

The Impact of Zakat on Government's Financial Performance: Empirical Study from Aceh Province in Indonesia

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THE IMPACT OF ZAKAT ON GOVERNMENT'S FINANCIAL PERFORMANCE: AN EMPIRICAL STUDY FROM ACEH PROVINCE IN INDONESIA

Abstract

Aceh is the only local government in Indonesia--or perhaps in the world--that practically collects zakat as their source of the local income, with a regulation basis of their own Sharia Law called Qanun. In this background, empirical evidence on how zakat has affected Aceh's financial performance is essential to prove so that the Indonesian government and other governments could follow Aceh's step in zakat policy implementation. This study aims to prove the hypothesis by using data from 23 districts/municipalities in Aceh province that have already implemented zakat policy. This study convincingly found that zakat could strongly affect the government's financial performance, by positively and significantly increasing Aceh's financial autonomy.

Keywords

Zakat, government's financial performance, panel data regression

1. Introduction

Indonesian Financial Minister has disclosed the policy of zakat management in Indonesia. She stated that Islamic economy and Islamic finance have contributed positively to the national finance by supporting the government's financial performance (Kusuma, 2017). However, in contrast to the tax management, zakat has not become a part of the State Budget (APBN) managed by the central government. Besides that, the hypothesis on the effect of zakat on the performance of public entities cannot be concluded yet because of the *research gap* to the existing studies (Johari et.al., 2014).

On the other hand, Aceh Province Government has collected zakat since 2006. Since the Law of 11 / 2006 on Aceh Governance was ratified, Aceh Province Government has become the only local government in Indonesia – or maybe the only one in the world - practicing zakat collection as a part of the local financial system. Zakat is an integral part of the Local Budget (APBD) of Aceh Province. Zakat is more specifically regulated by the Aceh's Islamic regulation of Qanun of 7/2004 on Zakat Management. Therefore, *law enforcement* of zakat is enacted to the whole Muslim society in Aceh Province.



Figure 1. Zakat Realization in Aceh Province (2011 - 2018)

Note:

The chart represents the realized zakat collection in the Local government of Aceh from 2011 to 2018. The chart shows an annual increasing trend in each local government in Aceh Province. Each number in the axis-X represents district/municipal governments in Aceh Province (see appendix)

Source: Aceh Province's Financial Statement (Budget Realization Report), 2019

As a part of the local financial system, zakat management is implemented by Aceh Province Government in response to the local autonomy policy authorized in the Unitary State of the Republic of Indonesia. Local autonomy authorized local governments in Indonesia to run their local governance independently to conform to the local potentials (Nasution, 2010). Aceh Province Government, as a Special Region that enacts Islam law, then collects zakat in line with the financial potential. Zakat is one of the sources of Local Own-Source Revenue (PAD) to *leverage* the government's financial performance.

Theoretically, financial performance essentially represents the performance of an entity. According to Mardiasmo (2007) to measure the effectiveness and efficiency of policy and the performance of the local government in financial management, some indicators or measures are needed. The indicator is called the ratio, which may serve as the quantitative measure to show the effectiveness and efficiency of the government's financial performance. In the context of the local government of Aceh, the ratio indicator can measure the performance of APBD management, particularly in the implementation of the local autonomy policy in Indonesia.

The financial ratio to measure the financial performance of the local government, as well as the proxy indicator of the success of autonomy policy, is the Local Financial Independence Ratio. This ratio compares the amount of Local Own-Source Revenue (PAD) and the funds transferred

by the central government. PAD is the aspect of fiscal decentralization as an instrument to improve the financial independence of the local government.

The theory proposed by Halim (2007) suggests that the local autonomy policy, which is implemented through fiscal decentralization and local revenue collection aims to reduce local governments' dependency on the financial transfer by the central government. Therefore, the local government will turn into a financially independent public institution. According to this theory, zakat as a part of local revenues managed by Aceh Province Government aims to trigger the financial independence of Aceh. The larger amount of zakat paid by the Muslim society in Aceh will result in an increased amount of realized Local Own-Source Revenue (PAD); in *ceteris paribus* it will improve local financial independence.

Various studies in Indonesia have confirmed the positive effect of PAD on the financial independence of local government (Junarwati et.al., 2013; Erawati and Suzan, 2015; Lestari et.al., 2016; Andriani and Wahid, 2018). The studies have involved many local governments in Indonesia to participate in the studies. However, none of the local governments manages zakat in the financial system. The studies used aggregate PAD as the independent variable, and thus they did not specifically identify the effect of zakat in PAD.

Studies on zakat in international journals have been conducted in private entities. Zakat has a significant effect on the improvement of the financial performance of private entities (Menne, et.al., 2016; Sarker et.al., 2017; Javaid and Malkawi, 2018). Specifically, zakat can improve some financial indicators of private enterprises such as profit maximization, capital performance improvement, and liquidity ratio maintenance (Sarket et. al., 2017). The different objectives among the entities and organizational patterns have led to the conclusion that the study on zakat in private entities cannot be used as empirical evidence for the financial performance of public entities (government).

The implementation of zakat policy in Indonesia by the central government has to be fully backed up by empirical studies. Considering the existing studies, the *research gap* that has to be bridged is conducting a study on the effect of zakat on the financial performance of public entities. In the context of Indonesia, the local government of Aceh can become the object of the study. Therefore, the implementation of zakat policy can be formulated at the central government based on the result of the empirical studies. This study is intended to meet that purpose.

2. Literature Review

Zakat is a topic most frequently discussed and analyzed by researchers of Islamic finance (Johari et.al., 2014). However, literature studies based on publication quantity, research approach, and pattern of authorship on zakat have shown the opposite fact. Zakat has become the topic infrequently published in reputable international journals. Consequently, the knowledge and

science of zakat have not developed accordingly. Furthermore, Johari et.al (2014) said that study on zakat should be conducted intensively and massively to ensure the rapid improvement of knowledge and science of zakat.

The study of zakat and the effect of zakat on the government's financial performance have infrequently been conducted. Some of the existing studies discuss zakat in private enterprises as a part of the program of *Corporate Social Responsibility (CSR)*. The study conducted by Menne et.al. (2016) concludes that zakat has a positive and significant effect on the increase of the financial performance of Islamic banks.

The study conducted by Sarket et.al. (2017) at Al Arafah Islamic Bank concluded that maximal collection and distribution of zakat can *leverage* the financial performance of entities. Some of the positively improving indicators are profitability and liquidity ratio.

Javaid and Malkawi (2018) conducted a study on the effect of zakat on the financial performance of enterprises in Saudi Arabia. This study concluded that zakat has a positive and significant effect on the profitability of enterprises. Zakat can serve as a strategy to maximize return and improve the financial performance of the enterprise.

However, international studies exclusively involved private enterprises. Public sectors have rarely involved as the objects of the study because of the limited number of governments implementing the zakat policy in their financial system.

In Indonesia , various studies on zakat have been conducted. However, they have not specifically discussed zakat. The studies in Indonesia confirmed the effect of local revenue on financial performance of local governments. The local revenue refers to the Local Own-Source Revenue (PAD). The studies confirmed the effect of Local Own-Source Revenue (PAD) on the financial performance of local government (Junarwati et.al., 2013; Erawati and Suzan, 2015; Lestari et.al., 2016; Andriani and Wahid, 2018). However, the studies did not identify the effect of zakat specifically because the local governments involved as the objects of the studies have not implemented the zakat policy in their financial system.

Analysis of the existing studies on zakat concludes that zakat is a frequently studied topic although in a limited context. International studies involve private entities as the object of study. Consequently, the results of these studies are not generalizable to the public sector, due to the different organizational objectives between private and public sectors. On the contrary, the domestic studies still discuss the effect of local revenue on the financial performance of local government and have not discussed the effect of zakat specifically. The only object of study that can be used in the study of the effect of zakat on the government's financial performance is Aceh Government.

The study on zakat is very essential when the government of Indonesia (or other governments planning to implement zakat policy) needs empirical proof about how zakat can have an effect on the financial system. Aceh Government is a suitable object of study. In this context, zakat is the independent variable in the model the effect of which is studied specifically in the object that has implemented the zakat policy in the financial system.

3. The Data, Variables, and Mathematical Expositions

3.1. The Data and Variables

This study used a data panel. Sekaran and Bougie (2016) suggest that data panel is a combined data of *time series data* and cross-*sectional data*. *Time series* data of the study was Report of Realized Budget of Aceh Province Government from 2011 to 2018 (8 years). The *cross-sectional data* of the study was Aceh's 23 districts/municipalities (184 observations). *Purposive sampling* was employed in the study.

The secondary data of this study was collected from such different sources as the Financial Report of Local governments, Central Statistic Board, and the Audit Report by the Indonesian Financial Audit Board. Report of Audit Result by Indonesian Financial Audit Board was used as the *cross-check* for the Financial Report of Aceh Province Government, which during the study, had not been *audited*.

Aceh Province Government was chosen as the object of study because it is the only local government that implements the zakat policy in the financial system.

The study used 3 kinds of variables:

- a. Dependent Variable: Local Financial Independence Ratio (KKD) was calculated by comparing the Realized PAD to the Realized Generally Allocated Fund (DAU). The ratio reflects the performance of local government independence on the financial transfer from the central government. This ratio is presented in percentages.
- b. Independent Variable: The component of Local Own-Source Revenue is described independently to identify the individual effect of zakat on the ratio of KKD. The components of PAD as the variable of the study were Zakat (Z), Aceh's Tax Revenue (PPA), Local Retribution (RD), Separated Aceh's Own-Source Revenue (PAAD), and other authorized sources of PAD (LLPS).
- c. Control Variable: To control the effect of other variables not included in the model of study control variable can be used (Sugiyono, 2014). The control variables in this study are the number of the Muslim population in Aceh Province and the number of Regional Work Unit (SKPD) to represent the control of zakat maximization by the local government.

3.2. Mathematical Expositions

Hypotheses of this study were tested using the panel data regression model with the following model:

$$\begin{split} & KKD_{it} = \beta_0 + \beta_1 Z_{it} + \beta_2 PPA_{it} + \beta_3 RD_{it} + \beta_4 PAAD_{it} + \beta_5 LLPS_{it} + \beta_6 SKPD_{it} + \\ & \beta_7 PM_{it} + \varepsilon_{it} \end{split}$$

.....(Equation 1)

Where

KKD _{it}	:	Local Financial Independence Ratio in the local governments in Aceh as the samples of the study (i) in a particular year (t). KKD is the ratio of Realized Aceh's Local Own-Source Revenue (Zakat, Aceh's Tax Revenue, Local Retribution, Separated Aceh's Own Source Revenue, and Other Authorized Sources of PAA) to the Generally Allocated Fund. The formula of KKD conformed to the theory proposed by Mahmudi (2007).
Z_{it}	:	Realized zakat in the Province Government, Districts, Municipalities in the Local Government of Aceh as the samples of the study (i) in a particular year (t)
PPA _{it}	:	Realized Aceh's Tax Revenue in the local government of Aceh as the samples of the study (i) in a particular year (t)
RD _{it}	:	Realized Local Retribution in the local government of Aceh as the samples of the study (i) in a particular year (t)
PAAD _{it}	:	Realized Aceh's Separated Local Own-Source Revenue in the local government of Aceh as the samples of the study (i) in a particular year (t)
LLPS _{it}	:	Realized other authorized sources of revenues (LLPS) in the local government of Aceh as the samples of the study (i) in a particular year (t)
Spit	:	Number of Regional Work Unit (SKPD) in the local government of Aceh as the samples of the study (i) in a particular year (t)
PM _{it}	:	

The model of the study was also used in previous studies conducted by Junarwati, et. Al., (2013), Erawati and Suzan (2015), Lestari et. al., (2016), and Andriani and Wahid (2018). However, it was probable that the model had *double-counting* potential because zakat was counted in both dependent and independent variables.

Therefore, this study proposed an auto criticism to model I by modifying the Local Financial Independence Ratio. Zakat was excluded from the calculation of Local Own-Source Revenue in the ratio of KKD to obtain the Non-Zakat Local Financial Independence Ratio. Pure zakat was only used as an independent variable. Therefore, the effect of *double-counting* has been eliminated. Besides that the component of non-zakat PAD has also been excluded from model I. Therefore, the alternative model can be transcribed in the following notation:

$$KKDNZ_{it} = \beta_0 + \beta_1 Z_{it} + \beta_2 SKPD_{it} + \beta_3 PM_{it} + \varepsilon_{it}$$
(Equation 2)

Where

KKDNZ_{it} : Non-Zakat Local Financial Independence Ratio in the local governments in Aceh as the samples of the study (i) in a particular year (t). KKDNZ is the ratio of the Realized Aceh's Local Own-Source Revenue (Zakat excluded from the component of PAA) to the Generally Allocated Fund as suggested by Mahmudi (2007).

Z_{it}	:	Realized zakat in the Governments of Province, District, and Municipality in the Local
		Government of Aceh as the samples of the study (i) in a particular year (t)
SKPD _{it}	:	Number of Regional Work Unit (SKPD) in the local government of Aceh as the samples of the
		study (i) in a particular year (t)
PM _{it}	:	Number of the Muslim population in the local government of Aceh as the samples of the study
		(i) in a particular year (t)

The methods for selecting and testing of data panel that will be used in \this study are the Chow Test, Hausman Test, and Lagrange-Multiplier Test. The Classic Assumption Test will be used. However, only a multicollinearity test that conforms with the theory proposed by Gujarati and Porter (2018) suggesting that *Generalized Least Square* particularly the *random effect* of the model of data panel conforms with the classic assumption will be used. The classic assumption test will use the correlation matrix as an indicator.

4. Research Results and Analysis

The model of data panel regression was formed with 3 approaches: *Fixed Effect Model (FEM), Common Effect Model (CEM),* and *Random Effect Model (REM).* The regression model that will be analyzed was chosen with the aforementioned test method.

Table 1

Testing	F-stat	Prob.	Criteria	Chosen Model
Chow Test	6.18	0.0000	0.05 (rejected H ₀)	Model FEM
Hausman Test	70.11	0.0000	0.05 (accepted H0)	Model REM
LM Test	8.45	0.1332	0.05 (accepted H0)	Model REM

Result of Choosing the Model of Study

(Source: processed from STATA 13, 2019)

Random Effect Model was used as the model of the study because the testing showed that F-stat was statistically higher than the probability. Therefore the testing of the classic assumption that will be used to test the validity of the data is the multicollinearity test that will use the correlation matrix. The results of the correlation matrix are as follows:

Var Ζ **PPA** RD PPAD LLPS SKPD PM Conclusion Ζ No PPA 71.67% multicollinearity RD 8.61% 10.63% was present PPAD 35.45% 13.93% 30.60% (correlation < 95%)LLPS 43.97% 41.63% 1.22% 39.45% according to SKPD 37.06% 24.18% 28.17% 45.11% 28.60% Ghozali (2011) PM 32.73% 44.15% 32.90% 54.69% 50.79% 52.40%

Table 2Correlation Matrix of the Study Model

(Source: processed from STATA 13, 2019)

The inter-variable correlation matrix showed the indicator below 95%. Therefore the study model was free of multicollinearity and the data was valid to be used in the study. The Study model was then formed through the data panel regression model with the *Random Effect* approach. The results are as follows:

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Variable	Coef.	Stat.	Prob. (α = 5%)	Conclusion
Z	0.2765	4.13	0.0000	Significant***
PPA	0.1547	6.89	0.0000	Significant***
RD	0.1567	14.33	0.0000	Significant***
PAAD	0.0663	0.66	0.506	Insignificant
LLPS	0.1331	33.53	0.0000	Significant***
SKPD	-1.5856	-1.13	0.257	Insignificant
PM	-14.5046	-4.94	0.0000	Significant***
Const.	11.8869			
Wald Chi ²	2.994.31			
Prob > Chi ²	0.0000; Significant at $\alpha = 5\%$			
R ² overall	94.41%			
Note	Obs: 184; groups: 23; obs per group: 8			

Table 3Result of Study Model Random Effect Model

(Source: processed from STATA 13, 2019)

The result of the testing showed that Zakat (Z) has a significant effect on Local Financial Independence (KKD) of Aceh Province Government at the confidence interval of 95% (significant at 0.0000 < 0.05). The increase of realized zakat of 1 billion Rupiah would increase the Local Financial Independence Ratio by 0,2765%, *ceteris paribus*.

The empirical result proved that zakat management in the financial system of local governments can improve the financial performance of local governments, proxied with the increase of the Local Financial Independence Ratio. Zakat that empirically can contribute positively to the financial independence of a region, can become a positive precedent that zakat management in a larger system, such as in the national financial system, can result in a similar positive effect. The government of Indonesia and other countries that would adopt the zakat policy in the national financial system should consider the empirical evidence to follow up on the implementation.

To reduce the effect of *double-counting*, an alternative model is used as a comparison to the study model. The alternative model excludes the effect of Zakat (Z) in the dependent variable and excludes the effect of other non-zakat variables as the independent variables in the study

model. Local Financial Independence Ratio (KKD) was modified into the Non-Zakat Local Financial Independence Ratio (KKDNZ).

Result of Thiermative Random Effect model				
Variable	Coef.	Stat.	Prob. (α = 5%)	Conclusion
Z	0.5769	3.14	0.0020	Significant***
SKPD	3.0517	0.54	0.5930	Insignificant
PM	0.3240	9.00	0.0000	Significant***
Const.	-71.0778			
F (3,158)	79.85			
Prob > F	ob > F 0.0000; Significant at $\alpha = 5\%$			
R ² overall	20.53%			
Note	Obs: 184; groups: 23; obs per group: 8			
(Sources proceeded from STATA 12, 2010)				

Result of Alternative Random Effect Model

Table 4

(Source: processed from STATA 13, 2019)

This alternative model can be transcribed using the following mathematical notation: $KKDNZ_{it} = -71,0778 + 0,5769Z_{it} + 3,05175KPD_{it} + 0,3240PM_{it} + \varepsilon_{it}$ (Equation 2)

The t significance test for the alternative model showed that Prob t had a value of 0.0020 where this value was < 0.05. it can be interpreted that the variable of Zakat (Z) has a positive and significant effect on the Non-Zakat Local Financial Independence Ratio (KKDNZ). The increase of Realized Zakat of Rp 1 Billion can improve the financial independence of the local government of Aceh by 0.5769%, *ceteris paribus*. The result of the study using the alternative model was in line with the result of the hypothesis testing in the study model where Zakat empirically has a positive and significant effect on Local Financial Performance proxied with the Local Financial Independence Ratio. The result of the testing of the alternative model also showed and confirmed that both models are valid to be used as the result of study.

5. Conclusions and Policy Recommendations

This study has contributed to some important aspects by (a) bridging the *gap* to the existing studies of zakat in public or government entities. So far, the studies on zakat are dominated by studies on zakat in the private sector. The object of the study was Aceh Province Government which is the only local government in Indonesia – or even in the world – that applies the zakat policy in the financial system; (b) proving the hypothesis that zakat can *leverage* local finance. Aceh Province Government has massively collected zakat in a quite significant amount to improve the financial independence of Aceh. Empirical evidence can be a reference and benchmark that the implementation of zakat policy can be adopted by the government of Indonesia or other governments to improve the financial potential.

Especially for the government of Indonesia, some policy recommendations to correct the existing policies are (a) Zakat, as mandated in the Law of 23/2011 on zakat management is adopting a *voluntary system*. The system should have been changed into an *obligatory system* to strengthen *law enforcement* for zakat collection. Besides, Nurhayati and Wasilah (2016) suggested that a particular property can be deducted by zakat when it meets the required amount (nishab) and term (haul). Therefore, the people beyond the criteria can be exempted from the zakat obligation; (b) Zakat should be included in the State Budget (APBN). Aceh Province Government has successfully included zakat collection in the Local Budget (APBD); (c) Revising the Law of 23 / 2011 on Zakat Management. The law has to be revised because in general it only discusses the organizational structure of BAZNAS and LAZ. It does not discuss the technical and operational mechanism of zakat collection. The law has relatively low legal enforcement and has not depicted the government's attempt to maximize zakat potential as implied by the Financial Minister; (d) Zakat is currently organized under the authority of the Ministry of Religious Affairs. Zakat with its potential to increase the state revenue should be managed by the Ministry of Finance as the State Treasurer as well as the State Zakat Management (Sakti, 2007). The organizational extension of the Ministry of Finance of the Republic of Indonesia (i.e. the establishment of the Directorate General or special directorates of zakat management) may be needed in the future to maximize the potential of zakat collection in Indonesia. With its large potential, zakat has to be managed professionally to maximize public prosperity in Indonesia.

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Appendix

Appendix 1. Local government data as cross section unit

F F	ε
1	District Government of Aceh Barat
2	District Government of Aceh Barat Daya
3	District Government of Aceh Besar
4	District Government of Aceh Jaya
5	District Government of Aceh Selatan
6	District Government of Aceh Singkil
7	District Government of Aceh Tamiang
8	District Government of Aceh Tengah
9	District Government of Aceh Tenggara
10	District Government of Aceh Timur
11	District Government of Aceh Utara
12	District Government of Bener Meriah
13	District Government of Bireuen
14	District Government of Gayo Lues
15	District Government of Nagan Raya
16	District Government of Pidie
17	District Government of Pidie Jaya
18	District Government of Simuelue
19	Municipal Government of Banda Aceh
20	Municipal Government of Langsa
21	Municipal Government of Lhokseumawe
22	Municipal Government of Sabang
23	Municipal Government of Subulussalam

Appendix 2. Histogram of The Research Data



Appendix 3. Research Data's Scatter Plot

