RELATIONSHIP BETWEEN FISCAL POLICY AND ISLAMIC FINANCE: A CASE STUDY OF THE JORDAN ISLAMIC BANK

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ABSTRACT

The study aims to clarify the relationship between fiscal policy and Islamic finance during the period of (2000–2020). Results of the co-integration analysis showed the existence of a long-term equilibrium relationship between the variables of the study. Analysis of a long-term relationship through the Fully Modified Ordinary Least Squares (FMOLS) model showed a positive, statistically significant effect of government spending on Islamic financing and investment and a negative, statistically significant effect of taxes on Islamic financing and investment. Causal relationship analysis showed that government spending and taxes cause Islamic financing and investment, which implies that Islamic finance follows the fiscal policy in Jordan. Results confirm the effectiveness of fiscal policy in influencing Islamic finance and investment, which indicates that fiscal policy has a role in Islamic banking financial services and in creating the appropriate environment for that. This study offers recommendations by finding new investment financial tools compatible with Islamic Sharia's provisions.

Contribution/ Originality: This study will be one of the very few that have examined the relationship between fiscal policy and Islamic finance influence, especially in an emerging country such as Jordan, where it works to stimulate the national economy through the use of the fiscal policy. Therefore, this study will prove a scientific addition to the field of financial and economic research.

1. INTRODUCTION

The fiscal policy represented in taxes and government spending is one of the important tools that states use to influence many economic variables. Islamic finance and investment of all types are considered among the modern investment tools of the economic variables used by Islamic banks in their banking operations, which are affected by financial policies. Keynes emphasized that the government, as an actor, can stimulate the economy through expansionary fiscal policies that increase effective aggregate demand (Sulistiawati, 2012). As a fiscal policy tool, government spending increases aggregate demand because it is one of the important factors that affect the economy positively (Muliana & Cahyadim, 2012). Thus, government spending has a role in increasing economic activity, including Islamic financing and investment; conversely, taxes are seen as reducing aggregate demand, which leads to a lower level of the economy in general (Nourieh & Saket, 2018). Hence, taxes have a role in reducing the level of economic activities, including the level of Islamic financing and investment. Therefore, this study aims to clarify the importance of Islamic finance and investment in the economy.

Islamic finance and investment are regarded as a distinct form of real investment that considers social responsibility to promote social and economic development goals (Khan, 2016). They can be used to face economic crises, such as the Coronavirus pandemic, and have thus become today's alternative to traditional finance, as well as advanced banking services that compete with traditional banks (Alhammadi, 2022).

The remainder of this study is organized as follows. Section (1) presents the introduction. Section (2) discusses previous studies and the theoretical aspect. Section (3) presents the statistical analysis of the study. Section (4) discusses the results, and Section (5) presents the recommendations.

1.1. Problem of the Study

The problem of the study comes from the practical reality of the fiscal policy carried out by the Jordanian government in influencing the aggregate demand in the economy. Therefore, the problem of the study lies in determining the effect of the fiscal policy, represented by public spending and taxes that the government uses within the expansionary and contractionary fiscal policies, on Islamic finance and investment, The problems to be addressed by this study can be formulated as follows.

First problem: What is the relationship between government spending and Islamic finance?

Second problem: What is the relationship between taxation and Islamic finance?

1.2. Objectives of the Study

The study aims to achieve the following objectives:

This study aims to introduce the concept of Islamic finance and its development and discussing the financial policy tools in Jordan and their development during the study period. This study also aims to analyze the relationship between fiscal policy and Islamic finance through the use of the (FMOLS) model, which shows a long-term relationship. Moreover, this study aims to analyze the co-integration and causal relationship between the variables of the study and thus obtain results and recommendations to help decision-makers achieve the desired financial and economic goals in Jordan.

1.3. Importance of the Study

This study aims to discuss the relationship between fiscal policy and Islamic financing for its importance in helping government financial decision makers. It aims to find the appropriate environment for the development of Islamic financing and investment for its direct contribution can achieve the objectives of financial and economic policies that most countries seek, including Jordan. The role of the appropriate environment through government financial policies must also be highlighted to develop various Islamic finance institutions to innovate new instruments that are compatible with Islamic finance, thereby achieving the objectives of public financial policy.

1.4. Study Hypotheses

By relying on the theoretical side, the study hypotheses can be formulated as follows.

First hypothesis: A positive, statistically significant relationship exists between government spending and Islamic finance at the level of statistical significance.

Second hypothesis: A negative, statistically significant relationship exists between taxes and Islamic finance at the level of statistical significance.

1.5. Study model

Figure 1 shows the effect of the independent variables (financial policy tools) on the dependent variable (Islamic finance and investment) as follows.

Figure 1. Study model.

1.6. Methodology

It will depend on the descriptive approach and statistical analysis approach, as it will rely on the data issued by the Ministry of Finance and the Central Bank to obtain government revenues and expenditures. The data issued by the Amman Stock Exchange will be relied upon to obtain the balance sheet of the Islamic bank to extract Islamic financing and investment during the study period.

On the basis of previous studies and the theoretical aspect of the study, the following model was adopted:

$$IS\ f\ (EX,\ TT)$$

Where *IS*: is the volume of Islamic financing and investment in million dinars during the study period, *EX* : is the amount of government spending in million dinars during the study period, and *TT* is the amount of taxes in million dinars during the study period.

The E-views program is used to perform the following tests:

- Choosing the stability of the study variables.
- Co-integration analysis that shows the equilibrium relationship between long-run variables.
- Regression using the FMOLS model, which shows the long-term relationship between the independent and dependent variables.
- Testing of the degree of deceleration of the study variables.
- Analyzing the causal relationship between the study variables.

2. PREVIOUS STUDIES AND THE THEORETICAL SIDE OF THE STUDY

2.1. Previous Studies

Many studies have discussed the relationship among Islamic finance, investment, and economic growth. Abduh and Omar (2012) tested the relationship between Islamic finance and long- and short-term economic growth in Indonesia during the period of 2003–2010 using autoregressive distributed lag (ARDL) methodology analysis. The analysis showed a positive long- and short-term relationship between Islamic finance and growth. Moreover, a causal relationship of a two-way relationship was found between Islamic finance and economic growth. Thus, economic growth affects Islamic finance, and vice versa, in Indonesia. This result supports the theory of aggregate demand driving, which indicates that the development of banking services stimulates economic growth, and at the same time, economic growth (aggregate demand) drives the development of banking services in Indonesia. The development of banking services will not lead to growth if the economy is not growing well. Therefore, the positive growth will help stimulate Islamic banking services. One of the most important recommendations of the study is the need for the government to support Islamic banks through facilities. Procedures and provision of spending and incentives to open branches of Islamic banks lead to the development of banking services through Islamic financing and investment, which means more growth.

Kunduz (2021) study aims to determine the nature of the relationship between Islamic finance and investment and the real sector in some countries of the Gulf Cooperation Council. The study sample represented the Kingdom

of Saudi Arabia, the United Arab Emirates, Oman, Kuwait, and Bahrain. The study relied on an analysis through Granger test for causality and analysis using the FMOLS model and co-integration using the E-views program. The study found that Islamic finance follows the development of the real sector. This finding supports the theory of aggregate demand driving. One of the most important recommendations of the study is the necessity of finding innovative and modern financing products and paying attention to Islamic financial engineering.

Qwaidari and Habeita (2021) measured the effects of fiscal policy tools on economic growth in Algeria compared with some Arab countries (i.e., Egypt, Jordan, Morocco, and Saudi Arabia) during the period of 1990–2019. They analyzed cross-sectional time-series data using multiple linear regression analysis and conducted a co-integration test using E-views. The statistical analysis showed that public spending has a positive effect and statistical significance on the per capita GDP, whereas tax revenues negatively affect the per capita GDP. The joint integration test showed a long-term equilibrium relationship between the study variables and one of the study variables. One of the most important recommendations of the study is the need to rationalize public spending. It also recommends directing expenditures to small investment projects, restructuring the tax system, and tax breaks, especially for oil-exporting countries.

The study of Iyari, Lorde, and Francis (2005) aims to demonstrate the relationship between financial development and economic growth, or vice versa, using aggregate annual time-series data on Barbados, Grenada, and Jamaica. Two indicators of financial development were used, namely, money supply in the broad sense of GDP and the volume of credit directed to the private sector. For statistical analysis, the study used vector autoregression (VAR) and vector error-correction model through the use of electronic opinions. The statistical analysis showed a long-term relationship among financial development, finance, and economic growth in most countries. The statistical analysis also showed a two-way causal relationship between financial development and economic growth. This result supports the demand-driven theory, as well as the supply-led theory between financial development and economic growth. The study also showed that every country has specificity in the relationship between financial development and economic growth. Alves (2019) studied the effect of tax structure on investment dynamics in all organization for Economic Cooperation and Development (OECD) countries during the period of 1980–2015). To clarify the effects of taxes in the short and long terms, the study used techniques of the standard economic dashboard. The statistical analysis of the study showed that income taxes negatively affect investment growth. The study also found negative effects of tax revenues from social security contributions on short- and long-term economic growth. Other studies have shown the relationship between fiscal policy and investment. Sharaf (2020) tested the effect of fiscal policy tools (i.e., public spending and taxes) on private investment in Syria during the period of 1990–2010. The study used time-series stability test, co-integration test, and ARDL model for its analyses. The results of the statistical analysis showed a positive long-term relationship between government spending and private investment, because government spending on utilities and infrastructure is complementary to private investment and not competing with it. The results of the study also showed a negative long-term relationship between taxes and private investment, because taxes directly affect the profits and income of companies, which, in turn, directly affect private investment. Some studies have shown the relationship between economic variables and tools of financial policy, Islamic finance, and investment. Abada and Melhem (2019) analyzed the relationship among inflation, unemployment, GDP, and Islamic finance. The study relied on the case study of the Islamic International Arab Bank and the Jordan Islamic Bank to reach statistical results. It used multiple linear regression using SPSS program. The results of the study showed that a relationship exists between Islamic finance from the Jordan Islamic Bank and inflation. However, no relationship was found between inflation and Islamic finance in the construction, housing, and general trade sectors in the International Islamic Bank, as well as among GDP, unemployment, and Islamic finance from both banks. The most important recommendation of the

study is the necessity of directing Islamic finance to invest in various real economic sectors to achieve the desired objectives of Islamic finance.

Mariam and Sharit (2018) analyzed the relationship between Islamic finance and GDP in Malaysia in 2000–2016. They used the E-views program to analyze the relationship between Islamic finance and GDP through a simple linear regression method. The analysis showed a positive relationship between GDP and Islamic finance in Malaysia. This relationship is the objective of finance in increasing the income generated in the economy, which is in line with economic theory.

Prasetyo (2020) study aims to clarify the effects of government spending and micro, small, and medium enterprises on growth in Indonesia. The study showed the role of government policies in investment and spending in promoting micro and medium enterprises and economic growth in Indonesia. Data from 2008 to 2019 were analyzed using ordinary least squares (OLS). The results of the analysis showed that government spending has a positive and important contribution to small and medium enterprises in Indonesia. The analysis also showed that the investment sector has a positive and significant effect on small and medium enterprises. The most important recommendation of this study is to further clarify the influence of government spending on small projects during the Coronavirus pandemic.

2.2. Features of the Current Study

The current study is distinguished from previous studies as follows.

First-Previous studies have discussed the relationship between Islamic finance and economic growth and between economic variables and Islamic finance. Some studies have also discussed the relationship between fiscal policy tools, especially public spending and investment. The current study aims to analyze the effect of fiscal policy (public spending and taxes) on Islamic finance.

Second-This study uses appropriate statistical analysis techniques that serve the results of the study by finding a long-term equilibrium relationship between the study variables through Johansson's co-integration test. It also finds the long-term relationship between the study variables by analyzing the forms model and analyzes the causal relationship between the study variables using the E-views program.

Third-This study is one of the first to present the idea of the effect of fiscal policy on Islamic finance and investment. Conversely, previous studies have discussed the effect of Islamic finance on macroeconomic variables.

Fourth-This study is considered one of the important research that serves financial policymakers in clarifying their importance in influencing Islamic finance and investment to find the appropriate environment for the development of Islamic banking in Jordan.

Fifth-This study is considered one of the few that discusses the three theories in clarifying the relationship among Islamic financial policy, finance, and investment. These theories are the theory of aggregate demand leadership, which is one of the objectives of financial policy; the theory of supply leadership, which refers to the effect of Islamic finance on economic variables; and the two-way theory, which clarifies the relationship between financial policy and Islamic finance, which highlights their role in this study.

2.3. Theoretical Aspect of the Study

2.3.1. Islamic Finance and Investment

Islamic banks are an important tool for expanding national savings by attracting the largest possible number of dealers, especially those who prefer to deal with Islamic banks for religious conscience and reasons (Abada & Melhem, 2019). Individuals and public and private institutions that wish to obtain Islamic financing and investment resort to Islamic banks that have various Islamic financing and investment tools. This Islamic financing consists of

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various financing and investment tools, as the Jordan Islamic Bank defines them with the following tools: (Amman Stock Exchange, historical financial data, and various issues).

- Deferred sales receivables and other receivables – net.
- Deferred sales receivables through the income statement.
- Ijara assets – Net.
- Finance Investments –Net.
- Financial assets at fair value through OCI.
- Financial assets at fair value through the joint investments accounts holders' equity.
- Financial assets at amortized cost.
- Net financial assets at fair value through profit or loss.
- Qard Hassan loans – net.
- Investments in Affiliates.
- Real Estate investments.
- Local wakala investments.

The above instruments represent the Islamic financing and investment tools that were used in this study through the balance sheet of the Islamic Bank of Jordan. The Islamic financing and investment tools are considered to expand the investment base in countries that deal with Islamic banks. A recent study conducted by the Research Office (International Business and Finance Group) in the West indicated that 6% of establishment owners reject usurious loans despite their need for them and prefer to use the funds through the Musharaka system (Islamic finance).

In practice, the Islamization of banks in some Islamic countries contributed to mobilizing investment savings in Sudan for example, investment deposits doubled 20 times within five years from the start of the experiment, whereas demand deposits rose slowly. Moreover, many studies have found that Islamic financing and investment lead to an increase in the actual production, which, in turn, leads to a reduction in inflation. Thus, there exists an inverse relationship between Islamic finance and investment and inflation (Luktani, 2002).

Academic studies in Islamic economics in major universities, such as Harvard, Sorbonne, and Birmingham, have indicated that the participatory system (Islamic finance and investment system) is more stable and balanced than the interest rate-based financial system (traditional finance) (Khan, 2016). Islamic finance and diversified investment conducted by Islamic banks provide the necessary needs for projects and producers for institutional sustainability, in addition to the great role provided by Islamic finance through zakat and good loan, which leads to the development and sustainability of the economic and social aspects (Ledhem & Mekidiche, 2020). Studies have also indicated that finance and investment offer the same characteristics as government spending, especially in their ability to increase aggregate demand and its positive effect on Islamic finance and investment (Muliana & Cahyadim, 2012).

Table 1 indicates that financing and investment in the Jordan Islamic Bank witnessed a remarkable development during the study period. The value of financing and investment was 343133215 Jordanian dinars (JD) in 2000, which is its lowest value, and continued to develop and rise until it reached the highest value of 3803476941 (JD) in 2020, as shown in Tables 1 and 2. Figure 2 also shows the continuous development of financing and investment of all types during the study period.

Table 2 shows that financing and investment follow a normal distribution, as is clear from the Jarque–Bera indicator.

Table 1. Volume of Islamic financing and investment (JD) during (2000–2020).

Year	Islamic finance and investment (IS)*
2000	343133215
2001	365767289
2002	353766802
2003	374984915
2004	396234882
2005	464894693
2006	690441715
2007	824357517
2008	947058826
2009	1060832743
2010	1191710018
2011	1214959813
2012	1877860035
2013	2276721892
2014	2374978316
2015	2785543889
2016	2883937609
2017	2929031674
2018	3076311210
2019	3315560462
2020	3803476941

Source: Amman Stock Exchange (2020).
Note: * $p < 0.1$.

Table 2. Descriptive statistics for Islamic finance and investment.

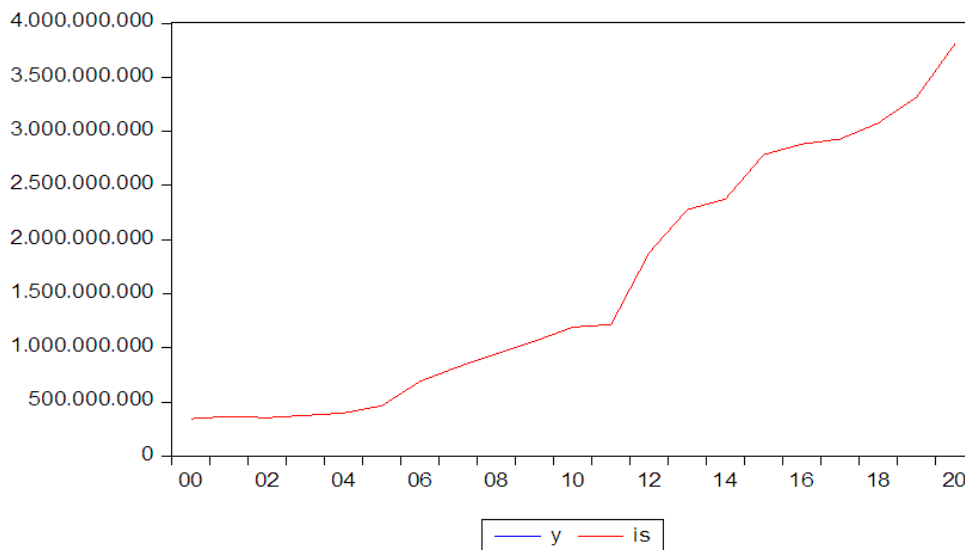| Descriptive statistics	Islamic finance and investment
Mean	1.60E+09
Median	1.19E+09
Maximum	3.80E+09
Minimum	3.43E+08
Std. Dev.	1.17E+09
Skewness	0.432541
Kurtosis	1.694819
Jarque–Bera	2.145382
Probability	0.342087
Sum	3.36E+10
Sum Sq. Dev.	2.73E+19
Observations	21
Mean	1.60E+09

Figure 2. Evolution of Islamic finance and investment during the study period.

2.3.2. Fiscal Policy

Economist Bach defined fiscal policies as a tool that uses government spending and taxes to influence aggregate demand, according to the economic growth conditions of the state and its role in achieving economic growth, reducing unemployment, and distributing resources between different needs and purposes to achieve individual welfare and justice through redistribution of income. Fiscal policy uses a set of tools, which are divided into public revenues and public expenditures (Nourieh & Saket, 2018). Public expenditures are divided into current and capital expenditures. These expenditures can be used to influence aggregate demand and to raise the efficient allocation of resources and the establishment of public benefits, as they contribute to the redistribution of national income. Current expenditures aims to operate the state's administrative apparatus; whereas capital expenditures may be called public investment spending, which is spending on infrastructure projects and other huge projects with great economic and social public benefits necessary to build the economy (Sharaf, 2020). Government spending is one of the financial policies that regulate the economy by determining the amount of revenue and spending each year. It is considered in Keynes' theory as one of the main indicators that increase economic growth, as it is one of the activities and efforts of the government to support economic development through making policies that support investment that is mutually beneficial to the government, the private sector, and society (Sulistiawati, 2012).

Taxes are classified into two types: direct taxes include taxes on income, wealth, and capital, which are collected directly from taxpayers; and indirect taxes are the amounts imposed on the uses of income in spending on goods and services (Sharaf, 2020). Taxes are a major source of public revenue. Thus, the researcher finds that one of the challenges facing the economy in Jordan is the high tax rates. Especially, indirect taxes are imposed on basic commodities, such as oil derivatives, electricity, medicine, clothing, and cars; thus, they affect everyone, which leads to the decrease in the real rates of income for individuals and society (Khasawneh, 2017). This rise in taxes leads to a decrease in aggregate demand, which results in a decline in economic activities, including financing and investment.

2.4. Fiscal Policy Objectives

The magic square of Kaldor describes fiscal policy as aiming at full employment, combating inflation, stagnation, economic growth, and external balance (Nourieh & Saket, 2018). It also aims to increase production and productivity in the economy and improve income distribution among individuals in society (Boukhatem & Moussa, 2018).

2.4.1. Mechanism of Using Fiscal Policy by the Government

The working mechanism of the fiscal policy lies in the case of economic depression. The state adopts an expansionary fiscal policy by increasing public expenditures by increasing salaries or increasing purchases of goods, services, and capital expenditures through the work of various government projects to increase demand. The increasing demand leads to an increase in production in various institutions and an increase in employment. The government is also working on reducing taxes and granting exemptions to individuals, which leads to an increase in income devoted to consumption and saving, which, in turn, result in an increase in aggregate demand and investment demand, thereby leaving the state of economic depression (Nourieh & Saket, 2018). In addition, by reducing tax rates, this policy has a positive influence on corporate profits (Mouss, 2016) which reflects positively on Islamic finance and investment.

In the event of inflation, the government adopts a contractionary fiscal policy by reducing public spending and increasing taxes, which reduces the net profits of companies and thus reduces aggregate demand (Belkheir, 2021), which negatively affects Islamic finance and investment.

2.4.2. Evolution of Fiscal Policy Tools in Jordan (Government Spending and Taxes)

Table 3 indicates that government spending and taxes witnessed a remarkable development during the study period. The value of government spending amounted to 21.871 million, and the value of tax revenues amounted to 961.9 Jordanian dinars in 2000, the lowest values during the study period. The values continued to rise significantly during the study period until government spending reached its highest value of 9211.2 million dinars and tax revenues of 4958.6 million dinars in 2020, as shown in Tables 3 and 4. Figure 3 emphasizes the continued growth of government spending and tax revenue during the study period. The findings indicate that government spending and taxes follow a normal distribution, as shown by the Jarque–Bera index in Table 4.

Table 3. Volume of government spending (EX) and taxes (TT) in million (JD) during the study period.

Year	Tax revenue (TT)	Government spending (EX)
2000	961.9z	2187.1
2001	996.4	2316.3
2002	1000.3	2396.2
2003	1083.2	2809.8
2004	1428.8	3180.5
2005	1765.8	3538.9
2006	2133.5	3912.3
2007	2472.1	4586
2008	2758.1	5431
2009	2879.9	6030.5
2010	2986	5708
2011	3062.2	6796.6
2012	3351.6	6878.1
2013	3652.4	7077.1
2014	4037.1	7851.1
2015	4096.8	7722.9
2016	4254.3	7948.2
2017	4343.6	8173.2
2018	4535.6	8567.3
2019	4680.8	8812.1
2020	4958.6	9211.2

Source: Ministry of Finance (2020).

Table 4. Descriptive statistics of government spending(EX) and taxes(TT) in million (JD) during the study period

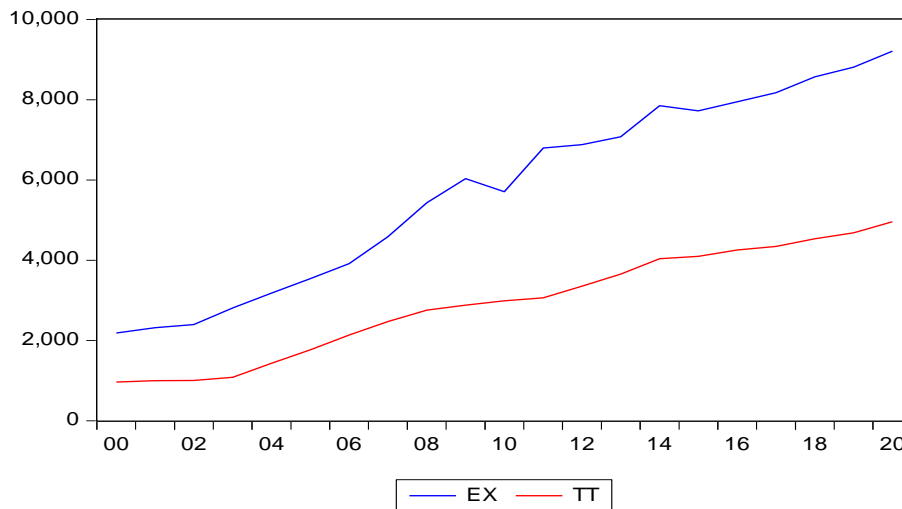| Descriptive statistics	Tax revenue (TT)	Government spending (EX)
Mean	2925.667	5768.305
Median	2986.000	6030.500
Maximum	4958.600	9211.200
Minimum	961.9	2187.100
Std. Dev.	1342.557	2379.175
Skewness	−0.149	−0.195
Kurtosis	1.703	1.60
Jarque–Bera	1.548	1.840
Probability	0.46	0.4
Sum	61439.00	121134.4
Sum Sq. Dev.	3604917	1.13
Observations	21	21

Figure 3. Diagram of public expenditure (EX) and tax revenues (TT).

2.4.3. Relationship between Fiscal Policy and Islamic Finance

Keynes claimed that the government, through fiscal policy, affects the economy, especially through public spending, which leads to stimulating aggregate demand. The government adopts an expansionary fiscal policy by increasing public spending and reducing taxes. Studies have also confirmed that the government's adoption of an expansionary fiscal policy has a positive and significant effect on the economy in the short term, whereas in the long term, the economy needs an expansionary fiscal policy through recurrent public spending, which leads to a positive and significant effect on the economy (Muliana & Cahyadim, 2012). In addition, the expansionary fiscal policy, through an increase in public spending, leads to encouraging consumption and investment, which leads to an increase in national income. Moreover, transfer expenditures have a positive role in the economy in general (Ismail, 2021).

Some studies have referred to the relationship between fiscal policy and direct Islamic finance (Kunduz, 2021), which indicates the great role of fiscal policy in stimulating growth in the Islamic finance and investment sector through the government's various financial policies. Studies have also confirmed the response of the finance and investment sector to government fiscal policies in directing funding toward the sectors adopted by the government. Some studies and theories support the strong relationship to create the environment. The occasion for Islamic financing to increase its effectiveness on the economy through the effects of economic variables (called demand-push theory) implies that the government, through fiscal policy, increases public spending and reduces taxes, which leads to an increase in production that leads to an increase in financing and investment (financial development). Husen and Sun'an (2018) referred to the relationship among fiscal policy, financing, and investment through the government's improvement of the economic situation. This situation affects income, because the change in public spending and tax will affect the general situation prevailing in the economy. According to Keynes' model, increasing the tax and reducing government spending will affect the purchasing power of society and reduce industrial output, which generally affects investment and financing.

In the long term, a two-way relationship exists between Islamic finance and investment and growth. This relationship occurs by pushing the demand that the government undertakes within the financial policies on the effect of finance and investment (the development of the financial sector) on the overall economy, which is known as the theory of supply leadership (Kunduz, 2021).

By reviewing the relationship among fiscal policy, financing, and Islamic investment, we find three trends. As discussed in the above analysis, some studies have indicated the effects of government and economic variables on financing and investment, which is called the demand-push theory. Keynes's model intends to stimulate aggregate demand through financial policies. Studies have also indicated the existence of a bilateral (reciprocal) relationship

between fiscal policy and the financial sector (finance and investment). Conversely, some reported that finance and investment (financial sector) are affected by economic variables and financial policy, which defines the supply leadership theory.

3. STATISTICAL ANALYSIS OF THE STUDY

3.1. Stability Test of Study Variables

Before co-integration, the stability of the study variables are tested. The unit root of the study variables is tested through the Augmented Dickey-Fuller test (ADF test), as shown in Table 5. The table shows that all data series are unstable at the level and contain the unit root. In addition, by making the differences, they are all stable and integrated from the first degree I(1). Given that all the variables are integrated from the first degree, a long-term equilibrium relationship is possible between the variables through the co-integration test.

Table 5. Stability test of study variables (EX,TT,IS).

Variables	Level		Indifference	
	t-Statistic	Prob.*	t-Statistic	Prob.*
EX	−0.71	0.82	−5.90	0.00
TT	−2.03	0.3	−5.2	0.00
IS	1.74	0.99	−.37	0.05

Note: * $p < 0.1$.

3.2. Co-Integration Test

Co-integration test is conducted through the use of the Johansen test. This test is used to find the co-integration relationship when we have more than two variables in the study. Moreover, when the variables in the study are stable at the first difference but not on the other levels, a co-integration test is necessary to ensure that there exists a long-term relationship between the variables. The integration test is conducted through the Johansen co-integration test, as shown in Table 6.

A long-term equilibrium relationship exists between the variables of the study. The outputs of this model indicate that a relationship exists between public spending and taxes and Islamic financing and investment, which implies the effect of long-term financial policy on Islamic financing and investment in Jordan.

Table 6. Co-integration test for study variables (EX,TT,IS).
Series: LOG(IS) LOG(EX) LOG(TT)

Prob.**	0.05 Critical value	Trace statistic	Eigenvalue	Hypothesized No. of CE(s)
0.00	29.8	61.5	0.80	None*
0.00	15.5	31.9	0.71	At most 1*
0.00	3.8	9.5	0.40	At most 2*

Note: ** $p < 0.05$, * $p < 0.1$.

3.3. FMOLS Model (Determining the Long-Term Relationship)

Given the co-integration relationship between the variables of the study, a long-term structural equilibrium relationship exists between the model variables, thereby guaranteeing no false regression. The next step is to find the model estimated using the FMOLS method. Among the advantages of this method is its ability to handle many severe problems, such as internal explanatory variable, homogeneity (endogeneity), correlation serial, and inconsistency of the potential variance of errors (Kunduz, 2021).

These problems are not tracked by the OLS. The FMOLS technique gives the possibility to obtain reliable results even in the case of small samples, such as in this study.

Table 7. FMOLS model (determining the long-term relationship for study variables (EX,TT,IS).

Variable	Coefficient	t-Statistic	Prob.
LOG(EX)	4.7	10.9	0.00
LOG(TT)	−2.5	−5.2	0.00
R-squared: 88%			
Adjusted R-squared: 88%			

As indicated in Table 7, the model shows that the explanation coefficient average (adjusted R-squared: 88%) implies that changes in the independent variables explain about 88% of the changes in the dependent variable.

Table 7 also shows that a positive, statistically significant relationship exists between government spending and Islamic finance. This result is consistent with the majority of studies that found a positive influence of government spending on investment, GDP, and growth. Thus, government spending certainly has a positive effect on financing and Islamic investment, because current and capital government spending is working to move and revitalize the economy in the country in a positive way and increase the overall demand, including Islamic financing and investment.

Moreover, Table 7 shows a negative relationship between taxes and Islamic finance. This study corresponds to the majority of research that found negative effects of taxes on investment, GDP, and growth. Prior to this study, negative effects of taxes on Islamic finance and investment are certain, because direct and indirect taxes reduce aggregate demand, which is directly reflected in the reduction of Islamic financing and investment. This result, which was reached through the analysis presented in Table 7, confirms the effectiveness of fiscal policy in Jordan in influencing Islamic finance and investment. This result also supports the demand-push theory, which is one of the objectives of fiscal policy in influencing the economy in general.

the researcher made some standard tests to ascertain the extent of stability and validity of the model, and the results are shown in Figure 4. The bias proportion is 0.004, the variance proportion is 0.029%, and the value of covariance proportion is 96%, which indicates that the error in the model is random.

The results further implies that the predictive ability of the model for the effect of fiscal policy on Islamic finance and investment is acceptable.
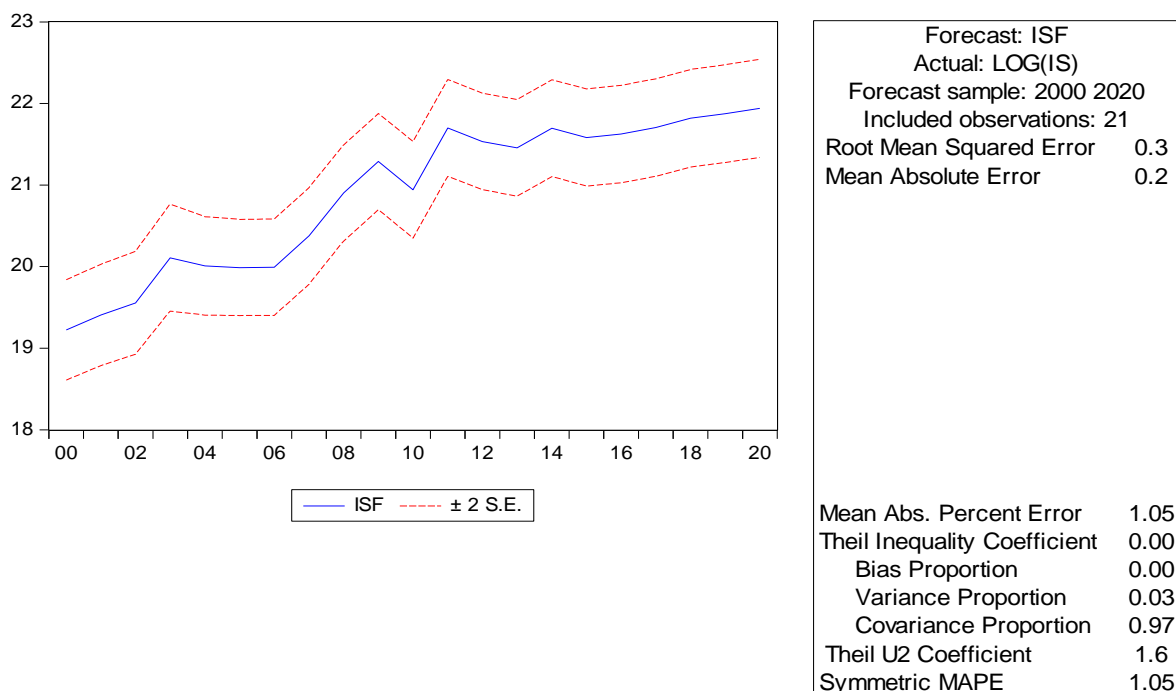

Figure 4. Stability and validity tests of the model.

3.4. Deceleration Test for Study Variables

Before conducting a test of the causal relationship between the study variables, the slow periods for the study variables are tested. The optimal slow periods for the variables are at lag (1), as indicated by the red text in Table 8.

Table 8. Deceleration tests for study variables for study variables (EX,TT,IS)..

Series: LOG(IS) LOG(EX) LOG(TT)

HQ	SC	AIC	FPE	LR	LogL	Lag
−1.7	−1.6	−1.78	3.4	NA	19.8	0
−7.2*	−6.75*	−7.3	1.3*	97.7*	81.8	1
−7.2	−6.3	−7.4*	1.4	11.7	91	2

Note: * $p < 0.1$.

Table 8 shows that the degree of slowness, as indicated by the tests, is late (1). A causality test is also conducted, and the results are shown in Table 9.

Table 9. Pairwise Granger causality tests for study variables (EX,TT,IS)..

LOG(IS) LOG(EX) LOG(TT)

Lag (1):

Prob.	F-Statistic	Obs.	Null hypothesis:
0.00	14	20	LOG(EX) does not Granger Cause LOG(IS)
0.8	0.09		LOG(IS) does not Granger Cause LOG(EX)
0.00	9.7	20	LOG(TT) does not Granger Cause LOG(IS)
0.14	2.4		LOG(IS) does not Granger Cause LOG(TT)
0.04	4.8	20	LOG(TT) does not Granger Cause LOG(EX)
0.7	0.2		LOG(EX) does not Granger Cause LOG(TT)

Table 9 shows the existence of a one-way causal relationship in terms of government spending, that is, government spending causes Islamic finance and investment. The table also indicates that there exists a one-way causal relationship between taxes and Islamic finance from the tax side, that is, taxes are the cause of Islamic finance and investment. This result is consistent with some previous studies. It also supports the hypothesis of driving aggregate demand, which implies that fiscal policy is the cause, that is, aggregate demand causes Islamic finance. This result supports the conclusion made by Kunduz (2021). In terms of economic variables, which are the reason for Islamic finance and support the theory of aggregate demand, this study emphasizes that fiscal policy is what supports the theory of aggregate demand. Therefore, according to the results of the study, the hypothesis that there exists a direct, statistically significant relationship between government spending and Islamic finance at the level of statistical significance ($\alpha \geq 0.05$) is accepted. The hypothesis that a negative, statistically significant relationship exists between taxes and Islamic finance at the level of statistical significance ($\alpha \geq 0.05$) is also accepted. These results confirm the effectiveness of the financial policy in Jordan in influencing aggregate demand. Thus, the government has a major role in pushing the economy through government public spending, including salaries and capital spending. These expenditures represent the capital and investment formation, which leads to a positive effect on Islamic finance and investment.

4. RESULTS

Jordan represents one of the Arab countries that adopt the Islamic financial industry, strengthen local and foreign Islamic banks, provide various Islamic financing and investment for economic sectors, and strengthen Islamic financial regulations and legislation. The Jordan Islamic Bank is considered the first local Islamic bank in Jordan that provides Islamic financing and investment. Then, other Islamic banks in Jordan followed suit. Thus, this study focused on financing and investment provided by the Jordan Islamic Bank to provide data on the crisis. Since 2000, Islamic finance and investment in Jordan are a great course in the field of financing for various economic sectors, and they show significant contribution to economic development and advancing Jordan's growth.

Islamic financing and investment in Islamic banks of all kinds were approved by taking the total volume of this financing during the study period. The study aims to clarify the extent of the influence of the financial policy of the Jordanian government on the volume of Islamic financing and investment through a case study of the Jordan Islamic Bank, which represents the largest Islamic banking sector in Jordan. The results of the study show the long-term effectiveness of financial policy on Islamic financing and investment from the period of 2000–2020. The existence of a long-term relationship between Islamic financial policy and Islamic financing and investment, as indicated by the analysis of the FMOLS model, implies a positive effect of government spending on Islamic financing and investment and a negative influence of taxes on Islamic financing and investment, thereby confirming the effectiveness of the government's role on Islamic banking services in Jordan.

The causal relationship between fiscal policy and Islamic finance confirms that financial policy is what causes Islamic finance and investment. That is, the growth of Islamic finance and investment follows the fiscal policy conducted by the Jordanian government through financial policies that push the aggregate demand, which affects the growth of Islamic finance and investment. The social environment in Jordan encourages dealing with Islamic banking to ease the religious conscience of the public. The results confirm that Islamic finance and investment respond to the Jordanian government's financial policy and directives toward financing and investment for the targeted sectors. They also provide Islamic financial services necessary to achieve the economic development goals that the Jordanian fiscal policy predicts.

5. RECOMMENDATIONS

The results of the study indicate that the government can, through financial policy tools, increase public spending on creating the appropriate environment for the further development of banking financial services by creating serious investment financial tools that are compatible with the provisions of Islamic Sharia. It is also possible by reducing various taxes due to their importance in driving aggregate demand, including Islamic financing and investment. An agreement must exist between financial and monetary policies that encourage innovation and development through Islamic financial engineering. In addition, economic and financial policymakers should encourage the substitution of Islamic finance and investment instead of traditional financing tools due to its importance in achieving the development goals that the state seeks. Providing incentives to local and foreign Islamic banks is also necessary, which leads to the development of banking services and encourage the opening of branches because of their importance in growth. Finally, the government must direct Islamic financing and investment toward economic sectors that aim to achieve the desired government goals.

REFERENCES

Abada, I. A. H., & Melhem, M. M. (2019). The economic importance of Islamic banking finance in Jordan: A case study of the Jordan Islamic Bank and the Islamic International Arab Bank. *Studies: Sharia and Law Sciences, 46*(3), 285-313.

Abduh, M., & Omar, M. A. (2012). Islamic banking and economic growth: The Indonesian experience. *International Journal of Islamic and Middle Eastern Finance and Management, 5*(1), 35 – 47.Available at: https://doi.org/10.1108/17538391211216811.

Alhammadi, S. (2022). Analyzing the role of islamic finance in kuwait regarding sustainable economic development in COVID-19 Era. *Sustainability, 14*(2), 1-11.Available at: https://doi.org/10.3390/su14020701.

Alves, J. (2019). The impact of tax structure on investment: An empirical assessment for OECD countries. *Public Sector Economics, 43*(3), 291-309.Available at: https://doi.org/10.3326/pse.43.3.4.

Amman Stock Exchange. (2020). Historical data, and annual report of the Islamic Bank, different versions 2000-2020. Retrieved from: https://www.ase.com.jo/en/history? history category=64.

Belkheir, F. (2021). The impact of fiscal policy on inflation in algeria during the period (1990-2018) standard study using ARDL methodology. *Journal of Organization and Work, 10*(2), 170-186.

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.Available at: https://doi.org/10.1016/j.bir.2017.11.004.

Husen, A., & Sun'an, M. (2018). The effect of government expenditures and tax on investment and economic growth in Indonesia. *Research Journal Finance and Accounting, 9*(6), 1-6.

Ismail, A. G. (2021). A model of Islamic public finance in the Malaysian constitution. *Diponegoro Law Review, 6*(1), 33-50.

Iyari, S., Lorde, O. T., & Francis, B. (2005). Financial development and economic growth in developing economies: Empirical evidence from the Caribbean. *Economics, 8*(2), 168-184.

Khan, N. (2016). The role of Islamic finance in economic development. *Lingnan Journal of Banking, Finance and Economics, 6*(1), 79-83.

Khasawneh, M. (2017). The jordanian economy: Imbalances and challenges, Al Jazeera center for studies. reports, Jordan. PP1-10. Retrieved from: https://studies.aljazeera.net/sites/default/files/articles/reports-ar/documents/ec83c8b1261a4e4b8144f5ae52e98545_100.pdf.

Kunduz, A., K, A. (2021). Islamic finance and economic growth, a standard study on the countries of the cooperation council for the Arab Gulf States, Studies of the Training and Capacity Building Institute (pp. 1-44): Arab Monetary Fund.

Ledhem, M. A., & Mekidiche, M. (2020). Economic growth and financial performance of Islamic banks: A CAMELS approach. *Islamic Economic Studies, 28*(`1), 47-62.Available at: https://doi.org/10.1108/ies-05-2020-0016.

Luktani, O. (2002). The role of Islamic banks and finance companies in development. Retrieved from: https://islamonline.net/archive.

Mariam, Z., & Sharit, K. (2018). The Islamic banking financing and its effect on the malaysian gross domestic product during 2000-2016 - an analytical and econometric study. *Journal of the Economic Researcher (CHEEC), 6*(1), 112-113.

Ministry of Finance. (2020). General government financial bulletin, Directorate of Governmental Studies and Policies, and Central Government Budget Summary, different versions (2000-2020).

Mouss, S. N. (2016). *Investment management* (1st ed.): Dar Al Masirah for Publishing, Distribution and Printing.

Muliana, N. Y., & Cahyadim, A. (2012). The impact of Islamic bank financing, government spending, and investment on economic growth in Indonesia. *Journal of Economics, 10*(2), 299 – 310.

Nourieh, K., & Saket. (2018). The impact of fiscal and monetary policy on foreign direct investment in Algeria during the period 1990-2016. *Global Journal of Economics and Business, 5*(2), 222–241.

Prasetyo, P. E. (2020). The role of government expenditure and investment for MSME growth: Empirical study in Indonesia. *The Journal of Asian Finance, Economics and Business, 7*(10), 471-480.Available at: https://doi.org/10.13106/jafeb.2020.vol7.no10.471.

Qwaidari, F., & Habeita, A. (2021). The impact of fiscal policy on economic growth in Algeria compared to some Arab countries during the period (1990-1990). *Journal of Business Administration and Economic Studies, 7*(1), 975-992.

Sharaf, S. (2020). The impact of public expenditure and taxes on private investment in Syria using standard modeling by "ARDL" method. *Tishreen University Journal for Research and Scientific Studies -Economic and Legal Sciences Series, 42*(5), 31-54.

Sulistiawati, R. (2012). The effect of investment on economic growth and labor absorption and community welfare in the province of Indonesia. *Journal of Business Economics and Entrepreneurship, 3*(1), 29-50.