out by Patmawati (2006). She finds that *zakat* has reduced the income inequality and poverty.

Yusoff (2010) studies the relationship between *zakat* spending and real output using the Keynesian model. The empirical evidence using Malaysian panel data supports the hypothesis that *zakat* spending has the ability to generate economic growth. He suggests that Muslim countries must make all effort to establish *zakat* as the major policy tool to spur economic growth. He argues further that in order to make this a success, we must organize *zakat* collection and *zakat* spending in the most effective and efficient manner. As long as *zakat* collection and spending are disorganized, we can never achieve the potential of *zakat* as an effective fiscal instrument to generate economic growth and well-being of Muslim society. This current study is an extension of Yusoff (2010) where another important Islamic variable, education, is added to the model.

3. MODEL

The empirical panel equation with fixed effect, in logarithm, is specified as

$$LGDPC_{it} = \theta_0 + \theta_1 LGZ_{it} + \theta_2 LPEDU_{it} + \theta_3 LSEDU_{it} + \delta_i + \mu_{it}$$

where *GDPC* is the real income per capita, GZ is the *zakat* expenditure, *PEDU* and *SEDU* are the enrollments in primary and secondary schools respectively; θ_0, θ_1, θ_2 are the parameters to be estimated, u is the disturbance term, L is the natural logarithm, i denotes the cross-section units, θ_0 is the overall intercept, and δ is the fixed effect. We expect the *zakat* expenditure to be positively related to real income per capita; an increase in *zakat* spending would raise income. The impact of both primary and secondary school enrolments are also expected to be positive. Enrolment of tertiary education are not available at state level, therefore they were excluded from the study.

3.1. Estimation Technique

The study uses panel data of the fourteen states of Malaysia. Panel data analysis has the ability to exploit the rich information inherent in cross-section and time series analyses. It also takes into account the heterogeneity of individual cross-sectional units by allowing for individual-specific effects and gives more variability and degrees of freedom. We shall employ a panel data analysis with fixed effect model. Since we are using panel data analysis, ordinary least squares (OLS) estimation is inappropriate as the errors are likely to be contemporaneously correlated across time and across cross-section units. The most appropriate technique of estimation is the Generalized Least Squares (GLS) method. More specifically, we estimate equation (1) using the cross-section seemingly unrelated model where both the cross-section heteroskedasticity and contemporaneously correlation are corrected.

3.2. Sources of Data

The study uses Malaysian data from 2003 to 2008. The published aggregate data on *zakat* expenditure for Malaysia as a whole are only available in recent years. We therefore decided to use panel data

analysis, where the cross-section units are the fourteen states in Malaysia. Moreover, *zakat* is collected and spent separately by each state. The annual data on *zakat* expenditure were obtained from the Pusat Pungutan Zakat, Majlis Agama Islam Wilayah Persekutuan (*Zakat* Collection Centre, Federal Territory Islamic Religious Council) while the real GDP data were collected from Economic Planning Unit (EPU) of Malaysia. The population data are collected from the Department of Statistics Malaysia. The real income per capita is then calculated by dividing real GDP with population.

4. RESULTS AND DISCUSSION

The estimated panel equation with fixed effect are reported in Table 1. The results of the estimated fixed effect model are quite satisfactory in terms of correct signs, significant of variables and goodness of fit. The adjusted-R^2 = 0.9992 suggesting that 99% of the variation in real GDP per capita is explained by *zakat* spending and primary and secondary school enrolments. The D-W statistic = 2.4229 indicates that there is no problem of auto-correlation. Specifically, all the independent variables are significant at 1% level. A 1% increase in *zakat* spending increases real GDP per capita by 0.0333 percent; a 1% increase in primary school enrolment increases real GDP per capita by 0.2507 percent, and a 1% increase in secondary school enrolment increases real GDP per capita by 0.4279 percent. These indicate that secondary school enrolment has the highest impact on real income per capita, followed by primary school enrolment, and *zakat* spending. The findings in this study are similar to the findings of Stengos & Aurangzeb (2008). Although they do not include *zakat* as one of the independent variables, they find that secondary school education has a strong and robust impact on economic growth in Pakistan but the impact of primary school education on growth is not as robust.

TABLE 1. RESULTS OF PANEL DATA: FIXED MODEL
(DEPENDENT VARIABLE: LGDPC)

Independent variables	Coefficients	Standard Errors
Constant	-6.3402	0.3923
LGZ	0.0333	0.0122
LEDUP	0.2507	0.0826
LEDUS	0.4279	0.0755

Notes: Adjusted-R^2 = 0.9992, F-statistic = 0.9995, prob. (F-statistic) = (0.0000), D-W statistic = 2.4229.

5. CONCLUSION

This study examines the impact of *zakat* spending and education levels on real income per capita using panel data of the fourteen Malaysia states. Empirical evidence supports the hypothesis that *zakat* spending and education, represented by both student enrollments in primary school and secondary school are important determinants of real GDP per capita suggesting that they are essential ingredients to be considered in formulating economic development programs to improve the standard of living in Muslim countries. Therefore, Muslim countries must make all effort to consider *zakat* and education as the major ingredients in the economic development policy. In order to make this a success, every Muslim country must organize *zakat* collection and *zakat* spending in the most effective and efficient manner. Muslim countries must also give priority to education in their economic development strategy to increase the stock of human capital needed to achieve and sustain economic development.

REFERENCES

Ali, A. Yusuff . 1983. *The Holy Qur'an: Text, Translation, and Commentary*, Brentwood,   Maryland: Amana Corp., USA.

Blankenau, W. F., Simpson, N. B. and Tomljanovich M. 2007. Public Education Expenditures, Taxation and Growth: Linking Data to Theory", *American Economic Review Papers and Proceedings* , vol.97, pp. 393-397.

http://www.muslimpopulation.com/World. World Muslim population country wise 2014.

Jehle, G. 1994. "*Zakat* and Inequality: Some Evidence from Pakistan", *Review of Income   and   Wealth*, vol.40, no.2, pp. 205–21.

Keller, K.R.I. 2006. "Education Expansion, Expenditures Per Student and the Effects on Growth in Asia", *Global Economic Review*, vol. 33, no. 1, pp.21–42.

Lucas, R. 1993. "Making a Miracle," *Econometrica*, vol. 61, pp. 251-72.

Ibrahim, P. 2008. "Pembangunan Ekonomi Melalui Agihan *Zakat* ", Tinjauan Empirical, *Jurnal Syariah*, vol. 16,. No. 2, pp. 223-244.

Salleh, I.M. and Ngah, R. 1980. "Distribution of *Zakat* Burden on Padi Producers in Malaysia", in Zaman M. R. (ed.), *Some Aspects of the Economics of Zakat*, New York: American Trust Publication.

Stengos, T. and Aurangzeba, A. 2008. "An Empirical Investigation of the Relationship between Education and Growth in Pakistan", *International Economic Journal*, vol. 22 , pp. 345 – 359.

Vidal, J. and Bruninger, M. 2000. "Private versus Public Financing of Education and Edogenous Growth", *Journal of Population Economics*, vol. 13, pp. 387-401.

Yusoff, M. B. 2010. "An Analysis of Zakat Expenditure and Real Output: Theory and Evidence", *IIUM Journal of Economics and Management*, vol. 18, no. 2, pp. 139-160.

Yusoff, M. B. 2014. "Foreign Direct Investment, Exports, Education, and Growth in Malaysia", *Global Business and Economics Review* ", vol. 16, no. 2, pp. 111-122.

AUTHOR PROFILE

Dr. Mohammed B. Yusoff is a Professor of Economics at the Department of Economics, Kulliyyah of Economics and Management Sciences, International Islamic University Malaysia where he is teaching both undergraduate and graduate courses. After graduating with a Bachelor of Science degree from Louisiana State University, USA, he pursued his graduate studies at the Department of Economics, Iowa State University, USA, where he obtained his Master degree in Economics and PhD in Economics. His areas of research interest include International Trade, International Finance, Macroeconomics, and Islamic Macroeconomics. Dr. Mohammed has published many papers in journals and has been actively participating and presenting research papers in international conferences.