



## RESEARCH ARTICLE

# The Role of Sukuk in the Economic Growth of Islamic Countries: An Approach to the Absorption of Liquidity Available in Iran

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### How to cite this article:

Mohammadi, J., Ghasemzadeh Khosroshahi, A., & Khalili Araghi, M. (2024). The Role of Sukuk in the Economic Growth of Islamic Countries: An Approach to the Absorption of Liquidity Available in Iran. *Iranian Journal of Accounting, Auditing and Finance*, 8(2), 23-38. doi: 10.22067/ijaaf.2024.42948.1232  
[https://ijaaf.um.ac.ir/article\\_42948.html](https://ijaaf.um.ac.ir/article_42948.html)

### ARTICLE INFO

#### Article History

Received: 2023-11-15

Accepted: 2023-01-29

Published online: 2024-04-26

#### Keywords:

Financial instruments,  
Sukuk, financing,  
Economic growth and  
development, Capital,  
Economic plans, Liquidity

### Abstract

Capital is considered the engine of economic growth and development in all economic growth theories and models. Therefore, providing direct financing and attracting enough capital to implement economic plans is one of the most critical concerns of economic decision-makers in every society. By understanding this issue, compilers of Iran's economic development programs have stated that one of the crucial goals in the country is to provide the necessary grounds for developing monetary and financial markets. Currently, there are many financing tools in the world, most of which cannot be used in Islamic societies due to their nature of usury. The data from 2001 to 2018 for selected countries were extracted from WDI, ICRG, and IIFM databases and analyzed through the econometric method. The results showed a positive and significant effect of Sukuk issuance on the economic growth of Islamic countries. In the end, implications were made to attract liquidity using this tool. In Iran, the role of Sukuk on economic growth has not been investigated, and the critical point is that in this research, the data related to economic risk and political risk have been used and simultaneously, along with other variables, its effect on economic growth has been evaluated and analyzed.

 <https://doi.org/10.22067/ijaaf.2024.42948.1232>



NUMBER OF REFERENCES

28



NUMBER OF FIGURES

1



NUMBER OF TABLES

7

Homepage: <https://ijaaf.um.ac.ir>

E-Issn: 2717-4131

P-Issn: 2588-6142

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## 1. Introduction

Financial markets are considered due to their essential role in gathering resources through small and large savings in the economy, optimizing financial circulation, and directing them towards productive economic sectors' expenses and investment needs. The positive effects of the stock market on economic growth, increasing investment motivation, reducing liquidity risk, and equipping and mobilizing deposits are so great and sensitive that some economists think that the difference between developed and undeveloped economies is not in advanced technology but in the existence of integrated, active and extensive financial markets. Sukuk is a newly emerging component of the financial system of the Islamic world. It is a new class of Islamic financial instruments designed based on contracts with a flexible structure and is an alternative source of financing (Ali, 2020). The development of the Sukuk market is an integral part of the financial development of an Islamic country through the financing of projects and the development of infrastructure. These bonds are a means of increasing the government budget through the issuance of government Sukuk, a source of financing for companies through the issuance of corporate Sukuk, and a way to finance with foreign currencies (Al-raeai et al., 2019).

Due to the prohibition of usury, Muslims are forbidden to use bonds. Therefore, Sukuk is made in a way consistent with Sharia's principle and spirit to achieve desirable economic goals. These bonds are used to invest in tangible assets for production and investment purposes, and the resulting profit is the basic principle of Islamic financing (IIFM, 2018). Sukuk can attract the savings of Muslims who do not want to invest in interest-based bonds because bonds contain usury (interest), which is prohibited by the principles of Islamic law. This can lead to an increase in financial participation and thus stimulate investment and economic growth. Without Sukuk certificates, savings will not be used effectively and, therefore, will not be directed to the formal financial sector (Smaoui and Nechi, 2017). In the capitalist system that is common in the world today, for large projects that require large capital and generate huge profits or income, the issuance of documents is based on bonds, and the owners of these documents are nothing but claimants based on interest from the owners of these projects. This is while Sukuk is designed so bondholders can participate in real economic activities jointly, and the profits from these activities are distributed among bondholders after deducting operating costs. Therefore, bonds are structured as debt instruments with fixed interest. The amount of bond interest is determined as a percentage of the capital and not as a percentage of the actual profit. Financial markets expand economic growth through optimal capital accumulation, improved resource allocation, and technological innovation (Thumrongvit et al., 2013). It is well proven that financial development leads to extensive economic growth today.

This growth is possible through selecting forward-looking entrepreneurs and high-yield projects, mobilizing external financial resources, diversifying risk and participating in innovation (King and Levine, 1993a, 1993b; Wachtel, 2001). The growth and development of the Sukuk market in the last few years in the world is mainly due to its role in liquidity control, and liquidity management at the macro and micro level is one of the factors that can cause the development of Islamic financial markets (Hassanzadeh and Ahmadian, 2012). Financial development and economic growth studies show that increasing access to financial instruments and institutions will reduce the cost of information and exchanges and cause economic growth. The effect of financial development on economic growth will not be the same among all countries, but it depends on countries' financial development level. In countries with a low level of financial development, this effect will be uncertain and may be positive, zero, or even negative (Seifipour, 2010). If the national currency of Iran is weakened compared to other currencies, it is because of the inflation in the society, which is also caused by the growth of liquidity. Economic experts believe that one of the most important ways to

get rid of the current situation is to pay attention to the issue of domestic production. The creation of production capacity leads to job creation and an increase in people's income and compensation for the decrease in the value of the national currency. If there is production in the national economy to increase the supply of goods, there should be no fear of liquidity growth. Liquidity growth leads to inflation if it increases without support. For example, if the price of essential goods or housing is expanding, the reason is the lack of supply according to the needs of the society. Table 1 shows the country's liquidity situation until June 2021.

**Table 1.** The balance of some major monetary and credit variables at the end of June 2021 (thousand billion rials - percentage - percentage unit) (Source: Central Bank of the Islamic Republic of Iran, Department of Economic Studies and Policies - Department of Monetary Statistics).

Liquidity	Liquidity according to factors affecting supply	26571.700	34761.700	37054.000	39.400	6.600	39.400	6.600	
	Net foreign assets	5121.500	5877.500	6669.900	30.200	13.500	5.800	2.300	
	central bank	3669.100	4703.700	4790.900	30.600	1.900	4.200	0.300	
	Banks and credit institutions	1452.400	1173.800	1879.000	29.400	60.100	1.600	2.000	
	Net domestic assets	21450.200	28884.200	30384.100	41.600	5.200	33.600	4.300	
	Internal demands	18031.000	24566.500	26954.500	49.500	9.700	33.600	6.900	
	Net claims from the government	2733.900	3137.700	3840.800	40.500	22.400	4.200	2.100	
	central bank	108.400	-495.500	108.500	0.100	121.900	0.000	1.800	
	Banks and credit institutions	2625.500	3633.200	3732.300	42.200	2.700	4.200	0.300	
	Net claims from government institutions and companies	414.100	415.100	526.200	27.100	26.800	0.400	0.300	
	central bank	285.900	270.700	299.700	4.800	10.700	0.000	0.100	
	Banks and credit institutions	128.200	144.400	226.500	76.700	56.900	0.400	0.200	
	Claims from the non-governmental sector	14883.000	21013.700	22587.500	51.800	7.500	29.000	4.500	
	Net of other items	3419.200	4317.700	3429.600	0.300	-20.600	0.000	-2.600	
	Liquidity according to constituent components	26571.700	34761.700	37054.000	39.400	6.600			
	Money	5020.500	6909.600	7261.900	44.600	5.100	19.9%	19.6%	
	Banknotes and sukuk in the hands of individuals	578.000	735.000	715.000	23.700	-2.700	2.1%	1.9%	
	Visual deposits	4442.500	6174.600	6546.900	47.400	6.000	17.8%	17.7%	
	pseudo money	21551.200	27852.100	29792.100	38.200	7.000	80.1%	80.4%	
	Savings loan	1539.800	2268.200	2292.300	48.900	1.100	6.5%	6.2%	
	short term	7555.600	10149.200	10709.400	41.700	5.500	29.2%	28.9%	
	one year old	11856.500	11001.400	10679.000	-9.900	-2.900	31.7%	28.8%	
	Biennial	42.400	3727.300	5298.900	#	42.200	10.7%	14.3%	
	three years	0.500	0.300	0.200	-	60.000	-33.300	0.0%	0.0%
	four years	4.200	4.000	4.000	-4.800	0.000	0.0%	0.0%	
	five years	77.400	62.800	63.600	-	17.800	1.300	0.2%	0.2%
	Other	474.800	638.900	744.700	56.800	16.600	1.8%	2.0%	

As can be seen in the above table, the volume of liquidity at the end of June 2021 reached 3705 thousand and 400 billion tomans, which in the twelve months ending at the end of June 2021 has grown by 39.4% and compared to the growth of the same period last year, which was 34.2, showing an increase of 5.2 percentage points. Considering the total volume of liquidity in Iran's economy at

the end of 1978, which was about 258 billion tomans, the volume of liquidity has increased 14 thousand times over the past 42 years, which is very dangerous.

Since a lot of money increases people's demand for goods and services, if there is not enough domestic production, it leads to an increase in prices and inflation in society and the weakening of the vulnerable section. Therefore, due to the bank-centeredness of the country's economy and the creation of liquidity by banks through the provision of facilities and the amount of available liquidity towards false markets, which is rooted in the axis of the economy, the best way for the country's economy is to pay attention to the capital market and offer different types of Sukuk to attract liquidity and direct the existing liquidity towards productive activities like the economy of advanced countries. The innovation of the present research can be expressed in this way in the domestic and foreign research about Sukuk and its effect on economic growth; for some reason, Iran was not used in the statistical population of the study, which led to the country's weakness being unknown in comparison with prominent countries in this field. Therefore, while collecting the statistics of Sukuk published by Iran and analyzing it in the statistical community, we point out the country's weakness in issuing this type of bond. While comparing it with prominent countries in this field, we intend to use Sukuk as one of the most important financing tools to attract liquidity in the country. This way, policymakers, while compensating for the country's backwardness in issuing these bonds in comparison to prominent countries such as Malaysia and the UAE, can create the necessary infrastructure and direct the existing liquidity towards production by using this financing tool. Moreover, since considering various risks in investment is one of the determining factors in its success, the risks in investment have been undervalued in the research. Hence, in this research, inspired by [Smaoui and Nechi's \(2017\)](#) research, only the impact of the risk of laws and regulations on economic growth has been analyzed. In this research, data related to economic risk and political risk have been used. Simultaneously, along with other variables, their effect on economic growth has been evaluated and analyzed.

[Aliakbari et al. \(2022\)](#) show that Sukuk significantly affects the economic growth of agriculture and industry, unlike the service sector.

[Yani et al. \(2022\)](#) have been investigated in Indonesia, and the results show the positive effect of Islamic shares, Sukuk, Islamic investment funds and exchange rate on the economic growth of this country.

[Yuliani et al. \(2022\)](#), by using the generalized least squares test of the variables of GDP per capita, Sukuk, rule of law, freedom of trade, government spending, etc., from 2006 to 2018 in the five countries of Indonesia, Malaysia, the United Arab Emirates, Bahrain and Saudi Arabia, where the results show that there is a positive and significant relationship between the issuance of sukuk and economic growth.

[Orhan and Tirman \(2021\)](#) using the econometric method and the ARDL-BOUND test, economic growth variables, Sukuk, bank credit, inflation, government spending, etc., from 2010 to 2019, the results show that unlike the Sukuk issued by the private sector, the issuance of bank and treasury Sukuk has a positive and significant effect on the economic growth of this country.

[Tan and Shafi \(2021\)](#), using the econometric method of corporate Sukuk variables, GDP per capita, bonds, stock market value, stock market turnover, real savings and employment growth rate, have been examined from 1998 to 2018. The results show that in the long term, the development of the stock market can lead to economic growth. One of the limitations of this research is the consideration of corporate Sukuk as one of the independent variables and the exclusion of government Sukuk, which accounts for the largest volume of Sukuk issuance.

## 2. Theoretical Principles and Hypothesis Development

## 2.1 Economic growth

Various indicators can measure economic growth, but gross domestic product (GDP) changes are the most common. This index may also be calculated per capita, which in some way indicates the changes in the welfare level of the people of the society, which is a sign of economic growth if the situation improves.

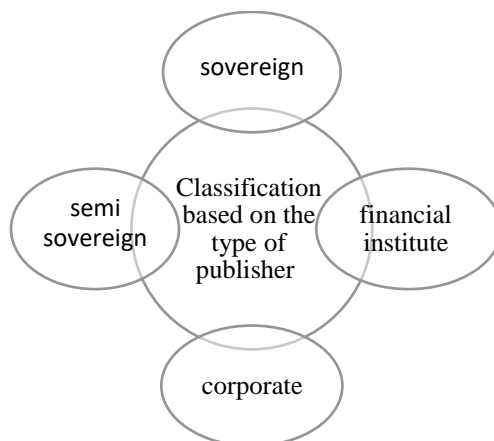
By examining the empirical studies carried out regarding the factors affecting the economic growth of countries, it is possible to determine the capital, development of financial markets, labor force, technology and other factors such as the efficiency of production factors, macroeconomic policies, research and development, trade development, the quality of laws and regulations. He mentioned the factors affecting economic growth. Economic growth is one of the most important indicators of a healthy economy, which increases people's living standards through a positive effect on national income and employment levels. An increase in economic growth means an increase in the production of goods and services, which leads to a rise in the level of employment, an increase in the country's wealth tax revenues, a reduction in the budget deficit, technological progress, an increase in exports and an improvement in the country's balance of payments in a certain period. The driving engine of this growth is the existence of sufficient and necessary capital, as well as the existence of developed financial markets to direct capital towards production.

## 2.2 Sukuk

The term Sukuk is derived from the Arabic word saq, which means a check, debtor's note, promissory note, or debt bill. It is defined as Islamic bonds. In 2005, the Islamic Financial Services Committee also described Sukuk as follows: "Certificates that show the common ownership of bondholders in the undivided part of the underlying asset, to which all rights and obligations are linked to that underlying asset." A more precise definition of Sukuk shows that these papers represent an asset or investment ownership. These bonds are financial asset-backed securities that must have value and cannot be profitable based on speculative and speculative activities and activities that take place without creating value and work (Al-Raeai et al., 2019). Sukuk attracts financial resources with the support of balance sheets and physical assets by converting assets into securities and using them to make investments. There are different classifications related to Sukuk, some of which are mentioned below:

## 2.3 Classification based on the type of publisher (sovereign, semi-sovereign, corporate, financial institution)

A criterion for classifying Sukuk is the issuer issuing Sukuk, a government, quasi-government, corporate or financial institution such as a bank. This issue is shown in the diagram below (Figure 1).



**Figure 1.** The Classification of Sukuk is based on the type of publisher (source: Mohammadi et al., 2015).

### 2.3.1 Sovereign bonds

The government issues them and their maturity may be short-term, medium-term or long-term; the government issues these bonds to cover the budget deficit or provide the capital needed for special or general construction projects. Government Sukuk provides an alternative source of capital for the government; depending on the government's requirements, it can be issued domestically or internationally.

### 2.3.2 Semi-sovereign bonds

These are issued by institutions and agencies (state-owned companies or publicly-owned companies) with government backing. These bonds are usually explicitly or implicitly guaranteed by the government. According to the Sukuk outlook and forecast, governments are the most active issuers in the history of the global Sukuk market, and Malaysia is considered the leader in this market.

### 2.3.3 Corporate bonds

are issued by a country's private sector (corporate sector). The purpose of issuing this type of Sukuk is to finance working capital, finance projects, or finance the development of a company's business.

### 2.3.4 Financial institutions Sukuk

These are bonds issued by financial institutions such as banks, credit financial institutions, etc.

## 2.4 Classification of sukuk bonds based on the place of issuance (domestic or international)

### 2.4.1 Domestic Sukuk

It is a Sukuk issued by the public or private sector in the current currency of a country, and domestic investors of the same country generally purchase such Sukuk. Until the end of 2019, the largest domestic market issuer of Sukuk was Malaysia, which had taken first place worldwide by offering 660.565 million dollars of domestic Sukuk ([IIFM, Sukuk report, 2020](#)).

### 2.4.2 International Sukuk

Sukuk is a Sukuk issued in international markets with a globally accepted currency (generally dollars or euros). The purpose of issuing this Sukuk is to finance and attract capital from international investors. In recent years, Sukuk has been widely accepted internationally, and international Sukuk issuers and investors are expanding. Today, the largest international issuer of Sukuk is the United Arab Emirates, which has taken first place in the world by offering 80.364 million dollars of

international Sukuk (IIFM, Sukuk report, 2020).

### 2.4.3 Global Sukuk

The total of domestic and international Sukuk forms global Sukuk.

Table 2 shows the number and volume of Sukuk issued by different countries.

**Table 2.** The Global Sukuk statistics were issued until 2019 (Sukuk Report, 2020).

Asian and East Asian countries	Sum (million dollars)	Number	percentage of the total
Bangladesh	6	59	0.000%
Brunei	173	10,949	0.880%
China	1	97	0.010%
Hong Kong	5	3,196	0.260%
Indonesia	490	98,908	7.930%
Japan	3	190	0.020%
Malaysia	7,090	733,748	58.830%
Maldives	2	10	0.000%
Pakistan	98	17,630	1.410%
Singapore	16	1,498	0.120%
Sri Lanka	2	5	0.000%
Total	7,886	866,290	69.460%
The countries of the Persian Gulf Cooperation Council and the Middle East	Sum (million dollars)	Number	percentage of the total
Bahrain	437	33,735	2.700%
Jordan	4	483	0.040%
Kuwait	20	4,458	0.360%
Oman	13	6,188	0.500%
Diameter	53	33,667	2.700%
Saudi Arabia	217	146,291	11.730%
Emirates	140	88,688	7.110%
Yemen	2	253	0.020%
Total	886	313,763	25.160%
African countries	Sum (million dollars)	Number	percentage of the total
The Gambia	429	407	0.030%
Ivory Coast	2	460	0.040%
Nigeria	5	864	0.070%
Mali	1	285	0.020%
Morocco	1	105	0.010%
South Africa	1	500	0.040%
Senegal	2	445	0.040%
Sudan	36	19,646	1.580%
Togo	1	245	0.020%
Total	478	22,957	1.840%
European countries and others	Sum (million dollars)	Number	percentage of the total
France	1	1	0.000%
Germany	3	206	0.020%
Luxembourg	3	280	0.020%
Kazakhstan	1	77	0.010%
Turkey	585	40,544	3.250%
United Kingdom	10	1,719	0.140%
America	5	1,367	0.110%
Total	608	44,194	3.540%
total sum	9,858	1,247,204	100.000%

The number of Sukuk issued by Iran from 2001 to the end of 2019 is 70.974 million dollars.

## 2.5 Explaining the relationship between Sukuk and economic growth

In the country of Iran, despite the existence of sufficient capital and a huge amount of liquidity, due to the lack of proper use of Islamic financial instruments, the available liquidity that should be directed towards production and creating employment has moved towards false markets, which can be done with proper planning and optimal use of Islamic financial instruments created a huge transformation in the economy. Despite the potential inside the country and the existence of more than 30,000 million dollars of domestic currency (there are no official statistics in this regard, but the mentioned amount is the estimate provided by most economic experts), Iran has only been able to offer 70.974 million dollars of Sukuk (over-the-counter site) and 2.000 million euros of international Sukuk ([Khansari, 2017](#)) until the end of 2019. [Abdullah and Nayan \(2020\)](#) consider the attraction of foreign investors and their confidence in expanding the use of this tool for the construction and development of renewable power plants in Malaysia as an important factor in the success of this financing tool. The type of financing for the project is green financing. Its main focus is on the issues of environmental protection and social responsibilities, which, through Sharia-compliant investments, the investor earns a good profit in addition to meeting the country's needs. [Smaoui and Ghouma \(2020\)](#) found that the freedom of trade and increased liquidity of banks in the use of Sukuk due to less volatility and better dynamics provided various benefits for the diversification of banks' debt securities (left side of the balance sheet), which is positively and significantly related to capital Banks. [Al-Raeai et al. \(2019\)](#) showed that macroeconomic factors and political risk influence the issuing of Sukuk. The amount of savings, exchange rate, freedom of trade, banking system, stock market, credit risk and budget deficit are influential factors in the issuance of Sukuk. Still, a higher level of uncertainty was observed between political risk and the development of the Sukuk bond market. [Wong and Bhatti \(2019\)](#) stated that because a low percentage of the population of East Asian countries are Muslims, to develop international Sukuk bonds in East Asia, it is possible to issue international Sukuk and sell it to the people of Muslim countries in the Middle East. This is due to the Muslim people's appropriate reception of the mentioned Sukuk due to its lack of usury nature. [Smaoui and Nechi \(2017\)](#) showed that the growth of the Sukuk market leads to economic growth, even after controlling for various measures in the development of the financial market, institutional quality, and classical factors that determine economic growth. [Said and Grassa \(2013\)](#) showed that macro factors such as GDP per capita, Muslim population, economy size, the degree of openness of the economy and the quality of regulation have effectively developed the Sukuk market. However, the global financial crisis in 2008 greatly influenced it. The development of this market has had a negative impact. [Thumrongvit et al. \(2013\)](#) showed that the development of the stock market stimulates and strengthens economic growth and that government bonds positively affect economic growth. [Naimi et al. \(2018\)](#) found that the issuance of Sukuk positively and significantly affects the GDP and causes economic growth. [Khansari \(2014\)](#), by introducing Sukuk per Basel 3, specified that using this instrument makes it possible to meet capital requirements in the 3 agreement and strengthen banks' capital. In this research, the use of this tool to enter the international space of Islamic banking is emphasized, and some of Sukuk's advantages in the banking system are explained. Lashkari and Arjamandi (2010) found that Sukuk can be a suitable tool for risk management and liquidity control if the necessary infrastructure is provided, including facilitating the rating and issuance of bonds, as well as creating suitable secondary markets for the purchase and sale of bonds, the conditions for the growth and expansion of the financial system and as a result, the country's economic system can be provided. Mousaviyan et al. (2009) found that Mudarabah bonds are a suitable tool for financing the export sector from the point of view of jurisprudence and economics, and the activists of the export sector can use these bonds to fill the lack of resources necessary for financial and credit support of



exporters. Mousaviyan (2016) concluded that farm and Musakat contracts are legitimate contracts from a jurisprudential point of view and are legally based on Iran's civil and ordinary laws, so there is no need to establish a new legal and jurisprudential unit to design documents based on them. Also, due to the profitability of farm bonds, it is expected that if there are legal institutions and government support for these bonds, a secondary market will be formed and the liquidity of Sukuk bonds will be found to be a suitable tool for attracting liquidity in the hands of people and directing them towards projects. They are production and construction that help economic growth. According to the stated theoretical foundations and background, the hypothesis of the research is proposed as follows:

*Research hypothesis:* Sukuk bond issuance leads to Islamic countries' economic growth.

### 3. Research Method

#### 3.1 Statistical population

The statistical population was selected as a panel and included primarily Islamic countries. Secondly, from 2001 to 2018, more than 15 million dollars of Sukuk bonds were issued, including Malaysia, Iran, Bahrain, Indonesia, Pakistan, Qatar, Saudi Arabia, UAE and Turkey. According to the IIFM Sukuk report (2020), the mentioned countries account for about 96% of all Sukuk bonds issued worldwide. Because these bonds are not usurious, they are accepted by the people of Islamic countries, so it is possible to develop them in Islamic countries, unlike bonds.

#### 3.2 Research model and methodology

In this research, the following model is investigated and estimated (Equation 1 and Table 3).

$$gdpp_{it} = \beta_0 + \beta_{1i}oilr_{it} + \beta_{2i}saving_{it} + \beta_{3i}mexport_{it} + \beta_{4i}nincome_{it} + \beta_{5i}exportgs_{it} + \beta_{6i}Governmentcons + \beta_{7i}glsukuk + \beta_{8i}ecorisk + \beta_{9i}porisk_{it} + e_{it}$$

where

GDPP: Gross domestic product per capita

Oilr: oil revenue (percentage of GDP)

Saving: domestic savings (percentage of GDP)

Mexport: export of manufactured goods (percentage of exports)

Nincome: national income per capita (percentage of growth)

Exportgs: export of goods and services (annual percentage growth)

Governmentcons: Government consumption expenditure (annual percentage)

Glsukuk: Total Sukuk

Ecorisk: economic risk

Porisk: political risk

$\beta_{ii}$  : estimated coefficients

$e_{it}$  : Error component

i: It represents the place that Islamic countries in this research

T: represents the period from 2001 to 2018.

Using these variables is inspired by Smaoui and Nechi's (2017) research. In addition, the full description of the variables is mentioned in the research results section.

**Table 3.** The description of variables (source: research findings)

Variable	Sign	Expected sign	Source
GDP per capita (current US\$)	GDPP	Na	WDI
Exports of goods and services (annual % growth)	Exportgs	+	WDI

General government final consumption expenditure (current US\$)	Governmentcons	+	WDI
Manufactures exports (% of merchandise exports)	Mexport	+	WDI
Cross domestic saving (%gdp)	Saveing	+	WDI
Adjusted net national income per capita (annual % growth)	Nincome	+	WDI
Oil rents (% of GDP)	Oilr	+	WDI
Economic risk	Ecorisk	-	ICRG
Political risk	Porisk	-	ICRG
Global Sukuk bonds	Glsukuk	+	IIFMSUKUK

## 4. Findings

### 4.1 Descriptive statistics

This section calculated descriptive statistics indices, including central indices (maximum, minimum, mean) and dispersion indices, including standard deviation (Table 4).

**Table 4.** The Descriptive data (source: research findings)

Variable	Mean	Standard deviation	Minimum	Maximum
Oilr	13.556	14.344	0.036	54.260
Gdpp	1.486	3.964	-15.151	11.868
Saveing	38.362	15.811	5.782	75.549
Mexport	35.889	30.846	0.052	85.537
Nincome	13934.420	14416.400	436.516	58415.590
Exportgs	5.152	8.796	-25.736	41.337
Governmentcons	4.500	4.380	1.550	1.970
Glsukuk	6974.260	16730.200	0.000	122421
Firisk	40.146	4.495	25.580	48.210
porisk	64.310	10.119	44.290	79.330
ecrisk	38.806	5.753	23.290	50.000

### 4.2 Stationary test

Levin Lin Chiu's unit root test results for the variables are as follows: the variables are stationary (Table 5).

**Table 5.** The Levin-Lin-Chu stationary test (source: research findings)

Variable	T-student	Significance Statistic
Gdpp	-3.859	0.000
Oilr	-3.810	0.000
Saveing	-1.762	0.039
exportgs	-5.151	0.000
Mexport	-2.993	0.001
nincome	-3.518	0.000
Governmentcons	-1.967	0.024
glsukuk	-1.788	0.036
Ecrisk	-3.378	0.000
Porisk	-4.057	0.000

### 4.3 Model diagnosis test

We use the F-Limer test to choose between pool and panel models. The results show that the significant statistical value of 1.04 is not in the critical area (greater than 5%), so the null hypothesis that the estimate is pooled is confirmed and the opposite hypothesis that it is a panel is rejected (Table 6).

**Table 6.** F-Limer test, Hausman test, The Wooldridge autocorrelation test, The Adjusted Wald

heteroskedasticity variance test (source: research findings)

Tests	F and Chi2	Prob
F-Limer test	F (8, 144) = 1.040	0.405
Hausman test	Chi2(7) = 8.410	0.297
The Wooldridge autocorrelation test	F (1, 8) = 4.134	0.076
The Adjusted Wald heteroskedasticity variance test	Chi2 (9) = 408.180	0.000

#### 4.4 Hausman test

The results show that the significant statistic of 8.41 is not in the critical area (more than 5%) in the Hausman test; if the panel estimation method is confirmed, the estimation should be done with random effects (Table 6).

#### 4.5 Autocorrelation test

Wooldridge test is used to test autocorrelation in panel data. Using the Wooldridge test, it is possible to find the existence of autocorrelation between variables, and the null hypothesis indicates the absence of autocorrelation. According to what is presented in the table, the significant statistic is more than 5%, which indicates the absence of autocorrelation in the model (Table 6).

#### 4.6 Variance heterogeneity test

Examining the statistical values of the conducted tests shows that the null hypothesis of equal variance is rejected; therefore, there is a problem of heterogeneity of variance in the model (Table 6). According to the research results, it is necessary to use the method (panel with random effects) or GLS to estimate the model to solve variance heterogeneity (Table 7).

**Table 7.** The GLS (Generalized least square) estimation (source: research findings)

Variable	Coefficient	Standard deviation	t-student	Significance statistic
Oilr	0.043	0.020	2.160	0.031
Saveing	0.102	0.026	3.820	0.000
Exportgs	0.172	0.022	7.840	0.000
Mexport	0.024	0.010	2.260	0.024
Nincome	0.000	0.000	5.390	0.000
Governmentcons	1.550	4.970	3.270	0.001
Glsukuk	0.000	8.650	3.000	0.003
Porisk	-0.110	0.030	-3.630	0.000
Ecrisk	-0.143	0.067	-2.130	0.340
Cons	-1.269	-1.269	-0.600	0.547

#### 4.7 Findings

Oil revenues have positively and significantly affected GDP per capita with a coefficient of 0.0435885. The main reason for this is the presence of most oil-rich countries in the statistical community, which are among the world's leading exporters. According to the World Bank, this variable is "the difference between the value of crude oil production at world prices and the total cost of production". Foreign exchange earnings from oil exports can positively affect production and economic growth by increasing capital and intermediate goods imports.

Domestic savings with a coefficient of 0.1024787 have positively and significantly affected GDP per capita. People's savings can be invested later and generate more income for them. Savings and their amount are among the factors that indicate the level of development of societies. Like Solow's model, saving is one of the most important production growth factors in neoclassical growth models.

The export of goods and services has had a positive and significant effect on the GDP per capita,

with a coefficient of 0.1729465. This index shows the annual growth of the dollar value of exports of goods and services to other parts of the world, including commercial goods, commercial services, government, finance, construction, transportation, etc. The increase in the export of goods and services will lead to an increase in the gross domestic product due to currency gain and employment growth. Undoubtedly, the annual growth of exports and goods in the service sector can also increase economic growth. If the production of goods and services increases in a country, it can be said that economic growth has occurred in that country.

The export of manufactured goods has had a positive and significant effect on the GDP per capita, with a coefficient of 0.0241916. According to the standard classification of international trade, this index includes goods in the chemical sector (including hydrocarbons, alcohol, nitrogen, mineral dyes, pharmaceutical products, chemical fertilizers, disinfectants, etc.), raw materials for special industries (including cloth, paper and cardboard, leather, glass and glass containers, iron, steel, etc.), transportation machinery and equipment (including electricity generation machinery and equipment, agricultural machinery, cooling and heating equipment, communication equipment, ship and boat construction, etc.) and Other manufactured goods (including prefabricated buildings, weapons and ammunition, stationery, jewellery, travel goods, household appliances, etc.) The importance of export and its role in developing countries' economies is not hidden from anyone. One of the foundations of the economic growth of developing countries has been to pay attention to the development of exports. The importance of exports can be analyzed from different aspects. No country can consider itself unnecessary to export goods because the era of a closed economy has passed. Exporting can improve the economic situation in various ways; among the essential factors the following can be mentioned: improving the quality of manufactured goods, achieving production on an economic scale, increasing employment, providing foreign exchange income, and increasing economic growth and development.

The national income per capita has had a positive and significant effect on the GDP per capita, with a coefficient of 0.0001245. This index shows the net income of each person in a country, such as the wages of workers and employees, income from providing services, income from renting real estate, etc., after deducting taxes and related expenses. An increase in income leads to more savings and, of course, investment.

Government consumption expenditure has positively and significantly affected GDP per capita with a coefficient of 1.550. Suppose it leads to the redistribution of income among the lower-income deciles. In that case, more government spending can positively affect GDP per capita, provided governments can adopt appropriate policies and do them correctly.

The economic risk with a coefficient of 0.1438176 has negatively and significantly affected GDP per capita. This risk is related to the general economic situation and conditions. It includes a sudden increase in production costs, the lack of productivity of invested foreign funds, a sudden decrease in a country's trade balance, etc. Therefore, the countries examined in this research have a high economic risk, and the negative relationship between this risk and economic growth is negative.

The political risk with a coefficient of 0.1105131 has negatively and significantly affected GDP per capita. This risk includes the instability of the government and socio-economic conditions, the poor outlook and perspective of investment in the country, internal conflicts, external conflicts, corruption, the involvement of military forces in the government, religious tensions, weak implementation of laws and social order, ethnic tensions, accountability The democratic weakness of the government is the quality of bureaucracy (Abdi and Drinogurani, 2014). Political efficiency indicates the optimal administration of a country. The countries investigated in this research have a high political risk.

Sukuk has positively and significantly affected GDP per capita with a coefficient of 0.000026. This variable positively and significantly affects economic growth at 95%. The low coefficient of

Sukuk supply on economic growth is the low volume of Sukuk supply worldwide because its figure is very small compared to oil revenues. However, since this market has not found its place among Islamic countries, including Iran, and it is a newly emerging market, there is no doubt that if it prospers and expands, it will take a large share of economic growth.

## 5. Discussion and Conclusion

Financial markets support the economy and provide sustainable economic growth and development conditions. The government, organizations, institutions, and companies need financial resources to establish, equip, or expand their activities, and in conventional financial markets, this need is met through the issuance of bonds. Since the mentioned bonds are based on loans with interest, they are considered haram and usury from the point of view of Islam; therefore, these bonds cannot be used in Islamic countries. Considering the importance of financing, Islamic thinkers have proposed Islamic financing methods, the most important of which is the issuance of Sukuk bonds. The countries examined in this research have issued about 96% of all Sukuk worldwide.

These bonds do not deviate from the main topic of investment due to the existence of the founding entity, intermediary entity, underwriter, market maker and guarantor, and the financing and issuance of Sukuk bonds can be called one of the main and essential pillars of economic growth in Islamic countries. These countries can identify suitable investment opportunities while collecting stray funds and moving them towards economic and productive activities. Issuing Sukuk bonds, in addition to the benefits it has for companies, can also be a form of financing and compensating for budget deficits from domestic sources for governments, so they do not have to compensate for budget deficits by increasing the monetary base. Today, many investors have turned to this direction, unlike in the early years of the issuance of Sukuk bonds in the world, which were mainly institutions and financial institutions.

Developing efficient financing tools and their success in countries is essential for economic growth and development. These tools are responsible for directing cash flow towards productive economic activities and are of great importance for the economy of countries. On the one hand, it has allowed the companies and institutions that provide financing, in addition to continuing economic activity through short-term financing, to develop activities through long-term financing. On the other hand, it also gives small and large investors the possibility to, in addition to participating in economic and productive activities, also receive profit from the investment or in the relevant plan as a partner, regardless of the deposit interest rate, from the profits from to benefit from the investment. The result of this work is to prevent the influx of liquidity to the false markets of dollars, housing, cars, etc., which, in addition to its role in controlling and reducing inflation, will also determine the country's economic growth. Therefore, efficient financing helps a lot in the flow of money in the economy's veins.

Unfortunately, the capital market in Iran, despite the high potential of making tools, has been unable to expand these tools to different sectors of the economy, which undoubtedly can achieve many successes in the country with some reforms in procedures and regulations. For example, by directing the flow of cash towards the construction of a refinery and not selling crude oil, the effect of oil sanctions on the country's economy is also neutralized because refined products cannot be sanctioned like selling crude oil.

The existence of a huge amount of liquidity in Iran and its inclination towards the housing, dollar and coin markets, which gives a severe blow to the society's economy, is caused by the lack of accurate information about the available investment opportunities and their returns. People tend to maintain their money's value and profit from its investment. As a result, if it is certain that their

investment in productive activities is profitable and they also maintain the value of their money, they have not invested in false markets without a guarantee. And they do not hurt the country's economy unintentionally. The lack of necessary infrastructures and proper information has caused this volume of liquidity to increase inflation, decrease the value of the national currency, and increase unemployment and delinquency in society instead of boosting production and creating employment. If there is a suitable platform and the people are assured of preserving their capital, without a doubt, this volume of liquidity will lead to a boom in production, an increase in employment, an increase in exports, an improvement in the country's balance of payments, increase in foreign exchange earnings, empowerment of domestic industries and overall enrichment of the country and the people of that society. The results of the current research show the effect of issuing Sukuk bonds on the economic growth of Islamic countries, which is in line with the results of the research of Naimi et al. (2018), who found that issuing Sukuk has a positive effect on the gross domestic product and leads to economic growth. Al-Raeai et al. (2019) found that macroeconomic factors and political risk influence the issuing of Sukuk. The results of the research of Smaoui and Nechi (2017) showed that the growth of the Sukuk market leads to economic growth, and the results of both studies are consistent. The results are consistent with Said and Grassa's (2013) research, which showed that macro factors such as GDP effectively develop the Sukuk market.

## 6. Implications

For years, the country's economy has been managed through oil exports, and the country's dependence on oil revenues has caused the country's vulnerability and the greed of foreigners to interfere in Iran's economy. This is even though the oil revenues are unstable, and the oil resources will eventually run out without sanctions.

Unfortunately, due to the lack of necessary infrastructure to absorb liquidity, more than 70% of the country has flocked to fake markets, and the country's economy faces many problems. Therefore, by creating the necessary infrastructure, in addition to absorbing the existing liquidity and directing it towards productive activities and the entry of the private sector into the production and export of domestic products, in addition to significantly reducing the effects of sanctions, we can also not allow the enemy to use oil embargo to condition the country's economy. Therefore, it is possible to take inspiration from prominent countries in the field of Sukuk supply, such as Malaysia, to develop financial markets inside the country and create the necessary mechanism for domestic companies to supply Sukuk. If this happens, it will be possible to create a lot of capacities inside the country to replace oil revenues. In this way, while supporting domestic production and raising public welfare, the impact of sanctions will be diminished and help to realize a resistive economy.

In the current situation where the country's economy is faced with cruel Western sanctions, the capital market can play an undeniable role in economic growth and the transition from the sanctions era. Unfortunately, most of the facilities granted by banks are related to the service and commercial sectors, which are considered one of the main factors of inflation due to the lack of proper supervision. Therefore, taking the share of the capital market from the money market requires stubborn and error-free competition, which itself requires a plan and justification of the economic officials regarding the importance of investment.

In addition to solving the problem of the country's economy being bank-oriented, the government and law-making institutions should prepare a suitable legal framework for this and use international jurisprudence and legal consultants. Also, creating appropriate credit enhancement mechanisms, such as establishing international reliable rating institutions to rate issued bonds, benefiting from the capacity of the country's banks as guarantors of bonds, creating operational infrastructures for bond issuance, creating mechanisms for obtaining guarantees from companies to return foreign currency

from exports to the country, fostering and using expert workforce and, most importantly, culture building and promotion through mass media and informing people about the benefits of these bonds, the importance of investment and the profit from it can bring many successes in Iran.

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