Analysis of the contribution of the Zakat Fund to sustainable development in Algeria: Empirical approach

تحليل مساهمة صندوق الزكاة في التنمية المستدامة في الجزائر: مقاربة تجريبية

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Abstract:

Zakat is legal alms which is considered a means of redistributing wealth. It plays an important role in reducing poverty. The objective of this article is to examine the contribution of the Zakat Fund to sustainable development in Algeria through a regression model based on the least ordinary squares relating the human development index and the revenues collected by the Zakat Fund using annual data covering the period (2003 -2020). A cointegration test is also applied. The results show that the revenues collected by the Zakat Fund contribute significantly to the improvement of living standards.

Keywords: Zakat; sustainable development; Fund; contribution; Algeria

JEL Classification Codes: C13, O15, G20

ملخص:

الزكاة صدقة شرعية ، وهي وسيلة لإعادة توزيع الثروة. إنها تلعب دورًا مهمًا في الحد من الفقر. تهدف هذه المقالة إلى دراسة مساهمة صندوق الزكاة في التنمية المستدامة في الجزائر من خلال نموذج الانحدار القائم على المربعات الدنيا العادية المتعلقة بمؤشر التنمية البشرية والإيرادات المحصلة من قبل صندوق الزكاة باستخدام البيانات السنوية التي تغطي الفترة (2003). –2020). كما يتم تطبيق اختبار التكامل المشترك. وأظهرت النتائج أن الإيرادات المحصلة من قبل صندوق الزكاة تساهم بشكل كبير في تحسين مستويات المعيشة.

كلمات مفتاحية: زكاة؛ تنمية مستدامة؛ تمويل؛ إسهام؛ الجزائر

تصنيفات JEL: C13 ،O15. ،G20.

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INTRODUCTION:

One of the challenges of sustainable development is to promote the equitable transfer of resources that enable development, preserve natural resources, and fight poverty. Over the last decades, some particularities have emerged leading Islamic finance, through Zakat Funds in particular, to take an increasingly significant place and play a social role.

Islamic Microfinance is part of this framework, and is defined as "an articulation of two very emerging and rapidly expanding industries around the world, namely microfinance and Islamic finance. It consists of providing financial products and services that are derived from the precepts of Islamic jurisprudence or "Shari'a", and it is aimed, like conventional microfinance, at people excluded from conventional financing, including Islamic bank financing.

Zakat, the legal alms, is the third pillar of Islam. It plays an essential role in the redistribution of wealth, while establishing social justice based on equity, in order to preserve economic and social balances and reduce the gaps between social classes.

Many empirical studies have assessed the impact of Zakat on poverty reduction. Empirical results have shown the effectiveness of Zakat funds in reducing poverty (Akram, Mian, & Afzal, 2014), (Dian, Irfan, & Wiwiek, 2019), (Bouchikhi, Ghrissi, & Rahmani, 2016) and (Hassab, 2021) . Our work follows this line.

In Algeria, the Zakat Fund, a religious and social institution operating under the aegis of the Ministry of Religious Affairs and Waqfs, was established in the early 2000s.
 Today, 20 years after its creation, and as it is time to take the balance sheet, we wonder about the effectiveness of the Zakat Fund. What has it achieved? What impact on sustainable development in Algeria?

In view of the above and the importance given to the issue of sustainable development by the public authorities in Algeria, the objective of this paper is to examine the impact of the revenues collected by the Zakat Fund on sustainable development in Algeria.

The methodological approach followed in this study is hypothetical-deductive. Guided by a starting hypothesis that the Zakat Fund positively affects the standard of living, it resembles a logical sequence of reasoning based on the observation of indicators, analysis and deduction.
The empirical investigation is based on a simple regression model using annual data covering the period (2003-2020) from the World Bank database.

This work is structured around three sections: the first will be devoted to the presentation literature review of the relationship between Zakat and sustainable development, the second section presents conceptual framework and activity report of Zakat Fund in Algeria, the

second will deal with the estimation of the impact of the revenues collected by the Zakat Fund on the sustainable development in Algeria

1- Literature review

Zakat, legal alms for Muslims, is one of the five pillars of Islam. The Verse 60 of Sura Tawbah sets out eight categories of beneficiaries for whose benefit Zakât may be paid. In this case, it is the poor, needy, persons responsible for collecting the Zakât, persons whose sympathizers to Islam, slaves, insolvent, travelers in distress, and the path of Allah.

Zakat has been a means of social financing for centuries. It allows for the redistribution of wealth and plays an important role in reducing poverty.

(Akram, Mian, & Afzal, 2014) used the ARDL approach to cointegration to evaluate the short run and long run impact of Zakat disbursement along with the other exogenous variables on poverty during thirty three years of implementation of Zakat system at the State level in Pakistan. The results of the study show that there is an inverse relationship between poverty and Zakat disbursement both in the short run and long run.

In the study (Nurzaman, 2016) with the Human Development Index (HDI), it can be concluded that there was indeed an increase in the HDI of Mustahiks (zakat recipients) households in the period being observed. There are several possible reasons why Mustahiks who received productive zakat assistance are improved their welfare status. In this regard, it is due to the investments in productive capital, in addition to having microfinance which can encourage growth in income and fulfill basic needs. Further, an appropriate training and empowerment programs can also be essential factors to strengthen household awareness in having good education.

The study of (Ariyani, 2016) determine the effectiveness of poverty alleviation patterns based on zakat compared with the pattern of poverty alleviation efforts run by the government and the pattern of Corporate Social Responsibility (CSR), as well as the key determinant factors Measurement of effectiveness is based on 30 attributes that include the dimensions of input, process and output. The study uses a multicriteria decision analysis approach that is supported by the software Rappoverty. The findings show that the pattern of zakat-based poverty alleviation program performs better on all attributes compared to the pattern of other programs. The sensitive leverage factors that determine performance status consist of: the suitability of the program to the needs of the target communities, socialization and education, inter agency coordination, consistency in the implementation of the rules, the existence of public institutions to carry out and support the program, improvement of welfare recipients, as well as an increase in the number of beneficiaries. The findings of this study indicate that the pattern of poverty reduction programs based on zakat can be a useful model for policy makers in developing effective poverty alleviation programs.

(Kasri, 2017) discussed the determinants of poverty among zakat recipients in Indonesia using household level analysis. The results show that the lower the age, the lower the education, the less formal employment, the smaller the size of the household, are related to the higher

probability of being poor. The results show that such group of people should be the main target of zakat distribution, notably in Indonesia's context.

The study of (Sumai, Mutmainnah, Nurhamdah, & Arsyad, 2019) deals with the role of *zakat* in social and economic changes in terms of poverty and food security of poor households after receiving *zakat*. The research employed qualitative methods. The results show that, pattern of *zakat* aid distributed by the National *Zakat* Amil Agency (called, BAZNAS) to the poor households in the form of IDR 300,000 (1USD=14, 000 IDR) in cash and/or rice (non-cash); there are two patterns acts of poor households in utilizing *zakat* (consumptive patterns and productive patterns). It indicates that, some poor households have been giving production capital, and in turn positively affects poverty reduction and food security situation. It implies that zakat is one possible route to reduce poverty and strengthen household's food security in the country.

The study of (Dian, Irfan, & Wiwiek, 2019) assesses how the positive impact of zakat on poverty and also calculates how many years the community estimates can get out of the cycle of poverty. The main data used in this study are primary data from community surveys with respondents who have income below the poverty line and receive assistance from zakat funds. Primary data is taken using a questionnaire that provides information about the characteristics of the respondent's household. Based on secondary data, the amount of data used is 200 respondents taken from all cities and regencies in West Sumatra, Indonesia.

In Algeria, the results of the econometric study conducted by (Aria & Abdeli, 2012), based on a simple regression, show the existence of a proportional relationship between the Zakat Fund and the Wakf Funds. If the amount of Wakf increases by one unit, the Zakat funds increase by 11.005. Zakat funds contribute significantly in reducing the unemployment rate, if Zakat funds increase by one unit, the unemployment rate will decrease by 2.76. In their applied research on Algeria, (Bouchikhi, Ghrissi, & Rahmani, 2016) measures the contribution and the impact of zakat fund in Algeria in the fight against poverty from 2003 to 2013 to using an estimation with the OLS method. The result demonstrates that the Algerian zakat fund helps to create new businesses, which leads the reduction of unemployment and poverty but this contribution remains small.

In its comparative study, (Hassab, 2021) examined the experience of two countries that centralize, collect and distribute Zakat, namely: the Zakat Fund of Algeria and the Zakat Fund of Malaysia "Selangor" to show how Zakat can be a social financing tool that helps the poor and the destitute to get out of poverty. The results indicated that the institutionalization of Zakat allows this pillar to fully play its role as a means of financing intended for the poor in the form of consumption aid or project financing. The experience of Malaysia remains very developed compared to that of Algeria, since it is older, collecting significant funds, as it intervenes in several areas to improve the quality of life of the poor and allow them to get out of poverty and become donors of Zakat.

2- The Zakat fund: Conceptual framework and activity report

The zakat fund is a religious and social institution operating under the authority of the Ministry of Religious Affairs and Waqfs, which ensures its legal coverage, in accordance with the statute organising the foundation of the mosque. Zakat is collected in Algeria through CCP accounts (each willaya has a CCP account), mosque coffers and banks. The Zakat Fund aims to achieve social solidarity between the different segments of society and to contribute to solving the problem of poverty.

The Zakat collected in Algeria is distributed among the poor and needy in accordance with Shariah law. The distribution is done according to the principle of location, after determining the list of beneficiaries specifying the method of payment and the amount paid for each of them, generally, the Zakat Fund has adopted two methods for disbursing the amounts collected (Hassab, 2021):

- Direct support to the poor and needy: poor families are classified according to priority of eligibility and the amounts allocated range from $24.25 to $61.62 ($2,000 to $5,000) per year.
- Investment for the poor (Qard Hassan): constitutes 37.5% of the collected Zakat, allocated to young graduates capable of working, as well as loans to start up micro-projects (dedicated to traders, farmers and craftsmen) ranging from USD 616.22 to 6,162.21 (AED 50,000 to 400,000). Priority is given to medical and paramedical projects and to craft projects.

Fig (3): Number of projects financed by the Zakat fund (2003-2014)
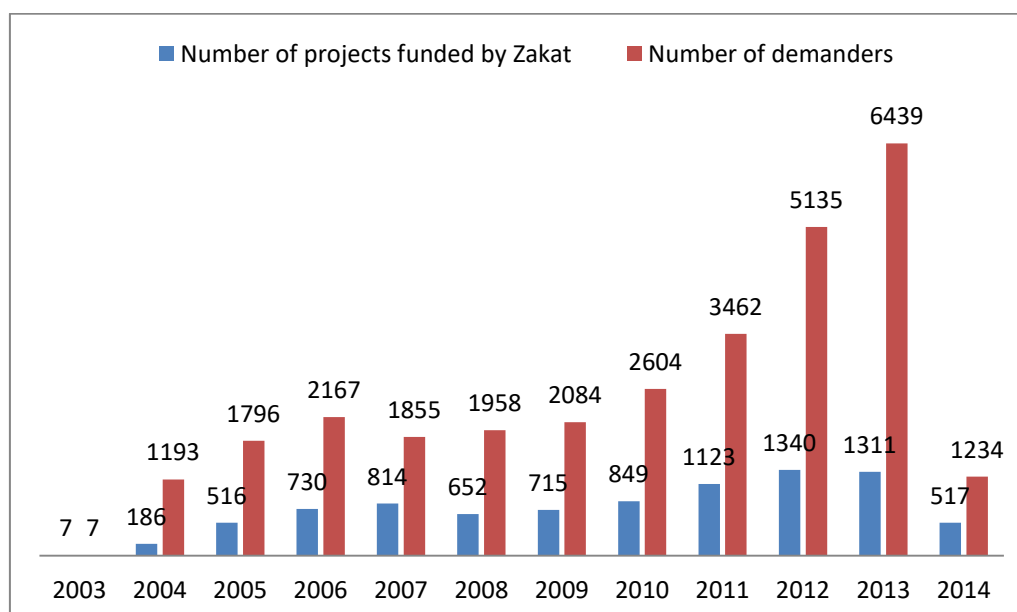
Source: statistics of the Ministry of Religious Affairs and Wakfs (2019)

The figure 3 shows the increase in the number of projects funded by the Zakat Fund. Due to the lack of recent data on the projects funded of zakat funds at the Algerian Ministry of Religious Affairs and related to the Zakat Fund, the number of projects funded will be indicated during the period for which the data are available in order to take a general idea of the proceeds of Zakat in Algeria as well as the activity of the Algerian Zakat Fund.

The Fund started its activity in 2003. In 2009, the number of projects funded is 1200. This number, in 2014, dropped to only 517 funded projects. However, this number is not really significant in regard to the number of applicants.

Fig (3): Evolution of the revenue collected by the Zakat fund (2003-2020)
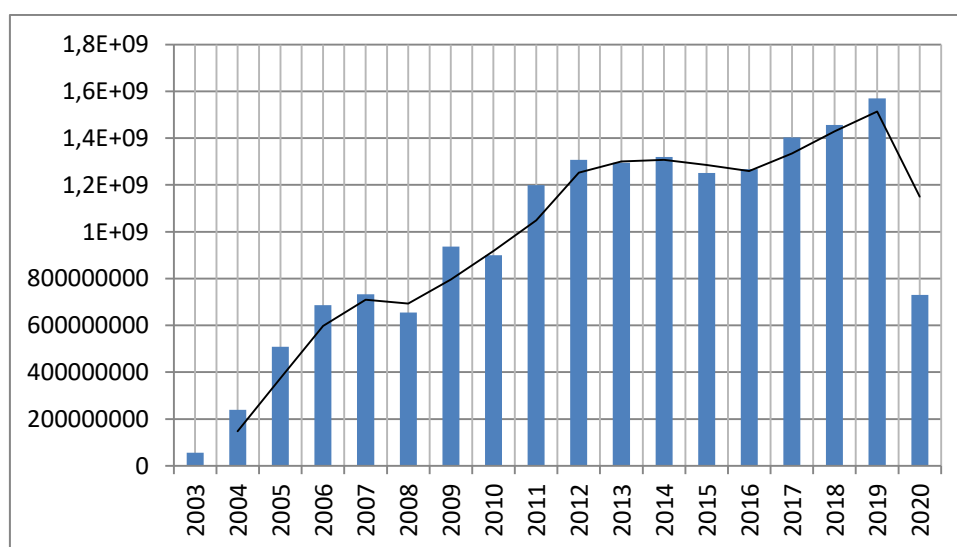
Source: Statistics of the Ministry of Religious Affairs and Wakfs (2021)

The revenue collected by the Zakat fund is constantly increasing (except 2008). From the year 2011, the amount collected has increased considerably due to the improvement of control mechanisms, transparency and increased awareness of the media on the goods made from Zakat. In 2020, the amount collected decreased due to the consequences of the covid 19 health crisis.

The amount of Zakat during the period from 2003 to 2021 exceeded 18.5 billion dinars, (National Office of Wakfs and Zakat, 2022) more than 4,400,000 people benefitted from it as the Zakat Fund contributed to the financing of 7,686 projects.

In order to develop the Zakat fund and make it more efficient, the public authorities plan
Efforts have been made to the "development of the Zakat system by:

- Updating and digitising the national card of Zakat beneficiaries". ".
- Creating annexes in the different wilayas and abroad.
- Creation of a guarantee bank, for the benefit of young people in difficulty of professional integration, by the Zakat Fund.

3- Estimation of the impact of the revenues collected by the Zakat Fund on the living standards

3-1 Methodology and choice of variables

The data used in this study was mainly provided by the database of and (Heritage Foundation, 2021) and the statistics of the (Ministry of Religious Affairs and Wakfs, 2021). The variables were selected according to the objective of the study. These include

1. **Human Development Index** (noted IDH): This is a composite index calculated each year by the UNDP to assess the level of development of countries based not on strictly economic data, but on quality of life. Health/longevity (measured by life expectancy at birth), which indirectly measures the satisfaction of basic material needs such as access to safe food, clean water, decent housing, good hygiene and medical care. Knowledge or educational attainment. This is measured by the average length of schooling for adults over 25 and the expected length of schooling for school-age children. It reflects the satisfaction of intangible needs such as the ability to participate in decision-making in the workplace or in society. The standard of living to include elements of quality of life that are not described by the first two indices such as mobility or access to culture.

2. **Revenues collected by the Zakat Fund** (noted Zakat) whose data is taken from the Ministry of Religious Affairs and Wakfs (2021).

The variables were log transformed for the estimation of the model. The statistical characteristics of these different variables are described in Table 1.

Table (1): Summary Statistics of the Variables used for Analysis (1995-2020)

|	IDH	ZAKAT
Mean	0.729056	9.73E+08
Median	0.738000	1.07E+09
Maximum	0.780000	1.57E+09
Minimum	0.674000	56122572
Std. Dev.	0.029283	4.35E+08
Skewness	-0.348246	-0.565958
Kurtosis	2.139841	2.310094
Jarque-Bera	0.918731	1.317903
Probability	0.631684	0.517393
Sum	13.12300	1.75E+10
Sum Sq. Dev.	0.014577	3.22E+18
Observations	18	18

Source: Eviews 9 program output, based don (Heritage Foundation, 2021) and statistics of the Ministry of Religious Affairs and Wakfs (2021)

According to Table 1, the series show a high level of consistency as their mean and median values are within their maximum and minimum values. It can be deduced from the table that the variables are normally distributed. This is obvious since the P-value corresponding to the Jacques Bera statistic is greater than 0.05 and the null hypothesis is rejected for the different series.

The graphical presentation of these different time series is shown in Figure 3.

Fig (3): Graphical evolution of study variables
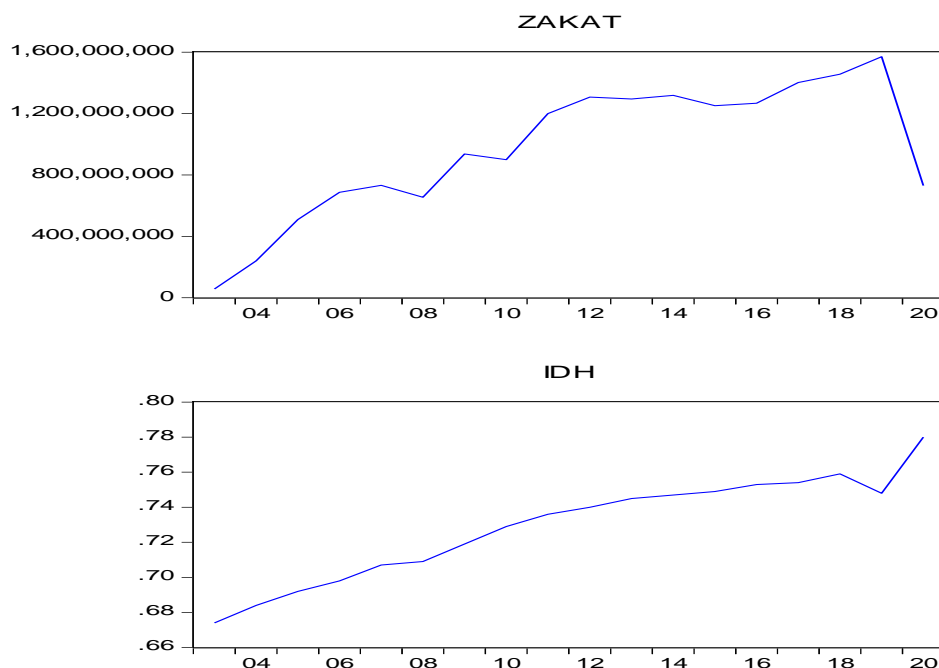
Source: Eviews 9 program output

Through the statistics of the Zakat Fund for the period 2003 to 2020, it can be seen that overall the revenues are constantly increasing, with the exception of the year 2008. The decrease in funds collected in 2008 is explained by the media accusations made by the Supreme Islamic Council to the Ministry of Religious Affairs and Endowments on the management of Zaket funds and the legality of the allocation of the Fund's funds (BenKadih & Baghezouz, 2018, p. 20).

From 2011 onwards, the amount collected has increased considerably to reach 1199 million dinars due to the improvement of control mechanisms, transparency and increased media awareness of the Zaket assets. In 2019, the amount reached 1.54 billion dinars.

The 19th campaign of the National Zakat Fund, organised for the year 2020, "did not generate the expected income, due to the closure of mosques, which prevented citizens from accessing the funds placed at these places of worship. The amount collected by the National Zakat Fund is estimated in 2019 at 1.54 billion dinars, had not exceeded the amount of 730 million dinars in 2020.

Algeria's HDI value for 2019 is 0.748 - placing the country in the "high human development" category and 91st among 189 countries and territories. According to the United Nations Development Programme (UNDP) Country Ranking Report, Algeria is ranked first in North Africa in terms of human development, category "high".

Figure 4 shows a positive correlation between HDI and Zakat.

Fig (4): "HDI and Zakat" scatter chart
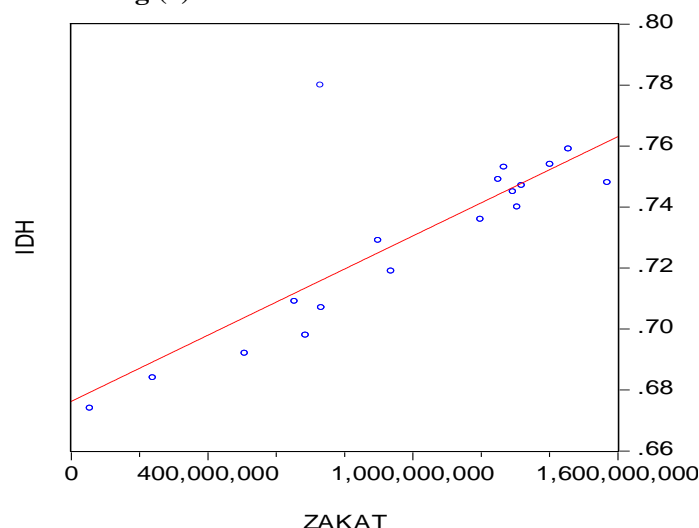
Source: Eviews 9 program output

3-2 Application of the simple regression model

In this section, we seek to verify the existence of a relationship between Human Development Index (IDH: variable of interest) and revenues collected by the Zakat Fund (Zakat: dependent variable).

As it is showed in figure 4, there is a positive correlation between HDI and Zakat. So, we can estimate the relationship between theses tow variables using the simple regression model. Regression analysis is a set of statistical methods used for the estimation of relationships between a dependent variable and one or more independent variable. It used to assess the strength of the relationship between variables and for modeling the future relationship between them. Regression analysis includes several variations, such as linear, multiple linear, and nonlinear. The most common models are simple linear and multiple linear.

The relationship between the Human Development Index and the revenues collected by the Zakat Fund is estimated using the OLS method applied on annual data covering the period (2003-2020). The results are shown in table 2.

The choice of the model was inspired by the work carried out previously (which are cited in the review of the literature) as well as the availability of data in Algeria.

It is assumed in this empirical study that the Zakat Fund can have direct (felt directly by credit recipients) and indirect effects on economic activity via the interdependency of economic activities. Indeed, the beneficiaries of the financing granted by the Zakat fund, in accordance with the Keynesian theory, by spending the income from their activities in the purchase of goods and services, will stimulate the economic activity of the country.

Table (2): Regression estimation results

Dependent Variable: LIDH
Method: Least Squares
Date: 10/22/22   Time: 20:20
Sample: 2003 2020
Included observations: 18

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LZAKAT	0.038779	0.007792	4.976645	0.0001
C	-1.111835	0.159877	-6.954317	0.0000
R-squared	0.607526	Mean dependent var		-0.316775
Adjusted R-squared	0.582996	S.D. dependent var		0.040490
S.E. of regression	0.026147	Akaike info criterion		-4.345727
Sum squared resid	0.010939	Schwarz criterion		-4.246797
Log likelihood	41.11155	Hannan-Quinn criter.		-4.332086
F-statistic	24.76700	Durbin-Watson stat		0.732544
Prob(F-statistic)	0.000137			

Source: Eviews 9 program output

From table (2) we note that the coefficient of determination (R2), obtained in the regression, shows that the variability of the HDI is explained at 60% by the explanatory variable lzakat

The coefficients of the explanatory variables are statistically significant with regard to the statistics of student which are higher than the value tabulated at the threshold of 5%.

The regression results show that there is a positive relationship between the human development index and the funds collected by Zakat

According to the simple regression estimation, we find that the standard of living measured by LIDH depends positively on the funds collected by Zakat.

The estimation of the regression model gives us the following equation:

$$LIDH = 0.0387 * LZAKAT - 1.111$$

The estimation of the model shows that, all other things being equal, a 1% increase in Zakat Fund revenues lead to a 0.03% increase in LIDH; this intuitive result is in line with theoretical predictions.

The validation of the model refers to various statistical tests (tests on the residuals and tests on the coefficients). The results of these different tests are illustrated in the figures and tables below.

We can study the distribution of the residuals, by testing the normality of distribution, which based on the Jarque-bera statistic.

Fig (5): Results of the normality test for residuals

Series: Residuals	
Sample 2003 2020	
Observations 18	
Mean	-8.79e-17
Median	-0.001443
Maximum	0.071960
Minimum	-0.036729
Std. Dev.	0.025366
Skewness	1.026259
Kurtosis	4.719518
Jarque-Bera	5.377176
Probability	0.067977
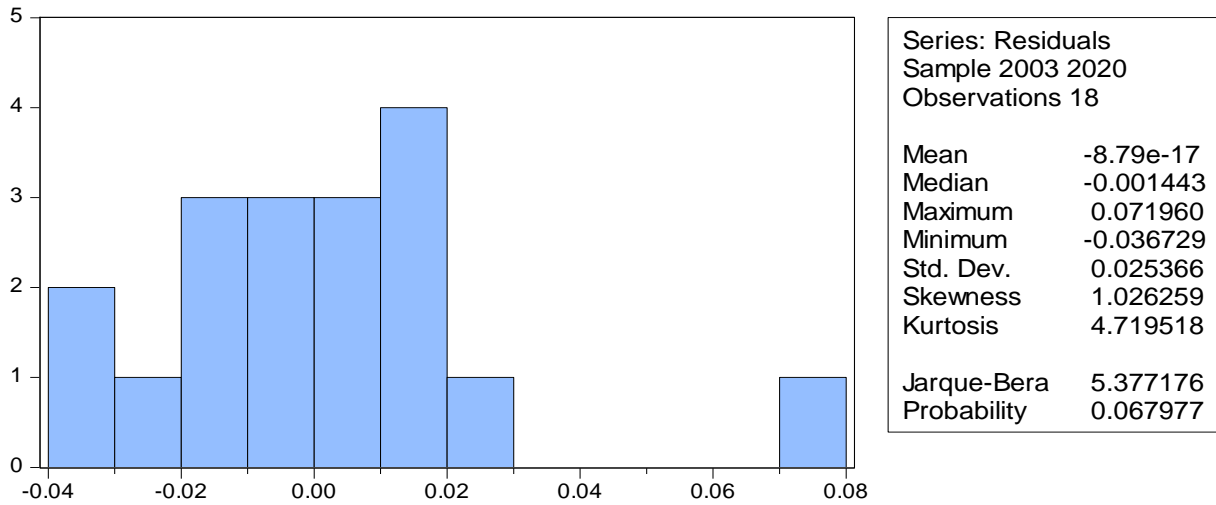
Source: Eviews 9 program output

According to the figure (5), the probability associated with the Jarque-Bera statistic (0.06) is greater than 0.05. The hypothesis of normality of the residuals is therefore verified. The hypothesis of normality of the residuals is therefore verified.

Table (3): Results autocorrelation test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	3.121649	Prob. F(2,14)	0.0757
Obs*R-squared	5.551435	Prob. Chi-Square(2)	0.0623

Source: Eviews 9 program output

According to these results, we can see that there is no autocorrelation of the residuals, since the probability of accepting H0 (0.0757) is greater than 5%.

Table (4): Results of the residuals heteroscedasticity test

Heteroskedasticity Test: White

F-statistic	1.362891	Prob. F(2,15)	0.2859
Obs*R-squared	2.767951	Prob. Chi-Square(2)	0.2506
Scaled explained SS	4.067335	Prob. Chi-Square(2)	0.1309

Source: Eviews 9 program output

From table (4) we note that the test indicates that the probability of accepting H0 (0.28) is greater than 5%, so the hypothesis of homoscedasticity is verified.

Table (5): Correlogram of the series of residues

Date: 10/22/22   Time: 20:21
Sample: 2003 2020
Included observations: 18

Autocorrelation	Partial Correlation		AC	PAC	Q-Stat	Prob
		1	0.368	0.368	2.8613	0.091
		2	0.349	0.248	5.6074	0.061
		3	0.208	0.025	6.6472	0.084
		4	0.154	0.006	7.2594	0.123
		5	0.065	-0.046	7.3762	0.194
		6	-0.028	-0.098	7.3995	0.285
		7	-0.051	-0.039	7.4842	0.380
		8	-0.141	-0.104	8.2036	0.414
		9	-0.193	-0.114	9.6871	0.376
		10	-0.171	-0.018	11.006	0.357
		11	-0.262	-0.139	14.538	0.205
		12	-0.225	-0.060	17.581	0.129

Source: Eviews 9 program output

The correlogram of the series of residuals suggests that it is stationary, since the terms of the autocorrelation have no particular structure, moreover, the probability of the Q statistic of Ljung-box for the lag h=5 is 0.19 > 0.05, so the null hypothesis of white noise is accepted.

Table (6): Results of the stability test of the coefficients

Ramsey RESET Test
Equation: UNTITLED
Specification: LIDH LZAKAT C
Omitted Variables: Squares of fitted values

	Value	df	Probability
t-statistic	1.912094	15	0.0752
F-statistic	3.656104	(1, 15)	0.0752
Likelihood ratio	3.926217	1	0.0475

F-test summary:

	Sum of Sq.	df	Mean Squares
Test SSR	0.002144	1	0.002144
Restricted SSR	0.010939	16	0.000684
Unrestricted SSR	0.008795	15	0.000586

LR test summary:

	Value	df	
Restricted LogL	41.11155	16	
Unrestricted LogL	43.07465	15	

Source: Eviews 9 program output

The results shown in table 6 indicates that P-value equals to 0.071 is greater than the level of 5% of significance; therefore, we accept the null hypothesis that there are no specification errors at level of 5% of significance, i.e. the RESET statistic indicates the

validity of the formula for the function used in the model.

An augmented Dicky Fuller (ADF) test is conducted to test the stationarity of the time series. The results of this test are shown in Table 7.

Table (7): Results of unit root tests using the ADF test

Variables	Level						ADF Difference Test	
	t-statistics and tabulated value	model 3 Intercept and Trend		Model 2 Intercept		Model 1 None	Model 1 None	Order of Integration
		t-ADF	t-trend	t- ADF	t-cons	T ADF	T ADF	
LZAKAT	t-statistics	-4.56	0.27	-7.50	7.61	/	/	**I (0)**
	tabulated value	-3.71	3.25	-3.05	2.97	-1.95	-1.95	
LIDH	t-statistics	-0.60	-0.38	-3.05	-2.88	-4.69	/	**I (0)**
	tabulated value	-3.73	3,25	-3.06	2.97	-1.95	-1.95	

Source: Eviews 9 program output

The results illustrated in Table 7 show that all the series are stationary in level.

The results (the good statistical significance of all the estimated model parameters, the creation of all critical probability values less than 0.05, and the determination coefficient ratio) denote the efficiency of the model in interpreting the changes of the dependent variable. As indicated in table 7, the study variables are integrated of the same order, a cointegration test can be applied.

The trace statistic either rejects the null hypothesis of no co-integration among the variables or does not reject the null hypothesis that there is one co-integration relation between the variables.

Table (8): Results of Trace test

```
Date: 12/25/22   Time: 11:51
Sample (adjusted): 2005 2020
Included observations: 16 after adjustments
Trend assumption: Linear deterministic trend
Series: LIDH LZAKAT
Lags interval (in first differences): 1 to 1


Unrestricted Cointegration Rank Test (Trace)
```

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.622193	24.24240	15.49471	0.0019
At most 1 *	0.418287	8.668450	3.841466	0.0032

```
Trace test indicates 2 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values
```

Source: Eviews 9 program output

The trace statistic either rejects the null hypothesis of no co-integration among the variables or does not reject the null hypothesis that there is one co-integration relation between the variables.

The presence of cointegration between variables suggests a long term relationship among the variables under consideration. Then, the VEC model can be applied. The long run relationship between Human Development Index and revenues collected by the Zakat Fund for one cointegrating vector for the Algeria in the period 2003-2020 is displayed below (table 9).

Table (9): Results of Vector Error Correction Estimates

Vector Error Correction Estimates		
Date: 12/25/22 Time: 11:52		
Sample (adjusted): 2005 2020		
Included observations: 16 after adjustments		
Standard errors in ( ) & t-statistics in [ ]		
Cointegrating Eq:	CointEq1	
LIDH(-1)	1.000000	
LZAKAT(-1)	-0.107685	
	(0.01279)	
	[-8.42158]	
C	2.542529	
Error Correction:	D(LIDH)	D(LZAKAT)
CointEq1	-0.097412	10.25462
	(0.16156)	(2.34488)
	[-0.60295]	[4.37320]
D(LIDH(-1))	-1.055940	19.24159
	(0.38872)	(5.64192)
	[-2.71645]	[3.41047]
D(LZAKAT(-1))	0.016790	-0.238641
	(0.01008)	(0.14634)
	[1.66525]	[-1.63069]
C	0.011588	-0.006028
	(0.00391)	(0.05674)
	[2.96394]	[-0.10624]
R-squared	0.440502	0.841458

Source: Eviews 9 program output

Estimation of the cointegration relationship makes it possible to identify the following long-term equation:

$$LIDH_t = 0.107 * LZAKAT_t - 2.5425$$

The first part of the table indicates that there is a long-term relationship between LIDH and LZAKAT since the coefficient of LZAKAT is statistically significant with regard to the statistics of student which (2,71) are higher than the value tabulated at the threshold of 5%. The estimation of the long run relationship indicates that an increase in Zakat Fund revenues (1%) lead to an increase in LIDH (a 0.107%) . This confirms the results found in the estimation of the OLS model.

CointEq1 indicates the residuals lagged by one period of the cointegrating relation which appears in the lower part of the table. This equation shows us the existence of a short-term relationship between the variables. Student statistics are those enclosed in square brackets. Thus, the results obtained show that the error correction term is negative but it is not significantly different from zero in the relationship relating to the human development index, which means that the LIDH and LZAKAT variables are not characterized by a return to the long-term target (towards equilibrium).

Conclusion:

In the context of financial exclusion affecting not only the poorest sections but also the middle classes of developing countries, the Zakat fund is a real lever for sustainable development through poverty reduction. In this study, we explored the relationship between Zakat funds and sustainable development in Algeria, measured by the Human Development Index.

The analysis of the statistics indicated the increase in the number of projects financed by the Zakat Fund. In 2014, the number of funded projects is 1200. However, this number is not really important in view of the number of applicants.

The available literature indicates that sustainable development is significantly influenced by revenue collected by the Zakat Fund.

Our estimation work is in line with studies that indicate a positive relationship between Zakat funds and sustainable development. In order to test this hypothesis, we relied on a proxy that reflects certain aspects of sustainable development in this case, the human development index (HDI) which takes into account both the standard of living and the quality.

Indeed, the regression we performed to test the statistical significance of the effect of Zakat funds on the HDI found a significant relationship. The sign of the Zakat coefficient confirms our expectations and shows that Zakat contributes significantly to sustainable development through the creation of micro-enterprises. This result is in line with the literature which has shown the positive relationship Zakat funds and sustainable development.

As a research perspective, it is possible to use other indicators of financial inclusion. This approach could remedy the technical flaw in our empirical approach, which consists in neglecting certain aspects of sustainable development (such as poverty reduction).

Our results suggest strengthening the Zakat fund for the «development of the Zakat system by creating annexes in the different wilayas and abroad.

This empirical study is not without limits, it would be interesting to conduct a field survey near the beneficiaries of the Zakat Fund to verify the relationship between the funds distributed and the reduction of poverty.

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