The Effect of Islamic Financing on the Growth of Iran's Economic Sectors

Farzaneh Aliakbari, Akbar Mirzapour Babajan [*], **Beitollah Akbarimoghadam, Arash Hadizadeh**

Department of Economics, Islamic Azad University, Qazvin Branch, Iran.

Abstract
Islamic financing is an alternative to conventional financing to meet the specific requirements of Muslims to provide financial services in accordance with Islamic religious law. The main purpose of this study is to investigate the impact of Islamic financing on the growth of Iran's economic sectors. For this purpose, the effect of the volume of issued sukuk and the volume of issued Islamic debt securities has been studied separately in three economic sectors, industry, agriculture and services. Therefore, the quarterly data for the years 2012 to 2019 were analyzed with two recordings of time series and data panel. The results of this study showed that Islamic financing, ie the sum of sukuk and debt securities, has a significant effect on the economic growth of the three sectors. The estimated probability for the total issued sukuk is less than 0.05 (0.00). However, in the analysis of different sectors separately, it was found that Islamic sukuk and debt securities have a significant impact on the economic growth of the agricultural sector and the industrial sector. While it has no significant effect on the service sector.
Keywords: Islamic Financing, Sukuk, Islamic Debt Securities, Economic Growth.

Introduction

Islamic financing has emerged in the world financial literature with the aim of providing a new model for replacing traditional and conventional financial systems and providing financial, commercial and investment facilities and opportunities in accordance with the principles of Sharia (Ghaffari Fard et al., 2017). The main feature of the Islamic financial system that makes it unique is helping the process of economic growth in real dividends whose income is evenly distributed and leads to social justice and long-term economic growth. The improvement in productivity resulting from capital allocation also depends on the return on capital productivity; In addition, Islamic financial institutions encourage investors to invest in banks' dividend deposits. In general, due to the lower importance of financial debt; The Islamic financial system prepares copies of conventional contracts to avoid the loss of capital and wealth caused by the repeated financial crisis and its negative effects; Thus, it leads to sustainable economic growth (Goaied and Sassi, 2010). Economic growth and development are one of the main issues of Islamic economics. In particular,

---

[*] Corresponding author E-mail: akbar.mirzapour@gmail.com

most Islamic economies are in developing countries and less so in developed countries (Ghlamallah et al, 2021). From the Islamic point of view, interest rates (usury) are forbidden and cannot be used for financing in Islamic society. Muslim thinkers, considering the financing of companies through Islam, first thought of creating an Islamic banking system and then thought of launching a capital market. Among these, the role of Islamic financial instruments or sukuk in the Islamic financing system is very important and prominent (Ghaffari Fard et al., 2017).

The development of the financial structure in a transparent economic environment takes place on the assumption of a competitive market, ie the symmetry of information. The more efficient the market and the more information symmetry, the greater the market security, and the higher the economic growth can be achieved by directing investments towards production. By equipping savings and directing them to manufacturing and commercial enterprises, banks and credit institutions, firstly, turn stagnant and possibly destructive economic capital into productive factors, and secondly, other factors of production, especially capital. People who are unemployed due to lack of capital or work with low productivity, lead to full employment with high productivity (Habibi and Amidi, 2020).

Sukuk markets play a positive role in helping banks to strengthen their capital adequacy ratio and manage banking operations. This can be achieved in two ways. First, Islamic banks have the opportunity to invest in high quality (low risk) Sukuk. The existence of the developed sukuk market also provides banks with different types of sukuk issuance with different credit quality through which they can reduce and manage risk (Smaoui and Ghouma, 2020). The Sukuk market has grown rapidly in recent years. One of the main factors influencing economic growth is that financial instruments are very diverse. The centrality of financing in the economy and its importance for economic growth raises the importance of innovation of financial instruments (Naemi et al., 2019). Although companies and firms are an important part of the country's economy, they face financing problems that are the biggest obstacles to their growth. Therefore, Islamic financial institutions can play a prominent role in strengthening financial participation (Boubker et al, 2021).

Gazdar et al. (2019) found that the impact of macroeconomic variables on economic growth is enhanced by the development of the Islamic financial system. Boukhatem and Ben Moussa (2018) found strong evidence that the development of the financial system has led to economic growth in selected countries in MENA. In addition, they found that while Islamic financial development could increase economic growth, underdeveloped institutional frameworks prevented this positive effect. Smaoui and Nechi (2017) provided strong evidence that the development of the Sukuk market is beneficial for economic growth. They even confirmed that after controlling various measures, it will lead to the development of the financial market, institutional quality and the classic factors of economic growth. They concluded that the development of Sukuk markets may lead to financial participation by eliminating its negative effects, which stimulate investment and economic growth. Kassim (2016) has also stated that Islamic financing, by effectively performing the role of financial intermediation by collecting and directing funds to investment activities, has begun to make important contributions to the real economy. Ghaffari Fard et al. (2017) showed that sukuk has affected the economic growth of selected countries and financial market policymakers should pay special attention to the development of financial instruments in Islamic countries. The results of the study of Naemi et al. (2019) have shown that the issuance of sukuk has a positive and significant effect on GDP and increases economic growth.

The main purpose of this article is to answer the question whether Islamic financing has a significant impact on the growth of Iran's economic sectors? Many studies have examined the relationship between Islamic financing methods on the economic growth of selected countries. While in the present study, the relationship between Islamic financing (sukuk and bonds) on the

economic growth of the three sectors of industry, services and agriculture has been studied separately. Also, according to the searches, the present subject is done for the first time. Therefore, predicting the economic growth of different sectors with regard to Islamic financing tools and providing solutions to policy makers to improve the economic situation and investment of the country, is the general purpose of this study.

Theoretical foundations and research background

In recent years, the study of new financial instruments has become relevant. Currently, the most effective experience in the Islamic world is the financial instrument of Sukuk (Khan et al., 2022; Bhuiyan et al., 2020; Zain et al., 2020; Razak et al., 2019; Lahsasna et al., 2018; Ali Asar, 2013). On the other hand, economic growth is the main manifestation of government performance, so economists try to help policymakers to improve the index by accurately recognizing the dynamics and factors affecting the change and evolution of this index. In the economic literature, the accumulation and storage of physical capital has been expressed as an important factor in achieving greater production and productivity and creating a steady flow of more income for society. Investing in any institution without financing that institution is considered impossible (Ghaffari Fard et al., 2017). Islamic financing and banking in several stages has finally evolved and been recognized since 1970 and a bright future has been drawn for it (Hossain, 2016). The Islamic financing system can greatly reduce income inequality and distribute wealth more equitably. By doing so, the level of welfare and income over time by reducing the unequal conspiracy of wealth is likely to increase the downward trend (Djennas, 2016).

The foundations of theories of economic growth go back to Marshall (1890) and Schumpeter (1942). However, the definition of economic growth and the basic principles for research in the field of optimal economic growth in its current form is provided by Ramsey (1928) (Naemi et al., 2019). Economic growth is the increase in a country's GDP over a given period. Numerous studies have shown that Islamic banks play an essential role in increasing economic growth. Sukuk is a type of Islamic securities that replaces bonds, which is in accordance with the law of interest-free banking by involving a specific physical asset and entering into contracts such as rent and Mudaraba (Ali Asar, 2013). The real sector of the economy has a limited capacity to produce and new investments are needed to expand its activities. The financial sector of the economy provides the financial resources needed to invest and, consequently, to develop the real sector. It also facilitates the production and distribution of products and services in the real markets of the economy.

Habibi and Amidi (2020) in an article entitled "Islamic Finance and Economic Growth: The Iranian Experience" using the self-explanatory model with wide intervals (ARDL) in the period Q4 2005-2004 Q42015 stated that a developed Islamic financial system leads to increased investment and the growth of the sector becomes real. The results also show that the volume of Islamic banking deposits has a negative effect and the degree of commercial openness has a positive and significant effect on Iran's industrial production index. The impact of the capital market on the movement of liquidity and leading to economic growth and development is an important issue that has recently been considered in view of the favorable growth of the capital market in Iran. If there is no logical relationship between the financial market and other economic sectors, there is a possibility of disruptions and shortcomings in the mechanism of the economy. Capital markets have a great impact on the economic growth of countries due to their essential role in collecting resources through savings, optimizing the circulation of financial resources and directing them to the expenditures and investment needs of productive sectors, so that some

economists believe that the differences between developed economies and Undeveloped is not active in the advanced technology of the developed but in the existence of an integrated capital market (Anetor, 2020; Ogbuji et. Al., 2020; Kapaya, 2020; Abdollahi and Mostafaloo, 2020). Fazeli et al. (2017) in research entitled "The impact of Islamic financing on the markets of selected Middle Eastern countries" have examined the impact of Islamic financing on the economic growth of markets in selected countries. For this purpose, sukuk, which is a new Islamic financial instrument, and statistical data of 2015-2010 and econometric method of panel data have been used. The results show that sukuk has a positive and significant effect on the economic growth of the business market in the studied countries.

Muharam et al. (2019) conducted studies on Malaysia and Indonesia in an article entitled "Islamic Stock Market, Sukuk Market Development, Economic Growth and Trade Openness". The research results show that there is a one-way causal relationship between the development of the Islamic stock market and the Sukuk market in Malaysia and Indonesia. Adhitya and Abidin (2021) in a study entitled "Analysis of Financial Performance of Islamic Bank and Ordinary Bank in Pakistan 2015-2017: A Comparative Study" conducted a study in this regard. Regression results indicate that based on the rate of return on assets, performance A bank that receives interest is better than an Islamic bank that does not receive interest. While based on the return on equity, the performance of Islamic Bank is better than non-Islamic Bank.

Research method

According to the main purpose of the research, the mathematical function of the present study is to describe equation 1:

$$SG_{it} = f(IF_{it}, INF_{it}, G_{it}, EDU_{it}, OT_{it}) \tag{1}$$

Where, INF: Inflation; G: Government Expenses; EDU: Education; OT: The degree of openness of the economy; IF: Islamic financing; Islamic financing methods, which include two parts: Sukuk and Islamic debt securities; SK: Volume of issued sukuks; ID: Volume of Islamic debt securities.

The regression equation of economic sectors is in equation 2:

$$GRW_{it} = \beta_0 + \beta_1 SK_{it} + \beta_2 ID_{it} + \beta_3 INF_{it} + \beta_4 G_{it} + \beta_5 EDU_{it} + \beta_6 OT_{it} + \varepsilon_i \tag{2}$$

The results of descriptive statistics showed that the growth of the agricultural sector during the 8-year period has generally had an increasing trend. The lowest growth in 2012 was 5.4 percent and the highest growth for 2017 was 10.5 percent. The growth of the industrial sector in 1393 has decreased by about 18 percent, while in 2018 it has grown by about 25 percent. The average growth of this sector has been 2 percent. The largest share of the country's economic growth belongs to the services sector in 2015, more than 48% of the country's GDP belongs to the sector. While in 2016, about 56% belongs to this economic sector. During an 8-year period, an average of 74959775 sukuk has been issued annually.

The average of Islamic debt bonds issued during the years 2013 to 2018 has been issued with an average of 16400 million Islamic bonds. In 2011 and 2012, no papers were published. In this period, the average annual inflation rate was about 21 percent and the government spent 11.10 percent of GDP annually. Also, on average, 3.30% of GDP is spent annually on education.

Results and Discussion

Results of inferential statistics

The results of inferential statistics with the approach of the data panel in the present paper were examined in accordance with the baseline article and also the logical relationships governing the variables, the relationship between sukuk and bonds of the three sectors and the economic growth of the three sectors. Initially, in order to avoid false regression and to ensure the stativity of the data, the statistical properties of the data were examined in terms of mania or the existence of a single root. According to the results, all variables are nominal and were differentiated once and became mana at the level of one. Accruals were used to measure earnings management using the modified Jones model. After Lemmer and Hausman test, the model with constant effects was estimated, and the remaining values of the model were entered into the model as independent variables.

According to the results of Mana test, co-integration test was performed and determined and according to both Padron test (PP) and advanced Dickey Fuller (ADF), the null hypothesis of non-co-integration between model variables is rejected and these results show in both tests, the variables form a long-run equilibrium relationship. The variance heterogeneity of the variables was also examined. According to Bruch-Pagan test statistics, the existence of variance inequality between wastes was rejected at the level of 5%. Therefore, the variances are not heterogeneous and parametric tests can be used to estimate the hypotheses. It was also found that the residuals obtained from estimating the model related to the hypotheses have a probability greater than 0.05, ie 0.127, indicating that the error sentence is normal, and has a normal distribution at the 0.95 confidence level.

Assessing the Assumption of Simultaneous Relationship between Sukuks and Bonds Separated by Three Sectors on the Economic Growth of the Three Sectors

According to the results of the Limer test, it was found that the combined method is not accepted. Therefore, there is a difference in width from the origin of cross-sectional units. However, due to the fact that the number of sections (i = 3) is less than the number of parameters (β= 7), so it is not possible to perform a random effects test. Therefore, regression was estimated by the fixed effects method. The results show that the volume of issued sukuk has a positive and significant effect on the growth of various economic sectors. The volume of Islamic bonds issued has a positive and significant effect on the growth of various economic sectors. Among the control variables of inflation, the negative relationship and government spending have a positive effect on the growth of various economic sectors, and other control variables, ie the degree of openness of the economy and education costs, have no significant relationship with the dependent variable.

The coefficient of determination is 99% and the adjusted coefficient of determination is 99%, which indicates the high explanatory nature of the independent variables. That is, more than 99% of the changes in the dependent variable can be justified by independent variables. The value of F statistic is more than its tabular value and despite Prob = 0.00, the whole regression is statistically significant. Watson's camera statistic is 2.28 and is not significantly different from the number 2. Therefore, it can be claimed that the error sentences and the health of the model are not self-correlated.

Assessing the hypothesis of the relationship between total sukuk on the economic growth of the three sectors

The results showed that the difference in width from the origin of the industry, agriculture and services sectors is constant. This model had an error sentence correlation problem. After entering the AR variable and solving the correlation problem, the results show that the volume of issued sukuk has a positive and significant effect on the growth of various economic sectors. All control variables affect the growth of different economic sectors. So that inflation has a negative impact and other control variables, namely government spending, education costs and the degree of openness of the country's economy have a positive impact. The coefficient of determination is 98% and the adjusted coefficient of determination is 98%, which indicates the high explanatory nature of the independent variables. That is, more than 98% of the dependent variable changes can be justified by independent variables. The value of F statistic is more than its tabular value, so the whole regression is statistically significant. Watson's camera statistic is 2.28 and is not significantly different from the number 2. Therefore, it can be claimed that the error sentences and the health of the model are not self-correlated (Table 1).

Table 1. After fixing the autocorrelation of the error sentence

Variable	Fixed		
	Coefficient	Statistics t	Prob
C	142.17	3.42	0.00
SUK	8.23e-7	3.52	0.00
INF	-1.41	3.46	0.00
G	69.98	3.44	0.00
EDU	288.60	3.46	0.00
TO	1.90	2.68	0.00
AR(1)	1.48	15.53	0.00
AR(2)	-0.64	-7.02	0.00
Adjusted R-squared= 0.98		R-squared= 0.98	
F= 718.82		Prob= 0.00	
D.W= 2.28			

Assessing the hypothesis of the relationship between total debt on economic growth of the three sectors

There is a difference in the width of the origin in the triple segment. Due to the fact that the number of sections ($i= 3$) is less than the number of parameters ($\beta= 7$), so it is not possible to perform a random effects test. Therefore, regression was estimated using the fixed effects method and the estimation results have shown that the total volume of issued Islamic debt securities has a positive and significant effect on the growth of various economic sectors. None of the control variables has a significant effect on the growth of different economic sectors. The coefficient of determination is 98% and the adjusted coefficient of determination is 98%, which indicates the high explanatory nature of the independent variables. That is, more than 98% of the dependent variable changes can be justified by independent variables. The value of F statistic is more than its tabular value and the whole regression is statistically significant. Watson's camera statistic is 2.38 and is not significantly

different from 2. Therefore, it can be claimed that the error sentences and the health of the model are not self-correlated (Table 2).

Table 2. After removing the autocorrelation of the error sentence

Variable	Fixed		
	Coefficient	Statistics t	Probability
C	34.67	1.66	0.09
TRB	3.72e-8	4.28	0.00
INF	0.10	0.96	0.33
G	-2.32	-1.09	0.27
EDU	3.33	0.39	0.69
TO	-0.17	-0.48	0.63
AR(1)	1.48	15.81	0.00
AR(2)	-1.69	-7.51	0.00
Adjusted R-squared= 0.98	R-squared= 0.98		
F= 765.85	Prob= 0		
D.W= 2.38			

Assessing the hypothesis of the relationship between Islamic financing (sukuk and debt securities) on the economic growth of the three sectors

First, to determine the presence or absence of width from a separate origin for each of the economic sectors, the Limer test is examined. In this section, the fixed effects are also confirmed. Watson's camera statistic is 0.34, a significant distance from 2. Therefore, the model has a correlation error error sentence. Therefore, the interpretation of the results is not relevant. To solve this problem, the AR component was entered and the model was re-estimated. The results show that total Islamic financing has a positive and significant relationship with the growth of economic sectors. All control variables affect the growth of different economic sectors. So that inflation has a negative impact and other control variables, ie government spending, the cost of education and the degree of openness of the country's economy have a positive impact.

The coefficient of determination is 98% and the modified coefficient of determination is 98% and more than 98% of the changes of the dependent variable can be justified by independent variables. The value of F is greater than its tabular value. Therefore, the whole regression is statistically significant. Dourbin-Watson statistic is 2.28 and is not significantly different from the number 2. Therefore, it can be claimed that the error sentences and the health of the model are not self-correlated (Table 3).

Results of inferential statistics

In this section, inferential statistics were performed with a time series approach that before estimating the models, all tests related to false regression as well as classical hypotheses were performed. The results of the unit root test (Advanced Dickey Fuller) showed that all variables are at the level of one stationary. Therefore, the variables are maintained with a differential load and entered into the model. The results of co-integration test also showed that all three models have co-integration vector and therefore, we do not have the problem of false regression. Hence, there is a long-term relationship in research models. In the next step, the classical hypotheses were examined.

Given the estimated probability of more than 0.05, the assumption of no autocorrelation is confirmed in all three models. The estimated probability of the White test for all three models is more than 0.05, so the models have the same variance. The normality of residual statements for all three models was also confirmed. According to the calculated probability value which is more than 0.05. Therefore, the null hypothesis that the residuals of the models are normal was accepted. The next assumption is the model specification error. Given that the specification error can be a very serious risk for interpreting the results, so a cryptographic test has been used to diagnose this problem. According to the results of the statistical value and the estimated probability value, it can be concluded that there is no specification error in the studied models.

Finally, the correlation coefficient was also examined. It was found that the correlation between the independent variables is less than 30%, so it is not enough to be considered as a strong correlation. Therefore, it can be ignored.

Table 3. Model output after fixing the error sentence autocorrelation

Variable	Fixed		
	Coefficient	Statistics t	Prob
C	142..17	3.42	0.00
IF	8.23E-7	3.52	0.00
INF	-1.41	-3.46	0.00
G	69.98	3.44	0.00
EDU	288.60	3.46	0.00
TO	1.90	2.68	0.00
AR(1)	1.48	15.53	0.00
AR(2)	-0.64	-7.02	0.00
Adjusted R-squared= 0.98	R-squared= 0.98		
F= 718.80	Prob= 0.00		
D.W= 2.28			

Assessing the hypothesis of a simultaneous relationship between sukuk and bonds with economic growth in the agricultural sector"

The regression equation of the agricultural sector is as equation 3:

$$AS_t = \beta_0 + \beta_1 SK_t + \beta_2 TRB_t + \beta_3 INF_t + \beta_4 G_t + \beta_5 EDU_t + \beta_6 OT_t + \varepsilon_i \tag{3}$$

The results showed that all independent and control variables have a significant relationship with the growth of the agricultural sector. And training costs alone have no significant relationship with the dependent variable. Also, all significant variables are symptomatically compatible with economic theories. More than 89% of the changes in the dependent variable can be explained by independent variables. In other words, the regression determination coefficient indicates the good fit of the model. In Table 4, the value of Fisher statistic in the present model is equal to 41.62 and despite the estimated probability of less than 0.05 (0.00), the significance of the whole regression can be claimed. Dourbin-Watson (D-W) statistics in the current model is equal to 1.94. Therefore, the health of the estimated model can be claimed (Table 4).

Table 4. Results of agricultural model estimation

Variable	Coefficient	Statistics t	Prob
SUK	1.06E-8	2.88	0.00
TRB	3.6E-10	2.26	0.00
INF	0.05	4.79	0.00
G	0.86	3.81	0.00
EDU	-1.2	-1.93	0.6
TO	0.20	5.83	0.00
C	-5.32	-2.37	0.02
Adjusted R-squared=0.89		R-squared=0.91	
Prob(F)= 0.00		F-statistic=41.62	
D.W=1.94			

Assessing the hypothesis of a simultaneous relationship between sukuk and bonds with the economic growth of the industrial sector

The regression equation of the industrial sector is as equation 4:

$$IS_t = \beta_0 + \beta_1 SK_t + \beta_2 TRB_t + \beta_3 INF_t + \beta_4 G_t + \beta_5 EDU_t + \beta_6 OT_t + \varepsilon_i \tag{4}$$

The estimation results showed that all independent and control variables have a significant relationship with the growth of industry. Government expenditures and training costs have no significant relationship with the dependent variable. Also, all significant variables are symptomatically compatible with economic theories. More than 64% of the changes in the dependent variable can be explained by independent variables. In other words, the regression determination coefficient indicates the good fit of the model. The value of Fisher statistic in the present model is equal to 10.22 and despite the estimated probability of less than 0.05 (0.00), the significance of the whole regression can be claimed. Dourbin-Watson (D-W) statistics in the current model is equal to 1.56. Therefore, the health of the estimated model can be claimed (Table 5).

Table 5. Industrial sector model estimation results

Variable	Coefficient	Statistics t	Prob
SUK	8.48e-8	2.42	0.02
TRB	5.43e-8	3.46	0.00
INF	0.28	4.34	0.00
G	0.06	0.07	0.94
EDU	-1.54	-0.69	0.49
TO	0.74	3.25	0.00
C	-4.20	-0.24	0.81
Adjusted R-squared= 0.64		R-squared= 0.71	
Prob(F)= 0.00		F-statistic= 10.22	
D.W= 1.56			

Assessing the assumption of a simultaneous relationship between Sukuk and debt securities with the economic growth of the service sector

The regression equation of the service sector is as follows equation 5:

$$SS_t = \beta_0 + \beta_1 SK_t + \beta_2 TRB_t + \beta_3 INF_t + \beta_4 G_t + \beta_5 EDU_t + \beta_6 OT_t + \varepsilon_i \tag{5}$$

The results showed that only the variables of inflation and government spending had a significant relationship with the growth of industry. While the main variables, namely sukuk and bonds issued, did not have a significant relationship with the economic growth of this sector. Also, all significant variables are symptomatically compatible with economic theories. More than *89%* of the changes in the dependent variable can be explained by independent variables. In other words, the regression determination coefficient indicates the good fit of the model. The value of Fisher statistic in the present model is equal to 44.68 and despite the estimated probability of less than 0.05 (0.00), the significance of the whole regression can be claimed. Dourbin-Watson (D-W) statistics in the current model is equal to 1.64. Therefore, the health of the estimated model can be claimed (Table 6).

Table 6. Results of service sector model estimation

Variable	Coefficient	Statistics t	Prob
SUK	3.25e-9	0.56	0.57
TRB	2.81e-9	1.120	0.27
INF	0.06	3.38	0.00
G	1.78	5.00	0.00
EDU	0.41	0.41	0.68
TO	-0.04	-0.81	0.42
C	34.68	9.81	0.00
Adjusted R-squared= 0.89		R-squared= 0.91	
Prob(F)= 0.00		F-statistic= 44.68	
D.W= 1.64			

Examine the classical hypotheses

In the present study, the Correlation LM test was used to test the first hypothesis (Autocorrelation). Therefore, according to the estimated probability, which is more than 0.05, the assumption of no correlation in all three models is confirmed (Tables 7 and 8).

Table 7. Correlation LM test results

Pattern	Correlation LM	Critical value	Estimated probability
Agriculture section	F-statistic	0.01	0.98
	Obs[†] R-square	0.03	0.98
Industry section	F-statistic	1.71	0.20
	Obs R-square	4.58	0.10
Service sector	F-statistic	0.58	0.56
	Obs R-square	1.53	0.46

[†] Observation
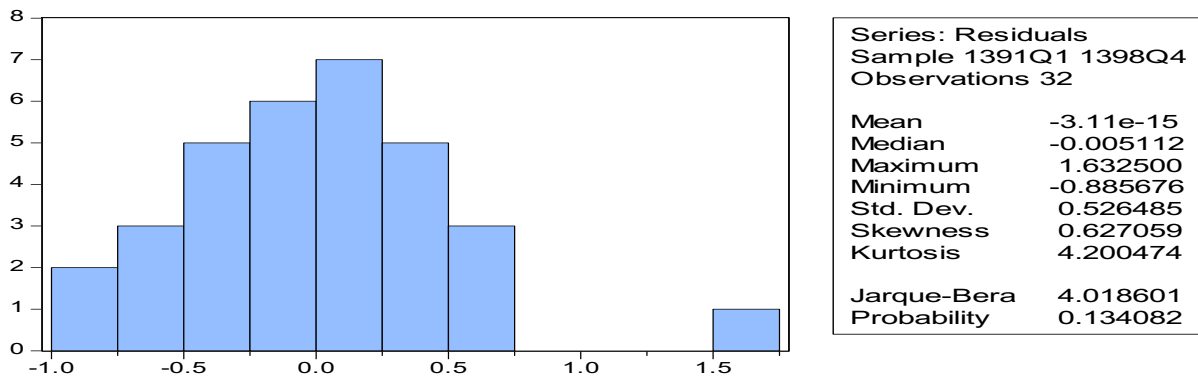
Homogeneity of variance

Test the normality of residual sentences

Agricultural Sector: According to the Jargbara statistic which is equal to 4.01, also according to the calculated probability value which is more than 0.05 (0.13) so the null hypothesis based on the normality of the model residues is accepted (Figure 1).

Table 8. Heteroskedasticity test results

Pattern	Heteroskedasticity	Critical value	Estimated probability
Agriculture section	F-statistic	0.19	0.99
	Obs R-square	18.02	0.90
	Scaled explained SS	17.60	0.91
Industry section	F-statistic	16.89	0.07
	Obs R-square	31.72	0.24
	Scaled explained SS	2978	0.32
Service sector	F-statistic	2.52	0.19
	Obs R-square	30.22	0.30
	Scaled explained SS	17.75	0.91

Industrial sector: According to the amount of Jargbara statistics which is equal to 4.75, also according to the calculated probability value which is more than 0.05 (0.09) so the null hypothesis based on the normality of the model residues is accepted (Figure2).
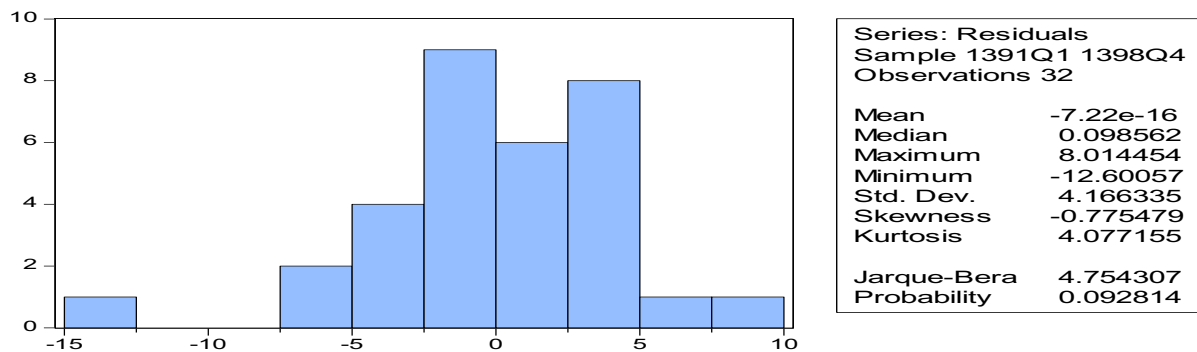

Series: Residuals
Sample 1391Q1 1398Q4
Observations 32

Mean	-3.11e-15
Median	-0.005112
Maximum	1.632500
Minimum	-0.885676
Std. Dev.	0.526485
Skewness	0.627059
Kurtosis	4.200474
Jarque-Bera	4.018601
Probability	0.134082

Figure 1. Test of normality of waste sentences of agricultural sector model

Series: Residuals
Sample 1391Q1 1398Q4
Observations 32

Mean	-7.22e-16
Median	0.098562
Maximum	8.014454
Minimum	-12.60057
Std. Dev.	4.166335
Skewness	-0.775479
Kurtosis	4.077155
Jarque-Bera	4.754307
Probability	0.092814

Figure 2. Test the normality of waste sentences of the industrial sector model

Service Section: According to the amount of Jargbara statistics which is equal to 0.06, also according to the calculated probability value which is more than 0.05 (0.96) so the null hypothesis based on the normality of the model residues is accepted (Figure 3).
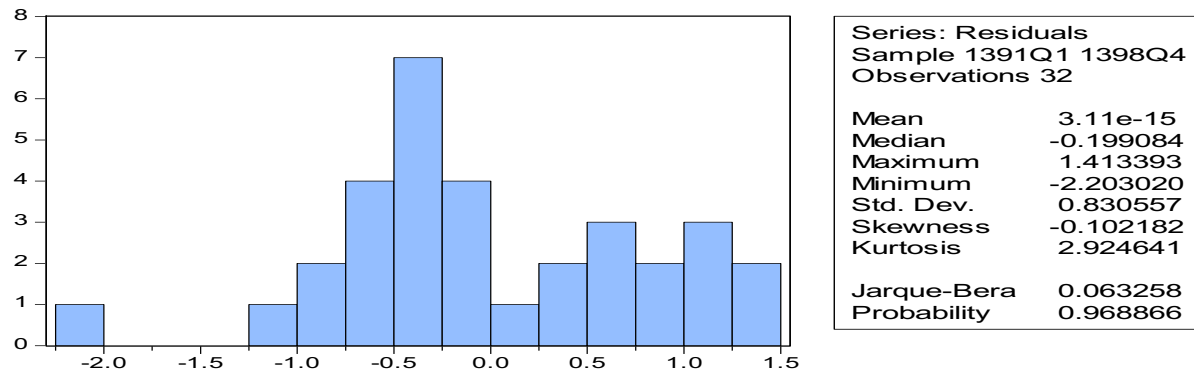

Figure 3. Test of normality of waste sentences of service sector model

Model specification error

Based on model in 3 sections such AS, IS and SS, show the error specification test has been defined based on the critical value and estimated probability (Table 9). The correlation coefficient between the variables in different parts of the research model is evaluated and analyzed based on the defined variables (Table 10).

Table 9. Error specification test

Model	Ramsey RESET	Critical value	Estimated probability
Agriculture section	F-statistic	2.49	0.12
	Log likelihood ratio	3.16	0.07
Industry section	F-statistic	1.99	0.06
	Log likelihood ratio	2.15	0.06
Service sector	F-statistic	0.003	0.95
	Log likelihood ratio	0.005	0.94

Test results of research hypotheses:

1) Sukuk and debt Islamic securities have a significant effect on the economic growth of the three sectors.

   The estimated probability for Sukuk is less than 0.05% (0.02). Therefore, it can be said that the volume of Sukuk issuance has a positive and significant effect on the economic growth of the three sectors. Also, the estimated probability for Islamic bonds is less than 0.05% (0.00). Therefore, it can be said that the volume of Islamic debt issuance has a positive and significant effect on the economic growth of the three sectors. Therefore, this hypothesis is confirmed.

2) Total sukuk has a significant effect on the economic growth of the three sectors.
The estimated probability for the total issued sukuk is less than 0.05 (0.00). Therefore, it can be said that Sukuk issued in all sectors and in general has a significant impact on the economic growth of the three sectors. Therefore, this hypothesis is confirmed.

Table 10. Correlation coefficient between variables

	Variable	AS	SUK	TRB	INF	G	EDU	TO
	AS	1						
	SUK	0.01	1					
	TRB	0.02	0.12	1				
Agriculture Section	INF	-0.14	-0.13	-0.23	1			
	G	0.18	0.11	0.20	0.13	1		
	EDU	-0.03	-0.28	0.24	0.15	0.22	1	
	TO	0.05	-0.15	-0.27	0.13	0.26	-0.11	1
	IS	1						
	SUK	0.09	1					
	TRB	0.29	0.22	1				
Industry Section	INF	0.07	-0.23	-0.23	1			
	G	0.24	0.11	0.10	0.13	1		
	EDU	0.20	-0.28	0.14	0.25	0.12	1	
	TO	-0.08	-0.15	-0.27	0.13	-0.16	-0.11	1
	SS	1						
	SUK	0.20	1					
	TRB	0.25	0.12	1				
Service Sector	INF	-0.04	-0.13	-0.23	1			
	G	0.22	0.11	0.10	0.13	1		
	EDU	0.26	-0.28	0.04	0.05	0.02	1	
	TO	-0.22	-0.15	-0.27	0.13	-0.06	-0.11	1

3) Total debt has a significant impact on the economic growth of the three sectors.

The estimated probability for total debt securities is less than 0.05 (0.00). Therefore, it can be said that debt securities issued in all sectors and in general have a significant impact on the economic growth of the three sectors. Therefore, this hypothesis is confirmed.

4) Islamic financing (total sukuk and bonds) has a significant effect on the economic growth of the three sectors.

The estimated probability for Islamic financing (total sukuk and debt securities) is less than 0.05 (0.00). Therefore, Islamic financing can have a significant impact on the economic growth of the three sectors. Therefore, this hypothesis is confirmed.

5) Islamic sukuk and debt securities have a significant impact on the economic growth of the agricultural sector.

The estimated probability for Sukuk is less than 0.05% (0.00). Therefore, it can be said that the volume of Sukuk issuance has a positive and significant effect on the economic growth of the agricultural sector. Also, the estimated probability for Islamic bonds is less than 0.05% (0.00). Therefore, it can be said that the volume of Islamic debt securities has a positive and significant effect on the growth of the agricultural sector. Therefore, this hypothesis is confirmed.

6) Islamic sukuk and debt securities have a significant effect on the economic growth of the industrial sector.

The estimated probability for Sukuk is less than 0.05% (0.02). Therefore, it can be said that the volume of Sukuk issuance has a positive and significant effect on the economic growth of the industrial sector. Also, the estimated probability for Islamic debt securities is less than 0.05%

(0.00). Therefore, it can be said that the volume of Islamic debt securities has a positive and significant effect on the growth of the industrial sector. Therefore, this hypothesis is confirmed.

7) Islamic sukuk and debt securities have a significant impact on the economic growth of the service sector.

The estimated probability for Sukuk is more than 0.05% (0.57). Therefore, it can be said that the volume of Sukuk issuance has no significant effect on the economic growth of the service sector. Also, the estimated probability for Islamic debt securities is more than 0.05% (0.27). Therefore, it can be said that the volume of Islamic debt securities does not have a significant effect on the growth of the service sector. Therefore, this hypothesis is not confirmed.

Conclusion

According to the results of testing the hypotheses, it was found that in general, Islamic Sukuk and bonds have a significant effect on the economic growth of the three sectors. Also, the results of this study showed that Islamic financing, ie the sum of sukuk and bonds, has a significant effect on the economic growth of the three sectors. However, in the analysis of different sectors separately, it was found that Islamic sukuk and debt securities have a significant impact on the economic growth of the agricultural sector and the industrial sector. While it has no significant effect on the service sector.

According to the results of testing the hypotheses about the impact of financing instruments on the economic growth of different sectors, it is suggested:

- Implement executive measures to increase the level of knowledge and expertise of financial managers in various economic sectors, including agriculture, industry and services. Suppose courses are held for senior managers and financial managers of small and medium enterprises and the necessary information is provided about Islamic financing instruments.
- Another suggestion of the present study to improve the effectiveness of Islamic financing instruments on economic growth and development is to properly monitor the use of these instruments. Therefore, it is suggested to the Securities and Exchange Commission to control the formation of committees to monitor the proper implementation of the issued instructions and to take appropriate measures.
- Investors should be offered to use Islamic debt securities and sukuk to finance projects. Because in Islamic financing, where investors are required to participate in potential losses, there is less financial leverage and more incentive to manage larger risks. On the other hand, this feature of risk sharing helps to ensure the correct operation of private financial institutions and to prevent the prosperity of various types of lending. While focusing on asset-based investment and risk-sharing of Islamic financing, it enables the inclusive growth of companies and firms and the financing of large-scale infrastructure projects.
- In order to strengthen the financial performance of companies and industries and also to overcome the conditions of economic sanctions, it is suggested that industries be allowed to issue sukuk bonds to provide working capital. Licensing sukuk bonds for private firms will reduce their dependence on banks and diversify their sharia funding sources. In this way, the release of new Islamic financial instruments can solve many problems related to the financing of private and even state-owned enterprises.

References

Abdollahi, A., & Mostafaloo, M. (2020). Corporate Governance and Dimensions of Stocks Liquidity: A case of Iranian Firms. Journal of Humanities Insights, 4(03), 129-135.

Adhitya H. P. and Abidin, Z. (2021). The Effect of Disclosure Corporate Social Responsibility (CSR) To Financial Performance of Conventional Commercial Banks Book 3 (Three) in Indonesia Period 2017-2019. International Journal of Innovative Science and Research Technology, 6(7), 1136-1142

Ali Asar, N., (2013). A Study of Types of Sukuk in Islamic Banking, Economic Journal, 13(3), 32-21.

Anetor, F. O. (2020). Financial development threshold, private capital inflows and economic growth: Evidence from sub-Saharan African countries. International Journal of Development Issues.

Bhuiyan, R. A., Puspa, M., Saiti, B., & Ghani, G. M. (2020). Comparative analysis between global sukuk and bond indices: value-at-risk approach. Journal of Islamic Accounting and Business Research.

Boubker, O., Douayri, K., & Ouajdouni, A. (2021). Factors affecting intention to adopt Islamic financing: Evidence from Morocco. MethodsX, 8, 101523.

Boukhatem, J., & Moussa, F. B. (2018). The effect of Islamic banks on GDP growth: Some evidence from selected MENA countries. Borsa Istanbul Review, 18(3), 231-247.

Djennas, M. (2016). Business cycle volatility, growth and financial openness: Does Islamic finance make any difference?. Borsa Istanbul Review, 16(3), 121-145.

Fazeli, H., Najafpour, A. and Pourasmail, M. (2017). The Impact of Islamic Financing on the Markets of Selected Middle Eastern Countries, Islamic Economics Quarterly, 18(70) 203-187.

Gazdar, K., Hassan, M. K., Safa, M. F., & Grassa, R. (2019). Oil price volatility, Islamic financial development and economic growth in Gulf Cooperation Council (GCC) countries. Borsa Istanbul Review, 19(3), 197-206.

Ghaffari Fard, M., Rahmati, A. & Yousefzai, D. (2017). The Role of Islamic Financing on the Economic Growth of Selected Islamic Countries Using Panel Data (Case Study of Islamic Sukuk), Scientific Quarterly of Islamic Economics and Banking, 29, 103-120.

Ghlamallah, E., Alexakis, C., Dowling, M., & Piepenbrink, A. (2021). The topics of Islamic economics and finance research. International Review of Economics & Finance.

Goaied, M., & Sassi, S. (2010). Financial development and economic growth in the MENA region: What about Islamic banking development. Institut des Hautes Etudes Commerciales, Carthage, 1-23.

Habibi, F. & Amidi, S. (2020). Islamic Finance and Economic Growth: The Iranian Experience. Islamic Economics & Banking, 9(30), 141-159.

Hossain, A. A. (2016). Inflationary shocks and real output growth in nine Muslim-majority countries: Implications for Islamic banking and finance. Journal of Asian Economics, 45, 56-73.

Kapaya, S. M. (2020). Stock market development and economic growth in Tanzania: an ARDL and bound testing approach. Review of Economics and Political Science.

Kassim, S. (2016). Islamic finance and economic growth: The Malaysian experience. Global Finance Journal, 30, 66-76.

Khan, N., Kchouri, B., Yatoo, N. A., Kräussl, Z., Patel, A., & State, R. (2022). Tokenization of sukuk: Ethereum case study. Global Finance Journal, 51, 100539.

Lahsasna, A., Hassan, K. M., & Ahmad, R. (2018). Forward lease Sukuk in Islamic capital markets. Springer Books.

Marshall, A. (1890). Principles of Economics. London: Macmillan and Co.

Muharam, H. (2021). Peer Review Dr. Harjum Muharam, SE., ME.: Islamic Stock Market and Sukuk Market Development, Economic Growth, and Trade Openness (The Case of Indonesia and Malaysia).

Naemi, M., Sohaili, K., & Karimi, M. S. (2019). Interaction Relationship Between Development of Islamic Financial Instruments (Sukuk) and Economic Growth. Islamic Economics, 19(73), 217-238.

Ogbuji, I. A., Mesagan, E. P., & Alimi, Y. O. (2020). The Dynamic Linkage between Money Market, Capital Market and Economic Growth in Ghana: New Lessons Relearned. Econometric Research in Finance, 5(2), 59-78.

Razak, S. S., Saiti, B., & Dinç, Y. (2019). The contracts, structures and pricing mechanisms of sukuk: A critical assessment. Borsa istanbul review, 19, S21-S33.

Schumpeter, J. (1942), Capitalism, Socialism and Democracy. Harper and Row.

Smaoui, H., & Ghouma, H. (2020). Sukuk market development and Islamic banks' capital ratios. Research in International Business and Finance, 51, 101064.

Smaoui, H., & Nechi, S. (2017). Does sukuk market development spur economic growth?. Research in International Business and Finance, 41, 136-147.

Zain, N. S., & Sori, Z. M. (2020). An exploratory study on Musharakah SRI Sukuk for the development of Waqf properties/assets in Malaysia. Qualitative Research in Financial Markets.