Tax-Based Modeling of Zakat Compliance
(Pemodalan Kepatuhan Zakat Berasaskan Cukai)

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ABSTRACT
This study aims to formulate a model of zakat compliance for formal zakat collection institutions based upon tax compliance model. The study further conducts an empirical examination of the application of the model developed utilizing a case study on the Province of Acheh. The study demonstrates that it is possible to construct a zakat compliance model based upon the tax compliance model. The case study of Acheh also suggests that individual zakat compliance was not significantly influenced by zakat law, but by factors of demography (gender and age), reference group, education, and the perception on the tax system.

Keywords: Tax based modeling; zakat compliance; zakat law; sociological factors; physiological factors

INTRODUCTION
Theoretically, behavior is one’s attitude toward an object that influences his/her decision-making (Mueller 1986). Individual behavior is related to one’s personality; the combination from the stability of physical and mental characteristics which makes it as its personal identity. Among those characteristics are the attitude taken in relation to a particular subject; and the way an individual thinks, acts and feels about a particular subject.

There are several factors that are known to influence one’s behavior: physiology (gender and genetic), environment, situation, culture and group/family (Kreitner & Kinicki 1998). In general, these factors are classified into two groups: internal and external. Further, according to Greenberg & Baron (1995), behavior consists of cognitive and affective components. The cognitive component relates to one’s opinion or belief regarding a subject that premised upon the individual’s education or knowledge. The affective component relates to one’s emotions or feelings, such as liking or disliking; belief or disbelief; and deciding whether to support or not to support something.

Many studies have been conducted regarding individual behavior in relation to taxation. Several theories have been established to describe the various factors that influence individuals in decision-making processes regarding taxation, including whether or not to pay tax. In its initial stage of development, the tax compliance model was proposed. Also known as the rational individual theory, it argues that a rational individual would receive the greatest satisfaction by not paying the tax, but this is counterbalanced by the high risks associated with being detected by the authorities.

Using rational individual theory as a premise, Becker (1968) determined that several factors influenced individual behavior and decision-making regarding tax payment, including the probability of detection if the individual failed to pay the tax; the amount of tax due; and the nature of punishment. The conclusion reached was that resolute and clear punishments can reduce the frequency of individuals choosing to avoid paying taxes. Becker’s study suggests that the implementation of laws is a crucial factor in increasing the likelihood that individuals will pay their taxes.
Later, the study was expanded upon by incorporating social and psychological factors (Geeroms & Wilmots 1985). Additional factors were considered in the study on the premise that tax compliance behavior is a complex subject that is not only affected by economy, but also by environment; knowledge; social demographic; the opportunity for tax avoidance; the individual’s perception of being caught; and the tax system itself (Jackson & Milliron 1986).

The present study considers two principal issues. The first issue is whether a model of zakat compliance could be developed based upon the tax compliance behavior model. The second, and related issue, is how to align the tax compliance model with zakat principles. Although tax and zakat are both considered obligations, they are theoretically distinguishable due to the nature, foundation, source, goals, targets, principles, objectives and guarantees associated with the obligation. The distinction can be demonstrated in the resulting practice associated with the two systems in regards to the manner in which the amount is paid and the authority that prescribes the penalties incurred for failing to meet the obligation.

The manner in which the obligation is fulfilled differs between tax and zakat systems. In taxation system, if an individual fails to pay tax through a formal institution, the individual is considered to have not complied with the tax law. In zakat system, however, the failure to pay zakat through a formal institution does not necessarily indicate that an individual has failed to fulfill the obligation, as the obligation may have been met by a payment directly to the asnaf, or beneficiaries, of the zakat. While the lack of a recorded tax payment indicates a failure to meet one’s obligation in a tax system, the same is not necessarily true in a zakat system.

The two systems can also be easily distinguished in regards to the authorities that may penalize individuals for failing to meet their obligations. In a tax system, the individual is influenced to pay tax by potential punishments from a governmental authority on the basis of legal obligations. Zakat, on the other hand, is an act of devotion and obligation originating from Allah SWT and is based upon moral and spiritual obligations. Although the fear of being punished by an authority exists in both systems, the two systems differ in regards to the nature of the authority and the nature of the obligations.

The aforementioned distinct characteristics between zakat and taxation systems have not been properly addressed in previous studies, particularly those focusing upon zakat compliance modeling. The present study integrates such issues into its analysis of a potential model for zakat compliance. The objective of this study is to formulate a model regarding zakat compliance behavior (in relation to formal institutions of zakat collectors) based upon the existing tax compliance behavior models and conduct an empirical analysis of the application of the model to the Province of Acheh, Indonesia.

LITERATURE REVIEW

Zakat is an act of devotion related to one’s assets and its function is to build a social relationship among Moslems, as explained by the earlier prophets. In the Holy Al-Qur’an, Surah Al-Ambiya’ verse 73, Allah SWT decrees: “We make them as the leaders (others as followers), who provide guidance with Our order and We have revealed to them to do good deeds, to pray and to fulfill the zakat”. However, the clear instruction for Muslims to fulfill the obligation of zakat in the aforementioned verse was given in Madinah (Hailani 2006; Zamzuri 2006). Moreover, zakat is recognized as one of the pillars of Islamic faith. The obligation is explained by the Sunnah of Prophet Muhammad (SAW), which detailed rules regarding nisab, had, conditions, types, guidelines and implementation. Understanding the definition, requirements and philosophy of zakat is a crucial factor in the fulfillment of this obligation by Muslims.

According to Hamid (1998), Mohd. Ali et al. (2003) and Sanep et al. (2005), the level of understanding and knowledge about zakat influences the payment of zakat that arises from income or farming. Additionally, research conducted by Mohd. Ali et al. (2003) and Kamil (2002) concluded that the degree of conviction (faith) and knowledge about zakat play major role in influencing people to pay zakat. A positive perception of the zakat institutions’ management is another factor that influences zakat compliance when it comes to payment to formal institutions: the more positive the perception, the higher the degree of compliance (Sanep & Hairunnizam 2004). In order to achieve a positive perception towards formal zakat institutions, the community needs assurances regarding the efficiency of the zakat institution’s management in the distribution of zakat funds. If such assurances are provided, individuals are more willing to pay zakat to the formal institutions for zakat collection (Zulkefly et al. 2002, Sanep, et al. 2005; Sanep & Hairunnizam 2005).

Kamil (2002) argues that clear and strict laws regarding zakat is another significant factor that influences zakat compliance, concluding that there was a direct relationship between individual response towards zakat law and the probability of paying zakat through formal institutions for zakat collection. Lastly, the same study also found that urgings by religious leaders can also be considered as a significant factor.

As indicated in the literature reviewed above, most researchers have focused their efforts in determining the causal effect of the legal aspect and several other factors on zakat compliance. A more comprehensive zakat compliance model has yet to be developed and an empirical test on such a model has yet to be performed. The two questions that immediately arise are how to develop a specific model for zakat compliance; and whether a zakat compliance behavior model can be based upon a tax compliance model. Since zakat can be be claimed to be
somehow related to tax and studies on tax behavior has been thoroughly investigated, one can reasonably assume that tax behavior model provides a framework for zakat behavior.

Tax studies, which have also examined individual compliance, have developed models for tax compliance. The tax compliance model was based on an economic theory, known as the rational individual theory (Hite 1987). The model was introduced by Allingham & Sandmo (1972), and then further developed by Srinivasan (1973), Yitzhaki (1974), Watanabe (1987), Borck (2004), Hindriks & Myles (2006), Chorvat (2007), Galbiati & Zanella (2008) and Tuzova (2009). According to the rational individual theory, an individual who pays tax will maximize his/her satisfaction by looking at the risks and costs associated with paying and not paying the tax. The expected cost is the mathematical expectation of the fine imposed and the probability of being detected by the authorities. The tax payer will consider his/her action in light of advantages and disadvantages arising from either course of actions i.e. to comply or not to comply (Allingham & Sandmo 1972; Srinivasan 1973). If the expected benefits of avoiding taxes are higher than the expected costs to be borne for doing so, then the individual may be influenced to avoid the tax by reporting as little income as possible or by not reporting at all. Conversely, if the possibility of being detected by authorities is high and the individual will suffer significant costs from fines or other punishments, then the individual is more likely to pay the tax.

The rational individual theory is premised upon the rational principle, applying purely to individual utility maximization. Kahf (1982) proposes that this assumption be redefined since zakat compliance does not solely depend upon fiscal burdens, such as benefits and costs. Zakat compliance may depend on a broader range of factors, such as physical and spiritual factors, because zakat originates in the religious belief that it was established by Allah the creator, unlike taxation that stems from governmental fiscal requirement. Based upon this argument, a study of zakat compliance should also include observations of psychological, religious and Islamic values.

The rational principle should not only consider utility maximization in the economic sense, but also mental and spiritual satisfaction. In order to apply the rational concept to Muslims, ‘satisfaction’ must to be divided into two dimensions, namely the present life in this world and life in the hereafter. Therefore, an individual’s behavior in selecting an option will ensure that the selected option achieves the highest values of satisfaction in the present life and in the life hereafter after (Kahf 1995). The rationale for seeking the path to maximize physical and spiritual satisfaction has been decreed by Allah (SWT) in the Holy Al-Quran, Surah Al-Baqarah verse 201: “And they pray: Our Almighty God, give us blessings in the present life and the hereafter and protect us from hell”. The maximization of satisfaction through the constraints of clear laws and penalties, needs to be considered alongside internal factors, such as faith and moral values.

This approach is similar to the normative perspective in sociology and cognitive theory in psychology, where both theories argue that compliance depends upon justice and the individual’s moral values. A sociological theory relating to compliance behavior, known as reference group theory, was introduced by Cartwright and Zander (1968) and argues that an individual’s environment can be an influencing factor in compliance behavior. According to the theory, an individual who is a member of a group will attempt to perpetuate membership in the group by mimicking the behavior of the existing members. Spicer & Lundstedt (1976) expanded the concept of environment, stating that it was logical to assume that the relationship with the community extends to other individuals, such as friends, relatives and colleagues, as part of a tax payment referral group. In this context, tax compliance behavior by an individual will occur if the referral group, or its membership, justifies the tax compliance behavior (Vogel 1974; WalIschutzky 1984; Weigel et al. 1987). However, if the standards of the referral group contradict Islamic values, then a Muslim may not adopt or mimic such behaviour. The level of understanding, belief and faith will determine the individual’s decision to either follow or not to follow the group. A case study on zakat (Nur Azura et al 2005), revealed that social status and household size significantly influenced individuals in paying zakat on income.

In psychology studies, exchange theory is often used in research on compliance behavior. The theory is based upon the human psychological consideration of the reward estimation or potential resulting from a decision. Taxpayer behavior has a close relationship with reward estimation or compensation received from the government as immolation from the tax payer’s income. The compensation arises in the form of public facilities established by the government from the collected tax, resulting in the tax payer wanting the government to work effectively, efficiently, transparently, and wisely in allocating the fund. On the other hand, the government also needs to ensure that the tax payer feels satisfied, so that he/she will continue paying taxes.

The resulting relationship between the taxpayer and the government differs from the relationship between a Muslim and formal institutions of zakat collection. A taxpayer’s dissatisfaction may lead tax avoidance at all, whereas dissatisfaction with the management of formal institutions of zakat collection will only serve to hinder individuals that pay zakat from paying through the formal institutions, as they may opt to pay directly to the asnaf. Therefore, exchange theory may be applicable to a study on zakat compliance towards formal institutions of zakat collection.

Attribution theory is another psychological theory that can be considered relevant to tax compliance
behavior. The theory argues that an individual will usually interpret and analyze an event rationally to understand the cause of an event. The cause of the event plays an important role in determining the reaction and individual behavior towards an event (Arrington & Reckers 1985). Studies undertaken concerning zakat have found some support for this theory, such as studies conducted by Hamid (1998), Mohd. Ali et al. (2003) and Sanep et al. (2005) that suggest the level of understanding and knowledge about zakat influences the decision to pay zakat. In addition, research conducted by Mohd. Ali et al. (2003), Kamil (2002), Hairunizam et al. (2008) and Radiah et al. (2010) also concludes that the level of conviction in Islamic teaching (faith) and knowledge about zakat plays a major role in influencing people to pay zakat.

In conclusion, zakat compliance can be analyzed in line with tax compliance behavior with some adaptations. A study on zakat behavior can be examined under rational individual theory; reference group theory; exchange theory; or attribution theory provided there is some modification to the theories by incorporating for example spiritual and religious factors alongside those factors already in the existing tax compliance behavior model.

METHODOLOGY

The research aims to formulate a zakat compliance model by adapting an existing tax compliance behavior model. The work plan of the development of zakat compliance model is shown in Figure 1 as follows:

![FIGURE 1. Work Plan of Zakat Compliance Model](image)


TAX COMPLIANCE MODEL

According to the model created by Allingham & Sandmo (1972), the tax payer will chose to pay or avoid the tax by maximizing his expected utility as follows:

$$E(U) = (1 - p(w - x))U(Y^{nc}) + p(w - x)U(Y^c)$$ (1)

In this model $U(Y^{nc})$ represents the satisfaction gained from income Y provided that tax avoidance is undetected by the authorities and $U(Y^c)$ is the satisfaction if he/she is arrested and punished, while $p(w - x)$ is the possibility to get caught due to not paying the tax. Then, $w$ is the actual income, $x$ is the declared income, $t$ is the ratable tax and $F$ is the penalty received. The constraints in the maximization of tax payer satisfaction are as follows:

$$Y^{nc} = w - t(x)$$ (2)
$$Y^c = (1 - t)w - F(t(w) - t(x))$$ (3)

By entering the restrictions into the equation (1) one produces the expected utility maximizing equation:

$$\text{Max } E(U) = [(1 - p(w - x))U(w - t(x))] + [p(w - x)U(w - t(w) - F(t(w) - t(x)))]$$ (4)

The solution to the unconstrained maximization of equation (4) is typically presented in equation (5) with the addition of interest cost ($r$) following Watanabe (1987).

$$\frac{pU'(Y^c)}{1 - pU'(Y^{nc})} = (F + r)$$ (5)

Equation (5) implies that an individual who declares income $(declared \text{ income}=x)$ considering to avoid tax must weigh the expected cost and benefit of doing so. The individual is more likely to pay tax as the penalty imposed is heavier and vice-versa.

ZAKAT COMPLIANCE MODEL

The factors that may influence zakat compliance can be simplified and demonstrated by Figure 2. Zakat compliance is not only influenced by the punishment imposed through law enforcement (IL), but also by the commitment to the religion/faith (RI), understanding/knowledge of zakat (KL), access to payment system (PM), trust to the formal institution of zakat collection (TR), perception about tax system (TAX) and the environment (EV).

Hence, the zakat compliance model may be built by modifying the tax compliance model stated in equation (1) by adding new variables as mentioned in Figure 2. Based on equation (1), the zakat compliance model can be written as:

$$E(U) = [1 - \Phi(\hat{a} - \hat{z}(\hat{a}))U(Z^{lb})] + [(\hat{a} - \hat{z}(\hat{a}))U(Z^{lb})]$$ (8)

Where, $U(Z^{lb})$ is the satisfaction received from net income when an individual avoids paying zakat to the formal institution; $U(Z^c)$ is the corresponding satisfaction level if a person pays zakat to the formal institution (baithmal); $\Phi(\hat{a} - \hat{z}(\hat{a}))$ is the probability of payment to baitalmal; $\hat{a}$ is the zakatable income; $\hat{z}$ is the level of zakat; and $\hat{z}(\hat{a})$ is the amount of paid zakat to baitalmal. Thus, if $\Phi(\hat{a} - \hat{z}(\hat{a}))=0$, the person does not pay the zakat via baitalmal.

Next, if the identified factors in the conceptual model, which are: IL (implementation of laws); RI (commitment to the religion/faith); KL (understanding/knowledge about zakat), PM (access to payment system); TR (trust to the formal institution); TAX (perception about the tax system) and EV (environment), are added to the model, then the net income is represented by equations (9) and (10):

$$Y^{nc} = w - t(x)$$ (9)
$$Y^c = (1 - t)w - F(t(w) - t(x))$$ (10)
\[ Z^b = \hat{\alpha} - z(\hat{\alpha}) \]  

\[ Z^b = (1 - z) \alpha - (IL + RI + KL + PM + TR + TAX + EV) (\alpha - z(\alpha)) \]  

Incorporating (9) and (10) into equation (8), the maximizing equation becomes:

\[ \text{Max } E(U) = \left[ 1 - \rho \left( \alpha - z(\alpha) \right) U(1 - z) \alpha - (IL + RI + KL + PM + TR + TAX + EV) (\alpha - z(\alpha)) \right] + \left[ \rho \left( \alpha - z(\alpha) \right) U(\alpha - z(\alpha)) \right] \]  

Hence, equation (11) produces the First Order Condition (FOC) as follows:

\[ \frac{\partial E(U)}{\partial(\alpha)} = \{-(1-\hat{\alpha}) U'(\alpha - z(\hat{\alpha})) - [(IL + RI + KL + PM + TR + TAX + EV) (\alpha - z(\alpha))] (IL + RI + KL + PM + TR + TAX + EV) (\alpha - z(\alpha)) \} + \{\rho U'(\alpha - z(\alpha)).z'(\alpha)\} = 0 \]  

or,

\[ \{\rho U'(\alpha - z(\alpha)).z'(\alpha)\} = \{-(1-p) U(\alpha - z(\alpha)) - [(IL + RI + KL + PM + TR + TAX + EV) (\alpha - z(\alpha))] (IL + RI + KL + PM + TR + TAX + EV) (\alpha - z(\alpha)) \} \]  

or,

\[ \frac{\rho U'(Z^b)}{1-\rho U'(Z^b)} = (IL + RI + KL + PM + TR + TAX + EV) \]  

When the level of zakat compliance behavior is measured by using a dichotomous scale of 0 and 1, the model can be estimated using the logistic regression model as follows:

\[ \text{Ln} \left( \frac{p}{1-p} \right) = f(IL, RI, KL, PM, TR, TAX, EV) \]

Where:

\[ p/(1-p) = \text{the odds of paying zakat to the formal institution (baitalmal)} \]

IL = perception on the punishment through law enforcement

RI = commitment to the religion/fait

KL = understanding/knowledge about zakat

PM = access to payment mechanism

TR = trust to the formal institution

TAX = perception about the tax system

EV = environment (reference group effect)

**EMPIRICAL RESULTS**

A pilot study on 43 respondents was initially conducted in order to identify the reliability and validity of the constructs in the questionnaires. Subsequently, in the full main study, 452 respondents were selected on the basis of stratified random sampling in the province of Aceh. Each construct is made up of several components. Tables 1 and 2 show the results of the reliability and validity tests of both the pilot test and the actual study. Table 1 shows that the alpha values for the reliability test for each tested construct for both pilot and actual study are greater than 0.6, with the majority of results falling between the accepted level (≥ 0.60) to very good (≥ 0.80), under the criteria established by Sekaran (2000). These results indicate that the constructs are reliable. For validity test, Table 2 shows that the KMO scores range from the acceptable (≥ 0.50) to outstanding (≥ 0.80) suggesting that the constructs are valid.
The Principal Component Analysis (PCA) using varimax rotation procedure is then applied in order to identify significant components for each construct for the purpose of regression analysis. The results indicate that all constructs, except for faith, have more than one dimension/component factor, ranging from two to three dimension/component factors. In addition, the loading factor yields satisfactory score, ranging from 0.536 to 0.987.

### LOGISTIC REGRESSION RESULTS

Results of the logistic regression estimation are shown in Tables 3 and 4. The overall fit is considered reasonable as evidenced by the values of the test statistics for Cox and Snell R² and Nagelkerke R² as well as the Hosmer and Lemeshow test. The model also predicts well with overall correct prediction of more than 70% as shown in the classification (Table 4).

Seven out of eleven tested variables significantly influence zakat compliance, namely gender, age, education, monthly spending, understanding, tax and environment. The results indicate that all constructs, except for faith, have more than one dimension/component factor, ranging from two to three dimension/component factors. In addition, the loading factor yields satisfactory score, ranging from 0.536 to 0.987.

#### TABLE 1. Reliability Test Results for the Main and Pilot Studies

<table>
<thead>
<tr>
<th>Construct</th>
<th>Alpha value (Pilot study)</th>
<th>Alpha value (Actual study)</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAITH</td>
<td>0.779</td>
<td>0.846</td>
</tr>
<tr>
<td>LAW</td>
<td>0.828</td>
<td>0.726</td>
</tr>
<tr>
<td>UNDERSTND</td>
<td>0.645</td>
<td>0.707</td>
</tr>
<tr>
<td>TRUST</td>
<td>0.870</td>
<td>0.856</td>
</tr>
<tr>
<td>ACCESSIBLE</td>
<td>0.616</td>
<td>0.778</td>
</tr>
<tr>
<td>TAX</td>
<td>0.632</td>
<td>0.679</td>
</tr>
<tr>
<td>ENVNMT</td>
<td>0.734</td>
<td>0.557</td>
</tr>
</tbody>
</table>

#### TABLE 2. Validity Test Results for the Main and Pilot Studies

<table>
<thead>
<tr>
<th>Construct</th>
<th>KMO</th>
<th>Bartlett</th>
<th>KMO</th>
<th>Bartlett</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAITH</td>
<td>0.818</td>
<td>1426.163</td>
<td>0.846</td>
<td>6283.433</td>
</tr>
<tr>
<td>LAW</td>
<td>0.724</td>
<td>172.825</td>
<td>0.707</td>
<td>1571.816</td>
</tr>
<tr>
<td>UNDERSTND</td>
<td>0.665</td>
<td>150.063</td>
<td>0.724</td>
<td>1638.878</td>
</tr>
<tr>
<td>TRUST</td>
<td>0.787</td>
<td>204.061</td>
<td>0.911</td>
<td>2298.264</td>
</tr>
<tr>
<td>ACCESSIBLE</td>
<td>0.644</td>
<td>41.079</td>
<td>0.666</td>
<td>456.513</td>
</tr>
<tr>
<td>TAX</td>
<td>0.554</td>
<td>55.678</td>
<td>0.664</td>
<td>456.513</td>
</tr>
<tr>
<td>ENVNMT</td>
<td>0.757</td>
<td>92.601</td>
<td>0.554</td>
<td>329.219</td>
</tr>
</tbody>
</table>

#### Table 3: Logistic Regression Results

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>Sig.</th>
<th>Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GENDER</td>
<td>-0.453*</td>
<td>0.070</td>
<td>0.636</td>
</tr>
<tr>
<td>AGE</td>
<td>0.682**</td>
<td>0.000</td>
<td>1.506</td>
</tr>
<tr>
<td>EDUCATION</td>
<td>0.277**</td>
<td>0.019</td>
<td>1.758</td>
</tr>
<tr>
<td>SPENDING</td>
<td>-0.833**</td>
<td>0.024</td>
<td>0.301</td>
</tr>
<tr>
<td>FAITH</td>
<td>0.347</td>
<td>0.115</td>
<td>1.415</td>
</tr>
<tr>
<td>LAW</td>
<td>0.224</td>
<td>0.371</td>
<td>1.251</td>
</tr>
<tr>
<td>TRUST</td>
<td>0.006</td>
<td>0.978</td>
<td>1.994</td>
</tr>
<tr>
<td>ACCESSIBLE</td>
<td>0.261</td>
<td>0.149</td>
<td>1.298</td>
</tr>
<tr>
<td>TAX</td>
<td>-0.777***</td>
<td>0.002</td>
<td>0.460</td>
</tr>
<tr>
<td>UNDERSTND</td>
<td>0.899**</td>
<td>0.001</td>
<td>1.407</td>
</tr>
<tr>
<td>ENVNMT</td>
<td>0.597***</td>
<td>0.002</td>
<td>1.816</td>
</tr>
<tr>
<td>Constant</td>
<td>3.026**</td>
<td>0.031</td>
<td>21.548</td>
</tr>
</tbody>
</table>

Note: *) significant at 10% level, **) significant at 5% level and *** significant at 1% level.

#### Table 4. Classification Table<sup>a</sup>

<table>
<thead>
<tr>
<th>Predicted Z</th>
<th>Observed Z</th>
<th>Z&lt;sub&gt;b&lt;/sub&gt;</th>
<th>Z&lt;sub&gt;b&lt;/sub&gt;</th>
<th>% Correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Z&lt;sub&gt;b&lt;/sub&gt;)</td>
<td>289</td>
<td>26</td>
<td>91.7</td>
<td></td>
</tr>
<tr>
<td>(Z&lt;sub&gt;b&lt;/sub&gt;)</td>
<td>89</td>
<td>48</td>
<td>35.0</td>
<td></td>
</tr>
<tr>
<td>Overall Percentage</td>
<td>378</td>
<td>74</td>
<td>74.6</td>
<td></td>
</tr>
</tbody>
</table>

Note: <sup>a</sup> (Z<sub>b</sub>): pay zakat to formal institution (baitulmal); and (Z<sub>b</sub>): does not pay to baitulmal

Conducted by Mohd. Ali, et al. (2003) and Hairunnizam et al. (2007), who note that gender affects zakat compliance behavior. In addition, many studies in the tax compliance literature find that gender also influences tax compliance.

The relationship between age and zakat compliance is positive and significant at the 1% level. Increases in age corresponds with an increasing odds of paying zakat to a formal institution. This finding is consistent with the result of a study conducted by Sanep, et al. (2005).

The level of education is also positively related to zakat compliance although at a lower significance level of 5%. In general, a higher level of education results in a higher odds that an individual will pay zakat to formal institution. The level of education may affect the decisions and actions of an individual, especially in obeying the law. The conclusion reached is that an individual with a higher level of education is more likely to undertake the responsibility of paying zakat through baitulmal as required by law.
The relationship between the respondent’s monthly spending as a proportion to income and zakat compliance is negative and significant at the 1% level. Households with high monthly expenditures relative to income tend to accumulate lower amount of financial assets, leading to a situation where an individual pays less zakat. Monthly spending as a proportion to income affects the overall financial burden of the individual and negatively affects zakat compliance behavior.

Understanding/knowledge of zakat is positively related to zakat compliance although at a relatively low significance level of 10%. This finding suggests that the higher a person’s understanding of zakat, the higher the odds of an individual being willing to pay zakat. The result is consistent with previous studies concluding that knowledge and understanding of zakat may positively affect zakat compliance (Monzer Kahf 1995 and 1999; Kamil 2002; Mohd. Ali Mohd. Nor, et al. 2003; Sanep et al. 2004; and Nur Azura et al. 2005).

The perception of the tax system is negatively related to the zakat compliance and significant at 1%. The current tax system in Aceh is perceived as a burden by tax payers. Since zakat does not offer a tax rebate, paying zakat becomes a double taxation for taxpayers. As a burden, it is consistent with the psychological theory stating that an individual is likely to avoid further burden than already carried. If a person is faced by two burdens at the same time, he/she will opt to bear the smaller of the two burdens. In terms of the risks of penalty associated with the failure to pay tax and zakat, non-compliance to tax law is perceived to carry a bigger risk compared to zakat non-compliance. Laws concerning taxes are clearer and regularly enforced by fines or other penalties. In accordance with the rational individual theory, an individual is more likely to obey the law with a clearer and stricter fine or penalty. Further, the law enforcement concerning the payment of zakat in Aceh is weak, although the law establishes clear fines or penalties for individuals who fail to pay zakat.

Finally the reference group effect (environment) is positively related to the zakat compliance. This factor has never been considered in previous studies concerning zakat compliance behavior. The perspective of the reference group (friends, relatives and colleagues) regarding the payment of zakat influences the individual’s zakat compliance behavior. If the perspective of the reference group is positive, the person is more likely to pay the zakat through a formal institution. Conversely, if the perception of the reference group is negative, the individual is less likely to pay zakat.

CONCLUSION

Based upon existing theoretical models regarding individual behavior, arising from fields such as economics, sociology and psychology, the tax compliance model can utilised as a basis for a zakat compliance model. Despite the similarities between tax and zakat, they have different philosophical underpinnings and some adaptations are required to account for Islamic values in the development of a zakat compliance model. Empirically, the case study of Aceh demonstrates that individual behavior to pay zakat was less influenced by zakat laws or the avoidance of punishment, but by factors of demography (gender and age), reference group, education, and the perception on the tax system.

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