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ISTANBUL SABAHATTIN ZAIM UNIVERSITY

GRADUATE EDUCATION INSTITUTE

DEPARTMENT OF ISLAMIC ECONOMICS AND FINANCE

THE IMPACT OF ISLAMIC FINANCE ON ECONOMIC GROWTH IN TERMS OF ECONOMICS SCHOOLS

Ph.D. DISSERTATION

Omar Salım ALI

Istanbul

June – 2024

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DECLARATION OF SCIENTIFIC ETHICS AND ORIGINALITY

This is to certify that this PhD dissertation titled "The Impact of Islamic Finance on Economic Growth in Terms of Economics Schools" is my own work and I have acted according to scientific ethics and academic rules while producing it. I have collected and used all information and data according to scientific ethics and guidelines on thesis writing of Sabahattin Zaim University. I have fully referenced, in both the text and bibliography, all direct and indirect quotations and all sources I have used in this work.

Omar Salim ALI

PREFACE

First, I would like to thank the Almighty God for his grace guidance and protection that he has bestowed upon me during my Ph.D. journey and the accomplishment of my dissertation. I would like to acknowledge and give my warmest thanks to my supervisor Prof. Dr. Metin TOPRAK, who made this work possible, his guidance and advice carried me through all these stages of writing and completing my research without forgetting to thank my lovely thesis progress committee members Asst. Prof. Dr. Ozan MARAŞLI and Asst. Prof. Dr. Cemil DURMAZ for their encouragement and profitable recommendations that letting my defense be enjoyable and for their brilliant comments and suggestion. I could honestly say that my dissertation could not have been completed successfully without the efforts and work done by these thesis progress committee members.

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Omar Salim ALI

ABSTRACT

THE IMPACT OF ISLAMIC FINANCE ON ECONOMIC GROWTH IN TERMS OF ECONOMICS SCHOOLS

Omar Salım ALI

Ph.D. Dissertation, Islamic Economics and Finance

Supervisor: Prof. Dr. Metin TOPRAK

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The relationship between economic growth and finance has remained an argumentative subject of discussion among economics scholars (King & Levine, 1993; McKinnon, 1974) even though most discussions are based on conventional finance. On the other hand, there is some evidence and criticism for the failure of conventional finance (Issah, 2019). Hence, the main objective of this study is to examine the impact of Islamic finance on economic growth based on Mainstream economics. To fill this gap in the literature this study examined the impact of each Islamic finance component (Islamic banks, Islamic capital markets and Takaful) on economic growth corresponding to conventional finance. The study applies the Generalized Method of Moment (GMM) technique to achieve the study objectives on the coverage of 21 OIC countries from 2017Q1 until 2021Q4.

Based on the findings, Islamic financial components especially Islamic banks, Islamic capital markets and Takaful are more powerful and more stable in economic growth than conventional finance. The results confirmed statistically positive significance on all components. However, conventional insurance is revealed to have more contribution to economic growth than Takaful. The study recommended that all financial institutions should operate according to the Islamic finance principles which including for operate under real transactions rather than virtual (financialization). Finally, the main benefit is that this work will hopefully provide additional awareness and add to the existing body of knowledge on Islamic and conventional finance, which is crucial for understanding finances.

Keywords: Islamic finance, Conventional finance, Economic growth, Generalized Method of Moments (GMM), OIC countries

ÖZET

İKTİSAT OKULLARI AÇISINDAN İSLAMİ FİNANSIN İKTİSADİ BÜYÜME ÜZERİNDEKİ ETKİSİ

Omar Salım ALI

Doktora Tezi, İslam Ekonomisi ve Finans

Danışman: Prof. Dr. Metin TOPRAK

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Ekonomik büyüme ile finans arasındaki ilişki, çoğu tartışma geleneksel finansa dayansa da, ekonomi bilimciler arasında tartışmaya açık bir tartışma konusu olmayı sürdürüyor (King ve Levine, 1993; McKinnon, 1974). Öte yandan geleneksel finansın başarısızlığına dair bazı kanıtlar ve eleştiriler de bulunmaktadır (Issah, 2019). Dolayısıyla bu çalışmanın temel amacı İslami finansın ekonomik büyüme üzerindeki etkisini anaakım iktisat yaklaşımı çerçevesinde incelemektir. Bu çalışma, literatürdeki bu boşluğu doldurmak için, her bir İslami finans bileşeninin (İslami bankalar, İslami sermaye piyasaları ve Tekafül), ekonomik büyüme üzerindeki etkisini geleneksel finansla karşılaştırmalı olarak incelemiştir. Çalışmada, 2017Q1'den 2021Q4'e kadar 21 İİT ülkesini kapsayan çalışma hedeflerine ulaşmak için Genelleştirilmiş Moment Yöntemi (GMM) tekniği uygulanmaktadır.

Araştırmanın bulgularına göre İslami finans bileşenleri, özellikle İslami bankalar, İslami sermaye piyasaları ve tekafülün ekonomik büyümeye etkisi geleneksel finansa göre daha güçlü ve daha istikrarlıdır. Sonuçlar tüm bileşenler üzerinde istatistiksel olarak pozitif anlamlılığı doğrulamakla birlikte; geleneksel sigortacılığın ekonomik büyüme üzerindeki etkisi tekafülden daha fazla bulunmuşçtur. Çalışmanın bulguları, tüm finansal kurumların, sanal işlemler (finansallaşma) yerine gerçek işlemler altında faaliyet göstermeyi de içeren İslami finans ilkelerine göre faaliyette bulunması gerektiğini göstermektedir. Son olarak, İslami ve geleneksel finans hakkındaki farkındalığın artması ve bu alandaki bilgi birikimine katkı yapması bu çalışmanın diğer önemli bir katkısıdır.

Anahtar kelimeler: İslami finans, Konvansiyonel finans, Ekonomik büyüme, Genelleştirilmiş Momentler Metodu (GMM), İİT ülkeleri

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LIST OF ABBREVIATIONS

Abbreviation	Meaning
AAIOFI	Accounting and Auditing Organization for Islamic Financial Institutions
AD	Aggregate Demand
AS	Aggregate Supply
ADF	Augmented Dickey-Fuller
AUM	Assets Under Management
ARDL	Autoregressive Distributed Lag
BNM	Bank Negara Malaysia
CAR	Capital Adequacy Ratio
CBN	Central Bank of Nigeria
COMCEC	Committee for Economic and Commercial Cooperation of the Organization of the Islamic Cooperation
CAGR	Compound Annual Growth Rate
CPI	Consumer Price Index
CUSUM	Cumulative Sum Control Chart
DIB	Dubai Islamic Bank
DPQ	Dynamic Panel Quantile
ECMS	Error Correction Models
EGM	Endogenous Growth Model
FDI	Foreign Direct Investment

FMOLS	Fully Modified Ordinary Least Squares
GDP	Gross Domestic Product
GFDD	Global Financial Development Database
GIEI	Global Islamic Economy Indicator
GMM	Generalized Method of Moments
GCT	Granger Causality Test
GF	Green Finance
GNP	Gross National Product
GCC	Gulf Cooperation Council
IB	Islamic Banking
IFD	International Finance and Development
IFSB	Islamic Financial Service Board
IIFM	International Islamic Financial Market
IPS	Im, Pesaran, And Shin's
IMCAP	Islamic Market Capitalization
IMF	International Monetary Fund
IRF	Impulse Response Functions
IPI	Industrial Production Index
IFFIM	International Finance Facility for Immunization
IBFIs	Islamic Banking and Financial Institutions

IBF	Islamic Banking Financing
IBS	Islamic Banking System
ICM	Islamic Capital Market
ICD	Islamic Corporation for The Development
IDB	Islamic Development Bank
IFI	Islamic Financial Institutions
IFSI	Islamic Financial Service Industry
ISMT	Islamic Stock Market Turnover
ISRA	International Shari'ah Research Academy
TNL	Total number of Listed
JCT	Johansen Co-Integration Test
LIQ	Liquidity Assets Ratio
LIBOR	London Inter-Bank Offered Rate
LSE	London Stock Exchange
LRSM	Long Run Structural Modelling
MAN	Management
MC	Market Capitalization
MENA.	Middle East/North Africa
MESA	Middle East and South Asia
MINT	Mexico, Indonesia, Nigeria, and Turkey

MMR	Money Market Rate
NPM	Net Profit Margin
OIC	Organization of Islamic Cooperation
OLS,	Ordinary Least Squares regression
OLSR	Ordinary Least Square Results
OJK	Otoritas Jasa Keuangan
PCT	Panel Causality Test
PLS	Panel Least Square
PSTR	Panel Smooth Transition Regression Models
PBUH	Peace Be Upon Him
PP	Persistence Profiles
PP	Phillip-Perron
PMG	Pooled Mean Group Estimation
POLS	Pooled Ordinary Least Square
PPP	Public-Private Partnership
QISMUS	Qatar, Indonesia, Saudi Arabia, Malaysia, UAE, and Turkey
ROE	Return On Equity
ROA	Returned On Asset
SAW	Sallallahu Alaihi Wasallam
SEN	Sensitivity to Market Risks

SESRIC	Statistical, Economic and Social Research and Training Centre for Islamic Countries
SAB	Shariah Advisory Boards
SS	Shariah Scholars
SSB	Shariah Supervisory Board
SIS	Social Impact Sukuk
SRI	Socially Responsible Investing
SEA	Southeast Asia
SEM	Structural Equation Modelling
SRI	Sustainable, Responsible Investment Sukuk
SWT	Subhanahu Wa Ta'ala,
TNI	Total Amount of Newly Issued Securities
TD	Total Deposits
TMC	Total Market Capitalization
TVS	Total Value of Stocks
TF	Total Financing
UAE	United Arab Emirates
URT	Unit Root Test
USD	United State Dollar
VAR	Vector autoregression
VD	Variance Decomposition

VDT	Variance Decomposition Technique
VECM	Vector Error Correction Model
WDI	World Development Indicator

CHAPTER I

INTRODUCTION

1.1 Overview

The connection between growth of economy and financial growth has remained an argumentative subject of discussion among scholars and policymakers ever since the most significant pieces on the subject by (King & Levine, 1993:513; McKinnon, 1974:1823; Shaw, 1973; Goldsmith,1970:365). According to early economic growth theory, innovations in finance interact to drive dynamic economic growth. Today's theoretical and empirical literature expands and demonstrates how financial intermediation could mobilizes savings, distributes funds, spreads hazards, and promotes growth (Greenwood & Jovanovic, 1990:1076). According to the new growth hypothesis, financial mediators and markets emerge endogenously in reaction to market extensiveness and therefore support long-term economic growth. Apart from that, some different theoretical frameworks and models have established the connection concerning finance and growth. For instance, the endogenous growth model is used in the works of (King & Levine, 1993:513; Saint-Paul, 1992:771; Gregorio & Pablo E, 1992:1; Roubini & Sala-i-Martin, 1992:5; Bencivenga & Smith, 1991:195; Greenwood & Jovanovic, 1990:1076) to analyse how financial variables interact with economic growth.

In addition, finance - growth has been discussed particularly in conventional schools. Schumpeter under the economic development theory (1911) reported that financial sectors facilitate economic growth while (Joan, 1952:12) proposed that under the demand-following hypothesis, the expansion of the financial system becomes due to economic growth. (Gerschenkron, 1962:14), also studied the demand-following model and supply-leading model and then concluded that economic growth leads to the request of financial sectors and financial intermediaries influence economic growth respectively. (Patrick, 1966:183) applied the supply-leading model to the connection from finance to economic growth particularly for less development nations and for rich countries, the demand hypothesis has been applied. Financial intermediary firms might

positively affect economic growth due to their significant volume of investment (Goldsmith, 1970:365). (King & Levine, 1993b:717) argued that effectively managed financial institutions encourage economic growth by increasing productivity and efficiency. The "financial repression theory" put forward by (McKinnon, 1973) and (Shaw, 1973:1), which follows the supply-side concept, noted that the expansion of the financial area stimulates economic growth. Despite an abundance of research on the association concerning finance and economic growth, theoretical foundations and empirical support are not fully clear and Islamic finance was not well studied. Therefore, this study encouraged an increase in interest in examining impact of the Islamic finance on economic growth from perspective of the mainstream economics.

1.2 Islamic Finance and Economic Performance of OIC Countries

The development of Islamic finance is constructed under real financial transactions that automatically attach and influence economic growth directly (Kahf, 2015). Therefore, the principles, paradigm, and axioms of realism, earning by owning and moral commitment founded by Islamic finance become major tools for boosting the economy, this is due to all transactions and institutions that operate automatically focus on natural development and exclude all virtual trades such as options, swaps, short trades, debts, that promise the development and economic growth although the social and economic problems increasing tremendously (Monzer & Tariqullah, 1992). The Islamic finance comment on received doctrine must avoid slogans and even unjustified disapproval, whether partial or total and offer alternative analyses that result in consequences and policies. It could be an economic analysis from an Islamic standpoint. As a consequence, this study would examine Islamic financial hypotheses and contemporary economic thoughts by using econometrics analysis to assess the outcome of Islamic finance on economic growth in OIC countries. According to this viewpoint, all Islamic financial industries (IFIs), particularly Islamic banks, Islamic capital markets, investment funds, and Takaful, could have an automatic impact on a country's economic growth associated with the study.

The outcome of Islamic finance on growth has been observed in several pieces of evidence from different countries including Middle East and North Africa (MENA), Organization of Islamic Cooperation (OIC) countries, Gulf Cooperation Council (GCC) states, Muslim and non-Muslim states. Therefore, there are a lot of gaps,

benefits, and reasonable reasons to consider whether Islamic finance has any impact on growth. For instance, the economies of the OIC nations also realized growth, with their GDP rising from US$13.9 trillion in 2011 to US$17.1 trillion in 2015. In 2015, the OIC countries collectively generated 15.0% of the global total production plus 26.1% of the output of emerging nations. Additionally, the ordinary GDP per person in OIC nations rose from US$8,988 in 2011 to US$10,224 in 2015 (SESRIC, 2016:1).

Moreover, the percentage of global FDI flows that went to the OIC nations increased from 8% in 2019 to 10% in 2020 before falling to 8.3% in 2021 due to the Covid-19 problem. These statistics show that when FDI flows to developed nations significantly decline, as they will in 2020, the OIC countries' shares of the global FDI flow increase. For over three decades, non-OIC emerging economies have seemed to be more attractive as FDI destinations than OIC members. Over the past three decades, the inward FDI stock of OIC nations has dramatically expanded. From $113 billion in 1992, it increased to over $2.22 trillion in 2021. In recent years, OIC nations' participation in the global FDI stock has decreased, falling from 7.1% in 2012 to 4.9% in 2021, reflecting the declining FDI performance in the world. As of 2021, the OIC Arab bloc had the majority of FDI stock in OIC nations at 45.5%. Saudi Arabia was the OIC nation that attracted the highest FDI throughout the long run, with $261.1 billion in FDI stock in 2021, or 11.8% of all FDI coming into the OIC countries (OIC, 2022:15).

In comparison to 2018, when it was 3.8 per cent, the factual GDP growth of OIC nations fell to 3.1 per cent in 2019. The OIC nations' GDP growth is calculated to slow down to 2.2 to 2.4 per cent in 2021 and remain below the average for the world. The issues seen in many OIC nations include high unemployment rates, poor skill levels, and a lack of investment in new abilities (SESRIC, 2019:vi). Sukuk development in OIC member nations today reflects the development of Islamic finance. Sukuk continues to be appealing to issuers and a variety of investors in diverse geographic areas and financial hubs. Between 2016 and 2017, the total volume of issuance climbed by 32%, from USD 87.9 billion to USD 116.7 billion. The regular issue of Sukuk in Saudi Arabia, Asia, Africa, and other regions was a major factor in its rise. The Sukuk market is still dominated by Malaysia. Stocks from nations like Indonesia, the United Arab Emirates (UAE), and Turkey, however, have also increased quickly.

Approximately 76% of all industrial wealth are estimated at USD 1.56 trillion in 2017, according to the Islamic banking sector. All significant geographical areas, including the GCC states are seeing a rise in Islamic banking assets at the same time. This requirement encourages the use of Islamic banking products, which are readily available currently. With only 12 nations in the OIC, it accounts for 92% of all assets in Islamic banking worldwide. It is attractive to demonstrate the influence on the circumstances of Islamic finance in OIC member states given the progress in economic growth.

The SESRIC study, which analyses macroeconomic trends focusing on OIC nations, has introduced the 2021 edition of the OIC Economic Outlook. During the pandemic COVID-19, which had an impact on practically every nation's economy, politics, social life, and ecology, it was discovered that OIC nations now see a decline in their actual GDP growth rate, which has driven significant government initiatives and efforts across all economic sectors. The economies of OIC nations are modestly squeezed by 1.6% on average, and it is anticipated that they will improve with growth rates of 4.3% in 2021 and 4.5% in 2022. OIC countries have become increasingly rich internationally, with the overall Muslim GDP expected to increase by 6.2% compound annual growth rate (CAGR) by 2023 (SESRIC, 2021:3).

The growth of Islamic finance setting in the financial sector, particularly in the nations of the Organization of Islamic Cooperation (OIC), appears to be related to the existing status of economic development in a stimulating study direction gap (Pudjihardjo et al., 2021:289). Furthermore, Islamic finance has made some contributions to reducing or eliminating issues of poverty, poor education, and COVID-19 by offering vaccination, food shortage, poor health, environmental destruction, and unemployment through its products, particularly Sukuk investment. As a result, the Islamic financial industry, particularly in its programs and transactions based on social-based financial instruments, could ultimately improve social outcomes (Khazanah, 2021).

Moreover, Islamic finance is constructed under the principle of the Maqasid al- shariah that comes to preserve the public interest. Therefore, social finance innovates several investment activities that create financial returns and respect social welfare. Some of the strategies and programs developed in the Islamic financial industry include the

launch of Green Finance (GF), Socially Responsible Investing (SRI), and Social Impact Sukuk (SIS) that run to fight against social, economic, and environmental problems that affect many people in the world reported by (World Bank, 2020b).

For the good news, the IFSB reported in its 2021 published annual report on Islamic finance that, notwithstanding a recovery of the COVID-19 disease in 2021, the global Islamic Financial Service Industry (IFSI) demonstrated resilience, assisted economies, and maintained its sustained growth. The projected value of the worldwide IFSI in 2021 is estimated to be USD 3.06 trillion, which would indicate an annual increase in assets in USD of 11.3% (2020: USD 2.75 trillion). Comparable to preceding years, the expansion in the worldwide IFSI's total value was mostly driven by the Islamic banking and capital markets sectors, as several nations saw their economies rebound and profited from a better global economy. The pandemic in 2020 put further pressure on takaful contributions, which resulted in a little improvement (IFSB, 2022:62). Islamic finance has a great deal of opportunity to expand and strengthen the financial sector through the wide range of institutions and products that offers (IFSB, 2015). (IFSB, 2022:62) IF involves the availability of wide range of financial institutions including banks that have great chances, and provide diversity of financial industry (IFSB, 2015). Islamic goods and services offer viable and affordable substitutes for traditional investing strategies. As financial and investing instruments, they are becoming more and more well-liked.

Even though Islamic banking is the predominant sector in the Islamic financial system, the Islamic capital market (ICM) has emerged as one of the Islamic financial institutions with a significant growth trend around the world (IFSI Stability Report 2020:6). This scenario happened due to the factor that, Islamic finance is a macroeconomic variable that provides components in the financial system and works as a financial intermediary, it can provide detailed findings to evaluate its performance on economic growth. Moreover, one of the products which are offered by ICM is Sukuk. It has become very famous and highly demanded, especially for big and long-term investments. In 2 Sukuk industry found to be continue to dominate the large shares among the industry of ICM with the double-digit growth of 22.2% in 2019, (IFSI, 2020:6).

ICM is said to be a market that is rapidly expanding, primarily based on Sukuk as one of the instruments of ICM (IIFM, 2021). Sukuk has continued playing a significant role in the Islamic Financial Services Industry's expansion (IFSI). Moreover, the Sukuk growth route has been continued by new players, issuers, and investors from many recognized locations. This paper demonstrates that from 2001 to 2020, the amount of Sukuk issued globally has increased. As a result, the greatest yearly value of Sukuk issued in 2020 which included both long-term and short-term Sukuk was USD 174.6 billion as opposed to USD 145.7 billion. Furthermore, Sukuk is a popular alternative to bonds in conventional finance due to its Shariah-compliant principles, operations, structure, and transactions. Therefore, shariah compliance is the heart of Sukuk development and Shariah approval is required. Unfortunately, there is great, that the distinction between Shariah-compliant and non-Shariah-compliant Sukuk can become distorted, especially with the existence of profit incentives and the demand for investor capital safety, security, and guarantees (Benaicha et al., 2019:329).

Apart from that significance, several major criticisms developed from various academics and writers on Sukuk that arguments raised from Sukuk operation and lead to be doubtfully founded on Shariah. Thus, the Sukuk holders were guaranteed the face value and profit forecast, and another issue was raised about Sukuk being a representation of ownership of the underlying asset. This demonstrates that certain Sukuk do not operate according to Shariah and may invalidate and weaken the validity of Sukuk by removing distinctions with conventional bonds. If all of the aforementioned rules were violated, Sukuk would essentially be nothing more than a bond (Abozaid, 2021). It could seem that the existing system of including Shariah scholars in the creation, integration, and acceptance of products is insufficient for a market that is expanding quickly and requires adherence to international best practices standards (Al-Bashir, 2008:15). From this point of view, the paper additionally expects to investigate how Sukuk has a significant impact on the economic growth of OIC countries.

In this connection, to the Global Islamic Economy Indicator (GIEI), Score for 2019/20, Malaysia and the UAE continue to take a leading role in the economic growth of OIC countries, followed by Bahrain and Saudi Arabia. Meanwhile, Indonesia has emerged from tenth part in 2018 to fifth part in 2019, owing to aggressive initiatives to

encourage economic growth through the enhancement of a dedicated Islamic economy approach. Turkey rose two places in the aggregate ranking among the top 15 countries (Dinar Standard Research, 2019).

There is extremely little research available for OIC nations, even though studies about the impact of Islamic finance on economic growth have been examined in several studies for different economies (Ali et al., 2022; Kim et al., 2018; Hassan et al., 2011). The new work could have significantly followed fields of knowledge by examining various Mainstream economics, this research goes beyond inspecting the increasing connection concerning Islamic finance and economic growth and further examines the impact of other reasonable Islamic financial variables, such as Sukuk, Islamic financing, and Islamic banking total assets, on their impact on economic growth of OIC countries. Unlike other researchers, they used time series data (Kim et al., 2018:1) and econometric techniques such as VECM, VAR, and ARDL, while this study applied the panel data and used the GMM approach.

1.3 Statement of the Problem

The impact of financial advancement on economic growth has drawn a lot of attention in recent decades based on the teachings of Mainstream economics. However, there are different perspectives on the contribution that the financial system boosts to economic growth. For instance, Levine (1997:29) contends that by assisting in the allocation of capital to its best uses, financial intermediaries expand economic efficiency and consequently, lead to economic growth, while Lucas (1988:6) claims that the involvement of the financial sector to economic growth is over-stressed. After the development of Islamic finance that imitates Fiqh in using textual and historical analysis, another room for discussion has emerged to examine whether Islamic finance has a positive impact compared to conventional finance on economic growth.

Understandably, Islamic finance could be a revolution in this discipline if it resorted to an analytical approach, using financial and economic tools of analysis developed by different Mainstream economics, rather than textual and historical analysis. Because of the presence of long-time critics and many failures of conventional thoughts, there is a need to reconstruct financial theories based on Islamic finance principles because as (World Bank, 2020a) reported there is high demand for Islamic finance in many

countries particularly Arabian states, therefore this study will attempting to respond on this report by examine on how IF is more demanded and potential then conventional finance on contributing economic growth. Therefore, several models would be testing their hypothesis corresponding with Islamic and conventional thought.

According to statistics, Islamic finance is expanding both in Muslim- and non-Muslim-populated nations. It is no longer a novel term in the contemporary financial sector, as there are currently over 7,098 Islamic financial institutions worldwide, growing at a rate of 10% between 2023 and 2024, with global assets exceeding $3.25 trillion in 2023. These assets are categorized as Islamic banking assets, insurance, Sukuk issuance, and funds (Islamic Financial Services Board, 2023).

In a similar vein, through in-depth investigation, there are some rules and principles from conventional thought that are highly correlated to the Islamic system including the issue of a market economy with a healthy investment orientation, capital accumulation and so on. History has noticed many financial crises that happened worldwide and affected the world economy or countries' economies, although run their system based on classical, neoclassical, Keynesian, new classical or new Keynesian principles so that events show the weakness of some of the principles of mainstream economics. According to the trials that happened from time to time such as the economic depression happened from 1929 up to 1933, the trial occurred in the 1980s, the financial crisis took place from 2007 up to 2009 especially in Asia, as well as European countries, even the incident of Covid-19 that took place erupted from 2019 has brought many countries being socio-economic affected (Issah, 2019). All these circumstances justify the failure of a certain conventional thought, and as a result, decision-makers, national governments, financial institutions, and major international organizations like the IMF and WB. These two World financiers have concentrated on enhancing market forces to accomplish optimal economic growth and sustainable development on a national and international scale. Unfortunately, market forces have been unable to generate balanced and fair growth, not only growth at the national level but also at regional growth amongst both developed and developing countries (Ayub, 2007:4).

The fundamental connection between Islamic finance and economic growth has been the subject of extensive theoretical discussion completed the last four decades,

however, there aren't many empirical studies that examine this connection from the viewpoint of Mainstream Economics. To bridge this scientific gap, it is crucial to examine the connections between Islamic finance and economic growth from the perspective of Mainstream economics. The primary scientific innovation of this research thus relates to the thorough examination of the association between Islamic finance and economic growth in OIC nations.

During the pandemic of Covid-19, which had an impact on the nation's economy, politics, social life, and ecology, the Muslim nations also experienced negative consequences to the GDP growth rate, which has driven significant government initiatives and efforts across all economic sectors. The economies of Muslim nations are modestly squeezed by 1.6% on average, and it is anticipated that they will improve with growth rates of 4.3% in 2021 and 4.5% in 2022. Muslim countries have become rich internationally, with the overall GDP expected to increase by 6.2% compound annual growth rate (CAGR) by 2023, as opposed to the global economy's 5.8% CAGR and a 4.3% CAGR for Gross Domestic Product per capita (Dinar Standard Research, 2019:10).

Apart from that, as it was introduced earlier in the background of this study, the Global Islamic Economy Indicator (GIEI), Score for 2019/20, Malaysia and the UAE continue to take a leading role in the economic growth of Muslim countries, followed by Bahrain and Saudi Arabia. Meanwhile, Indonesia has ascended from 10th place in 2018 to 5th in 2021, owing to aggressive initiatives to enhancement economic growth over the advance of a dedicated Islamic economy strategy.

In the light of the above score, many economic and finance studies reports have shown that Islamic finance under their products such as Sukuk products has boosted social welfare in several countries through launching different kinds of Sukuk issued for instance vaccines Sukuks issued in 2014, 2015, and 2019 to the least developed countries (LDCs). International Finance Facility for Immunization (IFFIm) issued a social Sukuk launched in 2014. This Sukuk launched on a three-period. The first vaccine Sukuk was launched in December 2014 and was carried out for three years and raised US$500 million to increase the speed of the availability of funds for vaccination programs and health systems by Gavi, the Vaccine Alliance for some of the world’s poorest countries. The second Sukuk issue was launched in 2015 which

raised another USD200 million, and 50 USD million was raised in April 2019. In less than a year, the two Vaccine Sukuks raised US$700 million on orders totalling well over $1 billion. Gavi has assisted with the vaccination of almost 288 million children in 33 poor countries from OIC member states as of the end of 2017 (Khazanah, 2021:11).

In addition to that, Khazanah offers social Sukuk on the availability of high-quality education. The program operated in Malaysia with the target of improving the accessibility of high-quality education in public schools in Malaysia. The project is governing and operating based on a public-private partnership (PPP). In its first phase, Ihsan issued RM 100 million in 2015, and in 2017 Khazanan raised RM 100 million. Until 2017, the Trust Schools Programmed had been implemented in 83 schools across 10 states, benefiting nearly 65,000 Malaysian students reported (Media, 2017). The same countries in OIC countries also experienced similar economic challenges, however, their economic performance was not major affected.

Different conventional financial thoughts that have emerged with models include the AK model, Solow model, Harrod-Domar model, endogenous growth model, Schumpeterian model, and Greenwood and Jovanovic (1990) that show the finance and economic growth nexus but because of the widespread Islamic finance, it is a time to examine that can link the connection between finance and economic growth and ultimately solving economic growth challenges. That framework would be developed after testing the influence of Islamic finance on economic growth and assessing it using conventional thought. Despite their shortcomings and conflicts with some Shariah-based Islamic finance, some aspects of conventional thought can be used to build policies and macroeconomic models that can be used to analyse economic growth based on Islamic principles (Abdullah et al., 2018). Furthermore, this study appears to be more useful in discussing economic thoughts and could provide a starting point for developing a macroeconomic policy framework, particularly on economic growth from the angle of Islamic finance.

In relation to the identified angles of Islamic finance, it concentrates not only on the financial system and transactions but also on fundamental and primary paradigms of socio-economic justice and welfare to the people as explained in the Quran (57:25). So, through the Islamic financial industry such as the Islamic banks, Islamic capital

markets, and Takaful the fundaments of social justice and equity participation should be strictly practised which in turns enhances social cooperation and participation and ultimately improve social outcomes and economic growth. At the results found, and discussion displayed in this study, we could see the relationship between Islamic finance on economic growth with correlation with convectional financial thought.

With the use of Islamic finance as an economic growth indicator, this research sought to restructure financial theory on economic growth. Following their interpretations of Islamic values and their theories, which they introduced in their remarks by establishing the Islamic viewpoint and Islamic principles as a basis for evaluating multiple facets of financial activity and economic growth, we were motivated to select the parameters from various convectional financial thoughts as provided in their theories, models, and Islamic financial indicators so that to innovate the more potential finance among these two groups on economic growth. Therefore, the study intends to fill the research gap by employing a more thorough analysis of Mainstream economics in 21 OIC member nations and to find out the potential of Islamic finance on economic growth.

Therefore, conventional finance experienced long-term and sustained criticism as well as many failures across various time periods (1929 -1933, 2007 – 2008 and 2019 - 2022). Following the increasing popularity, strong demand, and rapid growth of Islamic finance across several countries become so important to re-examine the potentiality and its impact on economic growth based on mainstream economics specifically on OIC countries due to its extensive growth in Islamic finance. Moreover, despite the rise of Islamic finance researchers in many countries, there have been no studies, to the best of my knowledge, that use mainstream economics to examine and for the application of Islamic modes of financing on the impact the economic growth.

1.4 Objective of the Study

The objective of the study is to examine the impact of Islamic finance on economic growth from the perspective of the mainstream economics.

Specific objectives

i. To examine the impact of Islamic banking on economic growth based on the perspective of mainstream economics in OIC countries.

ii. To examine the impact of Islamic capital markets on economic growth based on the perspective of mainstream economics in OIC countries.
iii. To examine the impact of Islamic insurance (Takaful) on economic growth based on the perspective of mainstream economics in OIC countries.

1.5 Scope of the Study

The Islamic finance studies have been conducted in many areas with different authors and their findings continue to be questionable because of the shares contributed by Islamic finance to businesses and projects absolutely could affect real economic growth either positively or negatively. In addition, it is shown that Sukuk become a significant tool in Islamic finance which enables to bridging of the gap between Islamic finance on economic growth from the perspective of economic schools which is an innovation that in the end could be shown in how Islamic finance could be working within the different economic thought. Currently, the Islamic financial system is predicted as a major player in economic growth in several countries and globally (IFSI, 2020). For instance in Turkey, the percentage of Islamic finance under the Sukuk Markets increased its share of GDP gradually every year from 0.013% in 2010 up to 0.054% in 2017 (Alkhawaja, 2019:98). This is due to the expansion of its assets, therefore Sukuk has become the key Islamic financial vehicle now boosting economic growth.

Furthermore, (Lahsen, 2018) addressed that, Sukuk become the major product that is shown to have a high contribution to national and global economic growth through its financing transactions, revenue generated as well and profit created subsequently Islamic banking, sukuk constitutes the additional largest section of the Islamic financial industry. It has widened the opportunity of the Islamic financial system to distant territories worldwide, with both Muslim-majority and non-Muslim-majority nations viewing Sukuk as a crucial instrument for generating capital (COMCEC, 2018:15).

Although, ICM has not started very long time due to several reasons such as low awareness, knowledge of Islamic finance well as the long-time presence of convectional capital markets which are based on bonds with other instruments and dominate the world markets currently many Muslim and Non-Muslim countries have

been established as well as operated the ICM, especially from Asian countries. Currently, (IIFM 2020) reported that at the country level, more than fifteen (15) Muslim and non-Muslim countries operate the Islamic capital market some from Asia, Africa, America, and Europe. But the Gulf Cooperation Council (GCC) and the Middle East countries are the main players in ICM. Therefore, the study would show the significance of capital markets that have been operated under Shari'ah-compliant instruments and their impact on economic growth.

Apart from that, ICM through Sukuk offers several kinds of Sukuk such as social impact Sukuk (SIS), green Sukuk, sustainable Sukuk, Sustainable, Responsible Investment Sukuk (SRI), and so on. All these concentrated market shares show that ICM brings positive outcomes to societies, the economy, and the environment. ICM provided Islamic equities and Sukuk indices that create profit through different investments and trades that comply with Shariah. The development and profit (revenue) generated through the Islamic capital market (ICM) should contribute to social welfare and solving social problems need a lot of investigation and discussion. A lot of studies work have been done on the IFIs especially Islamic banking and Islamic capital market but the study that covers Islamic finance as aggregate and focuses on OIC countries is not yet addressed, or we can say very little. In the Islamic capital market, the Sukuk is an interesting and innovative product that has gained significance as the Islamic capital market expands globally. So, the study intends to identify how Sukuk helps boost economic growth in different OIC countries. So, this research could add very valuable thought and knowledge regarding Islamic finance on economic growth.

One of the key players in the IFIs is Islamic banking then ICM. IBs are financing the Sukuk in many ways and become a more prominent player than others but the contributions to the Sukuk issued by IB on economic growth become silent and there is a need to expose these issues so that can help to know the way forward IB on their investment through Sukuk products. Moreover, there are great differences in the economic growth in the OIC countries some have high economies, some have middle-income, and others have low-income economies, therefore, this study would enable us to be able to illustrate whether the clear differences between Mainstream economics

of thought and Islamic finance points of views, as well as in the circumstance of relationship and the level of their economic performance.

The scope of the study is enclosed by examining the impact of Islamic finance on economic growth from the perspective of Mainstream economics of thought for twenty-one (21) OIC countries around the world and focusing on Islamic financial industries especially Islamic banks, Takaful, and Islamic capital markets. Therefore, quarterly data ranging from time spanning 2017Q1 to 2021Q4 were collected and the OIC countries included in the study were Malaysia, Indonesia, Bangladesh, Oman, Turkey, Bahrain, Qatar, Brunei Darussalam, Pakistan, Saud Arabia, Nigeria, Jordan, United Arab Emirates, Sudan, Afghanistan, Iran, Iraq, Kazakhstan, Lebanon, Libya, and Kuwait.

Under consideration of the above discussion, the study ends by answering the following general question.

Do the Islamic finance approach and conventional finance approach to economic growth differ?

Sub-questions:

i. Does the impact of Islamic banking differ from the impact of conventional banking on economic growth from the perspective of mainstream economics in OIC countries?
ii. Does the impact of Islamic capital markets differ from the impact of conventional markets on economic growth from the perspective of mainstream economics in OIC countries?
iii. Does the impact of Islamic insurance (Takaful) differ from the impact of conventional insurance on economic growth from the perspective of mainstream economics in OIC countries?

1.6 Research Hypothesis

(Schumpeter, 1911) observed the link concerning financial development and growth in the economy over a century ago. He argued that a healthy financial system should encourage economic progress by choosing the profitable investments that have the best chance of succeeding and by effectively allocating resources. Both perspectives on the

direction of causation between finance and economic growth are formalized by (Patrick, 1966:174). He proposes a process known as “demand following”, in which financial institutions grow in reaction to the accelerating demand of the actual economy. The supply-leading theory, on the other hand, postulates that the financial system grows ahead of the demand for financial services, offers effective resource allocation, and as a result encourages entrepreneurship and economic growth. According to (Pagano, 1993:618), capital markets accelerate the utilization of national savings by increasing the range of financial mechanisms accessible to depositors. This, in turn, offers a substantial amount of reasonably priced investment capital. One of the important areas of the financial markets where long-term financial products are exchanged is the stock markets and bond markets. The substantial positive connection between financial market advancement and economic growth is greatly proven in both theoretical and empirical investigations (Basheer & Abduh, 2016).

The study governs with the predictable hypothesis which shows that Islamic finance has great impact on economic growth in OIC countries. Even though Islamic finance under Sukuk plays a significant part in enhancing the economic growth of several states there is general debate in the literature. That is the emergence of the Islamic capital markets stimulates controversial discussion on how the Islamic capital markets could be an engine for economic growth in the state.

For instance, the previous studies show that there are several studies such as (Abel et al., 2021; Kapaya, 2020:187; Radikoko et al., 2018:290; Karim & Chaudhary, 2017) analysed the association between capital markets with economic growth, where most of them the findings of their studies are inconclusive, some results revealed that capital markets become a positive link with economic growth while others oppose the statement by demonstrating that capital markets boost the growth of the economy in the country. For instance, (Dada, 2021:711; Osaseri & Osamwonyi, 2019; Aduda et al., 2014:13; Ikikii & Nzomoi, 2013:145;Khan & Polat, 2010) the findings showed a positive stimulus of the capital market on economic growth nonetheless the discoveries of (Pan & Mishra, 2017; Baele & Soriano, 2010; Chang et al., 2003) their findings go inverse proposition it means negative relationship. Apart from these two contravening sides, there is now a group that conducted the same study with the same themes, unfortunately, their findings have shown that there is no cointegration and no causality

between these two major concepts in the economics and financial system. A good example is the studies from (Algaeed, 2021:388; Onuora, 2019:212; Abduh & Raditya, 2013). Therefore, the findings of these studies provide a gap for further studies to clarify empirically the relationship between these two nexuses.

Apart from that, in the case of Islamic banking and economic growth. Several studies have been conducted concerning Islamic banking and economic growth, but their findings were still inconsistent and still create room for further discussion. For instance, (Muhammad & Salisu, 2019:10) and (Tabash et al., 2017:403) findings revealed that Islamic banks contribute positive significance to economic growth supporting the belief that economic growth is simplified by the procedure of banks due to financial development which includes the bank industry while the findings from the others shown opposite directions which negative relationship between Islamic banks on economic growth.

The transmission channels through other macroeconomic variables are very important in economic growth, Islamic finance scholars are found to support the volume of Sukuk and intensity of Sukuk. These channels with other macroeconomic variables could affect economic growth. (Smaoui & Nechi, 2017:13) and (N. Ahmad et al., 2012) showed that Sukuk becomes a granger cause of economic growth after controlling other macro determinants of GDP growth. Therefore, most of the studies have focused on the role of Islamic banks in the transmission process effects on the real economy such as (S. H. Kassim & Abd Majid, 2008) and (S. H. Kassim et al., 2009).

The study hypothesized that:

i. Islamic banking leads to higher economic growth from the perspective of Mainstream economics in OIC countries.
ii. Islamic capital markets lead to higher economic growth from the perspective of Mainstream economics in OIC countries.
iii. Islamic insurances lead to higher economic growth from the perspective of Mainstream economics in OIC countries.

1.7 Research Gap

This part briefly discusses the gap in the literature. There are several studies on Islamic finance and economic growth have been conducted by various authors such as (Ledhem & Mekidiche, 2022:4; Algaeed, 2021:388; Seda et al., 2020:209; Musa et al., 2020:91; Alkhawaja, 2019:95; Echchabi, Aziz, & Idris, 2018:60; Smaoui & Nechi, 2017:1; Zarrouk et al., 2017:2; and Abd.Aziz et al., 2016:63). From these studies, different arguments have been revealed concerning the findings of the suggestion between Islamic finance and economic growth. For instance, the studies claimed that Islamic finance based on their segments (Islamic banks, Islamic capital markets and Takaful) confirmed to have a positive significance support to economic growth (Ledhem & Mekidiche, 2022:4; Ali, 2021:180; Seda et al., 2020:209; Mitsaliyandito et al., 2017:1; Abd.Aziz et al., 2016:63), while other studies revealed that Islamic finance doesn't have an impact on economic growth (Sumarti et al., 2020:15; Echchabi, Aziz, & Idris, 2018:60; Smaoui & Nechi, 2017:1; Mohamed & Seifallah, 2010:1).

Therefore, through this research gap, several issues were raised based on studies on the part of methods applied while others were concerned with disaggregating the Islamic finance industries. Moreover, another aspect emerged based on the number of samples used for those studies. Therefore, through the above-identified literature reviews, the following are the main areas that are noticed as research gaps.

The findings found from those studies were very different and inconsistent, some studies concluded that Islamic finance has a positive significance on economic growth while the other studies got opposite results. Because of that, this study would enable us to fill the gap by showing the correct side because the study covered many countries from different regions. For instance, the studies conducted by (Musa et al., 2020:91; Sari et al., 2018:21; Mitsaliyandito et al., 2017) their results show that Islamic finance has a definite govern on economic growth. Nevertheless, other studies revealed no cointegration and insignificance influence economic growth. These conclusions are justified by (Avci, 2020:66; Alkhawaja, 2019:95; Smaoui & Nechi, 2017:1). This gap is explained in the empirical review in detail because in this section all previous studies have been elaborated on one by one in a clear and precise form.

Although several previous studies conducted based on Islamic finance most of them are directly based on Islamic banking or Islamic capital market disaggregated and focused on an individual country which shows a relationship with economic growth while few studies are based on a group of Muslim countries or Islamic international organizations such as GCC countries, MENA countries. Such few studies include the study of (Abd. Aziz et al., 2016) which was undertaken on the given nexus based on GCC countries, Also the study of (Yıldırım et al., 2020) and Nayan & Kadir, (2014:4) covered nine countries and ten countries respectively, while (Smaoui & Nechi, 2017:8) cover the sample of 18 countries. Apart from these other previous studies focus on individual country-applied time series data. Therefore, this study would be crucial and advantageous because it tends to fill the gap of the previous studies by covering a large sample of more than 10 countries and applying up-to-date information.

Furthermore, the key gap that arose and stimulated the validity and reasonable cause for carrying out this study. It is one of the earliest studies that relate Islamic finance with economic growth based on the perspectives of different economic schools. We know that most of these schools are based on conventional finance. Therefore, this study will enable us to evaluate and assess the principles and structure of Islamic finance concerning the variables of Mainstream economics, therefore at the end of this study, the linkage between these two sides could allow us to confirm the impact of Islamic finance on economic growth based on the existence of conventional thought.

Moreover, most of these studies conducted have not used Sukuk issuance as their focus variable but they used the Islamic banks, total Islamic capital market capitalization, and Islamic stock market turnover (ISMT), few studies used Sukuk issuance per GDP as a proxy measure of Islamic capital market and total financing of Islamic banks. For instance, the studies from (Yıldırım et al., 2020; Echchabi et al., 2018:60 Smaoui & Nechi, 2017:11). Within the selection of the variables that could represent or measure the Islamic finance contribution it is very big on the very limited studies that apply the modes of Islamic financing on economic growth although these instruments have great implication on economic growth because it attached on the real economic activities such as business, manufacturing, constructions and projects. Therefore, this study filled the gap by applying the Murabaha, ijarah and Musharaka financing on economic growth.

Apart from that, there is a gap in the econometric techniques applied by studies. Most of the studies used time series data such as (Mulyadi & Suryanto, 2022:29; Khasanah et al., 2021:103; Tan & Shafi, 2021:102; Ali, 2021:180; Kapaya, 2020:187; Muharam et al., 2019:196; Alkhawaja, 2019:95; Sari et al., 2018:21; Tabash et al., 2017:403; Mitsaliyandito et al., 2017:1; Wardhany & Arshad, 2015:89; Majid & Salina, 2014:292; Yazdan & Hossein, 2012:1). All these studies were based on one country and used time series data and unfortunately, few of the previous studies covered an average of three or more than those countries including (Issa, 2022:131; Naz & Gulzar, 2022:1; Mifrahi & Achmad, 2020:72; Bendriouch et al., 2020:352; Mensi et al., 2018:1; Badri & Boujelbene, 2016:101; Tabash & Raj, 2014:11; Tajgardoon et al., 2013:542; Mohamed & Seifallah, 2010:1) therefore this study fills this gap by applied dynamic panel data and comprises 21 OIC countries.

In the context above, most of the research has shown contradictory and inconsistent results about the influence of Islamic and conventional finance on economic growth. Conversely, very little, if any, research has been done to investigate the effects of Islamic and conventional finance on growth. Additionally, considering the prominence of the Islamic finance sectors, there is little evidence to imply that the economic growth of both forms of financing has taken place in the OIC member states. This research intends to provide empirical facts, primarily on the economic growth in the Islamic and conventional finance sectors, considering this gap.

In summary, the research gap of this study derived from the absence of a study that scrutinize the impact of Islamic finance on economic growth depend on the perspective of Mainstream economics in comparison with traditional finance and in the end enables to development of a reliable framework for Islamic finance on economic growth. Moreover, for OIC countries with the application of the dynamic panel method, the study will fill the gap because as the above discussion shows most of the studies covered individual countries or groups of countries such as GCC, MENA but not for OIC countries were very little although they have good background and development of Islamic finance industries.

1.8 Importance and Contribution of the Study

It is understood that the theoretical support shows the existing of a correlation between finance and economic growth because it keeps the mobilization of capital from surplus units and their channelling into shortage units for investment thus increasing economic growth. This study will give more information and clarity on theories of the finance-growth nexus such as the Solow hypothesis, and endogenous model. Islamic finance focuses on the real economy and running under the principles of realism, earning by owning, channelling capital through sale, sharing, and leasing which is contrary to the conventional finance which is based on loans and lending.

This research will fill the gap in the discussion of the various economic schools' perspectives on the areas and circumstances related to Islamic finance principles. There is a big gap that needs to be innovated in terms of how mainstream economics relate to Islamic finance in terms of the hypothesis or models of economic growth. As a result, this study will provide the foundation and direction for mainstream economics related to Islamic finance, to later develop policy frameworks while taking different countries into account.

Most OIC countries have already been engaging and operating Islamic finance for more than 20 years, since the introduction of Islamic finance, funding from the public and private sectors has drawn interest from all around the world. Islamic finance has become more prominent in the global financial markets as a result of its significance as an intermediary in directing capital toward the development of a nation's economy. Therefore, the study will create a deeper understanding of Islamic financial products through an in-depth analysis and their ultimate result on economic development.

Furthermore, the study will stimulate further research about different Islamic finance instruments on economic growth in Muslim countries. Apart from that, the study will open the window to the study of the individual Islamic financial industry including Islamic banking, Takaful (Islamic insurance), and capital markets especially under types of modes of Islamic financing such as Wakalah, Mudarabah, Ijarah, Musharakah, Mudharabah, and Sukuk which took the leading position for the most of the investors, in which these areas where the researchers did not give much attention.

This research will be used as a benchmark by all Muslim and non-Muslim countries, investors, and governments officers in the countries that do not establish IFs as well as regions with a great awareness of Islamic finance and those that have not launched yet. The study will recommend that all stakeholders have confidence and pay attention to the Islamic financial instruments-related standards that are being set.

The originality of this study was to emphasize further understanding of Mainstream economics of thought on how related or not related to Islamic finance on economic growth in OIC countries. Also, the thesis contributed to filling the gaps in the current pieces of literature on the impact of Islamic finance on economic growth from the perspective of economic schools that consist of almost two economic models which is very rare from the previous studies. Existing kinds of literature have only focused on the impact of Islamic finance on economic growth in general or selecting only one model, especially an endogenous model. Finally, to the best of the writers' understanding, this thesis is among the earliest studies to examine the impact of Islamic finance on economic growth based on different economic schools.

This study provides empirical evidence on the impact of Islamic finance on economic growth since it has proven that the nature of its real financial transactions has real benefits and contributions to real economic growth than conventional finance found to harm real economic growth.

In summary, this thesis will give more verification and comparison of Islamic finance and conventional finance on economic growth and as a result, keep the development of Islamic finance model on economic growth. However, that model will provide the foundation and direction for each Mainstream economics models interrelated with Islamic finance. Therefore, this research paper makes contributions to be the first study to scrutinize the Islamic finance-growth nexus in terms of different Mainstream economics of thought. Second, we use a relatively new, and yet little-used, estimation technique, which is the Generalized Method of Moments (GMM) model, developed by (Arellano & Bond, 1991), (Blundell & Bond, 1998) and others. Lastly, OIC countries are an interesting case per se to assess the various Mainstream economics concerning Islamic finance on economic growth given its characteristics and development of Islamic finance industries especially Islamic banks, Takaful and Islamic capital markets that are reported to be leading countries and region.

CHAPTER II

THE COMPONENTS AND FRAMEWORK OF ISLAMIC FINANCE

This chapter describes a thorough explanation of the sectors of Islamic finance that were established and continue to function. It highlighted the sectors' financial development while examining the fundamental theoretical ideas underlying common Islamic finance. The chapter is categorized into four (4) sections; the first section talks about Islamic banking, the second one, presents Islamic capital markets, the third, expresses Islamic insurance (Takaful), and lastly overall performance of the components of Islamic finance.

2.1 Islamic Banking

The contemporary Islamic banking emerged as an extension of Islamic finance in the more recent part of the 20th century, as a consequence to the collaborative efforts of financiers and Islamic scholars of Shariah. Institutions that gave out Islamic financial services began around the 1960s in isolation, but once after the establishment of the Islamic Development Bank (IDB) and Dubai Islamic Bank (DIB) in 1975 resulted from the driving of Islamic banking into real momentum. In the primary stage, the theoretical model of Mudarabah launched into a multipurpose model to enhance the Islamic banks to run trading and leasing businesses (Ayub, 2007:xxi).

Due to the development and high involvement of Shariah Scholars (SS), the Shariah Supervisory Board (SSB) and Shariah Advisory Boards (SAB) such as the (AAIOFI) provide judgmental needs and approval of the financial issues concerning to permissibility or prohibition of the services or products offering by Islamic banks and other Islamic Financial Institutions (IFI). Apart from that, the major function which is performed by SSB is to offer recommendations and legal advice based on Shariah compliance to the IFI concerning its transactions, and its products, setting the principles as well as structure of the operation. Moreover, the precision of the standard-setting institutions such as the Islamic Financial Service Board (IFSB) since

2002 and the AAIOFI launched in 1991 gave the way to acceptability and credibility for Islamic services globally.

The study by (Zainur, 2021:52) justified that, Islamic finance has a great important impact on the modern economy and finance, by introducing new ideas and models that are implemented following the circumstances compromising the principles that must support the Islamic economic system. Even though the Islamic financial system is not new, it has undergone new developments in contemporary times as a result of the roles played by (Ahmad Khurshid), who is also known as the father of economics. (Zainur, 2021:53) in his paper explained that Ahmad Khurshid identified four (4) phases in the discourse of Islamic economic philosophical development, such as the first phase when the ulama, used their religious knowledge of socioeconomic concerns but had no formal education background in economics and finance, attempted to focus on the issue of interest by bringing economists, eventually coming up with what was anticipated in the 1930s. Local financial institutions were founded in the 1950s, reaching their height in the 1970s.

The second phase, which started in the late 1960s and focused on Muslim economists trained in American and European colleges, looked more closely at the prohibition on interest and proposed alternatives to retain financial institutions and transactions. They also held seminars on economic topics before the Islamic scholars started making ijtihad rulings about monetary and economic matters.

In similar contexts around this period, prominent academicians such as Ahamad Zarqa, Khurshid Ahmad, Nejetullah Shiddiqi, and Umar Chapra participated in economic discussions. Realistic initiatives to establish IFIs, including those from the public sector as well as commercial sectors, are characterized in the third phase. This era, which resulted in the formation of institutions launched in the 1970s including IDB was a visible combination of the effect of the academic and practical struggles of economists, and businesspeople. In the fourth phase, common theory and practice, especially IFIs, which will serve as the cornerstone for all people living on Earth, are developed using a more thorough approach and set of principles (Zainur, 2021:53).

Based on the above stipulated vivid development history of Islamic banking, Islamic banks have revealed greater progress that is significant than has crossed across the

global level. For the experts, policymakers, and practitioners of Islamic finance, the incredible development thus far, the current situation, and the difficulties that lie ahead raise some critical questions.

Currently, almost 500 of the Islamic financial institutions and an additional 190 traditional financial institutions participate in Islamic finance, which is now active in roughly 75 countries. The fast expansion has been powered by factors like an strengthen in the number of Muslims and their willingness to engage in Shariah-compliant banking and finance, wealth in the GCC, and the emergence of Asia as an economic powerhouse (Habib, 2018:19).

2.1.1 Performance of Islamic Banking

Islamic banking other depository monetary institution conducting all its operations under Islamic principles is referred to as an Islamic bank. It refers to a depository monetary institution that generally operates on a Wakalah basis and takes deposits from people, businesses, corporate clients, governments, and other real-life entities.

Islamic banks have a greater incentive to assess clients' financial needs in addition to their capacity to pay than they must focus solely on client requirements. The bank is always more interested in developing relationships with people in society who need financial partnerships or help but can also pay back by fulfilling their obligations.

In every industry category, Islamic banks continue to possess the most assets than others like Islamic capital markets and Takaful. Islamic banking total assets reached $2.3 trillion in 2020, growing by a double-digit rate of 14% year over year, somewhat less than in 2019. In contrast, the growth of assets in Islamic banking in 2018 was only 2%. As indicated by the IFD Report, the Islamic banking sector presently explanations for 71% of all Islamic financial assets or 1.721 trillion US dollars, and research suggests that it was stable during and after the 2008 global financial crisis. The statistics show that the GCC countries' special leading Islamic banks are Al Rajhi Bank from Saudi Arabia, Dubai Islamic Bank from UAE, Kuwait Finance House from Kuwait, Maybank Islamic from Malaysia, and Qatar Islamic Bank from Qatar by total assets, demonstrating the systemic significance of this core area to the total global Islamic banking industry. The GCC continues to be the region with the most Islamic banks by assets (IFSI, 2020:5).

According to data released (Dinar Standard Research, 2019:59), the Islamic finance and banking sector contributed the most to OIC countries' GDP growth and found to be a strong linkage between these two concepts. Moreover, the rate has risen consistently throughout the years, for example, it was recorded as 7.6 in 2014, 8.3% in 2016, and 8.5% in 2018. Because of Emiratis' strong connections to Islam and their commitment to its teachings, the banking industry in the UAE is one of the key contributors to the nation's overall GDP (Zarrouk et al., 2017:4).

The GCC nations continue to hold the top spot in standings of the worldwide Islamic banking asset share, which climbed to 57.6% in 2021. The worth of Islamic banking assets in the area increased to USD 1,212.5 billion (see Table 2.1). All the GCC nations had a growth in asset size in 2021, except for the UAE. The domination of the area is projected given that each GCC nation has a sizable Islamic banking industry that is crucial to the region's different economic transformation and diversification initiatives. Additionally, MESA and SEA areas have performed well, with their shares rising beyond 10%. Like the pattern from previous years, Islamic banking contributed most of the rise in the worldwide IFSI's total value, making up 68.7 per cent of it and accounting for USD billion 2104.1 of all Islamic banking assets. According to the number of nations, Malaysia, Saudi Arabia, Iran, and the UAE were the top four in Islamic banking (IFSB, 2022:12).

Table 2.1: Breakdown of the Global Islamic Banking Assets by Region

Region	**Islamic Banking Assets (USD Billion)**	**Share (%)**
GCC	1212.5	57.62
SEA	287.5	13.66
MESA	477.1	22.67
Africa	58.2	2.76
Others	68.8	3.20
TOTAL	**2104.1**	**100.00**

Region	Islamic Banking Assets (USD Billion)	Share (%)
Share in Total Islamic Finance (%)	**68.7**	

Source: IFSB, 2022:12

Table 2.2: The Global Islamic Banking Assets by Country

Rank	Country	Islamic Banking Assets (US Million)	Shares (%)
	GLOBAL	1.565.782	100.00
1	Malaysia	423.285	27.03
2	Saudi Arabia	338.106	21.59
3	Iran	320.300	20.46
4	United Arab Emirates	140.289	8.96
5	Kuwait	92.403	5.90
6	Qatar	81.027	5.17
7	Bahrain	64.644	4.13
8	Turkey	51.161	3.27
9	Indonesia	35.629	2.28
10	Bangladesh	18.938	1.21

Source: Reuters, 2014:21

2.1.2 Islamic Banking Contracts

The study by Kahf (2015), separated Islamic banking contracts into two categories based on the nature and the characteristics in their book called Islamic finance contracts. Corresponding to the characteristics of the contract, they may be classified into exchanging contract, sharing contract and contributory contract and cooperative contract. In an exchange contract, sales and lease are included whereas, in a sharing

contract, revenue and profit sharing including musharakah, mudarabah, and muzara are part of it and in a contributory, it may be repayment and without repayment type of contract, ariyah and gifts are part of them. Lastly, cooperative contracts are included. For instance, marriage, insurance, and entertainment contracts. According to characteristics contracts can be amanah and musawamah contracts. Amana means honesty and disclosure of everything related therefore, Murabah, Wakalah, Wadhia and Bay, Bil amanah are included in Amana contracts. All sharing contracts, Ijarah, Wadhia, wakalah, and collateral are amana hand which means when there is one's property or confidential information in the hand of someone else. In Musawamah contracts are Sale, Salam, Istisna, Lease and Sharing contracts.

Apart from that, other three fundamental sharing-based financial contracts are mentioned in classical works on shariah for the 12 Century, Islamic financial contracts are crop-sharing (muzara'ah), and equity sharing. Also describe three sale-based financing that manufacturing finance sale (istisna), forward sale with a cash advance (salam) and deferred or instalment payment sale. Finally, leasing is mentioned in classical texts as a method of finance. The collection of these contracts is known as the nomination contracts.

2.2 Islamic Capital Markets

Equity markets and Sukuks markets are the major components of Islamic capital markets. Additionally, the Islamic capital market instruments must adhere to Shariah and exclude the elements of maysir, gharar, and riba. These markets could be operated and participated in by different group of stakeholders. The IIFM, the IFSB, and the AAOIFI are the primary worldwide Islamic regulators involved in creating, governing, and promoting Islamic capital markets (Habib, 2018:15). The (McKinnon, 1973) and (Shaw, 1973:1) “financial repression theory” which holds that the financial markets and financial channels of investments can spur economic growth, is also consistent with the view that finance is driving economic growth grounded on the supply-leading Schumpeter hypothesis, Schumpeter's primary justification was the critical contribution made by financial institutions to the acceleration of both technological advancement and economic activity as quoted from (Ledhem, 2020:4) and (Sibindi & Godi, 2014).

2.2.1 Sukuk Markets

According to Shariah Standard No. 17 of the (AAOFI), a Sukuk is defined as "certificates of equal value representing undivided shares in ownership of tangible assets, usufruct and services, or ownership of the asset of a specific project or special investment activity". This definition is accurate only after the Sukuk's value, the subscription period has ended, and employment funds received for the Sukuk's intended use have been received (AAOIFI, 2008). Additionally, the AAOFI identified the most common varieties of Sukuk, including Istisna, Ijarah, Mudarabah, Musharakah and Murabahah Sukuk, as well as viable combinations of several of these types (Al-Bashir, 2008:1).

Most of Muslim and non-Muslim nations, including advanced and undeveloped, have recently acquired an appreciation for Sukuk as one of the finest alternatives for generating capital outside of the traditional financial system (Sufian & Zulkhibri, 2015:59). Islamic Sukuk is highly influential and has a important impact on a mixture of financial and economic operations. They also hold a respectable position in the global financial markets. Sukuk is now regarded as the most popular financial instrument among Islamic financial institutions and one of the industries with the quickest rate of growth in the global financial landscape. The development of Sukuk and ensuring that this Sukuk complies with Sharia criteria should receive more attention from institutions (Ahmed et al., 2015:93). Despite the Islamic financial sector's growth in many areas and the rising demand for Sukuk trading both domestically and abroad, several challenges are affecting the validity of Sukuk (Ahmed et al., 2015:84), and (Usmani, 2007).

The determination of the authenticity of the Sukuk contained the interest of the shareholders (investors), financial institutions, and supervisors including Shariah auditing, pricing, Shariah documentation, rating, and Shariah risk, and (Ahmed et al., 2015:85). However, this part would mainly look at aspects of Islamic Sukuk, including shariah compliant risks, price, shariah supervisory board, shariah auditing, shariah certification, and rating. A variety of variables indeed influence the legality of Sukuks. The reason is that these are, essentially, the key criteria that Islamic financial institutions (IFIs), investors, and regulators, will consider when establishing the

legality of an Islamic Sukuk under Shariah. Additionally, the chosen qualities are accessible in Sukuk's Shariah reports and are of a very general type.

Conversely, the Chairman of AAOIFI in 2007 highlighted that the majority of Sukuk products available on the market were not entirely Shariah compliant, necessitating an immediate assessment (Usmani, 2008). In response, the Muslim Council of Britain (2008) published the Islamic Finance Transparency Standard, a consultative document with the three goals of increasing consumer protection, raising the level of consumer understanding of Islamic retail products, and lowering consumer uncertainty regarding non-compliant Shariah products (Ginena, 2014:89).

A short while later, in 2010, the Bank Negara Malaysia (BNM) released its document on the topic, the Shariah Governance Framework. Furthermore, some studies (Jallad, 2017:1764) and (Al-Bashir, 2008:3) mentioned that one of the elements influencing the legitimacy of Sukuk is the price. The price of the Sukuk in Islamic finance may depend on debt or equity and might employ an interest rate-related benchmark, such as the London Inter-Bank Offered Rate (LIBOR). This involves Sukuk securities, which are valued using proxies for the resulting cash flows (profits or rental income). Shariah academics have opposed this practice since one of the major tenets of Islamic law because it is associated with interest rates.

Shariah scholars are still attempting to discover a substitute for the interest rate as a readily accessible measure of profitability, though (Al-Bashir, 2008:8). Because of this, traditional usury-based standards are used to calculate Sukuk pricing in the absence of Islamic compliance benchmarks (Selim, 2008). This viewpoint is supported by the fact that modern Islamic finance is nonetheless in its early phases of growth (Muhammad, 2002) which allows for the adoption of conventional mechanisms. Following this reason, many studies asserted that using the London Interbank Offered Rate (LIBOR) as a standard and benchmark is improper from a Shariah standpoint. Because it calls into doubt the legitimacy of Sukuk, this is a significant challenge to the pricing of Islamic financial instruments and must be stated as such (Aloui et al., 2015; Nanaeva & Pandey, 2010; Muhammad, 2007).

Sukuk may often be divided (Rating) into two groups: asset-based and asset-backed securities (IFSB, 2005). One of the elements influencing the validity of Sukuk is

grading. Sheikh Usami, declared in 2007 that about 85% of Sukuk unsuccessful the Shariah-compliance criterion. The rating agencies had already declared the distinction between asset-based and asset-backed, as evidenced by select approved applications of the asset-backed safe keeping grade methodology to Sukuk businesses. The Shariah laws will become more closely followed and the validity of Islamic Sukuk will rise when they are asset-backed (Ahmed et al., 2015:85).

Additionally, Ginena (2014:86) reported that Islamic finance industries may be faced with distinctive operational risks that have an impact on a product's compliance with Shariah is so-called shariah risk. The compliance of the Sukuk is critically impacted by a Shariah risk, which can also negatively affect investors' willingness to support the instrument and, eventually, the pricing of the Sukuk. Unfavourable risks have an impact on how competitively Sukuk asset prices are established (Ahmed, 2011:6). Shariah risk, if improperly handled, could erode the trust of stakeholders, including clients, investors, depositors, and staff, who become aware that the organization is not upholding its pledges (IFSB, 2007). According to earlier research, lowering the Sukuk's Shariah risk is a crucial component that might improve its adherence to Shariah and extreme strengthen the Sukuk's legitimacy (Casper, 2012:13). It is understood that any likely risk associated with the investment suggests that the stakeholders are adopting a sort of risk known as quasi-equity, which is not preferred for investments. As a result, the Sukuk documentation is completely silent on revealing any potential risks (Haneef, 2009:121). The results of earlier studies suggest that minimizing the Shariah risks for Sukuk is a crucial component and that boosting the Shariah compliance structure by elevating the role of Shariah advisors should intensification the legitimacy of Sukuk (Ginena, 2014:98).

In addition, Shariah auditing is a crucial and important aspect of corporate governance that monitors IFI company practices to make sure that all transactions are entirely compliant with Shariah (Casper, 2012:8). Various studies have shown that a crucial factor in enhancing the authenticity of Islamic financial instruments is giving information for apparent Shariah-compliant documentation (Haniffa & Hudaib, 2007:106). However, although the Shariah auditing operation has been acknowledged as a viable supervising tool for Shariah compliance, it has not been used extremely (Kasim et al., 2009:9).

Moreover, Sukuk should be under the control of the Shariah Supervisory Board to ensure their authenticity and adherence to Shariah rules. The SSB's responsibility would be to supervise the financial institution. Shariah specialists who can help IFIs complete their transactions in compliance with Shariah's rules should be included in such a supervisory body. SSB often consists of a variety of scholars who are familiar with Fiqh Muamalat (one who is knowledgeable about the laws governing economic transactions) to provide counsel on financial transactions and activities that adhere to Shariah law. The SSB is not including a doubt the greatest considerable and powerful body in every IFI. As a result, it could ensure that Shariah compliance is achieved and that Sukuk issuance is legitimately authorized. The SSB can provide a fatwa (a learned interpretation or legal opinion), which authenticates and underpins the permission of Sukuk issuance and lends validity to the Sukuk structure and the procedures used, with proper monitoring and assessment of the Shariah operating documents (Haniffa & Hudaib, 2007:102). The SSB's moderating function is used to maintain and increase the credibility of Sukuk.

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2.2.1.1 Performance of Sukuk Markets

South-East Asia continued to hold the title of the largest share for outstanding Sukuk in 2021 on a regional level. The amount of outstanding Sukuk for the SEA area represents 50.33 % of the total. Additionally, compared to other regions, the region's COVID-19 vaccine roll-out coverage was substantially greater, which hastened the region's economic reopening and recovery. Given that the GCC council maintains US$332.3 billion while the SEA contains US$390.3 billion, where the GCC share reached 42.8% of Sukuk outstanding, the GCC grabbed second place in comparison to other regions (IFSB, 2022:12).

When compared to other regions like Africa, the MENA, and others, the GCC and SEA nations covered 93.13% of the outstanding Sukuk. Additionally, there is 775.7 billion US dollars' worth of Sukuk outstanding for the year 2021, representing a 25.4% share of the Islamic financial industry.

Table 2.3 Breakdown of the Global Sukuk Outstanding by Region

Region	Sukuk Outstanding (USD Billions)	Share (%)
GCC	332.3	42.8
SEA	390.3	50.33
MESA	26.9	3.50
Africa	1.8	0.23
Others	24.4	3.14
TOTAL	**775.7**	**100.00**
Share in Total Islamic Finance (%)	**25.4**	

Source: IFSB, 2022:12

2.2.1.2 Sukuk Markets and Shariah Compliance

The foundation of the application of the Sukuk comes from Islamic Shariah. Shariah states as the body of Islamic law in literary terms. Islamic law was not codified in a specific jurisdiction's black-letter laws; rather, it is a body of ethical standards and regulations that have evolved all over Islamic history grounded on the Quran and Sunnah. Additionally, the term "fiqh" relates to the understanding of Shariah's actual laws and regulations. While one aspect of fiqh muamalat refers to banking and financial operations that are a part of economic activity.

There are two primary sources and secondary sources of Shariah, according to the traditional doctrine of Islamic law. The Holy Quran, which was exposed to the Prophet Muhammad (SWA), is the main source for Islam. However, it is debatable if some Quranic passages' prohibitions are mandatory or permissive. The Sunnah (the accepted manner of conduct of the Prophet Muhammad, SAW), who is regarded as having been

recorded in hadith, is the second most significant source. The consensus of jurists, analogous deduction, and analytical reasoning are examples of secondary sources for Shariah. According to Wahbah Zuhaili (Usul al-Fiqh al-Islami), there are two different kinds of Shariah foundations. The Quran, the Sunnah, the ijma, and the qiyas are the sources on which all madhahib agreed. According to him, these are the sources that all Muslims must follow since they are required (wajibatul ittiba'). These sources istihsan, consideration of public interest, the presumption of continuity, blocking the means, and customary practice, are those on which the Madhahib disagree. The "four major pieces of evidence" are the Quran, the Sunnah, the ijma, and the qiyas, according to (Kamali, 1999). They rely on primary sources to help them conclude (the Quran and the Sunnah).

The Holy Quran and Sunnah, which are the foundational texts of Islamic law, do not mention Sukuk in this context. Ijtihad led to the concepts that were created regarding Sukuk, their potential architecture, and their actual application. As a result, one should debate the idea of Ijtihad given its significance for any investigation involving Sukuk.

The study by (Ariff et al., 2013:622) showed that the Sukuk is currently created in that environment and markets that operate as convectional bonds so around the world 12 markets as traded instruments and 20 private issue the Sukuk for Islamic shariah compliant instruments traded. The development, better performance and worldwide spread of Sukuk and its financial instruments have replaced conventional bonds as a result of the need for funding through many financial markets (Rahman et al., 2013:28) and this is due to many investors to justify that the Sukuk as a Shariah-compliant alternative to traditional bonds based on Ijtihad practice.

All markets experience innovation, and no market can remain without it. The Sukuk market, as one of the financial markets since, was introduced, has displayed outstanding innovation, which fits this description. If a Sukuk structure intends to adhere to Shariah, it must, at minimum, be guaranteed by actual assets. Shariah consequently mandated that 100% of the backing for Sukuk be in the form of physical assets (Radzi, 2018:19). Islamic academics believe that the characterization of assets is the most important Islamic finance concept to keep in mind while arranging agreements that are consistent with Islamic law. For any business seeking to mobilize its financial resources, identifying eligible assets is a crucial stage in the procedure of

issuing Sukuk, as indicated by (Radzi, 2018:19) and (Radzi & Muhamed, 2012:36). The fact that Islamic financing is an asset-backed institution is among its most significant qualities, and it is legitimate since it limits the use of money to support commerce or the creation of tangible assets. In actuality, the requirement that transactions be real asset-based is the most apparent of all the laws governing the form of Islamic financial instruments.

The uniqueness of the assets is crucial in cases when the money obtained is utilized to finance a necessary tangible item. In other words, the assets being sponsored should be identified properly (Radzi, 2018:16). The underlying asset that is a core component of Sukuk will act as a source of income for investors through sales, renting, or partnerships. Furthermore, as "rewards are granted only if profits are achieved," Sukuk holders should see asset ownership in the assets as a key principle in Sukuk securities. Therefore, the idea of profit-loss sharing is crucial to Islamic finance. One important aspect of Islamic finance that sets it different is the requirement for a primary asset, which reduces the possibility of utilizing larger leverage and should be considered as a benefit.

2.2.2 Islamic Funds

The performance of the Islamic fund's subsector in 2019 was outstanding, with both the amount of AuM and the number of funds showing significant growth. Whereas the number of funds climbed from 1,489 to 1,545, the value of operating AuM rose from USD 67.1 billion in 2018 to USD 102.3 billion in 2019. Additionally, except for the real estate industry, returns on most assets are still favourable in 2019. Iran, Malaysia, and Saudi Arabia are the three most significant Islamic fund homes and apartments out of the 34, together making up around 81.5% of all AuM in 2019. Equities, money markets, and commodities continue to be the three primary investment opportunities for worldwide Islamic funds in 2019. The Islamic funds market is vulnerable to the effects of the COVID-19 dual shock and the choppy oil market circumstances, as described in this study, much like the other ICM subsectors. Large portfolio losses are already a problem for this subsector, which raises questions regarding both impending and existing redemptions. Further asset price declines are anticipated, particularly if asset managers are compelled to sell assets to reduce risk in their portfolios (IFSI, 2020:12).

Table 2.4 Breakdown of the Global Islamic Funds Assets by Region

Region	Islamic Funds Assets (USD Billions)	Share (%)
GCC	46.0	29.75
SEA	37.5	24.25
MESA	22.0	14.23
Africa	4.0	2.58
Others	45.1	29.17
TOTAL	**154.6**	**100.00**
Share in Total Islamic Finance (%)	**5.1**	

Source: IFSB, 2022:12

2.2.3 Performance of Islamic Capital Markets

Islamic capital markets have expanded quickly in recent years and become a significant component of the financial systems of many nations, both Muslim and non-Muslim. According to (Al-Muharrami, 2014:262), there are now more than 435 fully-fledged Islamic financial institutions operating in over 48 countries, up from just one in 1962, and 191 windows of conventional financial institutions, with Bahrain, Malaysia, and the UK serving as global hubs and shining examples. The basic ideas and characteristics of Islamic capital markets currently support Socially Responsible Investing (SRI) and genuine, inclusive economic growth, which are primarily responsible for its enormous worldwide popularity and remarkable expansion over the last four decades.

Islamic financial systems enable Muslims and non-Muslims with religious concerns to acquire finance or make the switch from a conventional to a lawful financial system by offering financial services and tools that comply with Islamic law. In conclusion, Islamic banks can increase access to financial services and lessen financial exclusion. This could also inspire more successful strategies for eradicating global poverty.

Based on numerous reports issued by different institutions such as IFSB, IIFM and others have shown that the Islamic finance industry has experienced significant expansion in terms of assets and geographical coverage, the Islamic finance sector has developed into a crucial constituent of the global financial system. As reported a survey by Refinitiv, a report from the IFSI (2020) the Islamic finance sector had double-digit growth of 14% in 2019 at $2.88 trillion in assets, and it is predicted to reach $3.69 trillion by 2024.

After a depression in 2018, when the sector only grew by a more modest 2 per cent, the industry resumed significant growth. Due to persistently low oil prices and quiet sector growth in prior years, the main Islamic finance markets have experienced uncertainty over the past several years, but growth has still been observed in those areas. Islamic finance assets continue to be concentrated in Iran, Saudi Arabia, UAE, Indonesia, and Malaysia and made up 66% of all assets worldwide in 2019.

The sector of the Islamic capital market segment has seen further positive advances in 2019. The industry is worth approximately USD 645.7 billion and represents 26.5% of the total assets worldwide. In terms of the percentage of assets, Sukuk continued to lead the ICM industry in 2019 with a double-digit rise of 22.2%. The high performance depicted on multilateral Sukuk and sovereign Sukuk in Islamic finance markets, as well as a rise in corporate financings in some jurisdictions, were primarily responsible for the positive performance (IFSB, 2022:26).

Islamic capital market reported in 2019 has seen more positive advances. This industry was worth roughly USD 645.7 billion in 2018 and represents 26.5% of the total IFSI assets worldwide. Likewise, Sukuk had double-digit growth of 22.2% in 2019 and continues to command the Islamic capital market industry. Effective sovereign and joint issuances in important IFM, as well as a boost in corporate issuances in several countries in 2019, were major contributors to the performance's success. These issuances supported the relevant budgetary expenditures.

In the case of the Sukuk, the upward trend in issuance that was seen in 2018 was maintained in 2019, with sovereign issuances accounting for many issuances at 55% over the reporting period. The increase in the issuance of government debt indicates

the growing usage of the Sukuk currency for both liquidity management and financing of fiscal deficits (IFSI, 2020:6).

Muslim nations, including Malaysia and other from the GCC, have mostly been responsible for the emergence of Sukuk as a financial instrument. These nations have been successful in issuing nearly all of the more than USD100.0 billion annually of sukuk to a grouping of a sizable Muslim population and a well-organized Islamic banking system built on shared Islamic principles, particularly Shariah or Islamic law (COMCEC, 2018:5). Lastly, the report of IIFM 2022 shows that the leading countries for global Sukuk issuance in 2021 were Malaysia, Saudi Arabia, Indonesia, Turkey, Bangladesh then Pakistan and the United Arab Emirates.

Table 2.5: The Global Islamic Capital Markets by Country

Rank	Country	Sukuk Issuances (USD Million)	Share (%)
	GLOBAL	183.322	100.00
1	Malaysia	77.465	42
2	Saudi Arabia	42.144	23
3	Indonesia	23.337	13
4	Turkey	17.776	10
5	Bangladesh	6.276	3
6	Pakistan	4.351	2
7	United Arab Emirates	3.800	2
8	Bahrain	3.722	2
9	Qatar	2.566	1
10	Oman	1.885	1

Source: IIFM, 2022

2.3 Takaful (Islamic Insurance)

Businesses and people now require insurance to reduce risks and losses and limit the effect of disasters on their survives and wealth. Commercial organizations must also

get insurance coverage to protect themselves from losses. Whilst Islamic banking commenced operating in the 1970s, it also needed a Shari'ah-compliant replacement for conventional insurance, which was seen to be against Shari'ah guidelines since it involved gambling, riba, and gharar. The Takaful system was created to close the gap in Islamic finance, and from that time several Takaful organizations are now offering services around the world (Ayub, 2007:417). Takaful is seen as an important resource for fostering growth in the economy. On the other hand, other scholars have suggested that there are other factors influencing the relationship between Takaful and economic growth. Takaful may be able to help by "supply-leading" (Han et al., 2010:184). Additionally, the expansion of insurance in this sector and an increase in Takaful firms' investments may both contribute to economic growth. At the macro level, factors like the Wakalah practice have an impact on economic growth through employment and statutory obligations by increasing demand to buy takaful. (Haiss & Sümegi, 2008:5) assert that the insurance industry is crucial to economic growth since it may be employed as a means of risk transfer, saving, and investment.

2.3.1 Performance of Takaful Industry

The worldwide takaful industry is the smallest of the Islamic financial sectors by assets, increased by 16% to $62 billion in 2020. This is a commendable accomplishment considering the difficulties the industry has been experiencing since March 2020, including significant technological losses, threats to its cyber security, and a decrease in asset values. Additionally, the competition from its traditional equivalent is becoming more intense for takaful. The GCC and Southeast Asia have the greatest takaful asset pools. The majority of the world's takaful assets were located in Malaysia, Saudi Arabia and Iran, in 2020 (Thomson Reuters IFD Report, 2022:25).

The Takaful industry continued to grow in 2018, with a compound annual growth rate of 8.5%, continuing its trend of expansion (2011–18). However, compared to the year before, the segment's growth in 2018 was significantly slower, and its percentage of the global IFSI assets decreased. The contribution of Takaful was reported to decline from 2017 to 2018 by 4.3 per cent to 3.2 per cent respectively and its value reached USD 27.07 billion. A total of 33 nations worldwide, predominantly in the GCC, MESA, and Southeast Asian areas, are estimated to have 353 takaful organisations, comprising retakful and takaful windows. Most of these nations have

created unique legislation for the takaful industry. With a involvement of USD 11.7 billion or 43% of all worldwide takaful contributions, the GCC countries continue to be the world's largest takaful market in 2018 (IFSI, 2020:7).

The Takaful as Islamic insurance has a low share compared to other Islamic industries, with only 2% reported up until 2020, according to the research, with total assets valued at 62 USD billion. These statistics provide a clear picture and profile of how Islamic banking has been developed and performed in the world. This is because of the easy acceptability and practised of Islamic banking transactions compared with other Islamic industries like Takaful that need intensive knowledge of their establishment, acceptability, and operation to the society. Due to that, Islamic banks took the highest share (70%) of global Islamic finance based on the total assets while the Takaful became the lowest one. Moreover, the growth rate and performance of Sukuk have been increasing tremendously compared to even Islamic banks this is because the operation of many Islamic financial transactions in any financial industry has a great linkage with the Sukuk operation. Therefore, currently Sukuk market become an innovation and revolution in the growth of Islamic finance in the world.

In terms of regional IFSI market share of Takaful compared to other regions, the GCC area maintained its top spot at the regional level. It contributed $12.7 billion in US dollars to the overall takaful contribution and in 2021 it had 52.26 per cent of the global market share. The MESA area has seen the most growth in the Takaful contribution, coming in second to the GCC. Its Takaful contribution was US$5.6 billion, and its portion was equal to 23.04. Additionally, Southeast Asia and other regions except Africa have the worst takaful contribution performance. The total contributions of the Takaful industry across all areas were USD 24.3 billion, with a share of just 0.8 per cent when compared to other Islamic financial sectors and the lowest performance when compared to other Islamic components. On a national basis, Saudi Arabia, Malaysia, Iran, and the United Arab Emirates are the top contributors to the global Takaful market (IFSB, 2022:12).

Table 2.6: Breakdown of the Global Takaful Funds by Region

Region	Takaful Contributions (USD Billion)	Share (%)
GCC	12.7	52.26
SEA	4.7	19.34
MESA	5.6	23.04
Africa	0.6	2.46
Others	0.7	2.88
TOTAL	**24.3**	**100.00**
Share in Total Islamic Finance (%)	**0.8**	

Source: IFSB, 2022:12

Table 2.7: The Global Takaful Assets by Country (US Million, 2014)

Rank	Country	Takaful Assets (USD Million)	Share (%)
	GLOBAL	27.840	100.00
1	Malaysia	8.596	31.19
2	Saudi Arabia	11.045	40.07
3	Iran	4.206	15.26
4	United Arab Emirates	1.905	6.91
5	Kuwait	122	0.44
6	Qatar	517	1.88
7	Bahrain	534	1.94
8	Indonesia	417	1.51
9	Bangladesh	220	0.80

Source: Reuters, 2014:21

2.4 Comparison of the Performance of the Islamic Financial Industries

A sectoral study indicates that in 2021, the Islamic banking industry, which is expected to have increased by 6.5% and be valued at USD 2.10 trillion, held the largest proportion of IFSI assets (68.7%) and remained standardize important in 15 states. It is anticipated that this number will rise soon specified that the quantity of Islamic banking resources to the entire assets of the banking arrangement has doubled in several countries as a result of faster economic recovery and reopening, more digital financial services, and acquisition operations(IFSB, 2022:13).

Despite structural advancements in the takaful sector, particularly through digitalization, its contribution to the asset value of the IFSI is still negligible. Following a considerable fall (-14.8%) in 2019, the straight helps made by the whole Islamic insurance segment expanded by 4.8% year over year to USD 24.2 billion in 2020. The portion has shown continuous progression because of controlling relief actions executed in the wake of the pandemic epidemic and afterwards. In recent years, the majority of nations have improved the regulatory environment of takaful business (IFSB, 2022:5).

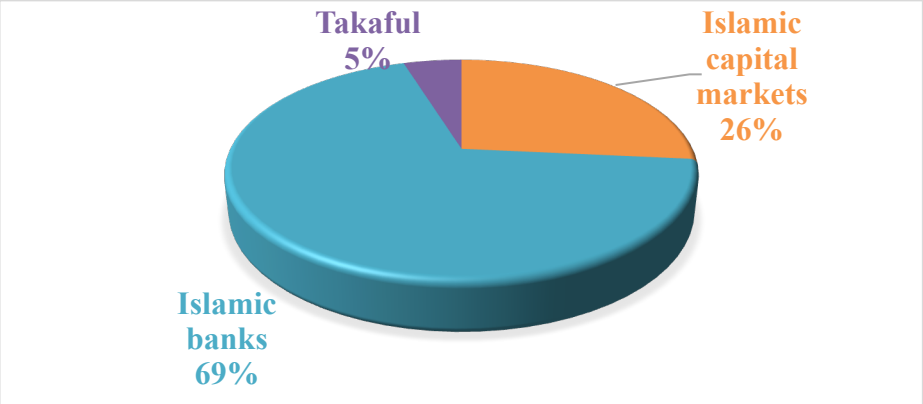

Figure 2. 1: The Total Assets Shares of the Islamic Financial Industries

Source: Author constructed

Table 2.8: The Total Assets Shares and Value of Islamic Financial Industries

Industries	Total asset share (%)	Asset worth (USD Billion)
Islamic capital markets	26.5	645.7

Islamic banks	68.7	2.100.0
Takaful	4.8	24.2
TOTAL	**100.0**	**2.769.9**

Source: IFSB, 2022:5

The statistics issued and reported by various international financial institutions have shown that the Islamic financial sectors are expanding quickly. Based on the Thomson Reuters IFD Study, 2022 report, it was determined that for the year 2020. Sukuk, Islamic banks, Takaful, Mutual funds, and other Islamic sectors have all continued to expand in terms of total assets, shares contributed, and the number of institutions. The Islamic banking sector is the largest and most important Islamic industry, which is worth 2,349 USD billion in total assets and a 70% share of all Islamic industries, according to table number 2.2 below, provided by Thomson Reuters IFD Report, 2022 on the annual report of 2022. The Sukuk, on the other hand, is the first rapid growth based on the IFSB report for the year 2021, making it the second Islamic industry after Islamic banking for the year 2020. Its total assets worth was 631 USD billion, and it was also noted that is Islamic financial industry has many institutions despite having a small share of the market at 19%.

Table 2.9: The Islamic Financial Industry's Statistics

Industry	Total Assets (USD Billion)	Share (%)	Number of Institutions
Islamic Banking	2.349	69.62	527
Sukuk	631	18.70	3.805
Other IFIs	178	5.27	1.698
Islamic Funds	154	4.57	745
Takaful	62	1.84	323
Total	**3.374**	**100.00**	**7.098**

Source: Thomson Reuters IFD Report, 2022:23

According to the IFSB report from 2022, the GCC countries are the top region for the growth and performance of Islamic finance, particularly when it comes to Islamic banking assets, which totalled 1212.5 USD billion, Islamic fund assets, which were reported at 46.0 USD billion, and contribution on Takaful from these three segments, which made up 52.4% of all Islamic finance globally. This is generally due to the existence of a high number of Muslims in this region as well as their willingness to keep the appropriate environment, policies, laws, and regulations on the operation of the Islamic financial industries. Currently, many conferences, university academic programs, meetings, and organizations concerned with Islamic finance have been launched. Southeast Asia (SEA) is the second region with a sizable proportion after the GCC region, and it has improved performance on the 390.3 USD billion Sukuk outstanding stated as leading for Sukuk outstanding. In general, the IFSB of 2022 revealed that the GCC region, Southeast Asia region, Middle East, and South Asia (MESA) region, and several countries in Africa had good trends in the expansion of the IFI. In conclusion, the GCC region is the first region for better performance for almost all Islamic financial industries including Islamic banking, Islamic fund assets and Takaful contribution except the performance of Sukuk is highest in the Southeast Asia region.

Table 2.10: The Global Islamic Financial Services Industry by Region -2021

Region	Islamic Banking Assets	Sukuk Outstanding	Islamic Funds Assets	Takaful Funds Outstanding	Total	Share (%)
GCC	1212.5	332.3	46.0	12.7	**1603.5**	52.4
SEA	287.5	390.3	37.5	4.7	**720.0**	23.5
MESA	477.1	26.9	22.0	5.6	**531.6**	17.4
Africa	58.2	1.8	4.0	0.6	**64.6**	2.1
Others	68.8	24.4	45.1	0.7	**139.0**	4.5
TOTAL	**2104.1**	**775.7**	**154.6**	**24.3**	**3058.7**	**100.0**
SHARE (%)	68.7	25.4	5.1	0.8	**100.0**	

Source: IFSB, 2022:12

As named in this chapter called the Components of Islamic Finance, based on this study the three main components of Islamic finance have been covered and deeply explained in terms of their Shariah governing the industry, its performance in the country, region and globally. Therefore, figure 2.2 briefly gives the structure of the components of Islamic finance that are covered in this study.

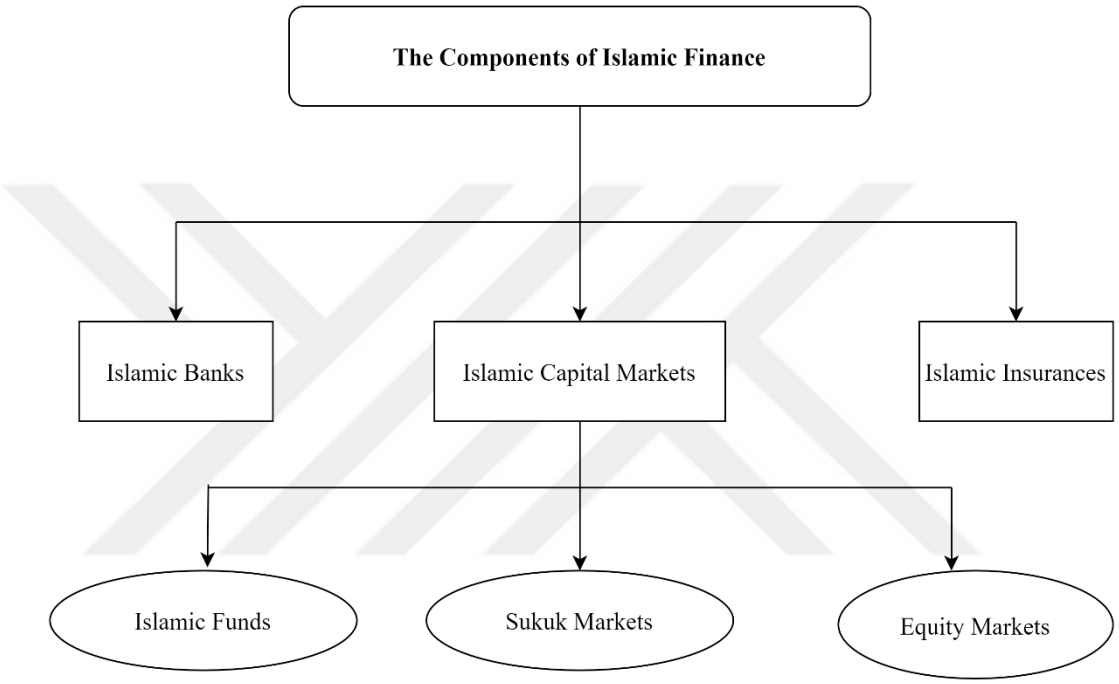

Figure 2.2: The Components of the Islamic Finance

Source: Author constructed

CHAPTER III

THEORETICAL FRAMEWORK FOR ECONOMIC GROWTH

This chapter is concerned with the theoretical framework that elaborates and discusses all theories from several economic schools of thought that are focused on the economic growth–finance nexus was reviewed theoretically. Different arguments and schools of thoughts have been deeply discussed. Moreover, Islamic finance thought on economic growth, a comparison of the arguments of the finance – economic growth nexus for Mainstream economics and a comparison of arguments of Islamic finance thought and Mainstream economics respectively explained in this chapter.

3.1 Theoretical Framework of Mainstream Economics on Finance – Growth Nexus

Economics and finance are typically described as being systematized by schools of thought that include classical school, neoclassical school, Keynesian economics, new-classical and new Keynesian which explain the presence of a variety of theories, models, and methods. Schools are supposed to appear to be an extensively recognized classification in economics even though the essential standards seem to be more contained implicitly relatively than explicitly. In short, economic schools are acknowledged to take a convinced degree of rationality at numerous stages of their structure of thought. Also, these schools indicate their theories, strategies, and methodology to follow the advances from further traditions as a result demonstrating a certain form of uniqueness.

Because the themes of this thesis have compiled the main concept of Mainstream economics, this section has been formulated purposely to explain in detail different economic schools that have emerged from different periods with different scholars based on the financial growth nexus. So, this section could show the main concepts elaborated by different scholars as a foundation for finance and economic growth in the countries. These schools have discussed many issues concerning the economy such as finance, employment, wages, inflation, development, economic growth, demand, supply, investment and so on. For the aim of this study, the discussion would be based on how these schools explain the relationship between finance and economic growth, where they are moving together and where they are contradicted by each other. Based

on the title of the study, this section is divided into two main sub-sections, the first sub-section explains and discusses the theoretical framework of conventional economic schools of thought on the finance-growth nexus which were classical school, neo-classical, Keynesian, new classical and new Keynesian while the second sub-section elaborates on the Islamic finance thought on growth.

Conventional economic theories frequently place a high priority on material progress and financial wealth; they represent dominant viewpoints in macroeconomics. Their foundations are founded on methodological human decisions based on self-interest, maximizing utility, and rational choice theory, which has been studied and applied for centuries. There are several significant schools of thought in economics and finance that provide various arguments on how finance and economic growth are interrelated and vice versa. Classical thought, neoclassical thought, Keynesian, new classical and new Keynesian were described as follows.

3.1.1 The Classical School of Thought on Finance - Growth Nexus

The theory of Classical based on growth and related to finance was founded by Adam Smith. Smith's model of growth continues to remain predominant in the classical view. The growth model has contained four major factors that influence the growth of the economy namely technology, natural wealth, population, and total capital stock. The evolution of specialization and the division of labour are all interconnected aspects of the historical process of growth in the economy, in Adam Smith's view (Mariati & Tahu, 2022:65). The classical theory of economic growth could be written up as considering that predicted increases in profits lead to more investment, which increases both the stock of current capital and the continual flow of new, better technology. The wage fund is raised by this growth in capital accumulation. Increased population increase brought on by higher income drives up food consumption. The production of food may be increased by adding labour and resources.

Donald (2007) Smith's theory of economic growth places a lot of emphasis on the capitalization process. Smith contends that capital accumulation helps the market expand. Increased worker capital, the ability to take on specialized work, and the ability to earn more than subsistence pay. This leads to a growth in population, which

increases demand and enables market expansion. The idea of the "invisible hand" was one of the book's major contributions. This approach assumed that businesspeople who were motivated to maximize their profits would put money into ventures that would benefit the country most (Tri, 2017:5).

Smith proposed that population stands as an endogenous variable that depends on the availability of food for maintaining the expanding labour force. Investment was an endogenous variable, controlled by the rate of savings, and land depended on the purchase of new lands or the technical improvement of the land. Overall growth may improve because of technological advancement, which depends on investment. The relationship between investment and technological advancement is T = f (I), which suggests that technology is influenced by the amount of investment: A key point was Smith's well-known contention that specialization enhances growth. Smith also saw increased specialization made possible by commercial breakthroughs as a growth-promoting component.

Finally, Smith thought that the way income was distributed, was one of the most important variables in deciding how quickly or slowly a nation would increase its output since capitalist savings are what drives investment and consequent development. Smith argued that when a country's capital stock increases, profits fall not because of diminishing marginal productivity but rather because of rivalry among capitalists for workers, which will raise wages. Savings, however, are partially decided by stock profits. Therefore, decreasing worker living standards was another approach to enhance growth.

The degree of technology is influenced by investment T = f (I) as well as profitability T = f [I(R)]. Profits are also influenced by the availability of technology.

In conclusion, the implementation of new technology changes the degree of investment, which changes the traditional theory of growth. The amount of profit determines the investment. The amount of the wage fund, which in turn affects the labour force, will decide the level of profits. New scientific discoveries will be required to support economic growth due to population expansion. The classical

model's circulatory system stated that economic growth came to a stop at a stationary condition.

The above discussion shows that saving which is normally called capital accumulation and working in the financial sectors can stimulate economic growth through distribution from the depositors who saved their funds to the investors who demand the capital. This situation could so on how the classical theory of growth narrated by Adam Smith could be linked with financial sectors on economic growth. Therefore, the ideal of classical schools moved along (Schumpeter, 1911:57) on the financial intermediaries to promote economic growth through mobilizing savings, facilitating the development of projects, and stimulating the technological innovation that is essential for economic growth.

3.1.2 The Neo-Classical School of Thought on Finance - Growth Nexus

Trevor Swan created the neoclassical growth model on his own. Swan (1956) came out decade months advanced than Solow (1956), however, it provided an additional comprehensive study of practical advancement, which Solow addressed independently in Solow (1957) (Dimand & Spencer, 2008:2). Solow-Swan created the fundamental neoclassical growth model. The cumulative production purpose was utilized in this model, which was based on three factors: labour force, capital, and technical innovation (Masoud, 2013). The development of technology and the accumulation of input variables like labour and capital would result in higher economic growth. According to the neo-classical economic theory, the financial sector helps people accumulate capital (Abdullahi, 2018:6). A long-run growth model, which is constructed from equations that contain the two production elements of labour and capital, and the exogenous nature of technological progress, demonstrates. The purpose of the financial sector is to promote capital accumulation by attracting both local and international investment, which in turn promotes efficiency (Abdullahi, 2018).

Technology in the financial industry can give developing nations access to financial benefits and promote economic progress. In their study, (King & Levine, 1993b:534) used cross-sectional data to illustrate how the financial sector contributes to economic advancement.

Solow model created the neo-classical growth model. The level of technological change is determined exogenously, which is an independent factor, and they developed a growth model where scientific innovation replaced capital as the main factor explaining long-term economic growth. Neoclassical economics bases its theory of economic growth on the idea that the returns to labour and capital, taken separately, decline with time while remaining constant when taken together. Technology, labour, and capital are the factors that determine output growth according to the neo-classical growth theory (Mamo, 2012:17).

Trevor Swan and Robert Solow first proposed the neoclassical growth theory in 1956. According to (Robert, 1956:66) (Robert, 1956:66), economic growth is caused by the three elements of labor, capital, and technology. Technology may have an infinitely large influence on economic growth even in economies with limited labour and capital resources. According to the neo-classical model of economic growth, the production function's representation of the prevailing technology, rates of saving, and technological advancement, all are assumed exogenous and will influence the level of per capita income. The model produces testable predictions regarding the effects of variations in saving rates (Malcolm et al., 2002:1).

As a result, saving has an impact on the country's production growth. Through financial sectors and as a result, capital-output boosts the economy. As a result, he reasoned that when saving equals investment, all funds received may raise the value of capital production. According to Harrod's hypothesis, Domar is the conduit of funds to financial intermediaries. Particularly the capital market is properly operating economic growth will be direct.

This school of thinking accepts the good function of finance in economic progress without hesitation. Solow (1956) establishes a mathematical model of long-term economic development. He believes that capital and labour are being fully used. He makes predictions based on population growth, saving rates, and technological advancements. The Solow model is consistent with the fundamental facts of economic growth. Solow (1956) introduced the neo-classical model that typically explained the production function that is enhanced by exogenous technology that raises the factor productivity. The cumulative output is the equation of the aggregate of capital, technology, and labour.

More formally, the Solow model that was formulated in 1956 was created by the following mathematical formula as written (Todaro & Smith, 2015:138).

$$Y = AK^{\alpha}L^{1-\alpha} \quad \text{..... (1)}$$

Whereby,

K = Capital input.

L = Labor input.

α = Output elasticity

A = Solow residual, which represents technology or technological progress.

The preceding equation (1) demonstrates that an increase in "A" will increase "Y" (total output) while maintaining inputs "K" and "L" unchanged, demonstrating that short-run economic growth may be accomplished without adding capital.

3.1.3 The Keynesian School of Thought on Finance - Growth Nexus

The Keynesian school of economics is known for emphasizing the immediate results of economic models. They focus on which policies are indicative of current demands and how these policies can result in quick improvements to a country's economy. According to Rangarajan (1998:15), an effective financial system is crucial for enhancing saving and investment behaviour and for boosting the economy's total production. Using the "money illusion" theory to support "forced saving" and low interest rates, he said that the acceptance of this theory would promote increased investment in the economy by including the financial sector and maintain short-term production stability.

Rangarajan (1998:17), the primary function of the financial system in any economy is to mobilize savings and distribute those resources across a range of competing needs through the process of financial intermediation. The financial industry primarily uses four transformation mechanisms to carry out this fundamental role. First, there is the concept of "liability-to-asset transformation," which is the acceptance of deposits as liabilities and their subsequent conversion to assets like loans. Second, the transition that the financial industry has undergone, combining a variety of modest deposits to satisfy investors' need for huge loans Third, maturity transformation, which entails

giving borrowers loans with the required maturities while providing savers with alternative deposit options based on their liquidity preferences; fourth, risk transformation, which entails the financial industry sharing risk via diversification.

According to Mckinnon (1974:1822), this rise in spending would increase overall demand, income, and money demand. Joan (1952:25) notes that the need for higher economic growth is what is driving the increase in demand from the financial sector. This addition illustrates that the rising demand for money is a result of economic developments, which in turn spurs financial growth. Money access and the financial sector are improved, which reduces poverty and income inequality.

Keynesian arguments in favour of financial development predominated for many years in the scholarly discussion of the connection between finance and growth. Before the 1960s, theory generally supported the idea that economic growth came first and then financial development, rather than the other way around. Gerschenkron (1962:15) framed the banking industry's function in terms of what he termed economic backwardness. His theory held that the function of a nation's banking sector was dependent on the level of economic growth the nation had at the outset of industrialization.

They simultaneously suggest that the most significant coordination breakdown of the capitalist economic system may be attributed to pricing and/or wage rigidities. Nominal and actual rigidities are distinguished by (Mariati & Tahu, 2022:66). The former speaks of nominal salaries and/or prices being insensitive to shifts in nominal demand. The latter is applicable to the inelasticity of price to price, wage to wage.

(Mariati & Tahu, 2022:66) identify that Keynesians created their growth model based on macroeconomic variables. That model shows the factors or components of economic growth as follows.

$$Y = (\mathrm{C} + \mathrm{I} + \mathrm{G} + \mathrm{X} - \mathrm{M}) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Economic growth = Consumption + Investment + Government spending + Net export

According to the model, rising investment, consumption, government spending, and net exports will result in a rising production of goods and facilities. GDP will rise if there is a growth in the production of goods and services; on the other side, GDP will

fall if there is a drop in the production of goods and services. Economic growth will slow down as a result of a shrinking GDP (Mariati & Tahu, 2022:67).

Keynesian Theory-derived grand theory in usage (1936). According to Keynes, government spending will generate employment and enhance consumer demand, which in turn will lead to high profits that will motivate money owners to invest more quickly. The economy will expand, and unemployment will disappear. In General Theory, Keynes (1936) calls for government actions that will significantly expand capital availability, provide only modest profits, and even lead to "the euthanasia of the rentier. (Mariati & Tahu, 2022:63), Keynes stressed the significance of aggregate demand as the major economic driver, particularly in a slow-growing economy. He contends that government actions may be utilized to boost macroeconomic demand, lower unemployment, and prevent deflation. If the government spends more, more money will circulate in the community, encouraging more people to go shopping and driving up demand (so that aggregate demand will increase). Moreover, savings will rise and become available for use as investment capital.

In conclusion, the Keynesian theory of economics faced several arguments, for instance, the Keynesian theory of production was subjected to significant attack from the monetarists. The monetarists thought that Keynesian theory emphasized the factors that disturb collective demand more than the factors that affect aggregate supply. Also, developed economies can use the “General Theory of Keynes”. In less developed nations, Keynesian notions are not particularly helpful for making policy.

3.1.4 The New Classical School of Thought on Finance - Growth Nexus

A renewed attention in the connection concerning financial growth and economic growth resulted since the creation of the theory of endogenous growth in the 1980s, which also showed that financial variables may have growth impacts on productivity. As a result, the endogenous growth model is used in the works of (King & Levine, 1993a:513; Saint-Paul, 1992:771; Gregorio & Pablo E, 1992:1; Roubini & Sala-i-Martin, 1992:5; Bencivenga & Smith, 1991:195; Greenwood & Jovanovic, 1990:1078) to analyse how financial variables interact with economic growth.

The lack of decreasing returns to capital is the main characteristic of the endogenous growth model. The AK function, where Y = AK and A is a positive constant reflecting

the degree of technology, is the most straightforward example of a production function without decreasing returns. The argument becomes more acceptable if we consider K in a wide meaning that includes human capital. The lack of declining returns on a global scale may appear impractical (Öztürkler & Bozgeyik, 2014:35).

A group of hypotheses known as "endogenous growth models" attempt to model economic growth in terms of new technological advancements. Technology advancement is the primary predictor of long-term economic development in endogenous growth models (EGM) (Howitt & Aghion, 1998:1) and (Pagano, 1993:614).

The quickly expanding "endogenous growth" literature, which offered a natural framework for incorporating the financial system into the theory of growth, gave the link between financial development and economic growth new life. This paradigm analyses the growth process as the sum of three fundamental variables (Pagano, 1993:614).

$$g = A\beta S - \alpha \quad \ldots\ldots (3)$$

' g ' stands for the long-term growth rate. The social marginal productivity of capital is denoted by "A". S is the percentage of savings that are used for investments; s is the saving rate, and β is the depreciation rate. Financial intermediation indicates that banks and other financial organizations absorb a portion of resources through intermediation costs (Pagano, 1993:615). The percentage of savings that is converted to investment falls off the greater the intermediation cost (Pagano, 1993:614). Therefore, financial development would raise and enhance the amount of investment in the economy to the degree that there are x-inefficiencies in the financial system.

However, there are many reasons to think that economic choices made by economic agents might influence technical advancement (Howitt & Aghion, 1998:1). He continues by reporting that technology advancement is the primary predictor of long-term economic development in endogenous growth models (EGM). Therefore, in endogenous growth models, technological advancement becomes endogenous. Remember that the neoclassical growth model's concept of diminishing returns is what prevents production growth and economic expansion (Howitt & Aghion, 1998:1).

The finance – growth is addressed by the (Pagano, 1993:614) model, which is shown below and describes the methods through which financial development fosters economic growth. The following steps can be used to replicate Pagano's endogenous growth "AK" model:

$$Y_t = Ak_t \text{.. (4)}$$

Luc et al. (2011:3) provides an equation for gross investment to describe the significant interactions between economic growth and financial development. To arrive at the subsequent equation:

$$\mathrm{K_{i+t} = I_t + (1 - \alpha)K_t} \text{.................................. (5)}$$

Where Y_t is the amount of output, K_t is the capital, A and are the rates of capital productivity for a particular time and I_t is investment. Therefore, the possible savings are as follows:

$$I_t = \beta S_t \text{.. (6)}$$

$S_t = sY_t$, 0≤β≤ 1 and S is the savings rate. Additionally, in the event of perfect information, investors would deal directly with savers, there would be no need for an intermediary system, and all funds would be invested. (Luc et al., 2011:3) considered equation (5), the growth rate in year $t + 1$ is expressed as follows:

$$g_{t+1} = \frac{(Y_{t+1} - Y_t)}{Y_t}$$

$$g_{t+1} = \frac{Y_{t+1}}{Y_t} - 1$$

$$g_{t+1} = \frac{K_{t+1}}{K_t} - 1$$

1. The percentage of national savings (β) devoted to projects for productive investment; Pagano theorizes that the rise in the latter may be attributable to the banking sector's inefficiency. The percentage (1- β) of savings spent decreases with increased financial sector efficiency.

2. The productivity of capital (A): because of data gathering and investors being encouraged to participate in riskier ventures.

3. The savings rate (s): The monetary scheme affects economic growth by influencing the economy's savings rate.

According to the model discussed above, (Luc et al., 2011:5) identified three factors the rate of saving, technical advancement, and the proportion of savings devoted to financing the economy can positively affect economic growth. Globally, the Pagano model demonstrations a strong association between financial growth and economic growth. This model has served as the basis for several studies that have developed a variety of theoretical connections between financial development and economic growth (Luc et al., 2011:3).

Because the endogenous growth model permits the addition of variables through technological development as an external factor. The model for determining economic growth will incorporate additional variables into their models, including government spending, inflation, labour costs, consumer spending, and financial development (Mulok et al., 2010:127).

EGM promotes greater returns to scale to get over this barrier to economic progress. Constant returns to scale are shown by the traditional Cobb-Dowling production function for the factor inputs (Onyimadu, 2015). This means that there is no longer any motivation or reward for economic agents to take actions that promote technological advancement. Because factors are compensated according to their marginal products in a competitive equilibrium, no theory that endogenizes technological advancement can be based on this equilibrium. Use the most straightforward endogenous growth model, the "AK model," where cumulative output is a direct function of cumulative capital stock, to analyse the possible effects of financial investment on economic growth (Onyimadu, 2015:502). By conclusion, Öztürkler & Bozgeyik (2014:36) believed that technical development is at the heart of economic growth. This is because technical progress creates incentives for continuous capital accumulation through financial sectors, and accounts for a large portion of the economic growth.

3.1.5 The New Keynesian School of Thought on Finance - Growth Nexus

Keynes' fundamental concepts form the basis of the New Keynesian Economics. However, it acknowledges the necessity for a more radical break from the neoclassical

model and for a significantly more thorough investigation of the effects of capital market weaknesses that may be attributed to information costs. Its components include the function of monetary policy, efficiency wage theories, credit rationing, and inefficiencies in the capital markets (Greenwald & Stiglitz, 1987:120).

Financial markets link investors and capital providers to ultimately boost economic growth, offering a solution to the situation described above. In contrast, financial intermediaries that effectively transfer money from surplus units to deficit units are used to meet the financial requirements of those units that do not have access to financial markets. Therefore, the effectiveness of its financial markets and the accessibility of financial intermediaries are key factors in determining economic growth (Greenwald & Stiglitz, 1987:123).

Additionally, the new Keynesian school provides a somewhat different explanation for how investments are made, especially considering the likelihood that interest rates won't be able to clear the credit markets. It also offers solid support for the capacity for changes in macroeconomic activity to strengthen themselves. However, it hasn't yet offered a thorough justification for the business cycle. It demonstrates how shocks may trigger extended, significant shifts in investment and employment (Greenwald & Stiglitz, 1987:122).

Financial Markets and the execution of monetary and fiscal policy are viewed in New Keynesian economics as technological phenomena that boost overall productivity. They can change the aggregate production function and, as a result, the supply curve. Therefore, the new Keynesian model connects the finance-growth nexus through the new variable called coordination that can be implemented under the monetary policy that directly focuses on financial sectors such as central banks or other kinds of banks, and financial markets. These sectors can be used by the government to regulate the economy according to the status of the economy at the time, moreover, fiscal policy also could be applied through the taxation method or government expenditure or both. To sum up, the new Keynesian model is like the other model with similar components of production but with adding the coordination variable.

3.2 The Arguments of Islamic Finance Thought on Economic Growth

Because Islamic financing activities are based on financing the real economy and exclude any speculative transactions like options, swaps, and other derivatives, Islamic finance is by nature a form of economic growth (Abdullah et al., 2018). This shows that Islamic finance is a correct indicator of economic growth and always makes the real state of the economy. In addition to carrying out the business of accepting deposits and investment funds from the surplus members and financing or investing in the deficit areas (Ayub, 2007). By transferring savings from surplus economic units to deficit economic units, Islamic finance plays an important part in providing financing and guaranteeing a reliable and efficient transfer of production components to the economic activities that generate wealth. Finally, it should be mentioned that because debts and loans are interpersonal responsibilities rather than property and their repayment is guaranteed by debtors/borrowers, they do not provide any revenue for the creditor/lender (Monzer & Tariqullah, 1992).

Like other financial institutions, Islamic banks, work as financial intermediaries, and engage in partnerships for financing business activities for entrepreneurs who have the necessary skills and intellect, thereby promoting entrepreneurial growth in the country (Kahf, 2006). Islamic finance, particularly joint ventures, solves the information asymmetry issue related to financial intermediaries better than conventional banking, which results in a more effective way to stimulate savings, attain optimal utilization of resources by eliminating the imbalance across the economy's surplus and deficit sectors and raising the proportion of savings allocated to investment. Additionally, it increases the bordering social output of investments and influences capital into areas with high rates of production. Islamic banking grows when investment rises because, unlike in the traditional banking system, authentic investment, not credit multiplication, determines investment (Jobarteh & Ergec, 2017:35).

Because it finances long- or short-term initiatives and high-yielding ventures, which in turn contribute to economic growth, the Islamic bank has a clear impact on the development of the GDP. It eliminates non-value-creating activities like debt-based financing and debt trading and sticks to the genuine market (it provides market signal). Finance is developmental when it is grounded in realities and closely linked to things and assets that generate prosperity.

It was formerly believed that the foundation of Islamic finance is risk sharing. Murabaha and Ijarah were not comfortable with this strategy. But later on, we understood that it is asset-based rather than risk-based (Monzer & Tariqullah, 1992:32) provided a fundamental framework for analysing Islamic funding methods. Their endeavour is predicated on considerations of ownership characteristics and methods of management integration. There are three different ways that management and ownership might combine. First, the owner may personally manage the properties he owns, such as via trade; second, he may contractually transfer control to another party, such as through Mudarabah, and third, he may delegate administration of usufruct rights to a third party, such as through renting foundation for the notion of financing in Islam is provided by these three ways of merging management and ownership, together with the features of the right of ownership outlined above. The result is national economic growth.

(Monzer & Tariqullah, 1992:32) defined commercial finance as any method in which the owner maintains management control. All managerial choices about the owner's assets are made by the owner personally. Management choices may be made gradually over time, as in the case of Sharikah, where the financier joins the partnership and shares in managing duties. The financier can also decide to solely take part in one managerial choice involving a piece of real estate he owns by selling it. Sale-based financing is therefore a type of commercial finance as it reflects a property owner managing his holdings. Different types of commercial finance include Musharakah, Murabaha, and Salam. In commercial finance, the right to ownership of the return on financing is based on ownership; if one owns a piece of property, he also owns the advantages connected to it.

3.3 The Arguments of the Finance - Growth Nexus Among Mainstream Economics

The place of the financial sector in the process of economic growth has been a topic of discussion among economists for over a century. A sizable body of theoretical and empirical research has grown since Schumpeter (1911:59) advanced opinions directing to the productivity and growth-improving impacts of the services supplied by a advanced banking sector. The research by (King & Levine, 1993:513; Goldsmith, 1970:365; Rondo, 1967;Patrick, 1966:174;Gerschenkron, 1962:12) sparked a

persistent scholarly discussion that had an impact on policymakers. Their theoretical framework remained simple, and the empirical support for a strong connection between finance and growth remained patchy.

Early in the 1990s, a new school of thinking asserting a positive link throughout finance and growth emerged from a subset of endogenous growth literature. According to Schumpeter's theory, innovation is crucial (King & Levine, 1993a:513). Financial systems allocate the risks accompanying with these actions and allocate savings to the most advantageous uses. They increase the rate of technical growth and the possibility of a successful innovation by fulfilling these obligations. The most important discovery of the endogenous growth study is the capacity to sustain growth rates that are increasing. Unlike the school of thought centered on the accumulation of physical capital, the rate of technological development is decided endogenously (McKinnon Ronald, 1973:334). This prevents the capital's marginally productive level from falling. The following are the fundamental roles that financial systems play in promoting capital accumulation and economic progress, as summarized by (Levine, 1997:22).

Like the traditional view of the connection among finance and growth, the Islamic financial system serves a wide range of purposes that may affect saving and investment choices and consequently have an impact on actual economic growth. Providing external money, as stated by (Schumpeter, 1911:57), is one of them. Financial institutions finance business owners that have promising futures. Any industry with any potential for development will need a sizable quantity of outside funding. As a result, the banking industry is viewed as a growth driver for the economy.

More developed financial markets, according to (Goldsmith, 1970:365; Hicks, 1969:343; John & Shaw, 1955), stimulate economic growth by enabling investment and mobilizing savings. Multiple bilateral agreements between agents with surplus resources and producing units that raise capital may be involved in mobilization. Pooling can take place through intermediaries to save money on the costs related to numerous bilateral contracts, where thousands of investors transfer their money to intermediaries who invest in hundreds of businesses (Tufano & Sirri, 1995:81). The Islamic financial system offers the same economic advantages as traditional finance. Islamic banks, by integrating moral and ethical ideals into their fundraising techniques,

encourage Muslims to raise cash and provide outside resources to venture capital. Because of the profit-loss sharing arrangement, they may have a bigger effect on economic growth. The Islamic financial institution provides capital financing for the manufacturing process and seeks to increase enterprises' capital through its tools. The distribution of financial resources following the needs of production is probably more effective than the distribution by pure lending.

Short-term economic growth is driven by capital accumulation according to the neo-classical growth theory, which was created by Solow and Swam (1956). This can be accomplished by using economic measures that motivate people to save more money. The neo-classical model predicts that growth rates will eventually return to the pace of technical advancement, which it assumes to be exogenously determined and independent of economic causes. The neo-classical approach, therefore, questions long-term economic development.

Cobb Douglas production function is taken for convenience. In this production function, it is frequently believed that constant returns to scale for all units would result in a doubling of output. However, because it is assumed that the labour supply will remain constant, declining returns will occur when one input (labour) increases while the other stays the same. This suggests that given fixed labour, the production contribution of capital decreases as more of it is utilized. The NGM connects the variations in output as the input factor rises based on Cobb Douglas production. Capital accumulation is a vital component. In this model, a portion of each period's production is saved and invested in new capital, while a small piece of the capital stock is lost to depreciation each year. This theoretical study fits with the idea of the Islamic financial system, according to which economic growth may expand because of the expansion of the financial system, on which the rising capital accumulation via saving and investment fuels economic growth. Therefore, the Cobb-Douglas model includes the elements of labour and capital that are influenced and maintained as key elements of economic growth by Islamic finance. Therefore, in this model, gains in output and, eventually, economic growth, are caused by capital accumulation, which is achieved by conserving a portion of total output throughout each period (Onyimadu, 2015:504).

The AK model, Schumpeterian Growth Model, and other models make up the endogenous model. The Arrow (1962:157), AK model stresses the likelihood that

productivity may vary depending on output per worker. This suggests that technological advancement is possible, although unintentionally. In terms of its assumptions about what causes economic growth, the AK model and the neoclassical growth model are extremely similar. The savings and capital accumulation that drive economic growth in the neoclassical growth model contrast with the savings, capital accumulation, and efficiency that drive economic growth in the AK model. Thus, Islamic finance likewise supports all three elements of the AK model in that they should all function following Shariah principles (Onyimadu, 2015:505).

Two groups with contrasting opinions emerged from the discussion on the relationship between finance and growth. Gerschenkron (1962:12) concentrated on the issue of the causal links between finances and growth, while (Patrick, 1966:174) narrowed his attention even more. He saw two patterns, "supply leading" and "demand following," and linked them to distinct growth stages. In the primary of the two designs, economic growth creates a need for financial services, which the expanding financial industry satisfies inadvertently. Demand for external finance is increased by rapid aggregate growth. There will be a greater need for financial institutions to move savings to the most profitable businesses or sectors if there is a wide disparity in advance crosswise those sectors.

According to Rondo (1967:1101), financial systems may both cause and encourage growth, but he underlines the critical importance of service quality and delivery efficiency. Then, he enumerates crucial aspects of the financial system. Financial intermediation acts as a conduit for modest sums of money from risk-averse savers to less risk-averse individuals with entrepreneurial talents, increasing the amount of money available for the latter. Additionally, financial intermediation gives investors incentives. Lower borrowing rates encourage business owners to make bigger expenditures. He highlights banks' contribution to the advancement of technology in his final point. According to Cameron, many technical advancements are presented to investors by well-established businesses with access to bank funding incentives. Furthermore, although he ignores the importance of the latter, Goldsmith (1970:365) claims that the efficiency and amount of investment may have increased as a result of financial intermediation, which is favourable for growth. He was the first to offer strong empirical support for the relationship between finance and growth for a variety

of nations. (Goldsmith, 1970:365) laid the foundation for further empirical study in that area by developing a measure of financial development, which is the value of all financial assets over GNP. He discovers a loosely positive association between the financial variable and GNP, both assessed during the primary 1960s, for a trial of 35 developed, emerging, and communalist nations (Eschenbach, 2004:5).

Similar to Romer (1990:71) and King & Levine (1993:23), create a Schumpeterian model of technological advancement that includes cost-cutting innovations that apply to intermediate products. Entrepreneurs can engage in creative activity thanks to financial intermediaries and the securities market, which influences growth by raising productivity Entrepreneurial activities are impacted by financial systems in four different ways: they assess entrepreneurs, pool resources, spread out risks, and value predicted rewards from creative activities. The likelihood of successful innovation rises with improved financial mechanisms.

Contrary to what was said above, some economists also believe that financial development and growth are not always related. Joan (1952:10), who is credited with founding this school of thought, asserted that finance has little function in growth. This is justified similarly with the empirical study of Arcand et al. (2015:105) that found finance on growth decreases as nations get prosperous and finally found that the financial sector starts off having a negative impact on growth. According to Van Wijnbergen (1983:440), the expansion of the economy in question is suppressed because of the migration of informal sector borrowers into the formal sector as a result of financial development. This decreases the overall availability of credit. Additionally, Lucas (1988:12) claimed that financial markets contribute less to the growth of an economy.

3.4 Comparison of Arguments of Islamic Finance Thought and Mainstream Economics

Up until recently, the conventional banking and economics were the most popular, but more recently, they have shown themselves to be less than ideal. It would make perfect sense if there were a different economic and financial system in these conditions. Islamic banking has always stood for a clear way of approaching financial and economic practice and offers a potentially all-encompassing framework. One might

see a day in the future when the Western and Islamic systems, each with its unique characters, coexist in open competition, giving people and companies an option between the two. Collaboration between these two systems is quite appropriate and conceivable. Islamic finance and conventional finance might work together and even compete to get the best results for shared projects. Due to its stronger moral foundation, the Islamic financial system may make this more suitable (Iqbal & Mirakhor, 2013:289).

Over the past few decades, Shari'ah-compliant Islamic finance has become more prevalent. It has demonstrated that it is a workable and viable substitute for the current traditional financial system. Like its conventional counterparts, Islamic finance acts as a middleman to transfer money from the deficit sector to the savings sector to support economic activity. Financial products are different since they are interest-free and hence adhere to Shari'ah Laws. Short-term and personal loans are the main emphasis of conventional finance, which has little impact on the capacity for genuine economic activity. On the other hand, Islamic finance supports economic activity by investing in businesses' capital and offering capital ventures in the manufacturing process. It is claimed that the impact of allocating financial resources following production needs is more effective than pure lending. As a result, economic growth is anticipated to be affected more favourably (Yusof & Bahlous, 2013:153).

Yusof & Bahlous (2013:154) contends that the beginning of interest made it feasible to encounter in speculative behaviour and breaking the Friedman rule led to the subprime mortgage crisis. According to his argument, the effective use of resources ending in stabilization of pricing, and the end of stagnation, all of which would contribute to an additional static macroeconomic condition. According to this research, Islamic banking systems are more resilient to economic and financial crises than conventional ones because they are more stable and less vulnerable to interest rates and inflationary swings (Yusof & Bahlous, 2013:154).

Saving and investing are fundamental processes that contribute to economic prosperity. In Western educational systems, the interest rate serves as both a performance standard and a measure for a profitable venture is established for the bank as the financier and the borrower share profit or if the financier provides loan assistance to the borrower without any increase in interest or other fees. This indicates

that the Islamic financial system is grounded on the complete ban of paying any fixed or guaranteed rate of return, which is one of the Islamic tenets. It fosters risk sharing, discourages speculation, and stresses the integrity of contracts. It also stimulates entrepreneurship. Additionally, it does away with the idea of interest and forbids the usage of debt-based products (Hamman, 2014).

Additionally, Islamic finance may be a superior way to address the financial demands of the business sector since it effectively monitors moral hazard issues at the firm level. According to (Yusof & Bahlous, 2013:152), Islamic finance is a particularly specific form of financial intermediation through which businesses may profit since the fund provider shares in the project's gains and losses and acts more like an equity holder than a debt holder.

Kocherlakota & Cole (1998) demonstrate that traders won't be enticed to replace actual resources with money if there is no interest rate, and more resources will be directed toward investments as a result. Islamic banking integrates additional rates, excluding interest rates that are more closely related to the real economy.

Islamic finance theories have been discussed by Muslim scholars since the 1970s, and they call for a risk-sharing-based financial system devoid of interest rate- and debt-based contracts (Ayub, 2007). However, practitioners, the majority of whom had been working in the field of traditional finance, were attracted in creating means of financing that would be understood and approved by market participants in conventional finance whereas avoiding the appearance of interest-based debt. The former prioritized risk transfer and risk shifting, while the latter concentrated on established means of conventional finance. As a result, all financial instruments used in conventional finance are now susceptible to replication and reverse engineering.

It is also noteworthy that, since conventional investors and Islamic finance investors compete, there is probably not much difference among the two groups' rates of return, interest rates in the context of orthodox banks, and profit-sharing shares in the case of (PLS) accounts. A new IMF research that examines the rates of profit from the two types of banking organisations in Malaysia and Turkey (Cevik et al., 2011:3) supports this theory. An Islamic banking system, in general terms, is fundamentally an equity-based system where depositors are regarded as though they are bank shareholders. As

a result, the depositors are not paid a set amount for their funds but are instead entitled to a portion of the bank's profits. Corporate governance differs from the traditional structure in this equity-based one (Iqbal & Mirakhor, 2013:76).

The claim is that Islamic finance is a force for stability in the domestic and global economy because it rejects interest rates and debt. This requests the question of whether this kind of financing encourages greater economic growth in addition to stable economic growth. The redistributive nature of Islamic inheritance rules, for instance, hindered capital accumulation. Western Europe's institutional growth, in contrast, promoted capital accumulation and impersonal marketplaces (Iqbal & Mirakhor, 2013:321).

The ongoing argument across particular sukuk observe to Shari'ah standards indicates that sukuk are predictably constructed following “Western asset securitization principles”. This begs the issue of how distinct as of bonds these novel financial vehicles are. Although the return on a sukuk is derived from an principal asset rather than the responsibility to earnings interest, Godlewski et al. (2013:149) claim that sukuk are designed to assure an identical return to a conventional bond. Wilson (2008:177) contends that for uninitiated investors to estimate the risk of these new investments, financiers take extra care to make sukuk comparable to traditional securities.

The theory of product invention combined with distinguishing, and pricing-risk features in the Islamic financial business is defeated by such sukuk, which effective than conventional securities. Due to the risk of turning Islamic financial instruments into conventional interest-based products, Shari'ah scholars are against constructing Islamic financial instruments to appease foreign investors. They reject the idea that conventional bonds and rising Islamic securities markets should be more comparable to one other to improve global financial integration. According to Mohammad Taqi Usmani, President of the AAOIFI Shari'ah Council, the current sukuk issuance procedures are comparable to those of bonds in that they guarantee principal repayment, do not grant ownership, and are entitled to a fixed return. According to . Usmani (2007:14) , Islamic institutions should be ready to attest to the acceptability of sukuk, thus there's no need to get international bond ratings for them. Instead, the recently established regional rating agency may do so.

In conclusion, by excluding the misalliance between the surplus and inadequate sectors of the economy, Islamic finance maximizes resource allocation and increases the share of savings directed toward investment. It also resolves the knowledge asymmetry challenge in financial intermediation further effectively than banking (Jobarteh & Ergec, 2017:35). Additionally, it increases the marginal social productivity of investments and steers capital into areas with high rates of production. Islamic banking grows when investment rises because, unlike in the traditional banking system, genuine investment, not credit multiplication, determines investment (Jobarteh & Ergec, 2017:35).

3.5 Theoretical Discussion on the Comparison between Islamic Finance and Conventional Finance on Economic Growth

The finance - economic growth nexus is a debatable topic that has been thoroughly examined in the literature (Hamman, 2014). However, a trustworthy and current topic that need more discussion is the comparison of Islamic and conventional finance regarding economic growth in OIC countries. It also explains how significant each of them is in relation to the economies of the OIC.

Since many scholars reported that the financial sectors promote steady economic growth, it's important and cannot be easily overlooked this indicator on economic growth. According to Valderrama (2003), banks are the primary engine of economic growth since they direct funds toward profitable ventures. Thus, it is important to examine how changes in the banking industry affect the economy. However, Siddiqi (2006) points out that Islamic finance theories on economic growth are still underdeveloped. As a result, a lot of research validated the basic hypotheses about productivity viewpoint using actual data. Moreover, the achievement of Islamic and conventional financing on actual economic growth is still a hotly debated subject. El-Galfy & Khiyar (2012) demonstrated the relationship between finance and productivity and pointed out that Islamic finance is unable to provide or accept money from others and hope to profit since interest is prohibited. Islamic differs from conventional finance in that it views money treats as a commodity and lend it against interest as a repayment that must be used productively, this view is totally rejected under Islamic finance since its products are general "asset backed" and comprehend

trading, renting of assets and equity sharing and that wealth can only be created via lawful commerce and asset investment (El-Galfy & Khiyar, 2012).

It is also noteworthy that, conventional finance, is based on financialization, comes into being when financial institutions, financial markets, and financial motives play a larger role in shaping economic outcomes and policy in both domestic and global economies (El-Galfy & Khiyar, 2012). The macro and micro functions of the economic system are adjusted by financialization. This might involve shifting income from the actual to the financial segments, enhancing income disparity, combined with elevating the consequence of the financial segment in link to the actual segment. William K. Black (2009) enumerated how the actual economy is harmed by the financial sector. The banking industry drew out cash for its gain and then misallocated the remaining resources. To incentive the previously wealthy financial elites at the consumption of the country's financial security, this was done in a way that undermines the actual economy. Since, Islamic finance is only a real-life, real commodities financing, as opposed to financialization. Money cannot enter the Islamic system if it does not first go through the creation and trade of actual products and services. The results of this thesis manifested that, in comparability to traditional finance, Islamic finance is more egalitarian, stable, and sustains long-term economic growth (Hamman, 2014). Therefore, it is advised that OIC nations embrace and promote more participatory Islamic financial intermediation.

Corresponding to Kahf, et al, (1998) claim that Islamic financing is constrained by the amount of capital needed for real transactions that occur in the products and commodities market and that it is inherently interlinked with market. The amount of the operation in the products and services market, providing through a share, sale, or leasing arrangement, determines the extent to which Islamic finance is available. Like sharing modes, which are only available to profitable businesses that engage in real-world operations that rise the quantity, expand the quality, or improve the serviceability of real goods and services, these trades also create returns that could be split concerning the investor and the entrepreneur. Similarly, the sale-based modes entail the real and physical interchange of products commencing from one party to another; finance is only available to the degree that the real worth of the items traded is only

evaluated by the actual sales of commodities. The same holds for leasing, in which the financing structure is based on the leased assets.

In addition to that, Islamic banking is more efficient since, as Friedman (1969) has shown, an optimum allocation of assets requires a zero nominal interest rate. The empirical demonstration of interest free systems as both obligatory and appropriate for efficient allocation in widespread equilibrium models was also provided by Cole and Kocherlakota (1998). The rationale is that traders will have no incentive to exchange actual resources for cash when an interest rate is fixed at zero, which will lead to an increase in the allocation of resources to investments. In support of this approach, Goaied and Sassi (2009) explained that Islamic banks eradicate all speculative transactions concerned to interest rate prospects by eliminating the interest principle from their procedure. As a result, changes in money flow will absolutely affect the actual world through changes in the supplies and demands for goods and services. Furthermore, the Islamic financial system guarantees that the nation's credit expansion is closely tied to actual economic growth because Islamic financial intermediaries only assist in funding genuine products and services (Salman & Nawaz, 2018).

Furthermore, profit and loss sharing by eliminating the unfairness associated with interest-based financing, which holds the business owner accountable for any losses incurred by the project, financing promotes entrepreneurship. PLS fairly distributes risk, which inspires bold entrepreneurs to embark on new ventures with the same degree of risk-taking mindset they already possess. According to Kahf (1999), Islamic finance encourages risk-taking and entrepreneurship, and it broaden to the smaller wealthy portion of society is a functional instrument for development.

According to Iqbal and Molyneux (2005), Islamic banking encourages innovation by providing capital to anybody with a good idea. Small and medium-sized business owners that have superior projects stand a greater chance of receiving funding since innovation carries a significant risk, which will not prevent them from pursuing their goals. Better risk distribution is achieved by the Islamic banking system since the risk is shared between the financier and the business owner. Large-scale infrastructure projects that offer an environment conducive to investment can be funded at the macro level using Islamic capital market products like asset backed Sukuk. As a result, it is advised that nations, particularly those with sizable Muslim populations, modify their

regulatory and supervisory structures to provide room for Islamic financial markets and products (IMF, 2015).

However, because of its perceived injustice and exploitation, conventional finance which was introduced under the guidance of the interest-based financial system has come under fire from all religions, particularly Islam (Kazak et al., 2023). Thus, under Shariah principles, the Islamic finance has arisen as replacement financial model (Ozdemir et al., 2023; Razak et al., 2019 and Saiti et al., 2014). To ensure that revenue and risk are distributed fairly among all stakeholders, Islamic finance therefore places a strong emphasis on a system of profit and loss sharing (Kazak et al., 2023 and Kahf, 2015).

Furthermore, as indicated by Cihák and Hesse (2008), the Islamic financial is less hazardous and financially powerful than traditional finance, making it more stable for economic growth. It is suggested that because holders of investment accounts in the Islamic banking lack fixed-value securities, investment depositors automatically assume risk if assets are reduced because of bank-specific or macroeconomic crises. As per (Abdullah et al., 2018), the concept of risk sharing, which is ingrained in Islamic financial operations, is expected to enhance economic stability by reducing the intensity and frequency of financial crises. Small and medium-sized businesses (SMEs) can also obtain funding attributable to the Islamic financial system's execution of the principle of risk sharing. At the macro level, Islamic capital market products like asset-backed sukuk may be used to fund massive infrastructure projects that offer an atmosphere that is conducive to investment. As a result, it is advised that nations, particularly those with sizable Muslim populations, modify their regulatory and supervisory structures to provide room for Islamic financial markets and products (IMF, 2015).

(Kahf, 2006) demonstrates that Islamic finance is based on the foundation that money has no intrinsic value. A Muslim cannot, in good faith, give money to someone or take money from them and hope to get anything in return. This implies that earning money using money is prohibited, as is taking interest. This characteristic has open to the enlargement of Islamic finance in funding forms. The only things that make Musharaka, Murabaha, Ijarah, and Mudarabah feasible are productive firms, tangible goods, and service providers who support actual businesses that raise output and

enhance quality. As a result, the Islamic banking sector drives economic expansion by encouraging profitable ventures (El-Galfy & Khiyar, 2012).

3.6 The Structure on the Impact of Islamic Finance on Economic Growth

This section introduces an Islamic financial framework for economic growth. It has therefore highlighted several findings and analyses based on the Islamic banks, Islamic capital markets and Takaful on mainstream economics models. The study derived the framework that indicates Islamic finance institutions could affect the economic growth either direct or indirect as reported by some scholars (Kahf, 2022) and (Mifrahi & Achmad, 2020).

The direct effect of Islamic finance revealed and operated under how Islamic financial institutions channel their funds. The channels work through sales, leases, and partnerships. Therefore, Islamic finance channels the funds into real economic activities like the agricultural sector, manufacturing sector, business, construction and so on. All these activities have a direct effect on economic growth.

However, Mishkin (1995) asserted that investment and consumer expenditure are the main financial channels impacting economic growth, which has an indirect influence. According to the assertion, Islamic financial institutions have grown by consumption and investment rather than by implementing an interest system. Instead, they employed what is so named Mudarabah and Musharaka (M. Ibrahim, 2018). In Islamic finance, mudaraba refers specifically to a trust structure wherein one party invests) while the other uses the proceeds to fund a business venture. Like musharaka is a sort of joint venture in which the participants split the profit or loss based on a predefined ratio.

It follows from this financial system that the expansion of the investment is influenced by Islamic bank assets (Nisak & Ibrahim, 2014). Nonetheless, Islamic banks favor doing selling-buying contracts, over Mudarabah and Musharaka to satisfy market demands (Ibrahim, 2015). Murabaha is the most widely employed funding technique in Islamic banks, according to (IFSB 2016). Because Islamic banks are offering a financing facility, this will probably increase the consumption rate (Hamza & Saadaoui, 2018).

The growth of the economy may have an impact on Islamic financial institutions' consumer expenditures. Considering this, Islamic finance has suggested a profit-loss

sharing plan with Mudarabah and Musharaka contracts that are based on this plan (IFSB, 2018). According to Ibrahim and Alam (2017), the Murabaha contract is the one the Islamic banking system uses the fastest now. The largest exposure for Islamic banks is financing to personal or household investments, which makes sense considering the sample countries' usually high consumer-driven demand for Islamic banking products. According to the IFSB (2019), this industry accounted for over 42% of all Islamic banks' financing experiences. It is anticipated that Murabaha financing would have an impact on consumer spending because it is a mark-up pricing model that primarily relates to consumer finance. Furthermore, it is anticipated to have a greater impact than the investment sectors if this Murabaha contract just used the consuming sectors (Mifrahi & Achmad, 2020).

The monetary transmission theory reveals the effect of Islamic finance on investment, and it also shows that when bank reserves and deposits rise, so do financing transactions. As demonstrated by Law and Singh (2014), the fact that many consumers rely on bank services to fund their operations leads to an increase in services that will raise investment expenditure (Mishkin, 2007). Second, according to (Mifrahi & Achmad, 2020) and Ismail (2011), the Islamic bank's funding option was reliant on assets. Equity financing was employed in the Mudarabah and Musharaka contracts, which displayed a profit-and-loss sharing plan. This will provide a more effective means of directing funding toward actual economic activity. A profitable profit-and-loss sharing plan indicates investment activity and ultimately influences economic expansion.

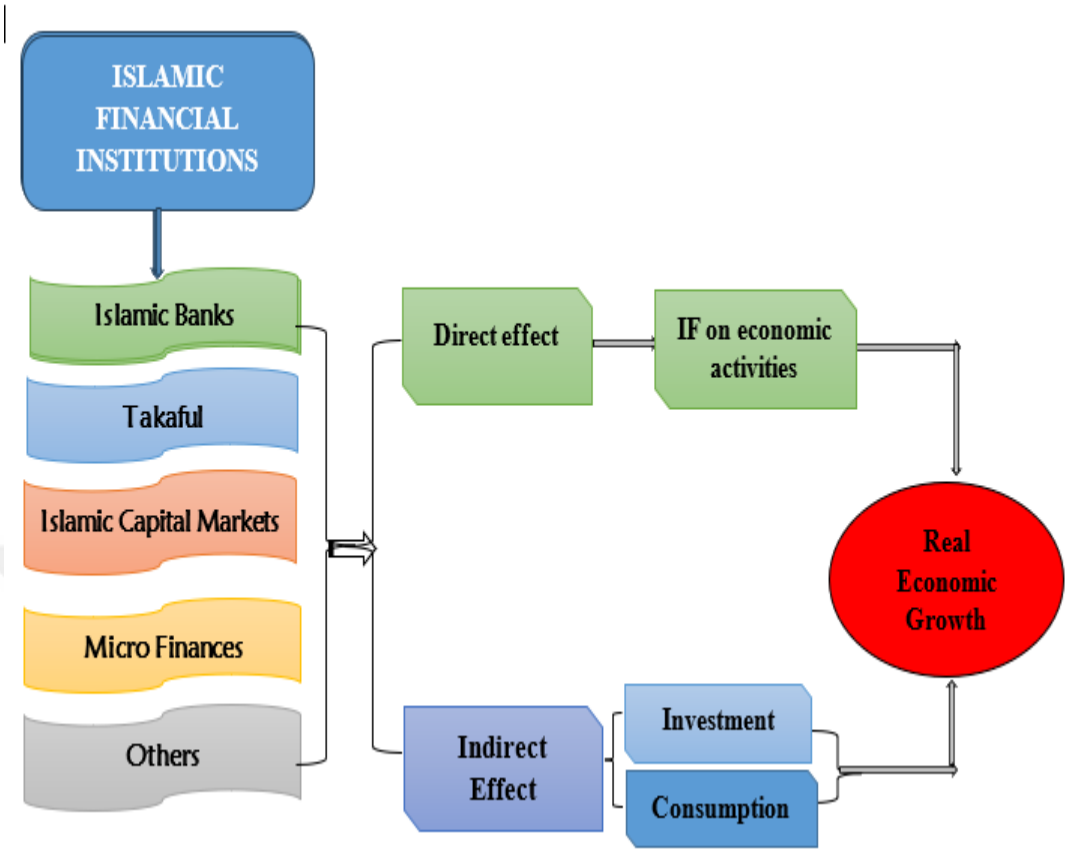

Figure 3. 1 Proposal of the Framework on the Impact of Islamic Finance on Economic Growth

Source: Author Compilation

CHAPTER IV

LITERATURE REVIEW

This chapter divided into several section but the main section which cover large area called empirical studies. The empirical studies encompassed in their elaboration of the research were objectives, methods, findings, and conclusions recommended. A great deal of interest has recently been generated in this area because of the findings of this major growth in literature. Therefore, the discussion of the prior reviewed studies could provide an overview of the conclusions and the way forward. The empirical review is divided into subsections that each focus on a different aspect of the review. The first subsection shows the empirical examination of how Islamic capital markets affect economic growth, while the second describes how Islamic banking affects growth. The main benefits of this chapter are that it makes it possible to identify research gaps in the literature and to learn more about economic schools of thought that have developed over time their main principles, themes, and approach to reaching high productivity, and economic stability as well as to maintain the sustainable development of the people so it helps of various researchers and contribute to the body of knowledge

4.1 Empirical Review

The following are some of the prior studies that were carried out by different authors and connected to the research objectives. So, this section briefly discusses the previous pieces of literature on the most critical evaluation. Their empirical studies appear to show the methods used, instruments applied, outcomes revealed, and recommendations offered by different scholars. This section separated into two groups in which the first group described and discussed all previous studies based on Islamic finance and economic growth nexus, and the second group discusses the impact of conventional finance on economic growth.

4.1.1 Empirical Review Related to Islamic Finance – Growth Nexus

This section outlined the several prior studies that were connected to this research theme, particularly those that focused on Islamic finance and economic growth. Much research has been conducted, and some of the outcomes and methodologies used were

similar while others were very contradictory. The description of each prior study was therefore broken down into its name, purpose, sample, place, methodology (methods for analysis), conclusions, and suggestions. Therefore, several academics have thoroughly researched the connect between the growth of Islamic finance and economic growth.

It should be recalled that, the prior studies that has been written about the connection concerning Islamic finance and economic growth is somewhat controversial since some authors like (Naz & Gulzar, 2022:15; Rafsanjani, 2022:532; AL Mustafa, 2020:28; Bendriouch et al., 2020:352; Mensi et al., 2018:1; Tabash et al., 2017:403; K. Ahmad & Hassanudin, 2017:1; S. Kassim, 2016:1; Yazdan & Hossein, 2012:1) believe that Islamic finance is one of the major factors of economic growth and experienced positive significant between them, while others believe it is only a minor determinant and its contribution is a negative or insignificant factor (Mulyadi & Suryanto, 2022:29).

Previous studies over the last two decades have concentrated on the impacts of the Islamic financial structure on economic growth for factors, rather than for aggregates like the number of Islamic banks and financial assets holding Islamic banks. Even Western nations are now working on fulfilling Islamic finance in their conventional banks and have been adding Islamic financial property by considering their quick expansion and growing demand. The establishment of Islamic banks has seen a rapid rise on a worldwide scale. There is very little research on the connection between Islamic banking and economic growth. The observed research on Islamic finance and economic growth is summarized as follows.

4.1.1.1 Studies of Islamic Finance Based on Individual Country

Tan & Shafi (2021:102), by using autoregressive distributed lag (ARDL). They check how the capital market affects economic growth based on the part of Sukuk as an instrument. The study was conducted in Malaysia and used secondary data which ranges from 1998 to 2018. The study found that both Sukuk, as well as bonds, become positively insignificant to economic growth in Malaysia. They recommended that there should be a discourse on Islamic financial development on economic growth and there is a need for a document of the Sukuk demand and supply on its role in economic

growth. This study finished by advising the government of Malaysia to provide awareness of the influence of Sukuk investment on economic growth.

Alkhawaja (2019:95), this study investigates the involvement of Sukuk to the GDP growth in Turkey. Based on private and sovereign Sukuk data collected from 2010 to 2017. The results show that there is an increasing the impact of Sukuk issue on GDP in Turkey. In addition to that, Turkey's Sukuk market is dominated by sovereign Sukuk rather than private Sukuk. At the end of their study (Alkhawaja, 2019:95), recommend that the government of Turkey should establish smooth regulations and laws to permit the transaction of Sukuk including issuing for both public and private sectors. Their findings have proven that Sukuk has boosted the economic growth in Turkey gradually since 2010.

Musa et al. (2020:91), this paper used ARDL and was carried out in Malaysia to examine the primary objective of the Islamic capital market's impact on economic growth. Data covered period (1998Q1 to 2017Q4). The study revealed that GFCF, Islamic stock market turnover (ISM), as well as Islamic capital market capitalization, have a positive significance on the economic growth in Malaysia. The study concluded by justifying how important the ICM plays in promoting real sector growth. To offer a variety of Shariah-structured goods and services, government and responsible agencies must empower and strengthen the role of ICM by setting policies which encourage Sukuk development. Additionally, the study suggested that government authorities establish rules to lower the financial expenses of ICM product development and registration. It will be used as a motivator to produce more productive Islamic capital market products and increase the volume of financial market participation investment.

Arshed et al. (2016:14) applied unit root problem, CT, CUSUM test and causality estimator to explore the impact of Islamic banking performance and economic growth. This study was carried out in Pakistan and data was collected from 2006 to 2013 on a time series basis. The findings and results show that Islamic financial investment (IFI) and IB net financing have a positive significant influence on economic growth, GFCF and capital accumulation. The study recommends that there is a great duty for the governments to keep a conducive environment and encourage the development of

Islamic banks the establish friendly laws, an environment for operation and easy establishment of Islamic banks.

Hazimi & Mansur (2017:2), this research is being done to determine if Malaysia's economic development would be impacted favourably by Islamic banks. This indicates that it is examining if Islamic banking success is greater to the traditional banking arrangement. Time series analysis which the data is arranged and covered 36 weeks, more especially cointegration, error correction modelling, and variance decomposition, is the approach used to explore this empirical investigation. The results were undoubted that the economy is stimulated by the banking systems, which include both traditional and Islamic banking. In contrast to other industries, Islamic banking appears to be the most reactive. It's noticeable that Islamic bank funding significantly improves over other categories and is determined to have a favourable and substantial link with economic growth over the long and short terms. It suggests that one of the measures the government should think about enhancing the growth of Islamic banking. As a result, the government may be deemed to be on the correct road given their considerable effort to concentrate on this industry since it can accelerate economic growth.

Abduh & Azmi (2012:35), discusses the short-term and long-term links between Islamic finance growth and economic growth in Indonesia. Azmi and Abduh used data arranged quarterly bases from 2003 to 2010 for this study's objectives. Utilizing the co-integration bound estimator and VECM developed in the support of (ARDL). The findings show a strong correlation between the rise of Islamic finance and both short- and long-term economic expansion. That connection, however, is not the demand-following Robinson nor the supply-leading Schumpeter. It seems like there is reciprocity in the relationship.

Zarrouk et al. (2017:2), confirmed positive results in Islamic finance's development and economic growth. According to study done in the UAE between 1990 and 2012, the country's rate of economic growth was initiated by a growth in financial development year over year throughout that time. Even if the nation's governmental revenue is unpredictable, Islamic financial development has the prospective to be the primary engine of economic expansion. Reforms in the evolution of Islamic finance are inextricably simultaneous to the UAE's growing economic growth. Beginning with

free competition, and a growing openness of the financial sector to international investment, the Islamic financial system is being reformed. The UAE's pursuit and planning of Islamic finance advances can boost its economic growth.

According to Mitsaliyandito et al. (2017:1), the development of the Sukuk market has a encouraging impact on Indonesia's economic growth. It focuses on outstanding Sukuk, and the analysis used Sukuk panel data on a quarterly for the years 2009 to 2016. To determine shock happened in variables and the direction of causation, and VAR model are all used. Results showed that the Sukuk market has a significant beneficial impact on Indonesia's economic growth. Additionally, foreign Sukuk has a greater impact on Indonesia's economy than cooperative Sukuk. This study concludes that the effectiveness of utilizing money determines how the Sukuk market's growth affects GDP. Because if a Sukuk defaults, the investor should be capable of executing the underlying assets. Therefore, the issue of Sukuk will affect the same degree. It depends on its productive uses and whether it can leverage GDP above its underlying assets. Furthermore, the qualities of the securities that would need their usage for productive use are virtually definitely what contributes to the Sukuk's good effect.

Sari et al. (2018:21) to look at how Islamic Capital Markets affect economic growth in Indonesia. The investigation was carried out in two samples from the Indonesian statistical agencies Badan Pusat and Otoritas Jasa Keuangan. Co-integration test & VECM have been used to scrutinize the data to achieve the study goals. Data was based on monthly data from 2011 to 2017. According to research, mutual funds and Sukuk have a favourable, considerable impact on Indonesia's economic growth. In addition, the VECM supported the ICM's influence on Indonesia's economic growth over the long term, while mutual funds and Sukuk had a big impact on it over the near term.

Ledhem & Mekidiche (2022:4), this study's objective was to scientifically explore the link involving Islamic finance and Turkish economic expansion. This study used a quantile regression with a Markov chain approach. While the GDP is used as a dependent variable of economic growth, the study adopts total Islamic financing as the primary explanatory element. The sample comprises all Turkish full-fledged participation (Islamic) banks functioning from the Q4 of 2013 to the Q3 of 2019. The study gathered information from a variety of sources, including the International Monetary Fund database, official financial reports from designated Turkish banks, and

the (IFSB). The findings showed that the impact of Islamic finance on growth in Turkey is statistically significant and favourable across many quantiles, confirming that the growth of Islamic finance in Turkey is fostering economic growth.

Tabash et al. (2017:403) they examine the Islamic banking and economic growth in Qatar. The annual time series data for 9 years (1990 -2008) were collected from corresponding Islamic banks and data for economic growth was collected from the World database and other sources. The study applied variables such as Gross Domestic Product, Islamic banks' financing funds, Foreign Direct Investment inflow, and Gross Fixed Capital Formation. Moreover, this paper was done by using econometrics analysis by testing unit root, after that testing co-integration and lastly, they applied Granger causality. The outcomes justified that, there is a long-run and positive significant correlation between Finance and economic development by Islamic banks in Qatar. Likewise, the outcomes indicate that Islamic banks contributed to the growth of the FDI in the positive and long run. The Granger causality also comes to justify the positive connection between economic developments and funding from Islamic banks has also shown significance. They concluded that to draw further investment, the government of Qatar should pay more attention to Islamic finance. The research results would be of attention to Western and Islamic financial experts, legislators, and academics involved in the Islamic finance industry.

Ahmad & Hassanudin (2017:1), based on time series data arranged quarterly from 2007 Q1 to 2014 Q1. Ahmad 2017 assesses the long-run and short-run impact of Islamic banks' performance and economic growth in Malaysia. This study used the data from IMF, IFS and Malaysia Central Bank Statistical Bullet. The data collected were analysed by testing unit root, co-integration, granger causality as well as VECM. After they processed the data, the findings showed that the Islamic Bank had contributed the economic growth in the long term while the Granger causality showed there is bilateral causality between Islamic banks specifically on total deposits to economic growth. The research recommends that further studies should be conducted by examining before financial crisis and after-financial crisis analyses on the connection between Islamic Banks and economic growth.

Ali (2021:180), in Bahrain, investigate has been done to study the connection between Islamic banking and economic growth. This study looked at the long-term linkages

and casual correlations between Islamic banks and economic growth. The total asset of the Islamic Bank of As-Salam in Bahrain was used as the focus variable, the GFCF, and FDI were associated as control variables and GDP per capita was employed as the dependent variable. VAR, VECM, and variance decomposition are among the estimation techniques used since the study's focus was on quantitative methods and time series data gathered from 2000 to 2019. The analysis of the data revealed that Bahrain's economy has benefited greatly from the asset base of Islamic banks. These results suggest that Islamic banks' expansion and growth have positive effects on the economy and personal income. So, policy forces should exert greater effort in support of Islamic banks' operations to foster a favourable relationship with their economies and serve as a catalyst for the growth of other economic sectors.

AlMustafa (2020:28), the study compares the macroeconomic variables of inflation and FDI with the influence of Islamic banks to economic growth as assessed by net financing from Islamic banks and total deposits made by Islamic banks in Pakistan. Hence, this study applied the bound testing cointegration technique established within the (ARDL) to quarterly data from 2009 to 2016 to discover the impact of Islamic finance and macroeconomic variables on economic growth. The outcome demonstrates that both variables have an impact on economic growth over the short and long terms. Macroeconomic factors and Islamic financing, when compared, have a favourable, considerable effect on economic growth. Also, it has been demonstrated that Islamic banking has enormous growth potential. This has the logical consequence that the government may first need to support Islamic banks in every capacity. Also, encourage the opening of new Islamic banks in nations that have never done so. Moreover, there is a growing need for skilled workers who can work in and support Islamic banks as the number of institutions and Islamic banks grows. Therefore, the government may motivate individuals to pursue Shariah education and eventually work for Islamic banks.

Wardhany & Arshad (2015:89), Investigate how Islamic banks (IB) affect Indonesian economic growth (EG) using VECM and the Variance decomposition Technique (VDT). The Indonesian Central Bank's quarterly data covering the years 2003 to 2011 were thus collected to fulfil the study's objectives. In addition to CPI, total deposits, and nominal GDP as independent variables. Real GDP was also gathered as a

dependent variable. Unit root test, co-integration test, LRSM, VECM, (VD), Persistence profiles (PP) and Impulse response function (IRF) were used to examine the data. The research revealed that Islamic banks under total deposits have a beneficial impact on economic growth. The state's economy needs to keep receiving benefits from the increased contribution of Islamic banks. Given that 85% of Indonesia's 240 million people are Muslims, Islamic banks ought to have a bigger presence there. The central bank needs to acknowledge the strategic contribution that Islamic banks provide to economic development and work to enhance the financial system and human resources that will support the expansion of Islamic banks.

Abduh & Chowdhury (2012:104), In the basis of Bangladesh, the study examined the long-term and dynamical association involving the rise of Islamic banking and national economic growth. This analysis uses quarterly time series data on the total deposits (TD) and total financing (TF) of Islamic banking and GDP for the measurement of economic growth. Data covered the time frame from 2004 to 2011. Its estimation was unit root test and Cointegration. The World Bank, Bangladesh's central bank, and the International Monetary Funds are where used for information gathered. This essay investigates the impact of Islamic banking on economic growth, notably in Bangladesh. The findings of the cointegration methodology demonstrate a long-term, positive association between Islamic banks and economic growth.

Tabash & Dhankar (2014:61), by using econometric research tools, especially the Unit Root test (URT), Co-integration test (JCT), and Granger Causality test (GCT), this article seeks to examine the connection amongst the rise of Islamic financing and long-term economic growth in Qatar. Yearly time-series data from 1990 to 2008 were utilized in the statistical study. According to the research, financing provided by Islamic banks helps Qatar's GDP and investment develop over the long term. The finance provided by Islamic banks and GDP are causally related. Yet, these findings indicate that there is a two-way causal relationship between GDP and Islamic bank financing, as well as between Islamic bank financing and economic growth. According to the study, strengthening Islamic financial banks will help economic progress, which is crucial for both the economy's long-term well-being and the fight against poverty. Also, the findings of causality tests indicate that there is a causal relationship between the financing provided by Islamic banks and GFCF and FDI. The findings show that

an atmosphere conducive to boosting foreign investment is provided by Islamic finance. The study's findings are quite important because it was one of the first to examine Islamic financing.

Majid & Salina (2014:292), this study's objective is to scientifically analyse how Islamic banking and financial institutions (IBFIs) have influenced Malaysia's economic development. The research uses time series data that covers the period from 1997 to 2009 quarterly. The techniques for testing, including vector error correction model, (ARDL), and variance decompositions, concentrate on the post-1997 economic turbulence. The results indicated that Islamic banks had a substantial impact on the Malaysian economy. Specifically, considerable unidirectional causation from the development of Islamic banks to economic growth was discovered, confirming the supply-leading perspective.

Mosab & Raj (2017), they explore the dynamic relationships between Qatar's Economic Growth and Islamic finance. The study was taken for a period of 9 years from 1997 to 2005. In addition, by employing econometrics analysis on VECM to examine the existence of long-run financial arrangements and the operation of the financial organization transforms. The outcome revealed that grangers found in the short-run, fixed investments trigger Islamic banks. But Long-running, clear evidence of a bidirectional relationship between fixed investment and Islamic banks. This result implies that Islamic banking causes an increase in GDP and not vice versa.

Based on Islamic Banks, researcher (Tabash, 2019:39) looked at the banking industry's execution and economic growth in the UAE. Thus, the goal of the study was to investigate the connection between the advancement of Islamic banks and the UAE's economic growth. (GDP) per capita was used to measure economic growth but ROE, NRM and ROA were utilized to measure the implementation of Islamic banks. Together complete Islamic banks functional in the UAE accomplish up the study. The research period includes the years 2000 to 2014. Combined with the multicollinearity test, Pooled Ordinary Least Square (POLS) is performed to test the hypotheses. The judgments indicate that there is a positive correlation in the UAE between the success of Islamic banks and economic development. The empirical findings of the study indicate that UAE policymakers should help the Islamic banking sector by establishing new initiatives for its growth and development.

Mulyadi & Suryanto (2022:29), seeks to explain how Islamic banks helped Indonesia's economy flourish throughout the pandemic. The study technique employs quantitative analysis of secondary data obtained from Otoritas Jasa Keuangan (OJK) utilizing the estimation techniques Vector Error Correction Model approach with Johansens Cointegrate Test and exhausting gathered time-series data from 2010 to 2021. The findings included that Islamic banking funding and the pandemic harmed economic growth, although overall Islamic banking assets had a long-lasting favourable impact on economic growth. The findings of the Impulse Response Function test, however, reveal that the impact of pandemics, Islamic finance, and total Islamic banking assets on the reaction of economic growth to shocks was unstable over 60 periods. Their actionable suggestions the government must strive more to build the Islamic economy and finance, especially Islamic banks, with the backing of infrastructure and services.

Khasanah et al. (2021:103), the purpose of the study is to assess how Indonesia's economic growth is related to the intermediate performance of Islamic banks. From 2007 to 2019, financing, fund placement, investment in securities, and third-party funds were the main variables associated with this study. The efficiency of Islamic bank intermediaries was examined using VECM, GCT, IRF and VD to look at causality linkages, short- and long-run impacts, and shocks. According to empirical findings, the success of Islamic banking intermediaries in the disruptive age may not have an impact on economic growth, also a substantial two-way causal connexion between Islamic banks and economic expansion is revealed by the findings of the Granger causality test. The GDP expands more when banks offer additional funding. This study suggests that Islamic banks focus more on the creation of technology. This is because, in this competitive era, client conduct is frequently digital as opposed to traditional. In addition, the authority ought to establish a legislative environment that fosters the development of Islamic banks. For Islamic banks to have the same potential to handle greater money, they should also include Islamic banks in numerous government programs. To increase consumer access, it is also critical to offer more creative and diverse Islamic banking services and products.

Sumarti et al. (2020:1), the study scrutinizes the growth of Islamic banks with its influences on economic growth in Indonesia. The study applies data from 2003 to 2013 from secondary sources. The main variables were GDP and inflation. It was based on

data from the time series which enabled measurement of the relationship of the selected variables. The outcomes imply that growth in Islamic banking has not had a chief consequence on economic growth. Using some simplified assumptions, we use the projected growth model to analyse again if this condition will arise 10 and 15 years ahead.

Rafsanjani (2022:527), in this article, the impact of Islamic banking on Indonesia's economic development between 2015 and 2019 monthly is examined. In this work, secondary data were employed in the form of monthly time series data from the years 2015-2019. Total finance, total savings, total assets, representing Islamic banking and GDP per capital as factors represent economic growth. For the examination of the gathered data, the ADF and PP used for testing unit root and cointegration tests were used, along with the Johansen technique. Corresponding to the outcomes, Total Assets Islamic Bank has an impact on GDP with a significant level and a long-term positive impact. Hence, any rise in the Total Assets of the Islamic Bank will lead to a boost in GDP in Indonesia. The findings so confirm that Islamic banking has an impact on Indonesia's industrial prosperity. As a result of these, the writer suggests that Islamic banks must increase their human resource capacity. The government is also anticipated to keep encouraging Islamic banks. Finally, Islamic banking must offer more finance in the real sector to boost capital and bring about job possibilities. This can be accomplished by setting up additional branch locations across the globe.

Kassim (2016:1) used time series data arranged quarterly from 1998 to 2013. These data were collected from many sources including the Central Bank of Malaysia and IMF. The key objective of the study was to examine the impact of Islamic finance on real economic growth in Malaysia. The study used variables such as GFCF, inflation, Islamic bank financing, general government expenditure, industrial index, Islamic bank deposits and trade openness. Based on the approach of this study the unit root test, cointegration and ARDL model were applied as econometric techniques for data analysis. The results revealed that Islamic finance especially Islamic bank deposits and Islamic financing have long-run positive contributions to real economic growth. Due to these results, the research recommends that Islamic banks would advertise Shari'ah-compliant investment deposits to attract long-term investors and prevent the delay in gathering money for investment activities. Similarly (Jobarteh & Ergec, 2017:31;

Jobarteh & Ergec, 2017), analysed the empirical impact of Islamic finance on growth in Turkey. By Using the VECM technique for monthly data range from 2005 to 2015 confirmed that Islamic finance has a long-run relationship with growth in Turkey.

4.5.1.2 Studies of Islamic Finance Based on Group of Countries

Seda et al. (2020:209), they investigate the Sukuk market financing on economic growth. Their study covers almost nine countries. This study used secondary data quarterly from 2014QI to 2017Q4. They used variables such as financial stress series, Inflation, gross domestic product, the trade deficit, and Sukuk export. The focus variable was Sukuk export. Their findings have shown that both Sukuk volume, as well as density, has a definite relation with economic growth therefore this study confirms that Sukuk growth has a positive long-run link with economic growth. Seda et al. (2020:209) concluded that Sukuk issues which include volume as well as density have long-run co-integration with economic growth. Because most developed and developing countries deal with it as the best alternative option in which their transaction for raising funds is beyond conventional instruments like a bond.
(Echchabi, Aziz, & Idriss, 2018:60), this study was conducted in GCC counties using data from 2005Q1 to 20 12Q4. The countries included in this study were UAE, Kuwait, Bahrain, Saud Arabia, and Qatar. On the side of analysis, the study employed a causality method to consider the relationship between Sukuk finance with economic development. The findings have shown that Sukuk gave no significant cause for economic growth. Echchabi, Aziz, & Idriss (2018:67) covered the gap by studying Islamic financing specifical on Sukuk issues and more importantly, it contributes to the decision-makers, investors, and policymakers, works of literature on the significance of Sukuk financing on economic growth.

Ledhem, (2020:1), this research shows how Sukuk markets involve economic growth. The study's sample consisted of countries in Southeast Asia. It spans the quarters 2013Q4 through 2019Q3. The study concluded that Sukuk had a considerable impact on economic growth in selected nations, based on a dynamic model. The study noticed that Sukuk became an alternative financing and the best booster of economic growth. Ledhem (2020:4) conforming that Rumer's theory moves together with capital markets with economic growth because according to Romer (2011:359) economic growth is

affected by the exogenous factor on which financial markets are included which can be capital markets or money markets. So Sukuk as security in financial markets improves economic growth by stimulating investment activities and capital stock (Fanta & Makina, 2017:1).

The study by Abd.Aziz et al. (2016:63), Their investigation revealed the impact of Islamic finance on the issuance of Sukuk & economic expansion in the GCC between 2005 and 2012. The data were evaluated by Toda & Yamamoto using the Granger non-causality test. The outcomes specified that while Sukuk issued by individual countries had an impact on economic growth, there was no effect of Sukuk issued by all GCC countries when pooled together as a panel. Additionally, the study showed that non-GCC nations had a favourable impact on the issuance of Sukuk for economic expansion.

Similarly, in the study by Nayan & Kadir (2014:4), the studied objective was an example of Sukuk and economic growth. The study is based on a panel system that includes 10 nations and spans 8 years, from 2005 to 2012. They used a difference and system GMM with pooled OLS, random effect, and five effects. The results of the study demonstrated that Sukuk had a significant impact on economic growth in the chosen nations. Additionally, the study supported the growth of the Islamic financial sector, particularly the IB and ICM.

In the same vein, the research by Smaoui & Nechi (2017:1), study's goal was to examine how the rise of Sukuk affected a sample of 18 nations' economic growth. It was statistical econometric research that covered the years 1995 to 2015. The system GMM calculated the data that was regressed. The conclusion was that the financial sector, particularly the Sukuk market, had little impact on economic expansion. Smaoui & Nechi (2017:27), The expansion of the Sukuk market was found to positively enhance economic growth, but other factors like trade openness and corruption were shown to have a detrimental impact. This study breaks out domestic and international Sukuk, although all its findings have a favourable correlation with economic growth.

According to (Avci, 2020:66), Based on sample nations around eight (8) countries were included in the study. Quarterly data from 2014Q1 to 2019Q2 was utilized to analyse the link between Sukuk market development & economic growth.

The results demonstrated a one-way causal relationship between economic expansion and the rise of Sukuk. The unit root of the variables paired Dumitrescu Hurlin panel causality test, IRF, and ultimately VD was all employed in the study's analysis. The research's conclusions indicate that there is a one-way causal link connecting economic development and the development of Sukuk markets. Whenever Islamic Securities outcomes and economic growth are compared, no causal link between the growth rates of Sukuk development and economic growth is found. Yet, a link between economic expansion and the rate of Sukuk growth has been established.

Muharam et al. (2019:196), this investigation was carried out to examine the bidirectional link between economic progress and the development of the Islamic stock market and the Sukuk market. The Granger Causality Test, VECM, and VAR (Vector Auto Regressive) were employed to test the hypothesis and achieve the study's goal. The findings indicated that there is a two directional causal link concerning the growth of the ISM and the Sukuk market in terms of economic growth over the time frame from February 2008 to December 2017. The expansion of Indonesia's economy is causally related to both the growth of the Sukuk market and the growth of the Islamic stock market. The development of the Malaysian Sukuk market and economic growth are revealed to be unidirectionally causal. And no correlation between the evolution of the Islamic stock market and Malaysia's growth.

According to Ayaz (2019:40), he investigated how ICM affected economic growth in the UAE, Pakistan, and Malaysia, three different states. From 2009 to 2017, secondary data for quarterly time series were provided. The EViews 9 application was used to evaluate the data using the CT and ARDL test. According to the findings, ICM had a favourable impact on economic growth in Pakistan and Malaysia over the short term, while only Islamic market capitalization and the total volume of newly issued securities had an impact over the long term. According to the UAE's findings, IMCAP and the total number of listed securities both had a substantial short-term influence on economic development, but only IMCAP had a significant long-term impact. In conclusion, the combined independent variables of TNI, TNL, and IMCAP all have a large impact on economic development across all nations.

Moreover, the study by Rahman et al. (2020:599), the study examined the reciprocal link between the expansion of the ISM and Sukuk and economic growth. The

investigation was carried out in Indonesia and Malaysia, two sample nations. Data for the time series was collected between February 2008 and December 2017. This research applied the common and reliable techniques of VAR, VECM, and Granger causality as their analytical tools. The study concluded that there appeared to be a bidirectional causal connection between the Islamic stock market and the Sukuk market, and it found that over the long run, there is a positive association between economic growth and both the ISM and the Sukuk market in both countries.

Ledhem & Mekidiche (2021:1) this study examines how Sukuk influences economic growth. This study was conducted in 3 South East Asia countries which were Indonesia, Malaysia, and Brunei. The secondary data which was based quarterly from 2013 to 2019 were collected from IFSB, WB, IMF, and other sources. The results confirmed that Sukuk as a product of the Islamic capital market has a greater contribution to the economic growth in Southeast Asia countries. Because the study was constructed in 3 countries, so panel data approach was applied to (Ledhem & Mekidiche, 2021:1) applied quartile regression which is a non-parametric approach for panel data estimate.

Malikov (2017:15), explore the effect of sovereign Sukuk. The study used secondary data analysed by quantitative analysis called panel analysis. Data ranged from 2002 to 2011. The results from both countries show that sovereign Sukuk especially in infrastructure sectors has a positive significance on economic development. This study noticed that sovereign Sukuk became among the major Islamic financial products for mobilizing public funds to finance the government budget through enhancing infrastructure projects in Malaysia and Saudi Arabia.

Zarrouk (2014:45), conducted a study on GCC and MENA regions which comprise a sample of forty-three Islamic banks. The study was based on the methodology of comparative analysis due to the challenges of data collection, therefore the study used data that covered a period from 2005 to 2010 to scrutinize the concert of IBs and CBs with their challenges throughout the global financial crisis that occurred from 2007 to 2008. The findings have shown that there is a negative connection between Islamic banks' performance and financial crises which results in the crisis the profitability of Islamic banks decreases and their average return on assets and return on equity as well. Also, it is justified that during financial crises the loans in Islamic banks increased.

The study was conducted in three Middle Eastern countries which include Qatar, UAE, and Bahrain, that examined the flow of economic growth and Islamic finance. It is based on econometric time series to the examined relationship between economic growth and the development of Islamic finance (Tabash & Raj, 2014:11). The testing unit root test tests co-integration test and test of Granger causality were achieved for the research. The results of the Granger causality check show a causal correlation in these countries between Islamic finance and economic development. There look as if to be a bi-directional correlation between the financing of Islamic banks and economic development, and vice versa for Qatar and Bahrain. The outcomes attained from the results of Granger causality for the UAE suggest that only in one direction does a causal relationship exist. The results show that Economic growth will benefit from strengthening the Islamic organizations in the countries of the Middle East., and that economic welfare, as well as poverty reduction, will be significant in the long run.

Bendriouch et al. (2020:352), this study aims to investigate the current relationship between the success of Islamic banks and economic growth in GCC countries. This research aims to analyse the contribution of Islamic banks to economic development. Based on the evidence that Islamic finance leads to higher levels of economic development, we are designing a structural equation model to attest to these relations. It includes determinants such as scale, liquidity, adequacy of resources, credit risk, and expense control as a measure of profitability. The study consists of time from 2010 to 2017 wherein the Bahrain, UAE, Oman, Qatar, and Kuwait Islamic banks operate. We are showing that Islamic banks have a positive link with economic growth, particularly in the years directly following the financial crisis. The success of Islamic banks has, in addition, contributed to economic development. The findings represent a significant contribution to understanding how economic growth is accelerated by the activities of Islamic financial institutions. The findings would give Islamic bank managers a better understanding of how, by reducing by avoiding significant flaws in the traditional banking system, and the severity of the financial, their institutions could improve their economic performance.

Mohamed & Seifallah (2010:1). Conducted a study for 16 MENA countries by using GMM unbalanced estimate of a dynamic model. The study covers a period from 1962 to 2006. The study focuses on examining the development of Islamic banks on

economic growth. The findings demonstrated that Islamic banks don't have an impact on financial markets and have a weak contribution to economic growth although in a positive form. The study recommended that a legislative framework and principles of international accounting are all necessary for the development of the Islamic banking sector. In these circumstances, the establishment of a trustworthy and robust financial system would be advantageous for economic growth.

Mifrahi & Achmad (2020:72), this study was based on a panel method that covered a sample of the QISMUS countries so the annual data that range from 2005 to 2015 were collected. The study method applied is called multiple mediation which includes direct effect, indirect effect, and mediation method. The intention of the study is to scrutinize the effect of Islamic banking financing (IBF) on economic growth while the mediated variables were consumption and investment. The results demonstrated that based on consumption and investment as variables mediations the IB Financing has positive indirect significance to growth but unfortunately, the direct result of IBF is not able to influence economic growth. The study concludes that, since Islamic banks are still in their preliminary stage in certain jurisdictions, research on how Islamic banking contributes to economic growth is essential. The banking sector significantly affects economic expansion.

Yazdan & Hossein (2012:1) was based on the analysis of the short and long-run impact of Islamic Banking Financing on economic growth in Indonesia and Iran, the quarterly data collected from 2000 Q1 to 2010 Q4 used to test VECM, Autoregressive distributed Lag ARDL and Granger causality were used to run the data to make analysis. The Islamic Bank is measured by total Islamic bank finance. The outcome revealed that both in the short run and long run Islamic banking financing is significant to economic growth while Granger causality is shown by the directional relationship between GDP and IBF. The findings recommend that the government should keep promoting Islamic banking because it has a positive impact on the economy. The government should encourage the launching of extra Islamic commercial banks, and Islamic rural banks as well as stimulate existing Islamic banks to open additional branch offices to achieve the goal of increasing the proportion of Islamic banking assets by a specific period.

Mensi et al. (2018:1) This study investigates the nonlinear relationship between Islamic banking performance, significant macroeconomic factors (such as oil output, inflation, and the human capital index) and economic growth for Islamic countries. Middle East and North Africa cover 13 countries and the non-MENA region contains 6 countries make a total of 19 sample countries were used in the study. The study based on the panel method covered a sample period which ran from 1994 to 2014 on an annual basis and was determined by the data availability for all the countries within the analysis. Data analysis is based on model estimation from Panel Smooth Transition Regression Models (PSTR) and the dynamic panel quantile (DPQ) model. According to the expected coefficients for the PSTR models, Islamic banking loans have a positive effect on economic growth in the intermediate regime, but the correlation is adverse in the high regime. This suggests that Islamic banking loans harm economic growth for Islamic countries, possibly because of sophisticated risk involvement or their propensity for making unproductive real estate investments.

Ledhem & Mekidiche (2020:47), this study uses the endogenous growth model to examine the connection between the profitability of Islamic banks and economic growth. In this research, a balanced panel of data from fully operational Islamic banks operating in Turkey, Saudi Arabia, Indonesia, Malaysia, and Brunei and about 37 Islamic Banks were used. The study's coverage period was from 2014 Q1 to 2018 Q4. IFSB database's quarterly statistics were used to compile the data on Islamic financing. Thus, the explanatory variables were indicators of profitability and liquidity of banks while the control variables were GFCF, trade, and CPI. The dependent variable was GDP. In this work, the panel GMM estimate was used. This study indicated that only ROE was statistically important and contributed positively to growth when by means of the GMM method. As a consequence, this article concluded that the profitability of Islamic finance had a major favourable effect on GDP growth.

Issa (2022:131), this study aims to determine the causal relationship between the D-8 countries' economic growth and the Islamic banking system. Data range from 2010 to 2021 on an annual basis. Islamic Banking Financing (IBF) was employed as a proxy for the Islamic banking industry, while GDP was employed as independent variables and trade, FDI and capital served as research controls. The panel URT, panel CT and GCT were the econometric instruments that were employed. The outcome indicated

that, in the long run, Islamic banking and economic growth had a beneficial connection. The long-term linkage between Islamic banking and economic growth was examined utilizing a panel co-integration test. To determine the path of causality between them, the Granger causality test was also carried out. Researchers found a positive correlation between Islamic banking and economic expansion. In the short and long terms, it was demonstrated that the causality was bi-directional. It implies that the advancement of Islamic banking and economic growth are driving significant.

Naz & Gulzar (2022:1) conducted to examine how Islamic finance affects the rate of economic expansion in Muslim nations. About five Muslim states were selected in this study that was Qatar, Bahrain, Pakistan, Malaysia, and Indonesia. The study's primary goals were to determine how Islamic banking and Sukuk might affect economic growth. The econometric tools used were the Panel Causality Test (PCT), and the Pooled Mean Group Estimation (PMG) /ARDL approach. The findings showed that Sukuk and Islamic financing have a considerable positive association with GDP, which suggests that over the long term, Sukuk and Islamic financing grow in parallel with economic growth. The assets of Islamic banks, on the other hand, exhibit a significant although long-term negative association with real GDP, indicating that the two variables are inversely associated. The findings of a panel causality test showed that there is a two-way association between Islamic banks and economic expansion. The study recommends that economic growth may result from looking at ICM and the Islamic banking system (IBS) as viable strategies. In addition, findings demonstrate how the IBS and Sukuk contribute to economic growth and, over time, to the well-being of Muslim nations.

Badri & Boujelbene (2016:101) in his research conduct the panel data analysis to examine the effect of Islamic banks on economic growth in CCG countries. This study covers a period of 11 years from 2001 to 2012. The techniques of estimation were so-called Within and generalized least squares (GLS) techniques as well as fixed-effect technique, So the study applied macro variables such as Money Market Rate (MMR), Inflation and Industrial production index (IPI) with the micro variables especially Returns on assets, returns on assets and ratio of the achievement of Zakat so that to access the achievement of Islamic banks on economic growth. The findings have

shown that there is a positive impact of ROE and ROA which measure bank profitability on economic growth.

Tajgardoon et al. (2013:542), this study examines the causal links between Islamic banking and growth. The dataset employed spans the years 1980–2009 and includes all Asia countries. The nations in question include Iran, Pakistan, Yemen Qatar, Malaysia, Iraq, Oman, Bahrain, Turkey, and Saudi Arabia. This study examines the correlations between selected credits of Islamic banks, GDP, and trade variables by using the Granger causality and the panel data model. Im, Pesaran, and Shin's (IPS) and URT validate the stationary nature of each of the variables used by the authors. The empirical outcome of the Granger causality test demonstrates a bidirectional association between exports and growth in the economy as well as between trade and Islamic banking. As a result, Islamic banking and other Islamic operations are beneficial to economic growth. The authors recommended that other nations use Islamic banking and do away with usury.

Muhammad & Salisu (2019:10), this research intended to examine how Islamic banking has influenced Nigeria's economic expansion in comparison to Malaysia's. The impact of Malaysian Islamic banks will be considered, as well as Nigerian content. Time series data from 2005 to 2018 were utilized yearly to calculate the linking between the economic growth and Islamic banks for both countries. The methodology employed is quantitative, and information was taken from a variety of sources, including the Bank Negara Malaysia (BNM) and the Central Bank of Nigeria (CBN). The analysis was operated under regression analysis, correlation analysis, and Ganger causality. Notwithstanding Nigeria's partial insignificance and subsequent restoration of its glory as evidenced by the linear regression, the study results indicated a high degree of confidence in both Malaysian and Nigerian Islamic banking as a factor in economic growth. According to the report, the government should continue to uphold the standards and laws governing the growth of Islamic banks, the production of more Islamic goods that are consistent with Shariah, and their correct implementation.

Farahani & Dastan (2013:156). They studied economic growth and Islamic banking financing by using panel analysis. This paper selected several countries such as Indonesia, Malaysia, UAE, Bahrain, Egypt, Saudi Arabia, Qatar, Yemen, and Kuwait.

The panel data were quarterly bases from 2000 to 2010. The results imply that, positive and linked to capital accumulation and economic growth.

Table 4. 1 The Summary of Studies on Islamic Finance - Growth Nexus

S/N	Reference	Research Methodology		Findings
		Sample	**Techniques**	
1	Yıldırım et al., 2020	**Sample:** Brunei, Indonesia, Jordan, Kuwait, Malaysia, Nigeria, Saudi Arabia, Pakistan, and Turkey **Period:** 2014Q1 to 2017Q4	i. Unit root test, ii. Panel cointegration test, iii. PMG test	Economic growth has a beneficial and long-lasting association with the Sukuk market.
2	Echchabi et al., 2018	**Sample**: GCC Six countries **Period:** ranging from 2005Q through 2012Q	i. Toda and Yamamoto (1995) approach ii. Granger non-causality test	Sukuk financing did not influence the economic growth of GCC countries.
3	Abd.Aziz et al., 2016	**Sample:** GCC 13 Countries and other countries. **Period:** 2005 to 2012	i. Toda and Yamamoto ii. Granger non-causality test	Sukuk issuance had a positive relationship with the GDP when all the countries were pulled together.
4	Nayan & Kadir, 2014	**Sample:** 10 countries **Period:** 2005 - 2012	i. Pooled OLS ii. Fixed Effects ii. Random Effects v. Difference GMM v. System GMM	Sukuk significantly affects economic growth.

S/N	Reference	Research Methodology		Findings
		Sample	**Techniques**	
5	Smaoui & Nechi, 2017	**Sample:**18 countries **Period:** 1995–2015	Regressions estimated, and system GMM	The Sukuk market does not influence economic growth.
6	Alkhawaja, 2019	**Sample:** Turkey **Period:** 2010-2017	Data analysis	Sukuk issuance is not independent of the country's economy Turkey.
7	Avci, 2020	**Sample:** Turkey, Kuwait, Malaysia, Pakistan, Saudi Arabian, Sudan, United Arab, and Indonesia **Period:** 2014Q1-2019Q2	Panel VAR analysis	The expansion of the Sukuk market and economic growth are not correlated.
8	Mitsaliyandito et al., 2017	**Sample:** Indonesia **Period:** 2009Q–2016Q	i. VAR test ii. Granger causality test	The Sukuk market has contributed positively to the GDP.
9	Ledhem & Mekidiche, 2022	**Sample:** Turkey **Period**:2013Q1 – 2019Q4	Quantile regression with Markov chain approach	The impact of Islamic finance on economic growth is statistically significant and favourable across many quantiles.

S/N	Reference	Research Methodology		Findings
		Sample	**Techniques**	
10	Sari et al., 2018	**Sample:** Otoritas Jasa Keuangan Indonesia and Badan Pusat Statistik Indonesia and **Period:** Monthly from 2011 - 2017	i.Co-integration test ii.Vector error correction model	Mutual funds and corporate Sukuk have a major beneficial impact on economic growth.
11	Muharam et al., 2019	**Sample:** Indonesia and Malaysia **Period:** February 2008 to December 2017	i. VAR ii. VECM ii. Granger Causality Test	The Sukuk and Islamic stock markets appears to be positively correlated and bidirectionally related to the growth of the economies of Malaysia and Indonesia.
12	Musa et al., 2020	**Sample**: Malaysia **Period:**1998Q1 -2017Q4	ARDL bounds test approach for cointegration	Positive Relationship of ICM on the Economy of Malaysia
13	(Malikov, 2017)	**Sample:** Saudi Arabia and Malaysia **Period:** 2002 to 2011	Quartile regression	The results from both countries show that sovereign Sukuk especially in infrastructure sectors have a positive significance

S/N	Reference	Research Methodology		Findings
		Sample	**Techniques**	
				on economic development.
14	Ledhem & Mekidiche,2021	**Sample:** Indonesia, Malaysia, and Brunei **Period:** 2013 to 2019	Quartile regression	Sukuk, an outcome of the ICM, has a substantial positive correlation with economic growth.
15	Ledhem, 2020	**Sample:** Southeast Asia countries **Period:** 2013Q4-2019Q3	Dynamic model	The study noticed that Sukuk became an alternative financing and the best booster of economic growth.
16	Tan & Shafi, 2021	**Sample:** Malaysia **Period:**1998Q1 to 2018Q4	Autoregressive distributed lag (ARDL) and cointegration bounds test	Bonds and sukuk have a small but favorable impact on economic growth.
17	Yan ling & Shafi, 2021	**Sample:** Malaysia **Period:**1998 to 2018	Autoregressive distributed lag (ARDL)	The study found that both Sukuk, as well as bonds, become positively insignificant to economic growth.

S/N	Reference	Research Methodology		Findings
		Sample	**Techniques**	
18	Rahman et al., 2020	**Sample:** Malaysia and Indonesia **Period:** 2008 to 2017	VAR VECM Granger Causality	The results showed that there was a positive and reciprocal association between economic growth in both nations and the ISM and the Sukuk market.
19	Ayaz, 2019	**Sample:** Malaysia, UAE, and Pakistan **Period:**2009 to 2017	Cointegration ARDL	ICM had a satisfactory impact on economic growth in Pakistan and Malaysia.
20	Abduh & Azmi , 2012	**Sample:** Indonesia **Period:**2003 to 2010 Quarterly bases	VECM ARDL Cointegration	The strong correlation between growth and Islamic financing was founded.
21	Zarrouk, 2014	**Sample:** Middle Eastern and North African (MENA) countries and GCC countries **Period:** 2005-2010	Comparative analysis	The results show that Islamic banks' activities were negatively impacted by the financial crisis.

S/N	Reference	Research Methodology		Findings
		Sample	**Techniques**	
22	Zarrouk et al., 2017	**Sample:** UAE **Period:** 1990-2012	The bivariate vector autoregressive model	Confirmed positive results in Islamic finance's development and economic growth.
23	Yazdan & Hossein, 2012	**Sample:** Iran and Indonesia **Period:** (2000 to 2010)	Autoregressive distributed lag (ARDL) system	The findings validate a strong connection between the rise of Islamic finance and economic expansion.
24	Tabash et al., 2017	**Sample**: in Qatar. **Period:** (1990 - 2008)	Testing unit root, after that testing co-integration and lastly, they applied Granger causality	The results demonstrate a strong, long-term positive association between finance and Qatar's Islamic banks' contribution to the country's economic development.
25	Tabash & Raj, 2014	**Sample** Qatar, UAE, and Bahrain. **Period:**	i. unit root test, ii. co-integration test, Granger causality	The outcomes attained from the results of Granger causality for the UAE suggest that only in one direction does a causal

S/N	Reference	Research Methodology		Findings
		Sample	**Techniques**	
				relationship exist.
26	Bendriouch et al., 2020	**Sample:** GCC countries. **Period** 2010 to 2017	Structural equation model	We are showing that Islamic banks have a positive relationship with economic growth.
27	Mohamed & Seifallah, 2010	**Sample:** 16 MENA countries **Period:** 1962 to 2006	GMM unbalanced estimate of the dynamic model	The findings demonstrated that Islamic banks don't have an impact on financial markets and have a weak contribution to economic growth although in a positive form.
28	K. Ahmad & Hassanudin, 2017	**Sample:** Malaysia. **Period:** 2007 Q1 to 2014 Q1	i. Testing unit root, ii. Cointegration iii. Granger causality as well as VECM	The finding has shown that the Islamic Bank had contributed the economic growth in the long term while the Granger causality shows there is bilateral causality.

S/N	Reference	Research Methodology		Findings
		Sample	**Techniques**	
29	Ali, 2021	**Sample** Bahrain, **Period:** 2000 to 2019	i. Unit root test, ii. co-integration test, iii. VAR, iv. VECM, v. IRF, vi. Variance decomposition	The analysis of the data revealed that Bahrain's economy has benefited greatly from the asset base of Islamic banks.
30	Mifrahi & Achmad, 2020	**Sample:** QISMUS countries **Period:** 2005 to 2015	Multiple mediations	The results demonstrated that based on consumption and investment as variables mediations the IB Financing has positive indirect significance to growth but unfortunately, the direct result of IBF is not able to influence growth.
31	Yazdan & Hossein, 2012	**Sample:** Indonesia and Iran, **Period**: 2000 Q1 TO 2010 Q4	i. VECM, ii. Autoregressive distributed Lag iii. Granger causality	The outcome revealed that both in the short run and long run Islamic banking financing is significant to economic growth while Granger

S/N	Reference	Research Methodology		Findings
		Sample	**Techniques**	
				causality is shown by the directional relationship between GDP and IBF.
32	AL Mustafa, 2020	**Sample** Pakistan. **Period:** 2009 to 2016	i. Bound testing cointegration technique ii. Autoregressive distributed lag model (ARDL)	Macroeconomic factors and Islamic financing, when compared, have a favourable, considerable impact on economic growth.
33	Wardhany & Arshad, 2015	**Sample:** Indonesian **Period:** 2003 to 2011	i. Unit root test, ii. co-integration test, iii. LRSM, iv. Vector error correction model, v. Variance decomposition vi. Impulse response function v. Persistence profiles	The research revealed that Islamic banks under total deposits have a beneficial impact on economic growth.
34	Mensi et al., 2018	**Sample:** Middle East and North Africa cover 13 countries and non-MENA **Period:** 1994 to 2014	i. Panel Smooth Transition Regression Models ii. Dynamic panel quantile model	Islamic banking loans have a positive effect on economic growth.

S/N	Reference	Research Methodology		Findings
		Sample	**Techniques**	
35	Ledhem & Mekidiche, 2020	**Sample**: Turkey, Saudi Arabia, Indonesia, Malaysia, and Brunei **Period:** 2014 Q1 to 2018Q4	GMM approach	According to this analysis, the only metric that was statistically significant and positively correlated with economic growth was ROE.
36	Abduh & Chowdhury, 2012	**Sample:** Bangladesh **Period:** 2004 to 2011	Unit root test Cointegration	The findings of the cointegration methodology demonstrate a long-term, positive relation between Islamic banks and growth.
37	Tabash & Dhankar, 2014	**Sample** Qatar. **Period:** 1990 to 2008	i. Unit root test, ii. Co-integration test iii. Granger Causality test	Financing provided by Islamic banks helps Qatar's GDP.
38	Issa, 2022	**Sample:** D-8 countries' **Period:** 2010 to 2021	i. unit root test, ii. Panel test of cointegration, ii. Granger's causality test	The outcomes indicated that, in the long run, Islamic banking and growth had a beneficial connection.

S/N	Reference	Research Methodology		Findings
		Sample	**Techniques**	
39	Naz & Gulzar, 2022	**Sample:** Qatar, Bahrain, Pakistan, Malaysia, and Indonesia. **Period:**	i.Panel Causality Test (PCT) ii.Pooled Mean Group Estimation (PMG) /ARDL approach.	Islamic financing has a considerable positive association with GDP.
40	Mulyadi & Asep Suryanto, 2022	**Sample:** Indonesia's **Period:** 2010 to 2021	Vector Error Correction Model	The findings included that Islamic banking funding and the pandemic harmed economic growth, although overall Islamic banking assets had a long-lasting favourable impact on economic growth.
41	Khasanah et al., 2021	**Sample** Indonesia's **Period:** 2007 to 2019	i.VECM, ii.Granger Causality, iii.Impulse Response Function, iv.Variance Decomposition	The success of Islamic banking intermediaries in the disruptive age may not have an impact on economic growth, also a substantial two-way causal link between Islamic banks and

S/N	Reference	Research Methodology		Findings
		Sample	**Techniques**	
				economic expansion is revealed by the findings of the Granger causality test.
42	Badri & Boujelbene, 2016	**Sample:** CCG countries. **Period:** 2001 to 2012	i. Generalized least squares. ii. Fixed-effect techniques	The findings have shown that there is a positive impact of ROE and ROA which measure bank profitability on economic growth.
43	Hazimi & Mansur, 2017	**Sample:** Malaysia's **Period:** 36 weeks	i. Cointegration, ii. Error correction modelling, iii. Variance decomposition	The results were undoubted that the economy is stimulated by the banking systems, which include both traditional and Islamic banking.
44	Tajgardoon et al., 2013	**Sample**: Iran, Pakistan, Yemen Qatar, Malaysia, Iraq, Oman, Bahrain, Turkey, and Saudi Arabia. **Period:** 1980–2009	i. Granger causality ii. panel data model. iii. Im, Pesaran, and Shin's iv. Unit root test	Demonstrates a bidirectional association between exports and growth in the economy as well as between trade and Islamic banking. As a result, Islamic

S/N	Reference	Research Methodology		Findings
		Sample	**Techniques**	
				banking and other Islamic operations are beneficial to growth.
45	Arshed et al., 2016	**Sample:** Pakistan **Period:** 2006 to 2013	i. Unit root test, ii. Co-integration test, iii. CUSUM test iv. Causality test	The findings and results show that Islamic financial investment and IB net financing have a positive significant guidance on economic growth.
46	Muhammad & Salisu, 2019	**Sample:** Nigeria's Malaysia. **Period:** 2005 to 2018	i.Regression analysis ii.Correlation analysis iii.Granger causality	Results indicated a high degree of confidence in both Malaysian and Nigerian Islamic banking as a factor in GDP.
47	Majid & Salina, 2014	**Sample:** Malaysia **Period:**1997Q3 -2009Q2	i. ARDL ii. VECM iii. VDCs	There is a positive contribution of IB and financial institutions to the economy.
48	Rafsanjani, 2022	**Sample:** Indonesia **Period**: 2015-2019	i. Augmented Dickey-Fuller ii. Phillip-Perron Johansen tests	The conclusion confirm that Islamic banking has a

S/N	Reference	Research Methodology		Findings
		Sample	**Techniques**	
				positive impact on Indonesia's industrial prosperity.
49	Sumarti et al., 2020	**Sample**: Indonesia **Period:** 2003-2013	Autoregressive Integrated Moving Average (ARIMA) and	The findings show that Islamic banking does not affect economic growth.
50	Farahani & Dastan, 2013	**Sample:** Indonesia, Malaysia, UAE, Bahrain, Egypt, Saudi Arabia, Qatar, Yemen, and Kuwait **Period:** 2000 to 2010	i. VAR ii. ARDL iii. VECM	Findings reveal that Islamic banks in the long run are optimistic and intensely correlated with economic development.
51	Tabash, 2019	**Sample:** UAE **Period:** 2000 to 2010	Multicollinearity test, Pooled Ordinary Least Square (POLS)	There is a positive relationship between Islamic banks and economic growth.
52	Furqani & Mulyany, 2009	**Sample:** UAE **Period:** 1997 to 2005	Vector error correction model	The outcome revealed that grangers found in the short-run, fixed investments trigger Islamic banks.

S/N	Reference	Research Methodology		Findings
		Sample	**Techniques**	
53.	Kassim, 2016	**Sample:** Malaysia **Period:** 1998 to 2013	Unit root test Cointegration test ARDL	The results revealed that Islamic finance especially Islamic bank deposits and Islamic financing have long-run positive contributions to real economic growth.
54.	Jobarteh, 2017	**Sample:** Turkey **Period:** Dec. 2005 to Nov. 2015	VECM	The findings confirmed a positive long-run relationship with Economic growth in Turkey

4.1.2 Empirical Review Related to Conventional Finance – Growth Nexus

Algaeed (2021:388), the study analyses the development of the capital market on economic growth in Saudi Arabia. The study used ARDL with FMOLS in the analysis of data which ranged from 1998 to 2018. The findings revealed that the capital market does not granger cause economic growth. Moreover, he determines the path of the capital markets and helps to encourage investors to make investments in Capital markets. For example, a rise in the aggregate share price will bring more investable money to the market. It could result in improved financial intermediation, which in turn would promote investment and boost economic growth.

Radikoko et al. (2018:290), Based on the sample included time series data that ranged quarterly from 2012 to 2017 carried out a study that aimed to measure the relationship between Botswana's capital market and economic development. Data were evaluated using a multiple regression model, which assisted in evaluating the long-run and short-run relationships, respectively, by co-integration and VECM. The investigation's findings support the existence of a long-term connection in which the capital market contributes to economic growth but has little impact on it in the near term in Botswana. According to the study's findings, the government and other capital shareholders should put in place appropriate laws to encourage the expansion of the capital market, which would ultimately lead to economic growth.

Adaramola & Kolapo (2012:11) the research focuses on how Nigeria's stock market affects economic growth. Data from 1990 to 2010 based on time series were used. Values of transactions, the total market capitalization of listed shares and government stocks, and the number of new issues made up the independent variables. The Granger causality test, used to look for causality, is used in conjunction with co-integration to evaluate long-term relationships. The results indicated a long-term causal relationship between NCM and economic growth, as well as a two-way relationship between economic growth and transaction values. Therefore, this is a clear indication that the capital market is recognizing its relevance to economic progress. The results show that activities related to capital markets have a positive impact on the economy. Therefore, it is advocated that regulatory authorities put into place policies that encourage entrepreneur ventures to enter the market while simultaneously being more zealous in their monitoring role to regulate nefarious behaviours that threaten market integrity and damage investor confidence.

Acquah-Sam & Salami (2014:511) investigated the connection between Ghana's capital market and economic development from 1991 to 2011. In this work, time series data were gathered using a quantitative methodology. To identify any potential statistical relationship between economic growth and capital market growth, structural equation modelling (SEM) was used. The results show that the market capital ratio, inflation, FDI, gross capital creation, and macroeconomic stability are all linearly related to economic development. Results indicate a causal connection between the growth of capital markets and economic growth in both directions. According to the

study's summary, developing countries should place a high focus on financial sector development while maintaining pressure on capital markets to assist economic growth.

The impact of capital markets on economic growth in Nigeria from 1981 to 2019 was examined (Idris, 2021:156). The Granger causality test, co-integration test, and OLS approaches are used to estimate the study. The conclusions demonstrate that there are long-term effects between economic growth and market capitalization and total stock values, which represent the evolution of the capital market. Except for totally new problems, all these independent factors exhibit a positive association with economic growth. Additionally, corresponding to the consequences of the GCT, there is now a one-way causal relationship connecting economic growth and the capital market. Despite this, modern capital market facilities are required to draw foreign investors by maintaining technological services. Additionally, Nigeria needs to improve credit access while promoting investment and the mobilization of long-term savings.

Lenee & Oki (2017:68) explored the link between capital market advancement and growth in the MINT nations. As a financial intermediary, CM is anticipated to be the nation's economic engine and driver. The study examined data from 2000 to 2012 and evaluated its goal using correlation analysis, regression testing, and panel least squares (PLS). Only GDP saving and GFCF appeared to be positively correlated with GDP growth, according to the study's findings for MINT nations. However, the capital market and GDP showed good statistical evidence in the case of each nation.

Onuora (2019:212) conducted a study in Algeria with the intention of an empirical investigation of the impact of the capital market on economic growth. The data utilized was time series-based and spans from 2007 to 2017. Regression using the OLSR method was used by the researcher to analyse the data to accomplish a target. The findings showed a weak negative association between capital market revenues and economic growth. The report indicated that for the capital market to operate efficiently and generate the anticipated income or revenue that would boost economic growth, enough protection should be accessible.

The effect of Oman's capital market on economic development is evaluated by (Shabbir & Hussein, 2019:117). To evaluate and explain the results, multiple regression was employed on time series data from 1993 to 2015. The total market

capitalization (TMC) and the total value of stocks (TVS) have a favourable influence on economic growth, according to the OLS model. The government should effectively oversee the financial sector, the argument goes, to give the country's economy a boost and create possibilities to improve the efficiency of the capital markets.

The research by Nordin & Nordin (2016:11) looks at the effect of Malaysia's stock market and debt market, in particular, on economic growth. It made use of time series data spanning the years 1981 to 2014 that were gathered from Malaysia's WDI and Bank of Negara. URT, co-integration test, VECM, GCT, and variance decomposition are all used to achieve the study's goals. The conclusion is that Malaysia's economic growth is positively and considerably impacted by the assets market, which encompasses both the debt and stock markets. Granger causation stock market was established without regard for economic growth. The report makes the case for possible revisions to the current laws, rules, and monitoring system to ensure the efficacy and efficiency of the capital market.

Coşkun et al. (2017:19). Based on the ARDL test, Markov switching regression and Kalman Filter models were used to examine the impact of Turkish government bonds, mutual funds, and corporate bonds on the development of the capital markets. Monthly data from January 2006 to June 2016 were used in the study. The results have shown that the dependent variables, which were the subcomponents of the capital market, had a long-term connection with economic growth. Results also indicated that the capital market had an unbalanced influence on economic expansion. Additionally, the aggregate index of other subcomponents has a positive influence, while government bonds have a negative impact. These results imply that initiatives to expand the market on the Turkish capital markets may be rewarded with greater economic potential growth. Furthermore, policymakers and regulators need to be mindful that encouraging the use of extra supply or demand side capital market instruments may cause money to be distributed among agents or market specifics.

Khetsi & Mongale (2015:154) used yearly time series data from 1971 to 2013 to examine how the capital market affected economic development in South Africa. URT, JCT, GCT, general impulse response function, and VECM are some of the approaches that were employed. According to (Khetsi & Mongale, 2015:154), South Africa's capital market has a favourable impact on economic growth. Based on the

VECM result, South Africa's capital market expansion can spur economic growth, as Schumpeter (1934) suggested. The report concluded by stating that, although being one of Africa's fastest-developing countries, South Africa's economic growth is being constrained by a lack of suitable infrastructure, including a stable macroeconomic environment, a sophisticated financial system, and political stability.

Investigate how the financial markets and economic growth in three Sub-Saharan African countries interact (Adoms et al., 2020:963). The research was centred on corporate relations between Kenya, South Africa, and Nigeria. To fulfil the goal of the study, data based on yearly collection from 1990 to 2018 were examined using three techniques: the ARDL approach, the GCT, and the ordinary least square (OLS). After the study, it was discovered that while Kenya had a negative and insignificant between the capital market and growth, Nigeria and South Africa had a positive correlation. Therefore, the capital market suggests that Sub-Saharan African countries should create and implement economic policies that would maintain relative economic stability to promote capital formation and increase investment.

Research on the capital market's impact on economic growth in Nigeria was undertaken (Emeh & Chigbu, 2014:838). Analysis was done using time series data from 1995 to 2012. The disaggregation of the capital market indexes was done using co-integration and VECM. The research revealed a long-term inverse association between market capitalization, total list, and economic growth, but a positive relationship between new issues and stock market transaction value. Market capitalization and total listing show an adverse link with economic growth in the case of short-run transaction value, whereas only new issues show a positive relationship with economic growth. The Chigbu proposes that to increase investor confidence, important regulatory bodies in the stock markets should concentrate on enhancing market efficiency and transparency. A solid connection between the capital market and economic growth is also made possible by a favourable macroeconomic environment.

Hossin & Hamid (2021:1). The study that assessed the effect of Bangladesh's developing capital markets on economic growth was carried out using yearly secondary data. Granger causality, the Toda Yamamato for the non-causality test, and the VECM were used as econometric approaches to examine the data to meet the study's objectives. Based on VECM, the results show that market capitalization and

total yearly turnover to GDP in Bangladesh had a long-term, substantial negative association. In the example of Toda Yamamato, where Granger non-causality was demonstrated, market capitalization (MC) caused GDP in Bangladesh, however, GDP did not Granger to cause market capitalization. The study recommended that the capital market regulator should formulate policies which could minimize the level of uncertainty which could give confidence to the investors and as a result its impact could boost the GDP of Bangladesh.

Owen (2020:496) conducted a study in Nigeria for the time series data ranges from 1985 to 2018. The ARDL technique approach is applied to analyse the data. The findings concluded that stock markets in not influence economic growth although there is a positive relationship between them. But Tahiri Jouti (2019), by using the Autoregressive distributed lag approach, examines the correlation of economic growth with real estate markets and stock markets in Vietnam. The data was collected in quarterly form from 2004 to 2018. The results show economic growth is positively linked with the stock market and real estate market. Moreover, Dada (2021:711), investigate the association of the expansion of capital markets and economic growth from 1990 to 2015 based on time series data. ARDL model and Granger Causality technique were used, and the results showed that capital markets have a positive impact on economic growth in Nigeria. Therefore, it is advised that market involvement be promoted as diverse economic entities should be encouraged to engage in the capital market through a variety of incentives to promote economic growth.

Koirala (2014:28), based on a sample of the London Stock Exchange (LSE) from the data ranges 2001 to 2009. The objective of the study was to examine the influence of stock markets on economic growth in the United Kingdom. The study used regression models, coefficient correlation and coefficient of determination. The findings show that stock markets have a positive significant correlation with economic growth. Also Aduda et al. (2014:17), based on correlation analysis and regression analysis, examine the impact of the capital market's Deepings on GDP growth in the Republic of Croatia for the data covering a period of 2000Q1 to 2015Q3. The results appeared to be a positive relationship. While Tsaurai (2016:269), the objective of the study was to investigate the relationship between Belgium's economic growth and stock market development, by using an econometric model called the ARDL approach and data

were arranged in time series from 1988 to 2012. The research revealed a favourable but minor link between Belgium's stock market development and economic expansion.

Ikikii & Nzomoi (2013:145), This study was conducted in Kenya to investigate how the stock market has changed concerning economic growth, the data arranged in quarterly form from 2000Q1-2011Q4. The methods of techniques applied called the Granger causality test and regression models and the consequences proven that market capitalization and trade volume have a beneficial impact on economic growth in Kenya. In panel analysis, Thumrongvit et al. (2013:529), conducted a study that covered 38 countries and collected data ranging from 1989 to 2010 to investigate the effect of domestic bond markets on the economic growth of the sampled countries. The study used dynamic panels because it covers many countries and GMM was used as an additional approach. The findings revealed that there is a positive linkage between domestic bond markets and economic growth. It decided that bonds influence the economic growth of 38 selected countries.

Kapaya (2020:187), evaluate the impact of the Tanzania stock markets on economic growth by applying the time series data that range from Q12001 to Q22019 through empirical analysis called ARDL and bound testing. The findings imply that changes in the stock markets have both positive and negative causal relationships with economic growth.

Table 4.2: The Summary of Studies of Conventional Finance – Growth Nexus

S/N	Reference	Research Methodology		Findings
		Sample	**Techniques**	
1.	Thumrongvit et al., 2013	**Sample:** 38 States **Period**:1989- 2010	Dynamic panels, and GMM	Domestic bond market development positively influences economic growth.

S/N	Reference	Research Methodology		Findings
		Sample	**Techniques**	
2.	Coşkun et al., 2017	**Sample:** Turkey **Period:** 2006:M1 to 2016:M6	The cointegrating test, Granger causality test, and ARDL model	While government bond is negatively correlated with economic growth, capital market development has asymmetric influence on it.
3.	Nordin & Nordin, 2016	**Sample:** Malaysia **Period:** 1981-2014	Co-integration test. VECM	There is a positive contribution of the debt market and stock market development to the economy.
4.	Owen, 2020	**Sample:** Nigeria **Period:** 1985 to 2018	ARDL Bound test methodology	The development and growth indicators of the stock market showed a positive correlation, but one that was not statistically significant.
5.	Tahiri Jouti, 2019	**Sample:** Vietnam **Period:** 2004Q3 to 2018Q3	Autoregressive Distributed Lag (ARDL) approach	The stock and real estate markets are

S/N	Reference	Research Methodology		Findings
		Sample	**Techniques**	
				strongly connected with economic growth.
6.	Lenee & Oki, 2017	**Sample:** Turkey, Mexico, Indonesia, and Nigeria **Period:** 2000- 2012	Correlation and regression test	The capital market is seen to be negative and significantly related to GDP.
7.	Algaeed, 2021	**Sample:** Saud Arabia **Period**: 1985-2018	An ARDL, FMOLS and Johansen tests	The capital market had no significant contribution to economic advancement in Saudi Arabia
8.	Onuora, 2019	**Sample:** Nigeria **Period:** 2001 – 2017	Ordinary least squares regression method	According to the analysis, there is no discernible correlation between Nigeria's capital market and economic development.
9.	Shabbir & Husein, 2019	**Sample:** Oman **Period:**1993 to 2015	Multiple regression approach	The favorable correlation between Oman's capital market and economic expansion.

S/N	Reference	Research Methodology		Findings
		Sample	**Techniques**	
10.	Dada, 2021	**Sample:** Nigeria **Period:** 1990 to 2015	i. OLS technique, ii. Cointegration test ii. Granger causality test	The capital market are positively correlated.
11.	Radikoko et al., 2018	**Sample:** Botswana **Period:** 2012Q to 2017Q	Cointegration test VECM Model	Positive link between capital markets and GDP in Botswana.
12.	Koirala, 2014	**Sample:** London Stock Exchange **Period:** 2001 to 2009	The Regression Model, Coefficient of Correlation and Coefficient of Determination (R^2)	The result shows that capital market development has a positive significant correlation with GDP.
13.	Aduda et al., 2014	**Sample:** Croatia **Period:**2000Q1 to 2015Q3	i. Correlation Analysis ii. Regression Analysis	The result appeared to be a positive relationship.
14.	Ikikii & Nzomoi, 2013	**Sample:** Kenya **Period:** 2000Q1-2011Q4	Granger causality test and regression models	Trade volume and market capitalization have a favorable correlation with economic growth.
15.	Emeh & Chigbu, 2014	**Sample:** Nigeria **Period:** 1995 to 2012	Cointegration VECM	The research revealed a long-term inverse association between

S/N	Reference	Research Methodology		Findings
		Sample	**Techniques**	
				market capitalization, total list, and economic growth, but a positive relationship between new issues and stock market transaction value.
16.	Adoms et al., 2020	**Sample:** Sub-Saharan African countries **Period:** 1990 to 2018	i. ARDL approach, ii. Granger causality test iii. Ordinary least square	The capital market and economic growth correlated positively in South Africa and Nigeria but negatively and statistically in Kenya.
17.	Hossin & Hamid, 2021	**Sample:** Bangladesh **Period:**	Toda and Yamamoto (1995) approach and VECM	The results showed that market capitalization and total turnover to GDP had a long-term, substantial negative association.
18.	Khetsi & Mongale, 2015	**Sample:** South Africa **Period:** 1971-2013	i. Unit root test, ii. Johansen cointegration test iii. Granger causality test	The findings show that a capital market promotes

S/N	Reference	Research Methodology		Findings
		Sample	**Techniques**	
			iv.impulse response function v.VECM	economic expansion.
19.	Idris, 2021	**Sample:** Nigeria **Period:**1981 to 2019	Cointegration Granger causality OLS	The results show a one-way causal relationship concerning economic growth and the capital market.
20.	Acquah-Sam & Salami, 2014	**Sample:** Ghana **Period:**1991 to 2011	Structural equation modelling	Results signify in two ways a connecting between the capital markets and economic growth.
21.	Adaramola & Kolapo, 2012	**Sample:** Nigeria. **Period:** 1990 - 2010	Cointegration Granger causality	There is a two-way link and statistically significant correlation between Nigeria's capital market and economic growth.
22.	Kapaya, 2020	**Sample:** Tanzania **Period:** Q12001 – Q2019	ARDL Bound testing	The findings imply that the stock markets have both positive and negative

S/N	Reference	Research Methodology		Findings
		Sample	Techniques	
				causal relationships with economic growth

Source: Author compilation

4.2 Comparison between Islamic and Conventional Finance on Growth

The studies carried out on the Islamic finance-growth nexus and conventional finance-growth nexus have some similarities in terms of the methodologies applied, findings of the study, a sample of the study as well and nature of the data.

Many studies from both perspectives have applied econometric techniques for the analysis of the data. This shows that the studies analysed by techniques such as vector error correction model, co-integration test, OLS, ARDL approach, granger causality, Toda, and Yamamoto, static GMM and Dynamic GMM, Pooled Ordinary Least Square (POLS), URT, FMOLS and so on. These methods were more applicable and reliable for most of the studies because their data was either time series data or panel data. (Issa, 2022:131; Naz & Gulzar, 2022:10; Mulyadi & Asep Suryanto, 2022:29; Khasanah et al., 2021:103; Tan & Shafi, 2021:102; Ali, 2021:180; Bendriouch et al., 2020:352; Kapaya, 2020:187; Mifrahi & Achmad, 2020:72; Alkhawaja, 2019:95; Muharam et al., 2019:196; Mensi et al., 2018:1; Sari et al., 2018:21; Mitsaliyandito et al., 2017:1; Tabash et al., 2017:403) used the econometric methods in Islamic finance and for the conventional finance the studies employed the similar methods of the data analysis and similar approach of quantitative. Therefore, this study could not violate this system and approach. This thesis decided to apply dynamic GMM that employed the panel data that range from 2017Q1 to 2021Q4 with the comprised 21 OIC countries.

Moreover, the findings of the studies for both sides of Islamic finance and conventional finance to economic growth have been revealed into similar contests on which three main groups of results have emerged. The first group shows that finance either Islamic finance or conventional finance has a positive impact on economic growth. This result

has covered many of the studies. For instance, for Islamic finance–growth nexus includes (Ledhem & Mekidiche, 2022:4; Ali, 2021:180; Seda et al., 2020:209; Mitsaliyandito et al., 2017:1; Abd.Aziz et al., 2016:63) and conventional finance–growth nexus includes the studies from (Dada, 2021:711; Owen, 2020:496; Radikoko et al., 2018:290; Shabbir and Husein, 2019:117; Nordin & Nordin, 2016:11)

Another group of studies their results manifested that finance has a negative impact on economic growth. This result confirmed from both groups for conventional finance includes the studies of Adoms et al. (2020) and Lenee & Oki (2017:68) but for Islamic finance this finding was very limited (Naz & Gulzar, 2022:1; Talahma, 2015; Said & Grassa, 2013:251). These studies expressed that financial sectors have not added any value to the economy of the countries rather than increasing the level of debts and shown it is the unimportant component in economic growth. The last group their findings have shown that finance has no impact on economic growth. Their findings suggest that finance is an insignificant indicator of economic growth. These results revealed come from (Tan & Shafi, 2021:102; Adoms et al., 2020:981; Sumarti et al., 2020:15; Onuora, 2019:212; Echchabi et al., 2018:60; Smaoui & Nechi, 2017:1). The empirical evidence of finance- growth nexus for both groups have been conducted based on similar methodologies and similar results have been reported although studies carried out at different time, authors, samples, and objectives. Therefore, this empirical evidence showed that there are some areas where Islamic finance and conventional finance move in the same way.

4.3 Development of the Conceptual Framework

Developing a reasonable conceptual framework is an indispensable element in the conduct of the current study. The research framework is instrumental in restricting the independent and dependent variables recognized within the study's view. The primary intention of the framework is to interpret the predictable relationships between the identified variables, supporting the fundamental hypotheses of the research (Creswell, 2013). Notably, the research framework relates to specific research questions formulated to actualize the study's objectives and address the identified gaps within the empirical literature (Yin, 2013). The framework integrates the study's independent and dependent variables, supports the study's objectives with specific research questions, and incorporates the study's underlying theories. In addition, it provides a

roadmap towards the expected outcomes of the study, facilitating the process of drawing valid and reliable conclusions (Creswell & Creswell, 2017).

Following the studies mentioned in the empirical review that focus on the Islamic finance-growth nexus, we construct the basis for this study, displayed in Figure 4.1, for exploratory the impact of Islamic finance derived from Islamic finance components such as IB, ICB, and Takaful on the GDP growth of OIC countries based on mainstream economics thought. This study is based on the examination of the endogenous model and Solow model as shown in the diagram below and each model through its theoretical foundation has described and mentions the main factors (variables) that could influence the economic growth of any country or region. Therefore, the diagram shows every model with its common variables.

Previously, the works of literature have shown there is a linkage between Islamic finance and economic growth. Also, the study objective is to look at Islamic finance on economic growth based on Mainstream economics. Therefore, this section explains in detail the conceptual relationship between the variables of the mainstream economics models with the variables of IF and CF on the growth of the economy. Hence, the conceptual framework contains the three main variables that are focus variables derived from Islamic finance and conventional components that could affect economic growth either directly or indirectly. These variables include total Islamic banking assets, total financing of Islamic banks, Sukuk issuance, takaful penetration rate, bank credits to private sectors, total value of traded stocks per GDP, broad money per GDP and insurance penetration rate. Moreover, the other variable is called the explanatory variable selected from each mainstream economics model as described from their theoretical models on economic growth while the last variable is called the dependent variable is economic growth and is presented by GDP per industry.

The discussion of the finance linkage on economic growth has elaborated clearly in the theoretical review with several scholars and ultimately some models especially the endogenous model, and Solow growth model justified the existence of the influence of finance on economic growth. From that point, the role of finance in driving change and serving as a link between capital surpluses and capital deficits in the economy. (Gulcemal, 2021:36) reported that finance creates a link between the certainty of the now and the unpredictability of the future, as well as between present demands and future

revenue. The development and stimulation of the real economy through financial intermediation is the ultimate objective of the financial system. The effectiveness of the financial system as an economic lubricant will have a significant impact on whether this objective is accomplished (Zarrouk et al., 2017:3).

Given the research gaps explored in the previous kinds of literature, the following conceptual framework illustrates in detail the innovative ideas of linking Islamic finance to economic growth. The chart below portrays the association between dependent and autonomous variables. Economic growth stands as a dependent variable throughout this study. At the same time, total Islamic financing, total assets of Islamic banking, and Sukuk issuance, bank credits to private sectors, total value of traded stocks per GDP, broad money per GDP and insurance penetration rate are used as focused variables and GFCF, inflation, labour force, exchange rate, government expenditure, FDI and trade openness are used as the control variables on corresponding to model. The following schematic diagram could enable the test of all hypotheses. These variables from Islamic finance and conventional finance concerning the impact of Islamic finance on economic growth have been applied by several studies including Ledhem & Mekidiche (2022), Rafsanjani (2022), Yan ling & Shafi (2021) and Ledhem & Mekidiche (2021)while this study innovates by examine two mainstream economics models together as a contribution on the field of knowledge.

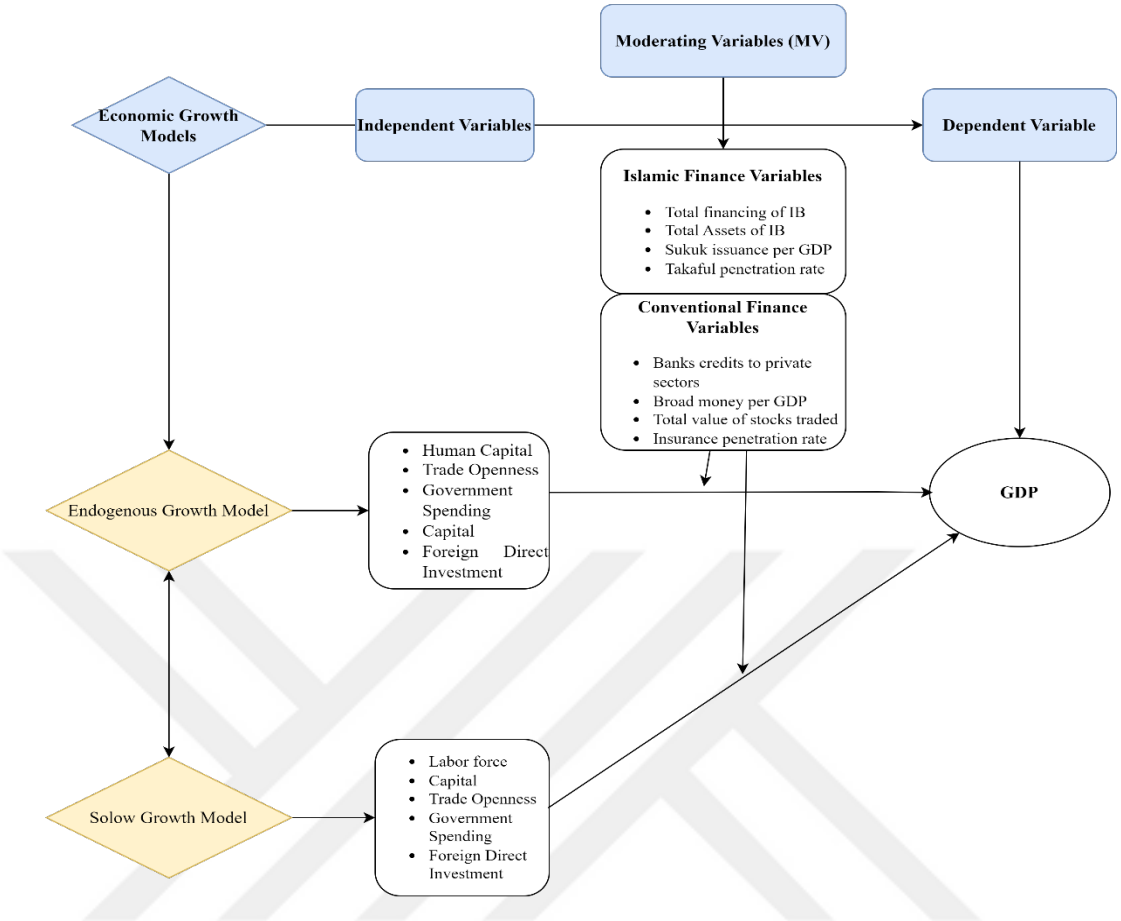

Figure 4. 1: The Conceptual Framework

Source: Author construction

CHAPTER V

RESEARCH METHODOLOGY

Chapter four explains the empirical methodology that enables us to answer the research questions which were outlined in chapter one. This chapter provides the framework that laid down the foundation for answering the research objectives. This study was comprised of three specific objectives that attain the main goal of this underlying study. This chapter is designed into six (6) sections; where the first section explains the research design, the second section elaborates on the variable's descriptions, and the third section explains the theoretical foundation of models and model specification for each of the specific objectives, after that sample countries. Moreover, the other section describes is the empirical methodology used for data analysis and estimation of results while the last section discusses the robustness and diagnostics checking of the GMM estimator.

5.1 Research Design

The study is based on a quantitative approach with some empirical framework. The study used panel data on a quarter basis collected from several sources, the secondary data of the dependent variable GDP per share in total value added of industries includes aggregation of economic activities such as mining, manufacturing and so on, and the independent variables including inflation, FDI, trade openness, GFCF, human capital, , exchange rate, labour force, and government expenditure are collected from WDI, International monetary fund (IMF) and interesting variables are total financing of Islamic banks, total penetration rate of Islamic insurance and Sukuk issuance are taken from Islamic financial Service board database (IFSB), and IIFM. The data on Stock markets, banks' credits to private sectors and total penetration rate of convectional insurance were collected from the Global Financial Development Database (GFDD). Since that study comprised many countries and a short period, the Dynamic Generalized Method of Moments (GMM) is appropriate to attain the objectives of this study which was processed in the STATA package.

The study covered a total of 21 out of 57 members of the Organization of Islamic Countries (OIC). The most members selected to be in this study is based on the data availability. Another key factor in selecting these nations was the comparability of their Islamic financial development and their similarity in terms of economic performance, as using homogenous data produces coefficients and conclusions that are more reliable and consistent. Moreover, the findings published in the (Refinitiv-IFDI, 2022:3), state that most of the world's Islamic finance assets are contained in OIC member states, with a total of 10 nations sustaining approximately 94 per cent ($3.18 trillion) of Shariah-compliant financial assets and being successful states that can support Islamic finance growth at the national and global levels.

To achieve the study objectives, the quarterly panel data collected from 2017Q1 to 2021Q4 covered all selected countries in this study. The data of interesting variables were collected through the IFSB database, financial market reports, and Global Financial Development Database (GFDD) while the data of the regulator variable gathered from the World bank database and International Monetary Fund (IMF).

Table 5.1: Sources of Data

Variables	Sign	Sources of Data
GDP through value added	GDP	WDI
Foreign Direct Investment	FDI	WDI
Inflation	CPI	IFS
Human Capital	HC	WDI
Government Consumption	ge	WDI
Gross fixed capital formation	GFCF	IFS
Total Financing of Islamic Banks	tif	IFSB
Total Assets of Islamic Banks	iba	IFSB
Sukuk Issuance per GDP	SKK	IFSB and IIFM
Takaful penetration rate	TPR	IFSB
Exchange rate	exch	IFS

Variables	Sign	Sources of Data
Total value of Stocks Traded per GDP	TVS	GFDD
Banks' credits to private sectors	BC	GFDD
Broad Money to GDP	BM	IFS
Murabah	MUR	IFSB
Ijarah	IJARA	IFSB
Musharakah	MUSH	IFSB
Insurance penetration rate	CTPR	GFDD
Trade Openness	TRO	WDI

Source: Author Compilation.

5.2 Variables Descriptions

All variables used in this study, including dependent variables based on specific objectives and independent variables that include focus variables and control variables for each research model, are described in detail to maintain a thorough understanding of how the variables chosen are related to this research theme. Additionally, the variables applied in this study have already been used by other studies to justify the appropriateness theoretically and empirically of the selection of these variables in the models. Other variables were selected by the researcher to demonstrate the uniqueness and innovation of the study. The variables described below are GDP per share of industry total value added, which measures economic growth, and gross fixed capital formation which is a proxy for the measurement of investment and capital. Other variables included government spending, human capital, trade openness, labour force, exchange rate and inflation. The focus variables that measured Islamic banking, Islamic capital markets and Takaful, are total financing of Islamic banks, Sukuk issuance and total penetration rate of Takaful while for the conventional banks, capital markets and insurance are measured by banks' credits to private sectors, the total value of stocks Markets traded ratio to % of GDP and insurance total penetration respectively. Below are brief explanations of all variables that are applied in the study:

5.2.1 Economic Growth (GDP)

The term Economic growth has been defined in a variety of ways, including the macroeconomic indicator, which represents the increasing value (output) of real goods and services generated in a certain country over time. It does not address the issue of the welfare of the people in the country (Shahid, 2007:89). The increase in economic growth influenced a variety of interrelated factors that could affect the country's economy either directly or indirectly. For example, one of the factors or determinants of economic growth is the presence of natural resources endowed in a country, such as minerals, oil, oceans, and their resources, as well as human capital, which comes from population growth. Human capital is identified as a primary source of growth in some endogenous growth models (Bernake & Refet, 2001:2). Also, technological development is identified in the neoclassical thought and endogenous growth models (Barro & Sala-i-Martin, 1997:5). Also included as an indirect factor are institutional variables such as the government's structure, constitution, rules, laws, regulations, and policies. As a result, socioeconomic, environmental, and political factors and advent have a significant impact on a state's economic growth (Boldeanu & Constantinescu, 2015:339).

Additionally, Boldeanu & Constantinescu (2015:330) divided the factors influencing economic growth into six main categories, with four of them being supply-related and the other two being efficiency and demand. "Natural resources, capital goods, human resources, and technology" are the 4 supply components, and they all directly affect how much a company may charge for its goods and services. Additionally, Boldeanu & Constantinescu (2015:330) divides factors into proximate that includes capital accumulation, technological advancement, and labour and ultimate sources, referring to non-economic factors. Many studies used the per capita real GDP as a variable used for the measurement of the economic growth in the country, for instance, Naz & Gulzar (2022:10), Seda et al. (2020:212), Echchabi et al. (2018:66), Farahani & Dastan (2013:160). This study measures economic growth by using the total value added of industries including accumulation of economic activities such as mining, manufacturing and so on. This indicator is used because the focus variable of the study is Islamic finance and general known that Islamic finance was founded under the real economic activities (Kahf, 2022) that could enable for Islamic finance to depict their

impact on economic growth directly rather than other measurements. This proxy is more robust and reliable for examine the impact of Islamic finance since it based on real economic activities such as trade, manufacturing, investing, agriculture and so on.

5.2.2 Foreign Direct Investment (FDI)

Foreign direct investment is among the economic indicators that are viewed as determinants of economic growth mostly based on the concepts, principles, and analysis of market economy by various economic schools. That is why it is commonly used in a range of research activities. Because the fundamental heart of economic growth is the quick and efficient transfer and adoption of "best practice" across borders, a large portion of the research is based on the examination of FDI as a significant factor of economic growth and technical advancement, therefore, FDI is a measure of strong economic productivity (Tocar, 2018:165).

In the medium and long term, it is necessary to attract them to developing nations to improve the economy in the sectors of employment, technology transfer, integration into international markets, improvement of a competitive environment, and training of qualified labour force (Pehlivan, 2019:452). Many developing countries keep many policies and strategies for attracting FDI to increase economic growth by establishing new markets and sources of national income. For example (Fazaalloh, 2022) explored the connection between FDI and economic growth in Indonesia and applied FDI inflows as factors of economic growth. Moreover, Islamic banks can be a determinant of attracting FDI in developing economies (Issa, 2022:139). Finally, FDI net inflow was used in this study as an independent variable because it is expected to significant contribution to economic growth as has been identified in the endogenous growth model through technological advancement and human capital development (Borensztein et al., 1998:131). In contrast, there some empirical studies found that a negative link with economic growth includes (Rawat & Mehdi, 2017) and (Rahman 2015).

5.2.3 Inflation (CPI)

A long-term expand in the mean price of goods and services within an economy is applied as inflation. When prices rise, it leads to drops in the capacity to buy goods and services in each unit of currency; hence, inflation shows diminish in purchasing

power per unit of a dollar. The cost to a typical customer of purchasing a basket of products and/or services, which may be permanent or modified at preliminary periods, such as annually, is estimated by the consumer price index (CPI), which is used by (Rinosha & Mustafa, 2021:167).

Inflation lowers the value of money and tends to make life more complicated for the average person; as a response, less is generated and exported, as described by (Rwenyagila, 2016:475). Various studies have been performed on the topic of inflation and economic growth however there is no straightforward answer concerning the connection link inflation and economic growth (Mamo, 2012:19), some of them concluded that there is a negative relation between them, such as (Fazaalloh, 2022:16) and (Muritala, 1999:72), while other studies emerged a positive connection between inflation and economic growth like the research by (Mallik et al., 2001:133).

5.2.4 Trade Openness (TRO)

Trade enables capital to move between countries. Then, imports and exports are projected to improve a country's economic performance. Whilst imports make capital goods available in the country, exports lead to raw materials, minerals, and oil being outflow into the country, which are critical factors to the growth of the economy of most countries in Africa (Ali et al., 2022). Some studies used the total of export and import to GDP ratio to measure trade (Sakyi et al., 2015:5, Mercan & Göçer, 2013:7, Enisan & Olufisayo, 2009:165). The expected outcome is that trade will have a favourable impact on economic growth. There are many studies that have been conducted based on trade and its impact on economic growth (Noureddine & Ozcan, 2020:445), trade may promote economic growth by enhancing resource allocation efficiency and boosting total factor productivity.

Trade may significantly affect economic growth in a number of ways, including technology transfers, business advantages, and a boost in economies of scale (Chang et al. 2009). Studies have shown that trade openness has a favourable impact on economic growth includes (Chang et al., 2009) and (Freund & Bolaky, 2008). There is no correlation between trade and economic growth, according to certain research (Polat et al., 2015) and (Ioanna, 2010). This study employed trade openness as one of

the explanatory variables used by (Issa, 2022), (Ali et al., 2022), (Abel et al., 2021) and (Smaoui & Nechi, 2017).

5.2.5 Gross Fixed Capital Formation (GFCF)

Lewis (1954:178) described capital accumulation as reallocation and shifting productive factors especially labour, capital, and technology from primary sectors to manufacturing or construction industries as a result it would transform productive structure as well as the concentration of aggregate output. Therefore, the group of classical scholars unanimously agreed on capital accumulation as one of the fundamental factors for economic growth in the country. Issa (2022:133) reported that the GFCF was utilized as an indicator of investment, one of the key methods that financial intermediaries employ to encourage economic growth. Investment, or gross fixed capital formation refers to the production of such assets by producers for their use as well as the acquisition of such assets. The GFCF, on the other hand, is an expense component of economic growth that transfers funds to the financial sectors and illustrates how much newly produced economic value is invested as opposed to consumed (Issa, 2022:133).

Capital, according to the neoclassical model, is also a factor that stimulates a country's growth performance (Aghion et al., 2009:13). According to Solow (1956), explained that increased capital will lead to increased economic growth. Capital is represented by gross fixed capital formation. Long-term developments in capital allow organizations and nations to generate revenue for many years by incorporating or enhancing production plants and improving operational effectiveness. According to Ibrahim et al. (2017:716) capital formation is strongly linked to investment and economic growth of a particular country through financing on capital markets as well as domestic debt, while adversely associated with liquidity in stock markets.

The gross fixed capital formation (GFCF) indicates capital accumulation which shows business activity statistic that evaluates net investment in fixed capital assets by domestic companies throughout an accounting period (Vázquez-muñoz & Hernández, 2015). The capital accumulation process has a dual impact on external constraints, one is negative because certain capital goods must be imported, but the other is positive because import substitution is possible through the generation of economic capacity if

it is used to produce goods that would otherwise be required to be imported (Vázquez-muñoz & Hernández, 2015:7).

5.2.6 Takaful Penetration Rate by GDP (TPR)

Pradhan et al. (2014:17) define insurance penetration as a percentage of insurance premiums to GDP, which links the size of the insurance market to the size of the economy. Empirical evidence suggests that there is a positive long-run link between insurance industry development indices and economic growth. Hadhek (2014:102) reported that penetration rate is the most prevalent indicator of takaful's contribution to economic growth, with most studies indicating that penetration rate has a positive and substantial influence on economic growth. Penetration rate to GDP is a flow variable that resembles an input component that affects savings and investment. As a result, the penetration rate can be converted into assets that increase their capital. This improves their funding base and stimulates more investment (Pradhan et al., 2014:23). Some of the research that utilized the takaful penetration rate is as follows: Webb et al. (2002) examined data from 55 nations from 1980 to 1996 and discovered that the prevalence of life insurance correlates considerably with economic growth. Haiss and Sumegi (2008) examined 29 European nations from 1992 to 2005 and discovered that life insurance had a favourable influence on GDP growth. Han et al. (2010) examined 77 nations from 1994 to 2005 using a dynamic panel data model. J. Kjosevski (2011) examined life insurance penetration as well as overall insurance penetration. The study made use of data from 1995 to 2010. The findings indicate that the expansion of the whole insurance industry has a beneficial impact on economic growth.

5.2.7 Human Capital (HC)

Human capital is among the main determining factor of economic growth that has been explained specifically by neoclassical theory, and endogenous theory and has been empirically studied in earlier pieces of literature. Human capital has been well defined as the health of individuals, skill, knowledge, and creativity (Becker, 2002). Becker (2002) argues that financial capital, physical capital, and human capital are different concepts of capital their difference is derived from the reality that uniqueness cannot be divided from their values, health, and skill, however, they can be divided from their properties and assets. Also, Albiman & Bakar (2022:372) stipulate that formal

education and training are essential instruments for developing the capacities of production and the investment in human capital as benchmarks for education registration. Human capital is the investment in human resources to raise their efficiency and productivity.

Lucas (1988), published that the contribution of human capital to the economic growth of a nation is generally acknowledged. Considering contemporary problems like globalization and technological advancements, nations require new strategies to maintain their competitive advantage. Human capital is an important resource for their nation and may give it the border it needs to achieve better. The effect of human capital on economic growth has been the subject of extensive research. For instance, (Lucas, 1988:17) emphasizes the provision of human capital to economic growth, via the ability to use labour skills and knowledge to improve productivity. Furthermore, (Lucas, 1988:39) demonstrates that labour has become a critical component of the economic growth process.

In terms of years of schooling, (Mankiw Gregory et al., 1992:419) and (Barro, 1991:409) computed growth rates for human capital. By using the secondary school enrolment rate as a proxy, (Barro, 1991:416) assessed the effect of human capital on economic growth and discovered a positive relationship with economic growth. (Barro & Sala-i-Martin, 1997:17) concluded that economic growth is influenced by the degree of human capital. The health expenditures and years of schooling were used as two proxies for human capital by (Gyimah-Brempong & Wilson, 2004:313), who discovered positive and significant correlations with economic growth. (Ogundari & Awokuse, 2018:16) have found a strong and favourable impact on economic growth by employing life expectancy years of schooling. Like this, (Ibrahim, 2018:11) discovered a strong and negative association between human capital and growth by utilizing the student-teacher ratio as a proxy for human capital. The number of secondary school enrolments used as a proxy for labour in this study as used by (Guru & Yadav, 2019).

5.2.8 Government Expenditure (ge)

It comprises all consumptions and investments made by the government. Government final consumption expenditure is defined as the amount spent by the government on

the purchase of goods and services that are used directly to meet the needs of people or the society at large. Government investment which often makes up the majority of the government's gross capital formation, is defined as the procurement of goods and services by the government to generate future benefits. Examples of such expenditures include infrastructure and research. The government can either acquire goods and services from market producers or generate its products and services utilizing for intermediate consumption.

Three active actors in the economic system are consumers, corporations, and the government. According to economic theory, government action in the areas of spending (government expenditure) and taxation revenue are the most common types of economic intervention. The government expenditure variable is more influenced by social and political factors than by economic factors (Rafsanjani, 2022:534). According to (Nusrate & Asadullah, 2017:9), there is a clear correlation between the level of government spending and the growth of an economy. As a result, the impact of government spending on the economy is given a lot of consideration to address serious problems including unemployment, unstable currency rates, inequality, inflation, high oil prices, and balance of payments stability.

Moreover, given the lack of agreement in the research about the short- and long-term impacts, the relationship between government spending and economic growth remains unclear. The available studies on how government spending affects economic growth indicate that further research is needed because the findings are still controversial. For instance, studies like (Kunwar, 2019:33; Nyarko-asomani et al., 2019:45; Al-Fawwaz, 2016:99) observed that government spending positively influenced economic growth, while the other studies found that the relationship was insignificant (Ogar et al., 2019), or even negative (Barlas, 2020; Aydin & Esen, 2019; Okoye et al. 2019). Government expenditure is used as a variable for the measurement of fiscal policy as applied by (Ali et al., 2022; Musa et al., 2020; Mulok et al., 2010).

5.2.9 Total Financing of Islamic Banks (tif)

This variable is used to measure all total value of financial activities carried out by Islamic banks under their modes of financing including Murabaha, Mudarabah, Ijarah, Musharakah, Salam and Istisna. These modes offer the services under Islamic banks

that ultimately affect economic growth. Belkhaoui (2023) and Zarrouk et al. (2017) reported that Islamic banking finance discloses the sum of the total outstanding amount of finance to the real economic industries. Islamic financial intermediaries work as other financial intermediaries which could participate either directly or indirectly implying the mobilization of resources from the funds deposited or invested by the surplus people in an economy and distribution to those who have the deficit units (Ayub, 2007). Islamic financial industry should operate in a win-win situation while preventing Shar'ah-incompatible aspects. They need to establish instruments and alternative investment portfolios that could earn profit while ensuring adequate liquidity to meet depositors' expectations and requirements. To maximize profits, firms should seek investments that produce the maximum return, reduce risks, and provide appropriate liquidity, while adhering to Shar'ah business standards (Ayub, 2007:357).

To accomplish the first specific objective, this study used total financing of Islamic banks (tif) on economic activities as a proxy of Islamic banks across countries in the OIC, following the same methodology as applied in the studies (Farahani & Dastan, 2013:161, Abduh & Azmi, 2012:39, Furqani & Mulyany, 2009:64).

5.2.10 Sukuk Issuance per GDP (SKK)

According to many studies, the development of the Sukuk market influences economic growth in a variety of ways, including mobilizing and utilizing investors' funds for long-term investment, which is the primary function of capital markets, so that funds can be placed toward efficiency and productive activities (Alkhawaja, 2019). Also, without Sukuk, bond, and stock markets, banks have fewer options for investing in deposits. Because Sukuk markets empower Islamic banks to invest in Sukuk certificates, the information discrepancy is eliminated.

Furthermore, the advanced development of Sukuk markets with well-developed financial structures and financial services may support economic growth in the face of technological improvement, increase productivity in the public and private segments, increase employment opportunities and reduce poverty. Furthermore, some varieties of Sukuk are characterized by risk sharing, particularly Musharakah and Mudarabah

Sukuk, which bring the risk of investment to be distributed the profit and loss, which may drive investment and, subsequently, economic growth (Smaoui & Nechi, 2017:3).

In concisely, after adjusting for numerous metrics of financial market, institutional quality, and the classical growth factors, the Sukuk markets has an essential function in encouraging economic growth. This study used the volume of Sukuk issuance on GDP as a measure of Islamic Capital Markets performance. This proxy has been applied by Tan & Shafi (2021), Smaoui & Nechi (2017) and Nayan & Kadir (2014).

5.2.11 Banks Credits to Private Sectors (BC)

Private credit from banks is defined as credit to the private sector divided by GDP that is provided by deposit banks and other financial institutions but not by central banks (Fufa & Kim, 2017). Additionally, Lee (2019), this term is defined as financial reserves that other depository corporations aside from central banks grant to the private sector. These resources include loans, and trade credits that create a claim for repayment. Greater levels of any of these indicators may indicate more financial services provided to the private sector and, consequently, more growth of financial intermediaries. It may also indicate excessive loans, which could hinder expansion (Fufa & Kim, 2017).

The goal of this measurement is to estimate the size of the banks (Cavenaile et al., 2014) (Ahmad). Therefore, in a traditional banking system, the total amount of financing is determined by the entire amount of bank credit that is provided to the private sector of that economy by all conventional banks. This is because credit enlarged to the public sector typically travels in the opposite direction from credit prolonged to the private sector, which grows during boom times and declines during credit crises or economic crises (Belkhaoui, 2023).

According to Awden (2012), credit to the private sector has an advantage since it more closely reflects the real amount of money flowing into the sector and is, thus, associated with investment and economic expansion. Credit to the resident private sector will thus be implemented as a percentage of GDP; a higher ratio indicates a stronger growth of financial intermediation.

5.2.12 Broad Money to GDP (BM)

The size and depth of financial intermediaries are measured by broad money, which is computed as the ratio of broad money to GDP. This indicator shows how much the banking industry helps with savings and payment operations (Pham-Gia & Choulakian, 2014). This indicator measures the efficiency of the bank and shows the depth and liquidity of the banking system as explained by Levine (1997). The rate of liquidity, according to King and Levine (1993), is a trustworthy determinant of financial progress. Through the channel of funded investments, this statistic, which evaluates how financial assets are allocated, is probably more closely related to economic growth. This variable is used as an indicator of the performance of conventional banks and has been applied by many researchers including (Yang, 2019), (Zarrouk et al., 2017) and (Nguyen & Pham, 2021)

5.2.13 Total Assets of Islamic Banking (iba)

This study utilized the complete total assets of Islamic banking for the growth of the Islamic banks. It indicates the total amount of Sharia-compliant assets that Islamic banks have funded each year. It is all the financial and non-financial assets that local and international banking and non-banking organizations that offer Islamic financial services own. Prior research found that the use of total assets of Islamic banks boosted economic growth in Malaysia (Majid & Salina, 2014:9), Bangladesh (Said & Grassa, 2013), and Southeast Asia (Lebdaoui & Wild, 2016). Therefore, it is established that growing the sector's total assets will result in economic growth. For this reason, we decided to examine the true impact of the Islamic banking system on economic growth by using the total assets of the Islamic banking industry. The proxy for measurement of Islamic banking is the total value assets of Islamic banking as used by (Issa, 2022) and (Abduh & Azmi, 2012).

5.2.14 Total Value of Stocks Markets Traded Percentage of GDP (TVS)

This variable organizes the trading of company equity as a proportion of national production and evaluates the liquidity and depth (Bayraktar, 2014). As such, it should positively represent liquidity on an economy-wide basis. It is a supplement to the market capitalization ratio since, despite a market's size, trading volume may be little (Hailemariam, 2014). Additionally, it estimates how busy the stock market is

concerning the size of the economy. The theory suggests that markets with higher liquidity and activity levels make resource allocation more efficient and promote growth (Fufa & Kim, 2017).

According to Akel & Torun (2017), there is a strong and statistically considerable association between stock market development and subsequent economic growth. As a result, the connection between stock market development and economic growth is consistent with Levine and Zervos (1998). Stock Value Markets play a vital position in the development of the stock market because, in theory, more liquid stock markets increase the share of capital put to optimal use, impact long-term investment, and foster technological innovation, all of which increase the long-term growth (Bencivenga et al., 1996; Henry, 2000).

Several writers' findings (Naik and Padhi, 2015; Levine and Zervos, 1998) corroborate the understanding that financial markets compel to economic growth by demonstrating the beneficial long-term control of stock market value on growth. However, most people agree that excessive liquidity can have a harmful impact on economic expansion (Levine, 1997). Therefore, the capital markets are measured by the total value of stock markets traded percentage of GDP. This indicator is common and has been applied by many authors including Owen (2020), Kapaya (2020), Adoms et al. (2020), Osaseri & Osamwonyi (2019), Akel & Torun (2017), Karim & Chaudhary (2017) and Ikikii & Nzomoi (2013).

5.2.15 Labour Force (lab)

Labour was used as one of the factors of production established under the approach based on the Solow model through the Cobb-Douglas function, considering constant forms to scale (Zulu & Banda, 2015:33), and it was discovered that empirical proof indicates that labour productivity contributes an important part in influencing economic growth throughout countries and that the increase in labour force is positive the for overall economic growth. The labour variable measured by the total labour force is used by (Anaman, 2004) as a factor affecting economic growth according to classical school and neo-classical school.

5.2.16 Exchange rate (exch)

It is an important economic variable since changes in its value impact the performance of other macroeconomic variables in any economy (Odili, 2014). (Akinbode et al., 2019:160), stated that a country can use any technique to regulate its exchange rate. The exchange rate impacts on economic growth and other indicators directly or indirectly, although to varying degrees. Conventionally, there are relationships between prices of items sold between countries and the exchange rate. Thus, each nation is required to enact an appropriate exchange rate policy that will assist her in achieving her objectives, particularly in the areas of feasible economic growth. Therefore, the exchange rate would be among the reliable variables for the test economic growth of a country. On the line of the Akinbode et al. (2019) and Mulok et al. (2010) used exchange rate as determinant of economic growth.

Variables for Objective 1: To examine the impact of Islamic banking on economic growth based on the perspective of Mainstream economics in OIC countries.

Table 5.2: Variables, Labels, and their Definitions Used in Objective One.

Variables	Definitions	The Source of Authors Applied
Economic Growth: Dependent Variable		
Economic growth (GDP)	Share in total value added	(Kazak et al., 2023) and (Apergis et al., 2008)
Macroeconomic factors: Independent / Control variables		
Trade Openness	The percentage increase of total exports and imports of goods and services divided by GDP	(Issa, 2022), (Abel et al., 2021) and (Smaoui & Nechi, 2017)
Human Capital	Secondary school enrolments	(Guru & Yadav, 2019) and (Umut, 2011)
Foreign Direct Investment	Foreign Direct Investment inflows	(M. I. Tabash, 2014) and (Mosab & Raj, 2017)

Variables	Definitions	The Source of Authors Applied
Government expenditure	It is the level of expenditure by the government in the economy through a budget.	(Musa et al., 2020)
Covid-19	(2019-2021), 0 normal and 1 covid-19 problem	(Author create)
Inflation	Consumer price index	(Osaseri & Osamwonyi, 2019)
Labour force	Total labour force	(Anaman, 2004)
Exchange Rate	"National Currency Per U.S. Dollar, End of Period".	(Akinbode et al., 2019)
Capital	Gross fixed capital formation (Quartey % growth)	(Echchabi et al., 2018) and (Yazdan & Hossein, 2012)
Focus Variables: Independent variables		
Islamic banks	Total financing on Islamic Banks	(Ledhem & Mekidiche, 2021), (Abduh & Azmi, 2012) and (Yazdan & Hossein, 2012)
Conventional Banks	Banks' domestic lending to the private sector as a percentage of GDP	(Dada, 2021), (R. P. Pradhan et al., 2017) and (Zarrouk et al., 2017b)

Source: Author creates

Variables for Objective 2: To examine the impact of Islamic capital markets on economic growth based on the perspective of Mainstream economics in OIC countries.

Table 5.3: Variables, Labels, and their Definitions Used in Objective Two.

Variables	Definitions	Source of Authors Applied
Economic Growth: Dependent Variable		
Economic growth (GDP)	Share in total value added	(Kazak et al., 2023) and (Apergis et al., 2008)

Variables	Definitions	Source of Authors Applied
Macroeconomic factors: Independent / Control variables		
Trade Openness	The total of imports and exports of goods/services per cent growth divided by GDP	(Abel et al., 2021) and (Smaoui & Nechi, 2017)
Foreign Direct Investment	Foreign Direct Investment inflows	(M. I. Tabash, 2014) and (Mosab & Raj, 2017)
Human Capital	Secondary school enrolments	(Guru & Yadav, 2019) and (Umut, 2011)
Government expenditure	It is the level of expenditure by the government in the economy through a budget.	(Musa et al., 2020)
Covid-19	(2019-2021), 0 normal and 1 covid-19 problem	(Author create)
Inflation	consumer price index	(Osaseri & Osamwonyi, 2019)
Labour force	Total labour force	(Anaman, 2004)
Capital	Gross fixed capital formation (Quarterly % growth)	(Echchabi et al., 2018) and (Yazdan & Hossein, 2012)
Focus Variables: Independent variables		
Islamic capital markets	The total volume of Sukuk issued as a per cent of GDP	(Seda et al., 2020) and (Abd.Aziz et al., 2016)
Conventional capital markets	Total value of stocks Markets traded ratio to % of GDP	(Idris, 2021) and (Osaseri & Osamwonyi, 2019)

Source: Author creates

Variables for Objective 3: To examine the impact of Takaful on economic growth based on the perspective of Mainstream economics in OIC countries.

Table 5.4: Variables, Labels, and their Definitions Used in Objective Three.

Variables	Definitions	The Source of Author Applied
Economic Growth: Dependent Variable		
Economic growth (GDP)	Share in total value added	(Kazak et al., 2023) and (Apergis et al., 2008)
Macroeconomic factors: Independent / Control variables		
Trade Openness	The percentage increase of total exports and imports of goods and services divided by GDP	(Abel et al., 2021) and (Smaoui & Nechi, 2017)
Foreign Direct Investment	FDI inflows	(M. I. Tabash, 2014) and (Mosab & Raj, 2017)
Human Capital	% of the total working-age population with advanced education	(Ali et al., 2022) and (Umut, 2011)
Government expenditure	It is the level of expenditure by the government in the economy through a budget.	(Musa et al., 2020)
Covid-19	(2019-2021), 0 normal and 1 covid-19 problem	(Author create)
Inflation	Consumer price index	(Osaseri & Osamwonyi, 2019)
Labour force	Total labour force	(Anaman, 2004)
Exchange Rate	"National Currency Per U.S. Dollar, End of Period".	(Akinbode et al., 2019)
Capital	Gross fixed capital formation	(Echchabi et al., 2018) and (Yazdan & Hossein, 2012)
Focus Variables: Independent variables		
Takaful penetration rate	"Ratio of gross written premiums to GDP"	(Kamarudin et al., 2023) and (Hadhek, 2014)

Variables	Definitions	The Source of Author Applied
Insurance Penetration rate	Total insurance penetration includes life and non-life insurance direct domestic premiums as a percentage of GDP	(Akinlo & Apanisile, 2014), (Richterkova & Korab, 2013) (Chen et al., 2011)

Source: Author creates

5.3 Theoretical Foundation of Models and Variables

This study describes the theoretical foundation of models that have derived from Mainstream economics prescribe the finance – growth nexus. Under this section could enable to developing the empirical models so that to achieve the research objectives. Therefore, two theoretical models are applied to generate the empirical models for three objectives.

5.3.1 Solow Growth Model

The neoclassical model also called Solow – Swan growth model or exogenous growth model describes the long-run economic growth (Anaman, 2004:785). This model begins with the Solow model (1956) at the initial efforts to clarify how capital, labour and technical advancement affect the rise of production over time (Liu & Peters, 2012:6). The Solow model was established in 1956 which stated that aggregate production has three basic components which are GDP as production is the function of capital, labour, and technology (Idris, 2021:165).

$$Y=AK^{\alpha}L^{1-\alpha} \quad \ldots\ldots (7)$$

Whereby Y represents GDP, A signifies technology, K denoted as capital and L signifies labour (Aghion et al., 2009:13).

The equation created from the Cobb-Douglas function is expressed as follows:

$$Y=A_{it}K_{it}^{\alpha}LAB_{it}^{\beta} \quad \ldots\ldots (8)$$

Where *Yit* represents total output, *Ait* signifies total productivity factors, K_{it} denotes capital, α is production elasticity, and LAB_{it} signifies effort of labour force, β is the production elasticity of the labour.

The above equation (8) can be re-written as

$$y=A_{it}k_{it}^{\alpha} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (9)$$

After dividing Y and K by Labour, where y = Y/L and k = K/L and y denoted output per labour and k stand as capital per labour respectively while A denoted as total factor of productivity (TFP) (Haini, 2020).

The equation 9 after taking into first differencing.

$$Gy = aGk + GA \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (10)$$

Whereas

Gy = percentage growth per capita GDP

Gk = percentage growth of per capita output

GA = percentage growth per total factor of productivity.

Gy and Gk are straightly estimate while GA is acquired by subtracting a share of Gk from Gy.

$$GA = Gy - aGk \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \quad (11)$$

Therefore, GA contained variables such as finance, technology, trade, government spending. Meanwhile equation 6 could be modified trans log production function as treated by (Barro, 1991).

Therefore, after transform the equation 8 into logarithm form can be re-written as

$$\Delta \log(Yit) = \log(Ait) + \alpha \Delta \log(kit) + \beta \Delta \log(l_{it}) \ldots\ldots\ldots\ldots\ldots \quad (12)$$

In steady-state equilibrium, the Solow-Swan growth model recommends that the economic growth is estimated by the available technology, as symbolized in the output function, as well as technological progress, all of which are thought exogenous (Knight et al., 1993:513).

This model with its variables has been applied in many empirical studies to measure economic growth includes (Idris, 2021:165) and (Acquah-Sam & Salami, 2014).

5.3.2 Endogenous Growth Model

The endogenous growth theory displays the famous theory that has been developed and applied by the new classical school to explain their thought on economic growth. This theory emphasizes the technological changes through external factors such as human capital, the function of investment in research and education, as well as part of the government policies on promoting physical capital and human capital.

The theory is constructed on the hypothesis of the Cobb-Douglas production and has been applied by several studies includes (Akinlo & Apanisile, 2014). The aggregate output is written (Akinlo & Apanisile, 2014).

$$Y=A_{it}K_{it}^{\alpha}H_{it}^{\beta}L \quad \text{..... (13)}$$

Where:

Y = Output (GDP)

A= Technological progress (TFP)

H= Human Capital

L= Labour force

α and β = elasticity of K and H

(Akinlo & Apanisile, 2014) after transforming by Y, AK and K divided by L it become,

$$y=Ak_{it}^{\alpha}h_{it}^{\beta} \quad \text{..... (14)}$$

Moreover, the above equation after transform into log linear form and differentiating equation (14)

$$\Delta \log(Y_{it}) = \log(A_{it}) + \alpha\Delta \log(k_{it}) + \beta \Delta \log(h_{it}) \quad \text{..... (15)}$$

Since the h and k is observed and directly measured while the A (TFP) is unobserved, we assume that (A) is determined by financial sectors such as banks, insurance and capital markets and other variables (Yang, 2019). Following Anwar & Nguyen (2011) specified A (TFP) determined as following

$$\log A_{it} = \beta_0 + \beta_1 \log(FS) + \beta_2 \log(TRO) + \beta_3 \log(ge) + \beta_4 \log(FDI) \quad \text{..... (16)}$$

Substituting the equation 16 into equation 15 we developed the following equation.

$$\log(Y) = \beta_1 \log(k) + \beta_2 \log(h) + \beta_3 \log(\text{FS}) + \beta_4 \log(\text{TRO}) + \beta_5 \log(\text{ge}) \quad \ldots. (17)$$

(Albiman & Bakar, 2022:372) finalized that the endogenous model is that the presence of technical efficiency, human capital, and research and development prevents capital stock from decreasing economic growth on its own. This is because several elements, including the financial sector (FS) represent all financial variables that employed in the different models, FDI and domestic investment encourage technological growth. Therefore, through R&D with human capital which strongly emphasizes in endogenous model on its contribution and stimulation of innovation, transfer technology and absorptive capacity ultimately enables sustainable economic growth (Apergis et al., 2008:8)

Finally, many studies adopted this approach including Akinlo & Apanisile (2014:123) and those studies show a strong correspondence between financial growth and economic growth. This model has served as the basis for several research that have developed a variety of theoretical connections between financial development and economic growth (Luc et al., 2011:5).

5.4 Model Specification

This section describes the specification of the models used to estimate the connection between the dependent and explanatory variables of the study. Based on the specific objectives and subject of the study the two models are specified for every objective and estimated for analysis and discussion. The first two groups of models intended to evaluate the impact of Islamic banks and conventional banks which was represented by total financing of Islamic banks and bank credits on economic growth from the perspective of Mainstream economics in OIC countries while the second two groups of models were used to examine the impact of Islamic capital markets measured by Sukuk issuance and total value of conventional stock markets on economic growth based on the perspective of the Mainstream economics in OIC countries.

Moreover, the models used in this study are designed based on specific objectives, and each model includes three (3) main variables: a dependent variable which is GDP per share of industry to represent economic growth, another variable a focused variable that is used to evaluate the impact of it to the dependent variable, and control variables that are used as another factor that influence and impact the dependent

variable apart from the focus variable. Because the study is based on panel data that comprise 21 OIC countries and time ranging from 2017Q1 to 2021Q4 the models were decided to be formulated through dynamic GMM model because they included more than one independent variable and data that collected ranging on panel system. As a result, this part was constructed to elaborate and present an in-depth one-by-one model based on specific objectives.

To attain study objectives, the study adopted two models to construct the growth model based on their theoretical framework. Therefore, the variables that are combined to construct the models are as specified below.

GDP = f (*Total financing of Islamic banks, gross fixed capital formation, Total value of asset of Islamic banks, Takaful penetration rate, human capital,* Sukuk *issuance per GDP, banks credits to private sectors, broad money per GDP, Total value of share traded, Insurance penetration rate, Foreign direct investment, labour force, trade openness, and government expenditure)*

All the variables are transformed into logarithmic form in order to minimize the skewness of the data value, and to ensure the stability of the data set (Hemed et al., 2019:3).

The new variables are denoted within the below model:

$$log\, Y_{it} = \beta_0 + \beta_1 log X_{it} + \beta_2 z_{it} + \varepsilon it \ldots\ldots\ldots\ldots\ldots\ldots (18)$$

Whereby

Y = Matrix of dependent variables

Y_{it-1} = Lagged value dependent variable.

i = Cross-section unit indicating the countries in the sample,

t = Time dimension

β = Gradient of the coefficient of each indicator.

X = Matrix of focus variables

Z = Matrix of control variables

ε_{it} = Error term which is the sum and individual of the regular effect of error term.

Objective one: To examine the impact of Islamic banking on economic growth based on the perspective of Mainstream economics in OIC countries.

As previously described in chapter three in theoretical framework, the various Mainstream economics of thought include Solow growth model and endogenous growth model. Each of these models has its own beliefs, philosophy, indicators, and foundations on economic growth that define the variables that should be associated with economic growth to be concerned.

An Empirical Model for Solow Growth Model

Islamic Banks

$$\log(\mathrm{GDP})_{it} = \beta_0 + \log(\mathrm{GDP})_{(it-1)} + \beta_1 \log(\mathrm{tif})_{it} + \beta_2 \log(\mathrm{GFCF})_{it} + \beta_3 \log(\mathrm{lab})_{it} + \beta_4 \log(\mathrm{ge})_{it} + \beta_5 \log(\mathrm{FDI})_{it} + \beta_6 \log(\mathrm{TRO})_{it} + v_i + \varepsilon_{it}$$

Conventional Banks

$$\log(\mathrm{GDP})_{it} = \beta_0 + \log(\mathrm{GDP})_{(it-1)} + \beta_1 \log(\mathrm{BC})_{it} + \beta_2 \log(\mathrm{GFCF})_{it} + \beta_3 \log(\mathrm{lab})_{it} + \beta_4 \log(\mathrm{ge})_{it} + \beta_5 \log(\mathrm{FDI})_{it} + \beta_6 \log(\mathrm{TRO}) + v_i + \varepsilon_{it}$$

An Empirical model for Endogenous Growth Model

Islamic Banks

$$\log(\mathrm{GDP})_{it} = \beta_0 + \log(\mathrm{GDP})_{(it-1)} + \beta_1 \log(\mathrm{tif})_{it} + \beta_2 \log(\mathrm{GFCF})_{it} + \beta_3 \log(\mathrm{HC})_{it} + \beta_4 \log(\mathrm{ge})_{it} + \beta_5 \log(\mathrm{FDI})_{it} + \beta_6 \log(\mathrm{TRO}) + v_i + \varepsilon_{it}$$

Conventional Banks

$$\log(\mathrm{GDP})_{it} = \beta_0 + \log(\mathrm{GDP})_{(it-1)} + \beta_1 \log(\mathrm{BC})_{it} + \beta_2 \log(\mathrm{GFCF})_{it} + \beta_3 \log(\mathrm{HC})_{it} + \beta_4 \log(\mathrm{ge})_{it} + \beta_5 \log(\mathrm{FDI})_{it} + \beta_6 \log(\mathrm{TRO})_{it} + v_i + \varepsilon_{it}$$

Objective two: To examine the impact of Islamic capital markets on economic growth based on the perspective of Mainstream economics in OIC countries.

The model specification now was expressed as follows:

An Empirical Model for Solow Growth Model

Islamic Capital Markets

$$\log(\mathrm{GDP})_{it} = \beta_0 + \log(\mathrm{GDP})_{(it-1)} + \beta_1 \log(\mathrm{SKK})_{it} + \beta_2 \log(\mathrm{GFCF})_{it} + \beta_3 \log(\mathrm{lab})_{it} + \beta_4 \log(\mathrm{ge})_{it} + \beta_5 \log(\mathrm{FDI})_{it} + \beta_6 \log(\mathrm{TRO})_{it} + v_i + \varepsilon_{it}$$

Conventional Capital Markets

$$\log(\mathrm{GDP})_{it} = \beta_0 + \log(\mathrm{GDP})_{(it-1)} + \beta_1 \log(\mathrm{TVS})_{it} + \beta_2 \log(\mathrm{gfcf})_{it} + \beta_3 \log(\mathrm{lab})_{it} + \beta_4 \log(\mathrm{ge})_{it} + \beta_5 \log(\mathrm{FDI})_{it} + \beta_6 \log(\mathrm{TRO}_{it}) + v_i + \varepsilon_{it}$$

An Empirical model for Endogenous Growth Model

Islamic Capital Markets

$$\log(\mathrm{GDP})_{it} = \beta_0 + \log(\mathrm{GDP})_{(it-1)} + \beta_1 \log(\mathrm{SKK})_{it} + \beta_2 \log(\mathrm{GFCF})_{it} + \beta_3 \log(\mathrm{HC})_{it} + \beta_4 \log(\mathrm{ge})_{it} + \beta_5 \log(\mathrm{FDI})_{it} + \beta_6 \log(\mathrm{TRO})_{it} + v_i + \varepsilon_{it}$$

Conventional Capital Markets

$$\log(\mathrm{GDP})_{it} = \beta_0 + \log(\mathrm{GDP})_{(it-1)} + \beta_1 \log(\mathrm{TVS})_{it} + \beta_2 \log(\mathrm{GFCF})_{it} + \beta_3 \log(\mathrm{HC})_{it} + \beta_4 \log(\mathrm{ge})_{it} + \beta_5 \log(\mathrm{FDI})_{it} + \beta_6 \log(\mathrm{TRO})_{it} + v_i + \varepsilon_{it}$$

Objective Three: To examine the impact of Islamic insurance (Takaful) on economic growth based on the perspective of Mainstream economics in OIC countries.

The model specification now was expressed as follows:

An Empirical Model for Solow Growth Model

Takaful

$$\log(\mathrm{GDP})_{it} = \beta_0 + \log(\mathrm{GDP})_{(it-1)} + \beta_1 \log(\mathrm{TPR})_{it} + \beta_2 \log(\mathrm{GFCF})_{it} + \beta_3 \log(\mathrm{lab})_{it} + \beta_4 \log(\mathrm{ge})_{it} + \beta_5 \log(\mathrm{FDI})_{it} + \beta_6 \log(\mathrm{TRO})_{it} + v_i + \varepsilon_{it}$$

Conventional Insurance

$$\log(\mathrm{GDP})_{it} = \beta_0 + \log(\mathrm{GDP})_{(it-1)} + \beta_1 \log(\mathrm{IPR})_{it} + \beta_2 \log(\mathrm{GFCF})_{it} + \beta_3 \log(\mathrm{lab})_{it} + \beta_4 \log(\mathrm{ge})_{it} + \beta_5 \log(\mathrm{FDI})_{it} + \beta_6 \log(\mathrm{TRO})_{it} + v_i + \varepsilon_{it}$$

An Empirical model for Endogenous Growth Model

Takaful

$$\log(\mathrm{GDP})_{it} = \beta_0 + \log(\mathrm{GDP}_{)(it-1)} + \beta_1 \log(\mathrm{TPR})_{it} + \beta_2 \log(\mathrm{GFCF})_{it} + \beta_3 \log(\mathrm{HC})_{it} + \beta_4 \log(\mathrm{ge})_{it} + \beta_5 \log(\mathrm{FDI})_{it} + \beta_6 \log(\mathrm{TRO})_{it} + v_i + \varepsilon_{it}$$

Conventional Insurance

$$\log(\mathrm{GDP})_{it} = \beta_0 + \log(\mathrm{GDP})_{(it-1)} + \beta_1 \log(\mathrm{IPR})_{it} + \beta_2 \log(\mathrm{GFCF})_{it} + \beta_3 \log(\mathrm{HC})_{it} + \beta_4 \log(\mathrm{ge})_{it} + \beta_5 \log(\mathrm{FDI})_{it} + \beta_6 \log(\mathrm{TRO})_{it} + v_i + \varepsilon_{it}$$

5.5 Sample Countries

As earlier explained, this study focuses on the twenty-one (21) OIC countries that were selected from the Asia continent and African countries. The countries that were covered for this study were Malaysia, Indonesia, Bangladesh, Oman, Turkey, Bahrain, Qatar, Brunei Darussalam, Pakistan, Saud Arabia, Nigeria, Jordan, United Arab Emirates, Sudan, Afghanistan, Iran, Iraq, Kazakhstan, Lebanon, Libya, and Kuwait. The selection of these countries is grounded on the availability of data, especially data on Islamic finance. This is because some OIC countries are still not well developed in their practice of the IFIs together with Islamic banks, Islamic capital markets, Takaful, and other industries. Therefore, these selected countries have been operating Islamic financial industries for a long time and their data have already been published in different financial databases. The detailed list of all the chosen states is given in Table 5.5 below.

Table 5.5: List of OIC Countries Used in the Panel Data.

Middle East Asia Countries	East Asia	South Asia	Africa Countries
Bahrain (BAH)	Brunei Darussalam	Afghanistan (AFG)	Libya (LIB)
Iran (IRA)	Indonesia (IND)	Bangladesh (BAN)	Nigeria (NIG)
Iraq (IRQ)	Malaysia (MAL)	Pakistan (PAK)	Sudan (SUD)
Oman (OMA)			
Jordan (JOR)			
Kazakhstan (KAZ)			
Turkey (TUR)			
Kuwait (KUW)			

Middle East Asia Countries	East Asia	South Asia	Africa Countries
Lebanon (LEB) Qatar (QAT) Saudi Arabia (SAU) United Emirates Arab (UAE)			

Source: Author Compilation (2023)

5.6 Empirical Methodology

This study designed on a quantitative method in which the econometric technique which is called Generalized Method of Moment (GMM) has been applied. This method was applicable because several previous researchers applied it with the corresponding theme of the study. Apart from that because the study was comprised of more than 21 countries as a sample for OIC countries and covered a large range of time scales (20) the technique becomes more reliable and applicable to succeed and reach research objectives. Numerous benefits arise from the analysis of cross-country panel data, including more information, reduced collinearity across variables, increased variability, increased degrees of freedom, and increased efficiency (Çinar & Ünsal, 2023). This model (GMM) was formulated to fulfil the study objectives and in addition to that, this method has already been applied by many studies in different times and places. Some studies are Ledhem & Mekidiche (2020:54), Guru & Yadav (2019:120), Malik et al. (2019:12), Smaoui & Nechi (2017:12), Nayan & Kadir (2014:4), Thumrongvit et al. (2013:536), Mohamed & Seifallah (2010:10).

The GMM technique is extremely appropriate since it uses models based on economic growth and incorporates its previous realization in the right side of the models, which necessitates dynamic panel analysis. Additionally, this study completes the condition of GMM that the number of observations should be larger than period, therefore this study complies this condition in which the number of observations (21) is greater

than the length of time (20). A dynamic panel approach called the GMM is further defined as an estimation of the lagged value of the dependent variable as an explanatory variable. Additionally, GMM can only be used when there is a linear functional connection and when the independent variables are not completely exogenous, which means that they are not connected with the past as well as the present values of the error term (Roodman, 2006:1). Moreover, Jonghe (2019:27), reported that by using a panel of data makes it possible to adjust for unobserved country-specific effects that eventually become a component of the error term and imbalance coefficient estimates. These impacts may be considered via the GMM technique, which reduces biases on the predicted factors. Furthermore, the GMM model uses lagged estimates of the variables as "internal instruments" in the equation, the GMM model enables correcting for any potential endogeneity of all independent variables. In this model, lagged rates are supposed to be "weakly exogenous" since exogenous variables are not present. This means that they are impacted by their past and present realizations of the growth but uncorrelated future realizations of the error term.

Generalized Method of Moments (GMM) is an econometric tool which was introduced in 1982 by Lars Hansen and is now a widely and highly applied tool for financial and economic analysis. It consists of the moments mean, standard deviation, skewness, and kurtosis. Also, the GMM model is widely used to address the endogeneity issue by using internal and external instruments. It is designed for situations such as when there are small-time periods while many panels which we call (micro panels), models must be on the linear functional relationship between dependent and autonomous variables. Moreover, the dependent variable is dynamic which means it is influenced by its past concerns. Sometimes the independent variables are not severely exogenous which indicates the errors in correlation with past or current realizations. GMM shows fixed individual effects of variables, and it does not show autocorrelation and heteroscedasticity between panels only appearing on individual observation (Alimi 2015:2; Arellano & Bover, 1995:35).

The generalized Method of Moments is therefore preferred in growth studies because of its capacity to resolve the correlation between the explained variable and the unobserved residual of the model. The cross-section approach results in biased estimations due to the existing correlation between the explained variable and the

country-specific effect. The panel approach is characterized by large observations over many periods. Therefore, since the correlation still exists, a dynamic mechanism must be the nature of the framework, and therefore the time-average cross-section method would still be biased, and it cannot be corrected by the static methods which are pooled OLS, fixed effect method, and random effect method. Nevertheless, these weaknesses would be corrected by GMM. Following (Ledhem & Mekidiche, 2020:55, Guru & Yadav, 2019, Doytch & Uctum, 2011:414, Mohamed & Seifallah, 2010:10, Blundell & Bond, 1998:117) the GMM version of the estimated models can be specified as follows:

$$log\ y_{i,t} = \beta_0 + \beta_1 \log(y_{i,t-1}) + \beta_2 x_{i,t} + \beta_3 z_{i,t} + \beta_4 \eta^t + \nu i + \varepsilon_{i,t} \quad \ldots\ldots\ldots (19)$$

Whereby

Y represents the dependent variable on the model,

$Yi_{,t-1}$ represents the lagged dependent variable level past time,

x is the vector for the independent variable,

Z represents control variables.

νi Represents time-fixed effect and country-fixed effect.

ϵ represents the stochastic error term which meets all requirements of classical assumptions.

i and t symbolise cross-section units and time correspondingly.

5.6.1 Classification of Generalized Method of Moments

GMM is categorized into two techniques which are the first-differentiated GMM and the system GMM method. First-Difference GMM was introduced by (Arellano & Bond, 1991:278). The method can control the endogeneity problem that normally appears in a model. This technique is prepared to handle the correlation problem between the lagged value of a dependent variable and error terms and hence this method contains preventive measures by one lagged value of independent variables. Therefore, it uses instruments to tackle the endogeneity arising from the relationship concerning the error term with the dependent variable. The drawbacks of Difference GMM include loss of information from the level variable via differencing (Griliches

& Hausman, 1986:104), weak instrumentation, when the lagged dependent variable and autonomous variables are constant over time (Blundell & Bond, 1998:116) and the time length (T) enlarge, the amount of instruments (Z) tends to increase quadratically.

Difference GMM is the traditional Arellano-Bond estimator which only employs differenced variables as IVs. The estimator utilizes Y_{i1} and Y_{i2} as Instrumental Variables, which indicates we have lost yet another period. The above conditions and weaknesses enable the first-differenced GMM to account for the country-specific effect and simultaneity bias but still leave the method with several possible problems. One of the biggest problems with this method is that the nature of lagged instruments asymptotically becomes weak and therefore leads to biases in the estimated parameter when the sample size is small and the corresponding variable is large (Alonso-Borrego & Arellano, 1999:48).

System GMM is the alternative to difference GMM, it comes to a modified variety of Difference GMM fully established by (Blundell & Bond, 1998:126). It uses two simultaneous equations: transformed (first differenced) and original (level form). It uses more instruments, and it is more efficient to address the drawbacks of Difference GMMs. System GMM is categorized into one step and two steps. One-step standard errors are always asymptotically inefficient and in finite samples, when your number of instruments (Z) is relatively large compared to the cross-sectional sample size (N), the two-step procedure is not guaranteed to produce superior results.

Hence the system now will result in an efficient estimate. In the same manner, if the original value of the independent variable differs drastically from the value of their long-term relation, systematically will not be correlated with the country-specific effect, yet the problem of optimal instrument identification may occur when applying System GMM. It includes the equivalent levels as IVs. According to simulations, the System GMM estimator is frequently extremely efficient and, in some situations, so it is much more persistent. Using the System GMM, particularly when the instruments of the Difference GMM are inadequate, frequently leads to huge advancements in the GMM estimator.

Roodman (2009:98) identified that the System GMM, however, suffers from problems with the over-identification of tools, which can create the estimated model over-fitting problem. There is currently a slight direction accessible to assess the maximum number of instruments that can be applied. The instrumental test of the J-test of Hansen (1982:1039) and the Sargan test can be applied to recognize the problem of over-identification when applying a system of GMM on which this study applied the Sargan test to test for over-identification problems. Under executing these tests, the hypothesis is stipulated under the condition that all given instruments are valid with the expectation of zero values under the moment condition.

Under identification of the over-identification problem, the distribution of Chi-square and the degree of freedom are treated with an equal number of instruments employed that restrict the over-identification conditions. Another problem related to the system GMM method is the possibility for a higher-order Autocorrelation; though, this could be simply identified by testing the error term. Whether the null hypotheses for both statement tests are not accepted, there would be evidence to favour the prime estimate of the model. Based on the conditional explanation above, this study used the system GMM method to minimize the probability of bias in the estimated coefficients.

5.6.2 Interpretation of the Model

The model for investigating the impact of Islamic finance on economic growth is based on economic thoughts in a panel data system of 21 OIC countries for quarterly data from 2017Q1 to 2021Q4.

$$log\ GDP_{i,t} = \beta_0 + \beta_1 \log\left(GDP_{i,t-1}\right) + \beta_2 X_{i,t} + \beta_3 z_{i,t} + \varepsilon_{i,t} \quad \ldots\ldots\ldots\ldots (20)$$

In the above equation, ECG is the Gross Domestic Product (GDP) per Capita and $\log\left(GDP_{i,t}\right)$ is its lagged value. $X_{i,t}$ is a pattern of the factors of focus independent variables which affect the economic growth such as Sukuk issuance, total Islamic financing, and total assets of Islamic banks. $Z_{i,t}$ is a pattern of the control variables in the independent variables, therefore real GDP growth accounts for gross fixed capital formation, inflation, government expenditure, trade openness, human capital, saving and population.

5.6.3 Robustness and Diagnostics Checking of the GMM Estimator

The authenticity and reliability of the application of a dynamic GMM estimator should be determined by several specifications that have been proposed and utilized (Blundell & Bond, 1998:117). First, the determination of instruments, and the validity of the model started by examining the number of instruments, the rule of thumb stated that several groups should be higher compared with the number of instruments. Before the analysis and interpretation, the individual variables AR (1) and AR (2) that measure the autocorrelation of the model should reject the null hypothesis "(p-value less than 5 per cent) and accept the null hypothesis (p-value should be greater than 5 per cent)" respectively. Therefore, AR (1) shows there is no autocorrelation while AR (2) should accept there is autocorrelation. In addition to that Hansen test and Sargan test should be greater than 5 per cent. Hansen p-value is applied when the model adds the robust option while the Sargan p-value is used without the robust option.

The disappearance of autocorrelation in the error term (εit) and the reliability of the instruments are crucial for the consistency of the parameter estimations made by the GMM estimators. Additionally, the issue of having too many instruments should be considered while employing the GMM estimators. The Arellano-Bond serial correlation test assesses the autocorrelation in the error term (it) on the residuals produced from running the first difference from all parameters.

$$(yit - yit{-}1) = (yit{-}1 - yit{-}2) + (xit - xit{-}1) + (\varepsilon it - \varepsilon it{-}1)$$

Therefore, the AR (1) error term should be correlated while in AR (2) as a result, the test for AR (2) needs to be hardly distinct from zero for the error term to be uncorrelated with serial correlation. In this regard, it is unnecessary to reject the null hypothesis of serial correlation of order AR (2). Apart from that, Hansen's (1982) J-statistic can be used to assess the reliability of the tools or moment circumstances.

It applies when there are more instruments than endogenous variables that are included, allowing over-identifying limitations to be used to determine if the instruments are associated with the error terms. The degree of freedom for Hansen's J statistic is equal to the number of over-identifying limitations, and it is distributed as a chi-square distribution. The fact that the null hypothesis was rejected suggests that the instruments are invalid. Sargan's (1958) test, which is a separate instance of

Hansen's J test receiving the presumption of conditional homoscedasticity (Newton et al., 2010:1), is additional test for instrument validity.

Hypothesis for Diagnostic Test

Hansen's J statistics

Null hypothesis: P - value ≤ 0.05

Where the refusal of the null hypothesis recommended that instruments are not valid.

Autocorrelation (AR - 1) Test

Null hypothesis: P - value ≤ 0.05

AR (1) shows there is no autocorrelation, it should reject null hypothesis and AR (2) indicates the presence of autocorrelation, it should accept the alternative.

5.6.4 Reasons for Application of the GMM Estimator

Despite the Generalize Method of Moment approach becoming the most common technique to address the issue of endogeneity, a powerful, flexible and more efficient strategy, there are a number of reasons that attract the author to apply like as follows.

1. The study is based on the panel datasets containing twenty-one (21) countries (N = 21) with a timeframe dimension (T = 20) which is a better condition for the application of GMM.
2. Also, GMM is the best when the study comprised more than one model, whereby this study focuses on the two models as specified above the Solow model and endogenous growth models.
3. In$X_{i,t}$, the endogenous focus variables. Because causality might flow both ways - from Islamic finance to real economic growth and vice versa, these regressors may be related to the error term (Arellano & Bond, 1991). To tackle the problem, fixed-effects instrumental variables estimate is used in two stages. As a result, countries use real GDP growth as an exogenous tool. In addition to the exogenous instruments, lagged levels of endogenous regressors in X it, such as Sukuk, have been used. As a result, the endogenous variables are predetermined and hence uncorrelated with the error term.
4. Moreover, GMM control the issue of time-invariant country factors (fixed effects), such as geography and population, may be interrelated with the explanatory factors

(Roodman, 2009) and (Arellano & Bond, 1991). The unobserved country-specific effects and observation-specific errors may rise because this study covers 21 countries, therefore GMM is a more reliable and effective methodology.

5. It controls the occurrence of autocorrelation problem which is indicated by the existence of the lagged dependent variable $GDP_{i,t}$(Holtz-Eakin et al., 1988).

CHAPTER VI

DATA ANALYSIS, FINDINGS AND DISCUSSION

This chapter contains the study's findings and a discussion of the results concerning the study's specific objectives. This chapter consists of numerous sections the first section explains the descriptive variables for all critical variables that are used in objective one. In addition, the second section discusses the correlation matrix between significant variables that are applied while the third part discusses the choice of the type of GMM estimator either system GMM or difference GMM. After deciding on the above procedure, the next section elaborates on the findings for all two (2) models that represent Mainstream economics including Solow growth model and endogenous growth regarding research objectives with their robustness checking as well. This chapter ends with a discussion of the results that compiled all the above results based on objectives.

6.1 Descriptive Statistics of the Key Variables for Objective One

The descriptive statistic is demonstrated in Table 6.1 for objective number one which concerns the impact of Islamic banks on economic growth depend on the perspective of Mainstream economics. The descriptive statistics contained information about mean value, standard deviation value, skewness, maximum value, and minimum value for each variable used in the study for the 21 OIC countries from 2017Q1 to 2021Q4. Therefore, it portrayed the information of all variables that were utilized in this thesis to maintain the validity of the variables that were used in econometric analysis and discussion of the findings. The crucial of Descriptive statistics helps to describe the characteristics, summary, distribution, trend, and main features of the dataset that are applied during the data processing and analysis. The standard deviation measures the distributions' variability. Standard deviation values are widely dispersed about the centres and below the mean values as presented in Table 6.1, it is illustrating that there aren't many significant changes in the data during the period of each distribution.

Therefore, every model comprises common variables that the founders of the theoretical framework explained. The important variables covered in this objective are

GDP per industry share of total value, labour force, human capital, gross fixed capital formation, consumer price index, foreign direct investment, government spending, total financing of Islamic banks, total assets of Islamic banks, while banks credits and broad money that represent conventional banks.

The dependent variable, independent variables, and other control factors are all discussed. According to the findings, the study covered 420 of the total number of observations. The dependent variable was the GDP per industry share which has a mean of 3.35, a standard deviation of 0.47, and the highest value and lowest value of 4.14 and 1.49 respectively. Moreover, the study contains one focus variable for Islamic banks was total financing of Islamic banks. The findings show that total financing of Islamic banks has an average of 13.31 with a standard deviation was 3.28. The maximum and minimum variation of total finance were 19.90 and 7.99 respectively. Moreover, banks credits that present conventional banks performance shown that has mean value 3.63, its standard deviation 1.01, while this variable has a negative 0.04 minimum value and 4.99 maximum value.

In general, this objective contained six (6) explanatory (control) variables as demonstrated in Table 6.1. By starting with foreign direct investment has a mean value of 5.83, a standard deviation of 0.42, a maximum of 7.83, and a minimum of 0.00. Gross fixed capital formation, as another control variable, had a mean value of 1.80, and a standard deviation of 1.19, while maximum and minimum values were 1.99 and 1.33, respectively. In this thesis, the mean of human capital is 0.24, while the standard deviation, minimum, and maximum are 0.06, 0.20 and 1.46, respectively. It is also found that the mean of the government expenditures and trade openness are 24.37 and 9.13 respectively, with the standard deviation (log ge = 1.39) while for trade openness is 1.89. The minimum value is 0.00 and 5.69 in addition to that the maximum value is 26.23 and 11.92 for log ge and log TRO, respectively.

In the case of statistics, the total labour force as latest variable for this objective shown an average value of 17.28, with a standard deviation of 0.89, a maximum of 18.99, and a minimum of 3.07. In general, the greatest average value was 24.37 from government expenditure, while the highest standard deviation was 3.28 from the total Islamic banking financing variable, and the minimum value was 0.06 from human capital and maximum values (26.23) from government expenditure. Moreover, all variables

depicted that the standard deviation is less (lower) than the mean which indicates the high variability, and the dataset is collected closely near the average. According to (Hair et al., 2010:35), data with skewness values between +2 and -2 can be considered normal and can be used to demonstrate a normal distribution while (Kline, 2016:77) should not exceed 3. Most of the variables that applied their skewness values are shown as either positive or negative values, with a range of +/- 2. The logged variables, therefore, are substantially symmetrical and are modestly skewed in both the left and right directions, which is the normal distribution. Even if certain variables are not normally distributed, this is not a concern because the GMM approaches used in this study can automatically solve the issue and offer an accurate result that may be used to determine how much the findings can be generalized. The table below 6.1 represents and shows the summary of the discussion of the descriptive statistic above.

Table 6. 1: Descriptive Statistics for Selected Variables of Objective One

Variables	Obs	Mean	Std. Dev.	Min	Max	Skew.	Kurt.
Log (GDP)	420	3.35	0.47	1.49	4.14	-1.05	4.24
Log (tif)	420	13.31	3.28	7.99	19.90	0.29	2.23
Log (GFCF)	420	1.80	0.19	1.33	1.99	-1.26	2.63
Log (HC)	420	0.24	0.06	0.20	1.46	18.69	371.78
Log (BC)	420	3.63	1.01	-0.04	4.99	-1.12	3.71
Log (TRO)	420	9.13	1.89	5.69	11.92	-0.49	2.00
Log (ge)	420	24.37	1.39	0.00	26.23	-12.93	229.46
Log (lab)	420	17.28	0.90	3.06	19.00	-9.13	150.50
Log (FDI)	420	5.83	0.42	0.00	7.83	-4.49	91.74

Source: Calculations from STATA 15.

6.2 Correlation Analysis between the Key Variables for Objective One

The correlation matrix is an important econometric concept that should be analysed for the data and variables used to know how the variables are associated, whether

positive or negative and from which degree, but also to expose all variables that are not connected depending on the specific study with selected variables. Therefore, before we continue the analysis of the findings the study displays the correlation of all variables that were included in the study. Table 6.2 shows that, nine (9) indicators are included in this objective. That are GDP (log GDP), human capital (log HC), government expenditure (log ge), trade openness (log TRO), foreign direct investment (log FDI), gross fixed capital formation (log GFCF), total financing of Islamic banks (log tif), banks credits (log BC), and labour force (log lab). The general findings show that most of the variables have positive linear relationships between them even if some are not located in any critical values from 1 percent to 10 percent. The dependent variable called the log of GDP has some weak and other moderate linkage with some focus and control variables. In Table 6.2 is noted that GDP has a positive relationship with all selected variables except foreign direct investment and labour force depicted as a negative link with GDP. Aside from that, Table 6.2 shows there is a very weak correlation between GDP and gross fixed capital formation (log GFCF). That is some of these correlations of the GDP with independent variables are accepted theoretically.

Likewise, the total financing of Islamic banks has positive and weak related to log GFCF (0.37), log TRO (0.10), log HC (-0.10), log ge (0.13), log lab (0.14), and log GDP (0.15). However, it found that the total financing of Islamic banks denoted a positive and linear association with gross fixed capital formation, government spending, trade openness, and labour force while negative correlation depicted with FDI, human capital as well and banks credits on private sectors.

The human capital indicates the positive with statistical significance with FDI and banking credits while the left variables revealed a negative correlation between them. While it shows a weak correlation on the other side the result on the correlation of human capital with GDP per capital with gross fixed capital formation shows is positive and weak as well correlated. Table 6.2 shows the government expenditure shows that all variables become weak and positive correlation except the FDI, and human capital becomes a negative correlation, and the final variable is banks credits to private sectors shown that all variables depicted positive correlation except labour force and total financing of Islamic

banks. Overall, the correlation results were extremely good and provided a good indication of the relationship between all variables employed in this thesis for the 21 OIC countries, allowing us to accomplish the study objectives. Therefore, this justifies the models that are applied to estimate the variables in this objective hopeful to generate valid results.

Table 6. 2: Correlation Matrix of the Key Variables in the Objective One

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Log (GDP)	1.00								
(2) Log (tif)	0.15	1.00							
(3) Log (GFCF)	0.27	0.37	1.00						
(4) Log (HC)	0.16	-0.10	0.01	1.00					
(5) Log (BC)	0.34	-0.08	0.16	0.09	1.00				
(6) Log (ge)	0.20	0.13	0.16	-0.06	0.17	1.00			
(7) Log (TRO)	0.13	0.10	0.27	-0.01	0.48	0.31	1.00		
(8) Log (lab)	-0.20	0.14	0.05	-0.81	-0.16	0.24	0.26	1.00	
(9) Log (FDI)	-0.05	-0.22	0.08	0.01	0.09	-0.08	-0.09	-0.09	1.00

6.3 Regression Diagnostic Test

The GMM diagnostic test, which was used to assess the reliability and validity of each GMM model used in the study, was described in this section. Four standard diagnostic tests are examined to assess the level of result validity. Testing for heteroskedasticity, multicollinearity, unit root, and cross-sectional dependency. Each test's results are displayed in the corresponding table.

Multicollinearity is utilized to determine if certain factors in the models correlate with the dependent variable or between independent variables (Shrestha, 2020). This study employed the Variance Inflation Factor (VIF), which measures how much the variables' estimated regression coefficient is inflated if the explanatory variable is correlated, even though other methods are for detecting multicollinearity (Kim, 2019). When there is a multicollinearity issue, the VIF range of 5 to 10 suggests it. Table 6.3 presents the data, which indicates that none of the models reach or come close to five. Given that the VIF was less than 5 or 10, it can be concluded that the applied GMM models do not suffer from multicollinearity. As a result, the models are reliable and valid. The results are made demonstrated in the table below.

Table 6. 3: Multicollinearity Test

Multicollinearity Test											
Islamic Banks		**Conventional Banks**		**Islamic Capital Markets**		**Conventional Capital Markets**		**Islamic Insurance**		**Conventional Insurance**	
Variables	**VIF**	**Variables**	**VIF**	**Variables**	**VIF**	**Variables**	**VIF**	**Variables**	**VIF**	**Variable**	**VIF**
Log lab	3.95	Log lab	5.15	Log lab	4.00	Log lab	3.96	Log lab	2.26	Log lab	1.83
Log HC	3.55	Log HC	4.14	Log HC	3.57	Log HC	3.56	Log ge	1.92	Log GFCF	1.72
Log TRO	1.38	Log TRO	2.16	Log TRO	1.51	Log TRO	1.39	Log GFCF	1.83	Log TRO	1.25
Log GFCF	1.31	Log BC	1.77	Log SKK	1.23	Log ge	1.25	Log TPR	1.63	Log ge	1.21
Log tif	1.28	Log ge	1.23	Log GFCF	1.22	Log GFCF	1.15	Log TRO	1.55	Log FDI	1.05
Log ge	1.19	Log GFCF	1.11	Log ge	1.21	Log TVS	1.11	Covid19	1.36	Log CTPR	1.04
Log FDI	1.11	Log FDI	1.05	Log FDI	1.09	Log FDI	1.04	Log FDI	1.09	Covid19	1.01
Covid19	1.02	Covid19	1.02	Covid19	1.02	Covid19	1.03	Log HC	5.24	Log HC	4.5

Multicollinearity Test											
Islamic Banks		**Conventional Banks**		**Islamic Capital Markets**		**Conventional Capital Markets**		**Islamic Insurance**		**Conventional Insurance**	
Mean VIF	1.85	Mean VIF	2.2	Mean VIF	1.86	Mean VIF	1.81	Mean VIF	2.11	Mean VIF	1.7

The second diagnostic test is known as the unit root test. Typically, time series or longitudinal data are non-stationary, unpredictable, and unable to be predicted or modelled. Non-stationary data might produce inaccurate and less trustworthy results (Kunwar, 2019). Thus, the study's findings are anticipated to be reliable and consistent. Therefore, the data should be converted into stationary data if they are non-stationary. To determine whether the variables used in the study were stationary, the Im-Pesaran-Shin unit-root test was utilized to determine the unit root qualities of every variable involved. All variables were determined to be stationary at the level, according to the unit root results, showing that they are I (0) variables. The unit-root null hypothesis has been evaluated against the stationary alternative hypotheses using the Im-Pesaran-Shin unit-root test. Additionally, these tests are run on all variables' levels. The unit root problem at level form, or non-stationary, has not been detected in all series, according to the findings of the unit root tests, which are shown in Table 6.4. Therefore, at 5 per cent and 10 per cent levels of significance, the test shows that the series becomes stationary at level.

Table 6. 4: Stationarity Test

Im-Pesaran-Shin Unit-Root Test			
Variables		**Statistic**	**P-value**
Log GDP	W-t-bar	-2.317	0.010
Log SKK	W-t-bar	-91.469	0.000
Log tif	W-t-bar	-40.923	0.000
Log ge	W-t-bar	-3.771	0.000
Log FDI	W-t-bar	-2.414	0.008
Log lab	W-t-bar	-7.320	0.000
Log HC	W-t-bar	-3.311	0.001
Log TVS	W-t-bar	-2.671	0.004
Log BC	W-t-bar	-4.068	0.000
Log TRO	W-t-bar	-2.978	0.002

Im-Pesaran-Shin Unit-Root Test			
Variables		**Statistic**	**P-value**
Log gfcf	W-t-bar	-2.053	0.020
Log CTPR	W-t-bar	-70.593	0.000

Heteroskedasticity was an additional diagnostic test that was used in the research. Where the statistics show that the error term's variances are not equal or constant, this is cause for nervousness. Regression analysis performed in the presence of heteroskedasticity yields an unbiased result, but the calculated standard errors and confidence intervals are excessively small, leading to deceptive conclusions (Kunwar, 2019). The heteroskedasticity test determines if the variances of the error terms vary between units and time intervals. The desired results of the Breusch-Pagan-Godfrey heteroscedasticity test and the normalcy test are more than 5%. Heteroscedasticity is therefore absent from this paradigm. It is a regularly distributed residual.

Table 6. 5: Heteroskedasticity Test

Heteroskedasticity Test			
Islamic Banks Model	Breusch-Pagan test	chi2(1) = 0.03	Prob > chi2 = 0.8569
Conventional Banks Model	Breusch-Pagan test	chi2(1) = 0.07	Prob > chi2 = 0.7958
Islamic Capital Markets Model	Breusch-Pagan test	chi2(1) = 0.00	Prob > chi2 = 0.9954
Conventional capital Markets Model	Breusch-Pagan test	chi2(1) = 1.48	Prob > chi2 = 0.2232
Islamic Insurance Model	Breusch-Pagan test	chi2(1) = 0.23	Prob > chi2 = 0.6280
Conventional Insurance Model	Breusch-Pagan test	chi2(1) = 0.70	Prob > chi2 = 0.4039

As previously indicated, before doing a panel data analysis, one of the most crucial diagnostics that a researcher should investigate is cross-sectional dependency. The Pesaran (2004) CD test was used in this situation. Panel data models presuppose that

individual observations are independent of one another. Nonetheless, there could be universal shocks that impact everyone (Hsiao et al., 2007). Persistent cross-sectional dependency, in which every unit in the same cross-section is correlated, can occur with panel data. This is often explained by the impact of some unidentified common elements that are utilized by all units and may have distinct effects on each of them. Consequently, estimators based on the assumption of cross-sectional independence may not hold true when data are dependent on different people. The study's use of the Pesaran cross-sectional dependency test data indicates that, at the 5% level of significance, none of the models included in the investigation have rejected the null hypothesis that there is no cross-sectional dependence (correlation).

Table 6. 6: Cross Sectional Dependence Test

Cross Sectional Dependence Test						
OBJECTIVE ONE						
Islamic banks model	Pesaran's test	=	-0.244,	Pr	=	1.1926
Conventional Banks	Pesaran's test	=	0.527,	Pr	=	0.598
OBJECTIVE TWO						
Conventional Capital Markets	Pesaran's test	=	1.465,	Pr	=	0.143
Islamic Capital Markets	Pesaran's test		0.551,	Pr	=	0.5815
OBJECTIVE THREE						
Conventional Insurance	Pesaran's test	=	-0.109,	Pr	=	1.0865

6.4 Discussion on Either to Apply Difference GMM or System GMM

Table 6.7 reports the results of checking the type of GMM that should be applied in the econometric analysis of GMM. As chapter four (Ibrahim, 2019:6) identified there are two estimators of dynamic GMM, that are system and difference GMM launched by (Arellano & Bond, 1991) and (Blundell & Bond, 1998) respectively. Therefore, the

researcher before analysis should check whether to apply a system or difference since everyone has their strengths and weaknesses. (Jha, 2019:11) suggested that because the autoregressive coefficient is skewed higher in the POLS estimate but downward in the FE estimation, both the POLS and fixed effects (FE) estimations give relevant checks on whether to apply system or difference. Therefore, when the lagged dependent variable is closer to POLS the difference GMM should be appropriated while the lagged dependent variable is close to fixed effect or below the system GMM could be more applicable for analysis of the econometrics results.

The results for all three specific objectives are presented in Table 6.7, the POLS estimate for objective one of the lagged dependent variables (l.log GDP) is 95% positive significance while the fixed effect is also positive significant on 54% where the difference GMM is 47% positive significant. Because the DGMM is below the fixed effect as a rule of thumb note that system GMM should be applied.

Similar results as the first objective were decided, the results of the second objective demonstrated that the POLS is 0.94 positive significant while the fixed effect (0.58) and the difference GMM is 0.34 significant. The results showed that DGMM is too close with fixed effect than POLS therefore the final decision revealed that system GMM is more reliable than difference GMM. Moreover, the results for the third objective move on simultaneously with the first and second objectives. The Pool OLS is 61%, the fixed effect is 35% and DGMM is 20%.

Therefore, for all three objectives, the system GMM would be employed for the econometric analysis to meet the study objectives. Thus, Blundell and Bond (1998), recommend that SGMM is more effective since lagged levels and lagged differences are used together. To estimate the economic growth models, we're employing System GMM, an incredibly new and powerful estimating technique. System GMM was created by Blundell and Bond (1998) and (Arellano & Bover, 1995), and it is regarded as being more effective than difference GMM. According to (Nayan & Kadir, 2014:4), this technique may correct measurement error, possible endogeneity, unobserved country heterogeneity, and bias from omitted variables, all of which typically impact economic growth estimation..

Table 6. 7: Choice between Difference GMM and System GMM

Results for Objective One				
	POLS	FE	DGMM	REMARK
L.log GDP	0.954**	0.545**	0.475**	System GMM
	(0.013)	(0.040)	(0.098)	
Observations	399	399	378	
Results for Objective Two				
	POLS	FE	DGMM	REMARK
L.log GDP	0.945**	0.589**	0.349**	System GMM
	(0.013)	(0.038)	(0.081)	
Observations	399	399	378	
Results for Objective Three				
	POLS	FE	DGMM	REMARK
L.log GDP	0.612**	0.356**	-0.208**	System GMM
	(0.038)	(0.064)	(0.040)	
Observations	154	154	140	

Parentheses values stand for Standard errors and * $p < 0.1$, ** $p < 0.05$.

Source: Author calculation

6.5 Analysis and Discussion of the Findings on the Impact of Islamic Banking on Economic Growth Based on Mainstream Economics

The study covered the estimation of the two (2) mainstream economics models on how Islamic finance stimulate on economic growth with the comparison on conventional finance. The study employed the system GMM to test all two models including the Islamic finance variables to check whether it is related or not related to economic growth. The dependent variable of the study was GDP while the moderated variables was total financing of Islamic banks (log tif) while for conventional banks the common two variables that applied was banks credits on private sectors per GDP (log BC). In

particular, the control variables were gross fixed capital formation, total labour force, government spending, human capital, trade openness, and FDI. Every variable is used according to the corresponding theoretical foundation of the model.

It is observed that, all two models are possible for the application of Islamic finance variables for the estimation of economic growth. This is proven when all models as shown in Table 6.8 accomplish the requirements on the acceptability and validity of the GMM model. The findings of system GMM rules should approve and validate the instruments' validity as a result to allow an analysis model. Table 6.8 demonstrates that all models should be accepted since they achieve all basic conditions including the number of groups should be greater / higher than the number of instruments, AR (1) should be less than 0.05 (5%) and AR (2) should be greater than 0.05 (5%). In addition to that, for the two-step GMM the Hansen test should be greater than 0.05 (5%). As summarized, the findings and models in Table 5.4 has achieved all conditions as suggested by (Blundell & Bond, 1998:117). The judgement of Table 6.8 displays that all instruments of the study are endorsed for further analysis.

The findings of the individual coefficients, starting with the log GDP of the dependent variable that is GDP for the two (2) models revealed significance with positive sign. As noted earlier, the interested variable was total Islamic financing of Islamic banks (log tif) that revealed significance and positive impact on economic growth through endogenous model and Solow model also revealed positive but significant for economic growth. The interpretation shown that, for endogenous model, one percent increase in the total Islamic banking finance causes the GDP to rise by 0.040 and on the Solow model GDP will increase by 0.031. These results support the prior studies that show that total financing of Islamic banks influences economic growth positively are like the findings of (Naz & Gulzar, 2022:15, Rafsanjani, 2022:532, Cheing et al., 2020:76,Malik et al., 2019:33, Farahani & Dastan, 2013:169, Abduh & Azmi, 2012:43, Majid & Salina, 2014:303). (Kassim, 2016) (Naz & Gulzar, 2022:17, Rafsanjani, 2022:532, Ahmad & Hassanudin, 2017:6) found the Islamic banks' financing operations benefit the real economy over the long and short terms. Consequently, it follows that increasing the overall assets and financing of Islamic banks will result in economic growth while it contrary to (Yüksel & Canöz, 2017) found Islamic banking do not significantly contribute to Turkey's economy and

(Polyzos et al., 2023) and (Çinar & Ünsal, 2022) that found IBs have no effect of negative effects on economic growth. On summary, this results show clearly that Islamic banking is more potential on economic growth under the value-added measurement since İslamic bank's channels to generate added value through sales, lease and creating new projects or expanding the existing projects and there is no more channelled beyond that to created added value (Kahf, 2022). These three (3) channels are based on asset – based and equity-based that generate added value. The financing of IBs on the real economic sectors have great weighted effect directly to GDP as found on the study of Kazak et al. (2023) that Islamic banks have huge impact on the manufacturing, mining and electricity sectors on GDP since this sectors contribute more on many countries economy and other sectors. Apart from that, these findings are consistent with the neo-classical theory and new classical theory as clearly and deeply explained in the chapter three (3) under the subtitle which called theoretical review of Finance – growth nexus. Under these two theories provided among the component of economic growth was called technological. Though this factor a number components that influence economic growth were proposed under the name of total factor of productivity (TFP) (Haini, 2020) including financial sectors. Therefore, Islamic banks as among the financial sector revealed to have positive significant impact on economic growth of selected OIC countries.

From the theoretical justifications, financial sectors have the potential to influence economic growth using capital accumulation and technological innovation. Among the neo-classical theories of economic growth, the Solow (1956) exogenous growth model maintains that technology is exogenous. It suggests that economic growth is a function of capital and labour force. According to this framework, capital accumulation encourages economic growth in nations. Islamic banks directly benefit economic growth through capital accumulation and distribution to real sectors such as business, industry, agriculture, and infrastructure building through equity, leasing, and sales (Kazak et al., 2023). This study expanded on these theories to regulate the OIC nations' Islamic banks' mediating function in economic growth. Consequently, these findings in Table 6.8 were confirmed and supported with neo-classical and new classical models.

These theories are in the line of the prior studies (Ledhem & Mekidiche, 2022:6), (Ledhem, 2020:5), (Musa et al., 2020:93). In line with Paul Romer's (2011) suggested endogenous growth, a framework of economic growth based on increased investment and human capital by exogenous factors like the financial markets.

On the other hand, Table 6.8 also reports the outcomes of the estimate analysing the effect of Conventional banks on economic growth. As introduced one indicator of conventional banks is called private credit from banks to GDP ratio (log BC). The outcomes show that the bank credits appear as negative and insignificant determinants of economic growth in the endogenous model and negative insignificance in the Solow model when GMM regressions are considered (columns 2 and 4 from Table 6.8). The findings of bank credits shows that 1 percent increase on credits of banks cause the GDP to decline by 0.032 and 0.015 on endogenous and Solow model respectively which indicate that conventional banks have negative impacts on economic growth.

These findings are similar to the studies of Ruwaydah & Ushad (2019), Awden (2012) and Masoud & Hardaker (2012). This finding suggests that bank credits have little or no or negative effect on the development of economic activity, with bank credits even showing a startling negative trend across all models. This may imply that bank lending expands into other industries, such as consumption and personal loans, which do not boost national production and do not appropriately target the productive sectors (such as manufacturing, agriculture and fishing, mining and so on). Unlike the Islamic banks ensures that its financings are strongly linked to real economic growth (Abdullah et al., 2018).

This demonstrates how little to no creativity exists in the financial industry that can both promote the economy and reduce investment risk. According to Owen (2020), the results are consistent with other empirical investigations (Owen, 2020), and (Hailemariam, 2014). The total financial development demonstrates that traditional finance is either unnecessary or detrimental to the economic expansion of OIC member states (Grassa & Gazdar, 2014:505). Unlike Islamic banking, the conventional banks concentrate on interest rate and speculation transactions in which these transactions have not positive impact on economic growth especially under the real economic activities. These transactions such as option, betting of price, future contracts, internet forex, internet currency trading, credit default swaps, and contracts for difference

(CFDs) called virtual transactions have not generated any increment on the economy (Kahf, 2022) . Because of these behaviours and fake transactions of conventional finance the results found negative impact on economic growth and from this circumstance there is need for delegalizing all speculation contracts, zero – sum contracts and preventing speculative behaviour from regulated financial sectors (Kahf, 2022). The findings of this study justified that Islamic finance is more potential on economic growth that conventional finance.

For the case of the control variables for instance gross fixed capital formation (log GFCF) the proxy of investment and capital revealed negative significance in Solow model and endogenous model. This finding is opposite to the studies of (Rinosha & Mustafa, 2021:165).

Another variable used in this study the total labour force (log lab); this component was suggested by the Solow growth model as a factor for economic growth. The results revealed that in the Islamic bank model, the labour force revealed negative insignificance while in the conventional bank showed that the labour force is a negative significant factor for economic growth with a similar result (Rinosha & Mustafa, 2021:165). This illustrates how, as this variable grows, a nation's likelihood of possessing labour forces that promote advancement increases. Moreover, it is essential to recognize that economic growth may be significantly influenced by the workforce. These results are in accordance Zieba et al., 2020:4, and Akinlo, 2004:636. A study done in South Africa and Mauritius, (Zulu & Banda, 2015:36) discovered a consistent positive relationship between the labour force and production per worker on economic growth.

Contemporary empirical studies create mixed results concerning the outcome of FDI on economic growth. The findings of this study confirmed the view that FDI does increase economic growth rather than decrease it although statistically insignificant and significant only in the Islamic bank model on the Solow model. The findings supported by the results of recent works, like that of Sokhanvar (2022:343) and Kalai & Zghidi (2017:1). For example, the study conducted by Kalai & Zghidi (2017:1) studied the correlation between FDI with economic growth in the MENA countries and revealed that FDI inflows significantly foster economic growth. Likewise, Sokhanvar (2022:343) looked into the relationship between tourism, FDI, and

economic expansion in European nations. The outcome confirmed that FDI inflows are beneficial.

It is indicated that the coefficient of human capital (HC) as proposed by endogenous growth model as among the main components of economic growth the findings become statistically positive significant in both Islamic bank model and the conventional bank model respectively. This result supported the empirical studies of Ali et al., (2022:7), Ibrahim (2018:13), Ogundari & Awokuse (2018:131) which confirm human capital has a positive impact on economic growth. It is a vital component to producing skilled workers that would generate extensive and quality products and services as well as better performance of businesses and economic industries ultimately promoting economic growth.

Trade openness revealed positive significance in both models under conventional banks. This is similar with (Noureddine & Ozcan, 2020:451) find that trade openness has a statistically significant beneficial effect on economic growth both in the short and long term. While the Islamic bank's models revealed trade openness is positive significant, These results are in line with the findings of (Ayad & Mostéfa, 2017:221) that found the trade-led growth hypothesis appears to be disproven throughout MENA nations. According to these findings, trade openness does not seem to have had a major impact on economic growth between 1980 and 2014 in MENA states.

Growth models suggest that economic growth should be generated through fiscal policy (government expenditures and taxation) as well as monetary policy. The empirical results of government spending show that it has statistically positive insignificance. The findings are proven by the Islamic bank model under Solow model. These results support those of (Ali et al., 2022:8, Lupu et al., 2018:2 Kimaro et al., 2017:34) they discovered a positive correlation between government spending and per capita real GDP. Additionally, (Ali et al., 2022:8) looked examined the short- and long-term effects of government spending on separated higher and lower-income OIC nations. Long-term economic growth in lower-income OIC nations is shown to be positive but insignificant, whereas it is found to be positively significant in higher-income OIC countries. These might result from the unique economic circumstances of these nations. Such a nation may be avoided by throng out effects in the form of greater

borrowing costs which might have an impact on people's income and, as a result, reduce government spending while it opposite by (Ibrahim, 2018:13).

Table 6. 8: Results of System GMM Estimation for Objective One

Variables	ENDOGENOUS GROWTH MODEL		SOLOW GROWTH MODEL	
	Islamic Banks	**Conventional Banks**	**Islamic Banks**	**Conventional Banks**
L.log (GDP)it	0.783**	0.843**	0.907**	0.803**
	(0.056)	(0.059)	(0.053)	(0.062)
Log (tif)it	0.040**		0.031**	
	(0.007)		(0.009)	
Log (HC)it	2.168*	1.062*		
	(1.127)	(0.586)		
Log (GFCF)it	-0.317**	-0.896**	-0.307**	-1.051**
	(0.103)	(0.189)	(0.114)	(0.291)
Log (FDI)it	0.120	0.239*	0.150	0.056
	(0.137)	(0.138)	(0.173)	(0.037)
Log (TRO)it	0.045**	0.086**	0.050**	0.095**
	(0.010)	(0.019)	(0.012)	(0.018)
Log (ge)it	0.021*	-0.002	-0.010*	0.024
	(0.012)	(0.010)	(0.006)	(0.014)
Covid19	0.000	0.015**	0.010**	0.008*
	(0.004)	(0.006)	(0.003)	(0.004)
Log (BC)it		-0.032		-0.015
		(0.022)		(0.017)
Log (lab)it			-0.030	-0.079*
			(0.040)	(0.041)

Variables	ENDOGENOUS GROWTH MODEL		SOLOW GROWTH MODEL	
	Islamic Banks	**Conventional Banks**	**Islamic Banks**	**Conventional Banks**
Constant	-1.399	-0.176	-0.112	2.163**
	(0.881)	(0.921)	(1.038)	(0.924)
AR (1)p	0. 013	0.039	0.036	0.001
AR (2)p	0.212	0.114	0.167	0.206
Hansen	0.241	0.327	0.203	0.319
Sargan	0.854	0.990	0.643	0.929
No. instruments	20.000	20.000	20.000	20.000
No. groups	21.000	21.000	21.000	21.000

Parentheses values stand for Standard errors and * $p < 0.1$, ** $p < 0.05$.

Source: Author calculation

6.5.1 Robustness Checking for the Objective One

To investigate the robustness of our results, three techniques could be applied to check our models have passed and are valid through GMM diagnostics tests. That technique excludes some variables in the models or excludes some time spanning that ranges from or excludes the samples of the observations as applied by (Jha, 2019:17). The second technique through adding other control variables in all models then checks if your models pass and become valid for further analysis. This technique was used by Smaoui & Nechi (2017:21) and the last technique called the deeper lags as instruments in which the models could change their lags (Jha, 2019:18). Therefore, for this study adding extra explanatory variables would be useful since it is the most often used method, and adding comparable factors to all models creates balance and avoids inequality and bias to the other models.

The results from the preceding sections (regression results) are subjected to robustness checks by additional control factors that have been included in this test to investigate if the results are affected by the number of independent variables included. To see if

the models would still satisfy all GMM requirements and be relevant for Islamic banks and conventional banks, all four models have been updated to include the two additional variables consumer price index (log CPI) and exchange rate (log exch).

Consumer price index and exchange rate are the variables that were introduced to the models to see how the outcomes changed because of these new variables. Following that, the (log CPI) and (log exch) are included in all economic growth models. The findings reveal that all models still become statistically significant with GMM conditions, this means that all findings achieved above in all models could be valid, reliable, and correct for interpretation and application.

Table 6.9 exhibits the robust checking calculations of the two-step system GMMs. The robustness checks of the baseline reported that all models have been following GMM conditions. The results authorized the Arellano-Bond auto-correlation test and the Hansen test. The findings reveal that the signs and proportions of the coefficients of interest are consistent with prior estimations (except for some minor fluctuations). For instance, in the endogenous model, the Islamic bank variable after robust checking still becomes positive and the endogenous model revealed significance and the Solow model became significant. The findings of the lagged GDP, human capital, banks' credits to private sectors and trade openness become similar signs. For instance, the lagged GDP maintains its results in which the endogenous growth model and Solow model still become significant for the variable of total Islamic banks. Similarly, the bank's credits to private sectors still become negative in all models consistent with the findings in Table 6.8 the variables such as TRO, GFCF, and labour force become inconsistent in Table 6.8.

Moreover, the results of the Solow model are consistent in Table 6.8 and Table 6.9 for instance the lagged GDP, total Islamic banking financing, trade openness, bank credits, government spending and others although there are very minor changes. The results of the robustness checking for the Solow model shown are all Islamic bank variables still positive significant. The elaboration and outcomes of the other control variables as shown in Tables 6.8 and 6.9 could see their similarity.

Table 6. 9: Robustness Checking Results for Objective One

Variables	ENDOGENOUS GROWTH MODEL		SOLOW GROWTH MODEL	
	Islamic Banks	Conventional Banks	Islamic Banks	Conventional Banks
L.log (GDP)it	0.698**	1.092**	0.859**	0.949**
	(0.101)	(0.076)	(0.060)	(0.090)
Log (tif)it	0.073*		0.037**	
	(0.041)		(0.010)	
Log (HC)it	2.242**	0.419**		
	(0.884)	(0.169)		
Log (GFCF)it	-1.714**	-0.624*	-0.821**	-1.375**
	(0.313)	(0.356)	(0.170)	(0.367)
Log (FDI)it	0.384	0.152	0.116**	0.048
	(0.276)	(0.114)	(0.025)	(0.047)
Log (CPI)it	0.131**	0.037**	0.023*	0.045**
	(0.022)	(0.014)	(0.011)	(0.008)
Log (exch)it	0.002	-0.014	-0.007	0.029
	(0.013)	(0.012)	(0.005)	(0.024)
Log (TRO)it	-0.051*	-0.100**	-0.097**	-0.168**
	(0.027)	(0.022)	(0.031)	(0.031)
Log (ge)it	0.020	0.050**	0.021	0.079**
	(0.023)	(0.022)	(0.016)	(0.025)
Covid19	0.008	0.024**	0.010**	0.017**
	(0.008)	(0.005)	(0.003)	(0.007)
Log (BC)it		-0.127**		-0.037
		(0.033)		(0.039)

Variables	ENDOGENOUS GROWTH MODEL		SOLOW GROWTH MODEL	
	Islamic Banks	Conventional Banks	Islamic Banks	Conventional Banks
Log (lab)it			-0.044	-0.068
			(0.042)	(0.061)
Constant	-0.729	0.624	1.947**	3.141**
	(1.851)	(1.166)	(0.889)	(0.604)
AR (1)p	0.018	0.042	0.050	0.036
AR (2)p	0.078	0.054	0.179	0.236
Hansen	0.247	0.132	0.099	0.151
Sargan	0.998	0.905	0.600	0.891
No. instruments	20.000	20.000	20.000	21.000
No. groups	21.000	21.000	21.000	21.000

Parentheses values stand for Standard errors and * $p < 0.1$, ** $p < 0.05$.

Source: Author calculation

6.5.2 Analysis of the Impact of Islamic Banking Based on Modes of Financing on Economic Growth

This subsection was developed to provide details justification for the impacts of Islamic banking on economic growth based on the different modes of Islamic financing. The studies which focus on these modes are very limited although they are the major section that can differentiate Islamic finance and conventional finance. As earlier reported Islamic finance channels their fund under the sale, lease, or partnership, because of that the study conducts further clarification by applying the Murabaha, Ijarah and Musharakah financing to examine the impact on economic growth. These three Islamic financing variables are employed since they channel their services direct beneficial technique and earnings fundament only create direct legitimate trade and investment in assets and ultimately influence economic growth.

As per the findings of the study in Table 6.10 Murabaha financing (Log (MUR)) came up with a positive coefficient value (0.110^{**}) on the endogenous model and a value 0.108** on the Solow model where the p-value is statistically significant on all models with economic growth in the long run. Similarly, the findings of Ijarah financing (Log (IJARAH)) show positive coefficient values (0.049^{**}) and (0.052^{**}) where the p-value is significant at less than ≤ 0.05 in both models. The last mode of Islamic financing called Musharakah as denoted by Log (MUSH) found that all models have a positive significant impact on economic growth with the value of 0.053^{**} and 0.029^{**} in the endogenous and Solow model, respectively. The above findings on all three Islamic modes of financing show that Islamic financing under their principles and different transactions has affected the economy of the country positively. This indicates that Islamic banking financing has successfully fulfilled its primary function as a financial intermediary in addition to being physically based (asset-based) and having a direct connection to the real economy.

Because Musharakah and Mudarabah are only feasible for productive firms, they support actual enterprises by raising output and raising quality. Murabaha and Ijarah must also entail the actual exchange of goods or the performance of services. As a result, the Islamic banking sector drives economic expansion by encouraging profitable ventures and facilitating the sale of goods and services (Bendriouch et al., 2020) and Ijarah is only a kind of lease in Islam.

These findings are consistent with an earlier study by (Terminanto & Rama, 2017) on the impact of Islamic banking financing on economic growth. The same is stated in other studies, specifically that of (Susilo & Ratnawati, 2015). According to the study, sectoral GDP is positively and significantly impacted by Islamic bank funding. Additionally, Khotijah (2020) examine how Indonesia's agriculture industry has grown economically via the use of Islamic bank Murabaha financing. The study's findings indicate that Murabaha financing has a positive impact on the agricultural sector's GDP. Also, Syahputra & Ningsih (2020) found that Musharakah financing and Murabaha simultaneously have a positive significant impact on economic growth in Indonesia. Nonetheless, the fact that Islamic Bank financing in Nigeria accounts for 64% of the variance in the Real Gross Domestic Product (RGDP) demonstrates the

empirical proof of the growth attained by implementing this type of financing (Lawal & Imam, 2016).

Murabaha is a popular financing method based on cost-plus financing, in which the seller reveals the cost and markup to the buyer in exchange for the buyer agreeing to acquire the products or assets at a predetermined price. It is a key factor in the economic success of many nations. Because it may stimulate economic growth and is compliant with Sharia law, this Islamic finance method has become quite popular (Usmani, 2008). Moreover, Murabaha is widely utilized in international trade and commerce, allowing companies to buy products and assets from foreign vendors, promoting small company growth and entrepreneurship: Murabaha has been shown to help promote entrepreneurship and assist in the expansion of small enterprises. Aspiring business owners may obtain capital through this funding option to launch new projects or grow current ones.

Apart from the findings of the interested variables, the results of control variables are shown in the same table. For instance, human capital was found to be positively significant all equations which means that, human capital influences economic growth as explained under the endogenous theory, also gross fixed capital formation revealed positive significance on all models which indicates that capital is among the component of economic growth as proposed by all economic schools. The findings of other variables as elaborated in the table below

Table 6. 10: Results Based on Modes of Islamic Banking Financing

VARIABLES	ENDOGENOUS GROWTH MODEL			SOLOW GROWTH MODEL		
	MURABAHA	IJARAH	MUSHARAKAH	MURABAHA	IJARAH	MUSHARAKAH
L.log (GDP)it	0.694**	0.949**	0.541**	0.845**	0.968**	0.785**
	(0.116)	(0.083)	(0.103)	(0.065)	(0.064)	(0.066)
Log (MUR)it	0.110**			0.108**		
	(0.033)			(0.038)		
Log (HC)it	3.747**	3.592**	3.633**			
	(1.301)	(1.228)	(1.599)			
Log (GFCF)it	4.490**	4.464**	3.692**	2.318**	2.078*	2.155**
	(1.522)	(1.565)	(1.344)	(1.063)	(1.134)	(0.538)
Log (FDI)it	1.350**	-0.517	-0.033	0.456	-0.871	-0.213
	(0.405)	(0.555)	(0.302)	(0.391)	(0.824)	(0.408)
Log (TRO)it	0.043*	-0.008	0.094**	0.037*	-0.011	0.034*

VARIABLES	ENDOGENOUS GROWTH MODEL			SOLOW GROWTH MODEL		
	MURABAHA	IJARAH	MUSHARAKAH	MURABAHA	IJARAH	MUSHARAKAH
	(0.022)	(0.016)	(0.028)	(0.019)	(0.010)	(0.017)
Log (ge)it	-0.089**	-0.111**	-0.048**	0.068	-0.049	-0.015
	(0.033)	(0.035)	(0.010)	(0.100)	(0.038)	(0.024)
Covid-19	0.043	-0.202**	0.132**	0.052	-0.289**	-0.186**
	(0.072)	(0.081)	(0.052)	(0.066)	(0.094)	(0.083)
Log (IJARA)it		0.049*			0.054**	
		(0.024)			(0.020)	
Log (MUSH)it			0.053*			0.029**
			(0.026)			(0.009)
Log (lab)it				-0.128**	-0.175*	-0.217**
				(0.059)	(0.089)	(0.046)
Constant	-13.934**	-1.783	-4.858	-6.738**	6.101	2.493

VARIABLES	ENDOGENOUS GROWTH MODEL			SOLOW GROWTH MODEL		
	MURABAHA	IJARAH	MUSHARAKAH	MURABAHA	IJARAH	MUSHARAKAH
	(3.468)	(4.461)	(2.852)	(2.998)	(4.816)	(2.485)
AR-1	0.001	0.033	0.016	0.005	0. 014	0. 021
AR-2	0.263	0.872	0.649	0.486	0.667	0.405
Hansen	0.137	0.078	0.448	0.131	0.047	0.109
Sargan	0.996	0.999	0.936	0.998	0.993	0.678
No. instruments	15.000	15.000	15.000	14.000	15.000	15.000
No. groups	15.000	15.000	15.000	15.000	15.000	15.000

6.6 Descriptive Statistics of the Key Variables for Objective Two

This descriptive statistic is specifically for objective two where the panel data collected from various reliable statistical data sources is to be examined. The objective is to examine whether Islamic capital markets influence economic growth based on the perspectives of Mainstream economics. The data in this objective covered the same time framework for the period of 20 quarters for the 21 OIC countries from 2017 to 2021. The availability of data from the IMF, IFSB, and other sources was taken into consideration while choosing this time frame. In Table 6.11, a descriptive analysis of the factors under inquiry is succinctly presented. As seen in the first row, it includes the mean value of each variable as well as its maximum, minimum, standard deviation, skewness, and total sample size used in the investigation. The first column in Table 6.11 indicates all variables. The second column represents the total observations used in the study as shown in 420. The analysis of the specific variable, the GDP shows its mean value is accounted for at 3.35 while the standard deviation is 0.47. This signifies that there is a wide variation in the GDP in OIC countries across the life span of data. The maximum impressive growth GDP was 4.14 per cent while the minimum was 1.49 per cent while the skewness was negative 1.05.

Furthermore, the average rate of Sukuk issuance which is also denoted as log SKK in this study reveals 11.07 of the rates. Besides the minimum Sukuk issuance was accounted at 5.11 whereas the maximum number of Sukuk issuance is 20.03. The standard deviation is 3.61 which indicates the existence of a low variation. The skewness value is positive at a rate of 0.69. Another interesting variable of this objective was the value of Stock markets which is denoted by log TVS. The stock markets which revealed an average rate of 1.75 while the standard deviation was 1.62. The skewness range at 0.62 negatively and the minimum with maximum is - 6.01 and 5.36 respectively. Moreover, the mean value of gross fixed capital formation is 1.80 whereby the maximum rate is 1.99 while the smallest value is 1.33 and the standard deviation is 0.19. Additionally, the variable of human capital denoted as log HC indicates an average amount of 0.24 per cent in which the maximum amount is 1.46 and the minimum value is 0.24 per cent. The summary of other variables is revealed in Table 6.11 below.

Table 6. 11: Descriptive Statistics of the Key Variables for Objective Two

Variables	Obs	Mean	Std. Dev.	Min	Max	Skew.	Kurt.
Log (GDP)	420	3.35	0.47	1.49	4.14	-1.05	4.24
Log (SKK)	420	11.07	3.61	5.11	20.03	0.69	3.17
Log (GFCF)	420	1.80	0.19	1.33	1.99	-1.26	2.63
Log (HC)	420	0.24	0.06	0.20	1.46	18.69	371.78
Log (TVS)	420	1.75	1.62	-6.01	5.36	-0.62	4.01
Log (TRO)	420	9.13	1.89	5.69	11.92	-0.49	2.00
Log (ge)	420	24.37	1.39	0.00	26.23	-12.93	229.46
Log (lab)	420	17.28	0.90	3.06	19.00	-9.13	150.50
Log (FDI)	420	5.83	0.42	0.00	7.83	-4.49	91.74

6.7 Correlation Analysis between Variables for Objective Two

The table indicates the correlation between the GDP, Sukuk issuance and other explanatory variables. The strength of the coefficient that shows the linear relationship could be range $-1 \leq R \leq 1$(Koirala, 2014:29). This subsection represents the correlation relationship between all variables employed in the analysis of objective three and indicates the impact of Islamic capital markets on economic growth on the perspectives of different schools. Table 6.12 shows the correlation coefficients between all variables that indicate there is no multicollinearity problem between two variables because most of the coefficient's range below 0.8 however both correlations positive and negative revealed on this matrix. The high relationship showed a strong link between two variables that depicted gross fixed capital formation with the labour force.

Table 6.12 below denoted a positive linear association between Sukuk issuance with other variables special GDP as the dependent variable and the independent variables including Sukuk with gross fixed capital formation, Sukuk with human capital, Sukuk with government spending, Sukuk with labour force. Sukuk's positive linear correlation with GDP indicates that a Sukuk are a specific kind

of security in financial markets, and their expansion encourages GDP growth by increasing capital stock and investments (Ledhem, 2020:5). Additionally, it appears that there is a negative correlation between the Sukuk and FDI, trade openness, and stock markets value while the left variables revealed a positive correlation with Sukuk. Furthermore, the stock market results manifested there is a positive correlation between GDP, government spending, human capital, and trade openness, while labour force, GFCF, sukuk and FDI are revealed to be a negative correlation with stock market value. The correlation analysis of the other variables is represented in correlation table 6.12.

Table 6. 12: Correlation Matrix of the Key Variables for Objective Two

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Log (GDP)	1.00								
(2) Log (SKK)	0.12	1.00							
(3) Log (GFCF)	0.27	0.23	1.00						
(4) Log (HC)	0.16	-0.08	0.01	1.00					
(5) Log (TVS)	0.38	-0.03	-0.14	0.07	1.00				
(6) Log (ge)	0.20	0.12	0.16	-0.06	0.19	1.00			
(7) Log (TRO)	0.13	-0.14	0.27	-0.01	0.10	0.31	1.00		
(8) Log (lab)	-0.20	0.11	0.05	-0.81	-0.04	0.24	0.26	1.00	
(9) Log (FDI)	-0.05	-0.18	0.08	0.01	-0.08	-0.08	-0.09	-0.09	1.00

Source: Author calculation

6.8 Analysis and Discussion of the Findings on the Impact of Islamic Capital Markets on Economic Growth Based on the Mainstream Economics.

This study employs the system GMM as section 5.4 elaborates. The second objective of the study was to examine the impact of Islamic capital markets on economic growth in terms of Mainstream economics. Using 21 OIC countries as mentioned in Chapter 5 sample countries over quarterly data range from 2017 to 2021. The endogenous model and Solow model have been tested concerning their primary theoretical foundation and components of economic growth. Interestingly all two models were found and confirmed to pass and approve all diagnosis tests of the system GMM model. The table below 6.13 at the bottom shows that AR-1 is less than 0.05 for all models, and AR-2 greater than 0.05 for all models which means there is no autocorrelation problem in all models. Likewise, the number of groups is higher than several instruments for all models therefore, there is no interest in overfitting bias. This means that Islamic capital markets could be used and attached as financial tools for economic growth in any economic model.

Considering the above information, Islamic finance could work in any economic model if that model components follow the principles and paradigm of Islamic economics and finance. Moreover, according to the results, the endogenous model in Islamic capital markets (0.016) has better results because its Hansen p- p-value is the smallest value and others follow.

Sukuk issuance (log SKK) as an indicator of Islamic capital markets was found to be statistically positive and significant in explaining the economic growth in the endogenous model and Solow growth model. These findings justify the reality of the Sukuk affect the economy of the country since it operates under equity bases and asset-linked securities bases (Habib, 2018) in which all types of Sukuk including ijarah sukuk (based on ownership of usufructs of assets.), Istisna, Salam and so on operate through real economic activities such as agriculture, business, manufacturing industry, building extensive objects like aircraft, hospital, roads, power plants, ships, etc, and establishment of real estate projects (Habib, 2018) which have a straight impact on the economy. Most of the studies found that Sukuk issuance has a positive impact on economic growth for many economies such of the studies are Naz & Gulzar (2022:17), Seda et al. (2020:209), Ledhem (2020:1), Sari et al. (2018:27), Abdaziz et al.

(2016:70). From this objective, Sukuk is the only variable from Islamic capital markets indicators that applied. To put it another way, in endogenous model if the sukuk issuance is increasing by one percentage, GDP increases by 0. 024 and 0. 063 in the Solow model.

Corresponding to the above findings, Sukuk development promotes economic growth by increasing investment and capital assets, according to numerous noteworthy studies (Ledhem & Mekidiche, 2020, Sari et al., 2018, Malikov, 2017). This is due to Sukuk being a type of product in the financial markets. Sukuk is an external factor that stimulates economic growth when investments become available through sukuk investment. Islamic finance is accelerating global economic growth as an exogenous competitor, in line with the endogenous growth model (Ledhem & Mekidiche, 2021; Ledhem & Mekidiche, 2020).

Table 6.13 shows that the impact of the capital market on economic growth is found to be statistically significant and positive as expected in the Solow growth model while in endogenous model revealed insignificant. The findings show that the sample economies' economic development is influenced by the total value of stocks traded relative to GDP. It is emphasized that only the endogenous growth model has a modest, inconsequential influence. It demonstrates that a 1% gain in stock value results in a 0.018% and 0.030% rise in economic growth. The aforementioned results are consistent with the earlier empirical research conducted by Kapaya (2020), Owen (2020), Akel & Torun (2017), Fufa & Kim (2017) and Ikikii & Nzomoi (2013).

To investigate whether Islamic capital markets influence economic growth in terms of economic schools several control variables as suggested by the founders of the economic models have been used. In this objective 7 instruments as control explanatory variables were applied. For stance gross fixed capital formation (log GFCF) in table 6.12 shows a negative and significant effect for Islamic capital markets in the endogenous model and Solow model on economic growth.

Moreover, the labour force is also applied as a control variable for the Solow model as explained in their theoretical framework. Based on the empirical findings from both the ICM and conventional capital markets model labour force has a significant impact on economic growth despite the conventional capital markets depicting a negative sign (0.071) and the ICM revealing a negative sign (0.064), Their results could be taken

into consideration because many studies have been proven.

With a significant threshold of 5%, trade openness has a positive and significant impact on economic growth in both ICM models (0.069) and (0.114) favourable impact on economic growth found in the endogenous model. This also suggests that Solow model under the conventional capital markets model, economic growth will increase by 0.098 per cent when trade openness increases by one per cent.

Foreign direct investment (log FDI) is found positive insignificance for both models in the Solow model while the ICM model under the endogenous model become positive significant. Consequently, the coefficient of government expenditure (logge) appeared positive and insignificant in all two Solow models which means the increase in government expenditure, either recurrent or capital expenditures have a favourable impact on economic growth in the sample of 21 OIC countries by 0.003 per cent and 0.035 per cent. Meanwhile, the government spending revealed negative in all Islamic capital markets model under endogenous model with values of 0.014.

The coefficient of human capital is an important variable that determines the impact on economic growth in the endogenous growth model. Human capital was empirically found positive and significant in ICM model. The interpretation shows that a one per cent increase in human capital influences the account of 0.287 per cent on economic growth.

Table 6. 13: Results of System GMM Estimation for Objective Two

VARIABLES	ENDOGENOUS GROWTH MODEL		SOLOW GROWTH MODEL	
	Islamic Capital Markets	**Conventional Capital Markets**	**Islamic Capital Markets**	**Conventional Capital Markets**
L.log (GDP)it	0.924**	0.801**	0.771**	0.800**
	(0.044)	(0.085)	(0.073)	(0.055)
Log (SKK)it	0.024**		0.063**	
	(0.009)		(0.013)	
Log (HC)it	0.287**	0.764		

VARIABLES	ENDOGENOUS GROWTH MODEL		SOLOW GROWTH MODEL	
	Islamic Capital Markets	**Conventional Capital Markets**	**Islamic Capital Markets**	**Conventional Capital Markets**
	(0.073)	(0.569)		
Log (GFCF)it	-0.311**	-1.540**	-0.391**	-0.962**
	(0.084)	(0.148)	(0.136)	(0.283)
Log (FDI)it	0.206*	0.354	0.213	0.073
	(0.117)	(0.228)	(0.178)	(0.112)
Log (TRO)it	0.069**	0.114**	0.100**	0.098**
	(0.011)	(0.023)	(0.017)	(0.016)
Log (ge)it	-0.014	-0.002	0.003	0.035*
	(0.011)	(0.012)	(0.008)	(0.020)
Covid19	0.020**	0.011	-0.009	0.002
	(0.005)	(0.010)	(0.006)	(0.006)
Log (TVS)it		0.018		0.030**
		(0.018)		(0.009)
Log (lab)it			-0.064**	-0.071**
			(0.009)	(0.020)
Constant	-1.031	0.133	-0.374	1.410
	(0.885)	(1.067)	(1.175)	(1.295)
AR (1)p	0.016	0.035	0.021	0.047
AR (2)p	0.129	0.061	0.104	0.128
Hansen	0.186	0.402	0.257	0.270
Sargan	0.608	0.999	0.948	0.943
No. instruments	21.000	20.000	20.000	21.000

VARIABLES	ENDOGENOUS GROWTH MODEL		SOLOW GROWTH MODEL	
	Islamic Capital Markets	**Conventional Capital Markets**	**Islamic Capital Markets**	**Conventional Capital Markets**
No. groups	21.000	21.000	21.000	21.000

Parentheses values stand for Standard errors and * $p < 0.1$, ** $p < 0.05$.

Source: Author calculation

6.8.1 Robustness Checking for the Objective Two

The robustness results for the second objective were conducted by examining the impact of the consumer price index and exchange rate on economic growth to check whether the addition of these two variables could maintain the results as appeared in the previous or would change. To do so, we add these two selected indicators to every model and the outcomes are exhibited in Table 6.14. This table shows the findings of the effect of Islamic capital markets on economic growth based on the perspective of Mainstream economics. The findings of robust checking are reported to be consistent with the findings reported in Table 6.13. For instance, the findings of the Sukuk exposed positive significance in all models as appeared in Table 6.13. Similarly, the findings of the stock markets become negative in the endogenous model although become positive in the Solow model. The coefficients of the human capital continue to be positive significance as appeared in Table 6.14.

In addition, the labour force remains to have the same sign and significant effect on economic growth in the Solow model. Moreover, gross fixed capital formation has consistence results. However, the sukuk issuance was insignificant but through robustness became significant.

Table 6. 14: Robustness Checking Results for Objective Two

Variables	ENDOGENOUS GROWTH MODEL		SOLOW GROWTH MODEL	
	Islamic Capital Markets	Conventional Capital Markets	Islamic Capital Markets	Conventional Capital Markets
L.log (GDP)it	0.783**	0.877**	0.612**	0.805**
	(0.098)	(0.012)	(0.093)	(0.059)
Log (SKK)it	0.058**		0.123**	
	(0.021)		(0.036)	
Log (HC)it	0.563**	0.786		
	(0.166)	(0.716)		
Log (GFCF)it	-0.494**	-0.517**	1.225	-1.070**
	(0.160)	(0.141)	(1.020)	(0.374)
Log (FDI)it	0.230*	0.058	0.233	0.059
	(0.127)	(0.124)	(0.199)	(0.122)
Log (TRO)it	0.101**	0.003	0.050**	0.091**
	(0.019)	(0.004)	(0.023)	(0.017)
Log (ge)it	-0.001	0.015**	0.003	0.032
	(0.012)	(0.005)	(0.008)	(0.021)
Log (CPI)it	-0.033	-0.031**	-0.037	-0.018
	(0.036)	(0.009)	(0.053)	(0.020)
Log (exch)it	-0.001	0.011	-0.023	0.009
	(0.009)	(0.008)	(0.015)	(0.007)
Covid19	0.017*	0.012**	-0.013	0.007
	(0.009)	(0.003)	(0.013)	(0.005)
Log (TVS)it		0.007		0.010

Variables	ENDOGENOUS GROWTH MODEL		SOLOW GROWTH MODEL	
	Islamic Capital Markets	Conventional Capital Markets	Islamic Capital Markets	Conventional Capital Markets
		(0.008)		(0.008)
Log (lab)it			-0.083**	-0.073**
			(0.027)	(0.026)
Constant	-1.253	0.535	-2.516	1.896
	(0.978)	(0.774)	(2.102)	(1.326)
AR (1)p	0.012	0.050	0.033	0.040
AR (2)p	0.112	0.254	0.067	0.189
Hansen	0.128	0.143	0.130	0.211
Sargan	0.812	0.260	0.984	0.907
No. instruments	21.000	21.000	20.000	21.000
No. groups	21.000	21.000	21.000	21.000

Parentheses values stand for Standard errors and * $p < 0.1$, ** $p < 0.05$.

Source: Author calculation

6.9 Descriptive Statistics of the Key Variables for Objective Three

This section describes the descriptive statistics for objective three and focuses on scrutinizing the impact of Takaful on economic growth from the perspective of different Mainstream economics. This objective contained only fifteen (15) OIC countries due to the scarcity of the availability of the data and development of the takaful industry in some OIC countries and the data based on quarterly coverage from 2018 to 2021. Table 6.15 shows the total of 9 primary variables employed in this objective. The descriptive statistics show a total of 240 observations covering almost all variables except for Takaful penetration rate which shows the completion of the sample countries' data set. Apart from that, when comparing the mean value and standard deviation, nearly all single variables have the lowest standard deviation than

the mean value. This suggests that there is little variation among research variables due to the characteristics of the OIC nations' homogeneous behaviour of the economy, social, financial, and institutional indicators.

The findings show that the GDP which is the dependent variable has a mean of 3.44 which is greater compared with the standard deviation of 0.35, while its maximum value is 4.14 and minimum value is 2.61 with the negative skewness at 0.06. The Takaful penetration rate, which is the focus variable for this objective, has a mean of -1.49, a standard deviation of 3.09, the highest value is 4.61, the lowest value of -5.96 and the skewness value is positive 0.32. The conventional insurance that is represented by log CTPR as total penetration rate has a mean value of -0.07 while the standard deviation is 0.58, minimum value and maximum is -2.08 and 1.25 respectively. The left variables which are FDI, gross fixed capital formation, trade openness, human capital, and others selected as control variables based on the corresponding mainstream economics model found in the table below. The descriptive results are demonstrated in Table 6.15.

Table 6. 15: Descriptive Statistics of the Key Variables for Objective Three

Variables	Obs	Mean	Std. Dev.	Min	Max	Skew.	Kurt.
Log (GDP)	240	3.44	0.35	2.61	4.14	-0.06	2.20
Log (TPR)	224	-1.49	3.09	-5.96	4.61	0.32	2.00
Log (GFCF)	240	1.45	0.10	0.00	1.53	-12.49	179.64
Log (HC)	240	0.25	0.08	0.20	1.46	14.58	221.47
Log (CTPR)	240	-0.07	0.58	-2.08	1.25	-0.02	3.11
Log (TRO)	240	9.66	1.64	6.04	11.92	-0.72	2.69
Log (ge)	240	24.41	1.75	0.00	26.23	-11.26	157.88
Log (lab)	240	17.32	1.12	3.06	19.00	-8.45	111.31
Log (FDI)	240	5.85	0.31	5.63	7.34	3.55	13.89

6.10 Correlation Matrix of Objective Three

The correlation matrix is useful in analysing multiple variables because it represents the pairwise degrees of connection that exist between multiple factors in the regression model (Pham-Gia & Choulakian, 2014:330). It measures the strength of the relationship between variables on the linear association between them. According to (Koirala, 2014) the coefficient of the correlation range from 1 to -1, that is $-1 \leq R \leq 1$. Moreover, the correlation could be perfect when it is coefficient is 1, sometimes high degree when it is above 0.75, and medium value, the value located between ± 0.25 and ± 0.75, while the value lies between 0 to + ± 0.25 called low degree and lastly when the coefficient is near to zero it indicate no correlation between selected two variables (Koirala, 2014:30).

Table 6.16 appear for the correlation between the two indicators which shows the results on the power of the linear correlation between the two indicators. This correlation matrix determines how much one variable, like GDP, changes because of changes in the other variable. A high relationship showed a strong link between two variables, while a low correlation indicates a poor connection between two variables. The overall results show that the value of correlation for every variable range from +1 to -1 and most of them are weak correlation and no strong correlation between variables because no one above 0.8 and no zero correlation in which some are positive correlated while the other negative correlated. The positive sign in the result Table 6.16 below denoted a positive linear association among the variables. For instance, GDP experiences a positive correlation with the conventional penetration rate, GFCF and human capital. While labour force, FDI and trade openness depicted negative linear relationship with GDP.

Generally, Table 6.16 Shows the results of correlation among variables lay between weak correlation and medium correlation and there is no strong or high correlation between the variables. This indicates that the data set with their variables is reliable and better for analysis so that to achieve the study objective. The elaboration of the correlation between other variables can be checked in the table below.

Table 6. 16: Correlation Matrix of the Key Variables for Objective Three

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Log (GDP)	1.00								
(2) Log (TPR)	-0.03	1.00							
(3) Log (GFCF)	0.12	-0.09	1.00						
(4) Log (HC)	0.21	0.01	-0.89	1.00					
(5) Log (CTPR)	0.21	-0.01	-0.01	0.07	1.00				
(6) Log (ge)	-0.02	-0.31	0.25	-0.26	-0.05	1.00			
(7) Log (TRO)	-0.10	-0.30	0.03	-0.08	-0.19	0.54	1.00		
(8) Log (lab)	-0.41	-0.02	0.63	-0.87	-0.10	0.49	0.29	1.00	
(9) Log (FDI)	-0.25	0.09	0.01	-0.03	0.13	-0.28	-0.19	-0.09	1.00

Source: Author calculation

6.11 Analysis and Discussion of the Findings of Islamic Insurance on Economic Growth Based on Mainstream Economics

This section provides the GMM regression findings of the empirical estimations on the connection between Islamic insurance and economic growth based on Mainstream economics. Because the relationship between Islamic insurance and economic growth could be reversed that means economic growth increases the demand for Takaful increases or vice versa in the discipline of econometrics analysis, this link is commonly referred to as endogeneity, while if it is not managed, it can produce significant biases in the coefficients. In the context of econometrics analysis, this link is simply referred to as endogeneity, and if it is not managed, it may result in inefficiencies in the estimates (Albiman & Bakar, 2022:374). Also, the study based on OIC countries that there are some similarities among them concerning population, economic growth, geographical, cultural, and religion, therefore fixed effect problems could be raised. To address these potential biases, it is widely recommended to use a dynamic panel estimator based on a GMM.

Table 6.17 shows the results of GMM estimation that include two separate models with different number indicators of independent variables are estimated. Given this information, the coefficients are unlikely to be biased. The number of groups and instruments are supplied for comparison to see whether any overfitting bias arises, as this is one of the most important factors when dealing with GMM estimators. The findings show that all models' number of groups is greater or equal to the number of instruments. The Takaful penetration rate (TPR) that represents the contribution of Takaful on GDP is regressed with all two models while the covid-19 as dummy variable is included. Moreover, the GMM output of Table 6.17 shows that AR (2) in each model is insignificant which means it becomes above 5%, As a result, there appears to be no autocorrelation problem. Similarly, p-values larger than 5% for the Hansen test are deemed to be statistically insignificant. Moreover, the quantity of groups is greater than the number of instruments, therefore there is no risk of overfitting bias.

The findings show Takaful is statistically negative insignificant in the endogenous model while the Solow model revealed positive insignificance. This means that, for the Solow growth model one percent increase on the takaful causes the GDP to

increase by 0.022 generally as the volume of takaful increases the GDP of the country increases. When it comes to its financial structure, according to (Aziz & Kassim, 2020:32) reported that Takaful is incredibly consistent stable and productive. It also works hard to establish a strong market position and proposes growing its market share to support economic growth. Generally, Takaful promotes economic growth and has more potential by encouraging long-term saving and re-investment of the contribution funds in private and public sector projects that have a direct impact on the economy (Aziz & Kassim, 2020). Moreover, Some studies like Quartey (2008) also point out that increasing the generation of capital through Takaful would directly enhance savings in the form of financial assets, which would then stimulate real sector development. Also, these results support the studies of Kamarudin et al. (2023), Nkirote et al. (2017) and Muye & Hassan (2016) where all of them discovered that takaful has a positive significant relationship with economic growth. (Kamarudin et al., 2023) reported that Takaful offer individuals and businesses financial protection against potential risks, and their widespread usage has made them an essential aspect of economic growth. Moreover, it also facilitates people to distribute wealth more efficiently and hence generates more economic impact.

Aziz & Kassim (2020:33) based on their paper give evidence that Takaful offers all-inclusive support and safeguarding against the misplacement of goods and assets, as well as facilitating the turn of capital into wealth and stimulating economic growth. The accumulation of capital from those covered is used to fund the nation's future growth. Takaful meets all critical requirements and demands for economic growth through savings and investment. As an institution, Takaful may contribute to economic growth in various ways, including supporting financial depth through capital market investing operations. Also, Aziz and Kassim (2020) used a survey approach to explore the relationship between Takaful demand and Malaysian economic growth, and the results demonstrate that Takaful can support economic growth through investments and savings. Furthermore, Takaful incentivizes individuals to save and get well-thought-out and well-managed savings programs in addition to contribution/donation schemes. According to some research, takaful can also have a beneficial impact on the interaction between the insurance market and economic growth through reverse or bidirectional causality (Pradhan et al., 2016).

Moreover, COMCEC (2019:142) it indicated that, while Takaful penetration remains low in OIC nations, it is increasing. Nonetheless, the Takaful industry's development prospects remain positive, if OIC nations fully recognize the need for protection in achieving household resilience and long-term economic growth.

Conventional insurance presented by (CTPR) revealed negative insignificance in the endogenous model and Solow model. The finding interpreted that when insurance increases by one percent causes the GDP to decline by 0.088 and 0.028. This demonstrates how insurance penetration does not supports economic growth in OIC nations, which different normally insurance indicating that a robust insurance industry is indispensable for economic progress as it provide longstanding reserves for growth despite also enhancing risk-attractive competence (Akinlo & Apanisile, 2014). This indicates that insurance premiums significantly and favourably affect the economic growth of OIC member nations. Therefore, it is advised that policies be implemented that would increase the penetration of the insurance industry by building the supply chain to reach the critical mass of the population. These findings are by the studies of Lee (2019), Pradhan et al. (2014), Akinlo & Apanisile (2014) and Richterkova & Korab (2013).

This likely due to Takaful does not cover large geographical area with huge capital compared to its competitor. It still makes up a relatively small portion of the financial system. As new Takaful industries are created and supported, the link between Islamic finance and economic growth will be strengthened, and the proportion of Islamic finance in the financial system will rise. Thus, government policies may encourage takaful to promote economic growth. By adding additional Takaful sectors to the financial system and drawing in more economic players, the beneficial correlation between takaful and economic growth may be strengthened.

In summarized on interested variables above, it is shown that while takaful differs slightly from conventional insurance, it tends to be more progressive. This conclusion seems to be in line with the findings of other studies, and the results of this study support the later insurance system because of the advantages that conventional insurance has over takaful, including its longer history, more specialized knowledge base, large capital, widespread distribution, and significantly more sophisticated technology (Jubilee et al., 2021).

The results of control variables, such as gross fixed capital formation revealed a positive significant on economic growth on all models except on endogenous model under conventional insurance found insignificance. The trade openness found positive significant in all models. COVID-19 was found negative insignificant in the three equations except from Islamic insurance under endogenous model. These results are similar to those Malata & Pinshi (2020), who used an econometric method to demonstrate that the stress caused by the COVID-19 epidemic harms the economy. Pinshi (2022) performed a study using a modified Bayesian VAR model and discovered that COVID-19 has a significant impact on trade openness, exchange rates, and inflation.

Table 6. 17: Results of System GMM Estimation for Objective Three

Variables	ENDOGEOUS GROWTH MODEL		SOLOW GROWTH MODEL	
	Islamic Insurance	Conventional Insurance	Islamic Insurance	Conventional Insurance
L.log (GDP)it	0.451**	0.740**	0.939**	0.703**
	(0.108)	(0.170)	(0.057)	(0.164)
Log (TPR)it	-0.007		0.022	
	(0.034)		(0.021)	
Log (HC)it	4.409**	2.546**		
	(1.088)	(0.471)		
Log (GFCF)it	4.130**	3.948**	0.342*	3.005**
	(0.749)	(0.998)	(0.190)	(0.872)
Log (FDI)it	0.079	-0.066	-0.846	-1.047
	(0.476)	(0.514)	(0.501)	(0.666)
Log (TRO)it	0.043*	0.050**	-0.046	0.085**
	(0.020)	(0.019)	(0.029)	(0.029)
Log (ge)it	-0.069	-0.100**	0.141**	-0.065**

Variables	ENDOGEOUS GROWTH MODEL		SOLOW GROWTH MODEL	
	Islamic Insurance	Conventional Insurance	Islamic Insurance	Conventional Insurance
	(0.061)	(0.035)	(0.028)	(0.028)
Covid-19	0.020	-0.044	-0.159	-0.111
	(0.095)	(0.082)	(0.120)	(0.103)
Log (CTPR)it		-0.088		-0.028
		(0.170)		(0.215)
Log (lab)it			-0.080**	-0.194**
			(0.027)	(0.069)
Constant	-4.427	-3.115	3.144	6.966
	(4.042)	(3.252)	(2.976)	(4.543)
AR (1)	0.049	0.000	0.021	0.002
AR (2)	0.354	0.150	0.501	0.304
Hansen	0.117	0.120	0.086	0.152
Sargan	0.313	0.999	0.200	0.994
No. instruments	15.000	15.000	15.000	15.000
No. groups	15.000	15.000	15.000	15.000

Parentheses values stand for Standard errors and * $p < 0.1$, ** $p < 0.05$.

Source: Author calculation

6.11.1 Robustness Checking for the Objective Three

The results from the preceding sections (regression results) are subjected to robustness checks in this part. Additional control variables have been included in this test to investigate if the results are affected by the number of independent variables or not. The additional variables in all models are the consumer price index (CPI) and exchange rate (exch). Tables 6.18 show the outcomes of the two-step GMMs for robustness checking. The robustness checks of the baseline growth model and the

accompanying economic growth models are reported. The results pass the AR (1) and AR (2) concerning the auto-correlation test and the Sargan test.

The findings reveal that the signs and magnitude of the coefficient's variables are consistent with prior estimations except for some minor changes. The lag of the dependent variable still its coefficient remains positive and significant in all models. The Takaful variable still remains positive in all models but insignificant and conventional insurance as well but in robustness becomes significant from endogenous model. The findings of the Covid 19 continue to hurt economic growth in all models. These findings imply that the conclusions presented in the preceding sections are resistant to the addition of additional control variables.

Furthermore, gross fixed capital formation remains a positive significant variable on economic growth in the Islamic insurance under endogenous model and conventional insurance under Solow model which is similar sign on the above discussion. Also, the labour force continues to remain negative in all two models where these results are identical to the previous one. As seen in the table above, FDI has an unfavourable impact on economic growth, again similar findings are revealed in this section. This section also displays negative signs in the models probably the Takaful could be affected by exchange rate as well as inflation. For instance (Ayyubi et al., 2019:196) found the inflation influence the Takaful negatively performance on economic growth.

Table 6. 18: Robustness Checking Results for Objective Three

VARIABLES	ENDOGEOUS GROWTH MODEL		SOLOW GROWTH MODEL	
	Islamic Insurance	**Conventional Insurance**	**Islamic Insurance**	**Conventional Insurance**
L.log (GDP)it	0.778**	0.581**	0.804**	0.999**
	(0.260)	(0.160)	(0.244)	(0.181)
Log (TPR)it	0.120		0.022	
	(0.172)		(0.090)	
Log (HC)it	8.858**	-2.532		

VARIABLES	ENDOGEOUS GROWTH MODEL		SOLOW GROWTH MODEL	
	Islamic Insurance	Conventiona l Insurance	Islamic Insurance	Conventional Insurance
	(3.704)	(2.438)		
Log (GFCF)it	6.149**	-0.954	1.686	2.439**
	(2.417)	(1.971)	(1.399)	(1.108)
Log (FDI)it	-2.017	-3.461**	0.438	0.071
	(1.462)	(1.302)	(0.291)	(0.187)
Log (TRO)it	0.140*	0.068**	0.091	0.050**
	(0.075)	(0.021)	(0.074)	(0.020)
Log (ge)it	0.477	-0.076	0.341	-0.025
	(0.397)	(0.065)	(0.335)	(0.102)
Log (CPI)it	0.492	-0.030	0.582	0.058
	(0.386)	(0.096)	(0.559)	(0.126)
Log (exch)it	-0.450*	-0.016	-0.089	-0.013
	(0.224)	(0.050)	(0.084)	(0.056)
Covid-19	-0.695	-0.186	-0.048	-0.096
	(0.416)	(0.133)	(0.272)	(0.136)
Log (CTPR)it		0.445**		-0.143
		(0.158)		(0.099)
Log (lab)it			-0.272	-0.110
			(0.196)	(0.068)
Constant	-12.430	25.187**	-11.575	-2.154
	(9.861)	(11.305)	(9.638)	(3.656)
AR (1)p	0.014	0.000	0.008	0.024
AR (2)p	0.277	0.873	0.425	0.106

VARIABLES	ENDOGEOUS GROWTH MODEL		SOLOW GROWTH MODEL	
	Islamic Insurance	Conventiona l Insurance	Islamic Insurance	Conventional Insurance
Hansen	0.341	0.269	0.130	0.059
Sargan	0.949	0.922	0.404	0.996
No. instruments	15.000	14.000	14.000	15.000
No. groups	15.000	15.000	15.000	15.000

Parentheses values stand for Standard errors and $^{*}\ p < 0.1$, $^{**}\ p < 0.05$.

Source: Author calculation

6.12 Discussion of the Findings on the Comparison between Islamic Finance and Conventional Finance on Economic Growth

This study is mostly intended to explain empirical analysis of the connection of Islamic finance on economic growth from the perspective of Mainstream economics of thought, the findings as presented in the above sections and from table 6.1 to table 6.18 show clearly that Islamic finance seems to be resilience and flexible financial system that could be applied in any economic schools since the findings have met the criteria of GMM estimator for the model to be valid and reliable. This happens since Islamic finance works on real economic activities and transactions and owing to principles including ownership, equity, participation, and its emphasis on risk-sharing ownership that strongly links to real activities that could affect economic growth automatically. On the other side concerned with conventional finance includes banks, capital markets and insurance companies their findings show either negative or insignificance that have an unfavourable contribution to economic growth, this is general because conventional finance is based on financialization in which financial sectors accumulate more profit through the financial channels rather than production, sale, leasing, trade, commodity production (El-Galfy & Khiyar, 2012:948). Because of this, some economists contend that the financialization of an economy may result from the expansion of financial services in the wake of the most contemporary financial crisis. Apart from that, the relationship between the financial and real sectors has been severely eroded by financialization, according to Mirakhor and Krichene (2009),

enabling the overturned credit pyramid to achieve a leverage ratio in respect to actual growth that may have overshoot a manifold of 50. The worrying rise of the reversed credit pyramid in proportion to actual growth has been seen, and it has been concluded that financialization has almost destroyed the connection between finance and production. William K. Black (2009) enumerated the real economy is harmed by the financial sector. According to him, the financial industry serves as the predator state's extremely sharp fangs, eating apart the country. The banking industry sucked out cash for its gain and then misallocated the remaining resources. To reward the already wealthy people at the price of the country's financial security, this was done in a way that hurt the actual economy.

By their very nature, Islamic financing methods are contradicting with and inapplicable to conventional banking's purely monetary transactions, such as debt swapping, debt rescheduling, financing speculative balances, swaps, and collateralized debt obligations (CDOs), which are not often valuable additions to the real economy (El-Galfy & Khiyar, 2012:949).

Therefore, this study covered the testing of the Islamic finance indicators on the four models that developed under the endogenous and Solow framework concerning economic growth. Both models used their ingredients with Islamic finance and conventional finance variables. The findings generated under the GMM estimator show that through all model Islamic and conventional finance could be applied. These results have been justified by many studies that used the individual model and they confirmed the legitimacy and validity of that model on Islamic and conventional finance to economic growth.

In specific terms, starting with the endogenous model, many studies of Islamic finance for instance (Ledhem & Mekidiche, 2022:6) and (Ledhem, 2020:5) used the endogenous model to scrutinize the impact on economic growth. This model promotes technical advancement deriving from the degree of investment and the size of human capital. In addition, the development of Islamic finance acts as an exogenous element inside the endogenous model, contributing to growth. Consistency (Musa et al., 2020:93) used the endogenous growth model and suggested that the aggregate production function might include an indicator for Islamic finance because the financial sector boosts economic growth through increased investments.

In line with Paul Romer's (2011) suggested endogenous growth, a framework of economic growth based on increased investment and human capital by exogenous factors like the financial markets. Furthermore, several prominent empirical research support the notion that finances are exogenous elements in the paradigm of endogenous growth. This, (Hassan et al., 2011) found that, based on the endogenous growth model, finance development promotes technical progress through increasing innovation, which in turn leads to important yield and is therefore necessary for economic change. Beyond that, a notable research by (Fanta & Makina, 2017) showed how the financial markets would boost economic growth by enhancing assets and resources. Consequently, Thumrongvit et al. (2013) suggest that the endogenous growth hypothesis used securities to accelerate economic growth.

More significantly, Mitsaliyandito et al. (2017:6) have studied the achievement of the sukuk market on economic growth in Indonesia. This study demonstrates that overall, the sukuk market has a favourable impact on Indonesia's GDP. While specifically speaking, the domestic sovereign sukuk has a greater impact on the GDP of Indonesia. Therefore, sukuk may be viewed as a useful financial tool for improving the Indonesian economy. This model illustrates the connection between GDP growth, net savings, and capital output. The net-savings ratio, which demonstrates a nation's tendency to save, has a direct impact on production growth. The amount of capital required to create one unit of economic growth is another way that the inverse capital-output ratio of an economy affects a nation's output growth. All the money raised through the sale of sukuk will be utilized to increase capital. Capital production demonstrates increased capital productivity. The stronger the capital's productivity, which in turn influences rises in output growth, the lower the capital value relative to the quantity of output that may be produced.

Another group of researchers employed Solow model on the scrutiny of the impact of Islamic finance on economic growth. For instance, (Tan & Shafi, 2021) examine the impact of the impact of Sukuk and other components of Capital markets on economic growth in Malaysia. The results reveal the relationship between Islamic capital market variables (Sukuk and other components) have a positive, although insignificant influence on economic growth. These findings are consistence with our study as the Solow model could applied for the measurement of economic growth through Islamic

finance components. As a result, this Solow model argues that the Islamic capital market operates in a steady state and serves as a driving force for economic expansion, which is compatible with both theoretical models and empirical evidence. This research closes a gap by researching all two models simultaneously, with each model presenting its findings as proof and supporting the applicability of models on Islamic financing to economic growth.

CONCLUSION

There have been many research on the impact of Islamic finance on economic growth, trying to find out whether there is a linking between the segment of the Islamic financial system and economic growth. Most researchers, after conducting empirical analyses, concluded that there is a connection between the development of Islamic finance and economic growth, which is consistent with the economic theories. However, the application of different Mainstream economics to show how they are related to Islamic finance is a very new concept. Also, there are very limited studies and empirical evidence that show the impact of Islamic finance on economic growth in most of the Mainstream economics of thought compared to conventional finance although Islamic finance has dominated a large part of OIC countries and even has better performance and increasingly tremendously in term of their assets, transactions, and geographical coverage.

Subsequently, the current global financial crises in the financial sectors demonstrate and prove that the Islamic mode of financing is the feasible alternative that can rescue conventional finance from further disaster. Islamic finance is capable of replacing the conventional finance model (Issah, 2019).

The objective of the study was to explore empirically whether Islamic finance has an impact on economic growth by using different mainstream economics theories, by applying the quantitative approach based on panel data that was analyzed through the Generalized Method of Moments (GMM). The study is divided into six (6) chapters including the introduction, the components of Islamic finance, the theoretical framework for economic growth, the literature review, the research methodology and the last chapter called Findings and Discussions.

7.1 Summary of the Study

The impact of Islamic finance on economic growth from the perspective of Mainstream Economics in the OIC countries was investigated in this study. This study covered all three components of Islamic finance including Islamic banks, Islamic capital markets and Islamic insurance. Mainstream economics theories have been included in the study which are endogenous growth theory and Solow growth theory.

Because the study is based on a quantitative method, and it comprises the 21 OIC countries with a time range from 2017Q1 to 2021Q4 the panel data collected, and carried out, the GMM technique has been applied since the effective and powerful method for panel data and become reliable for this study since comprising 2 models and also enable to control the issue of endogeneity as well as a fixed effect. The study discovered that all two mainstream economics models could be adapted to Islamic finance on economic growth and finalized on Islamic finance is more applicable on economic growth than conventional finance.

Therefore, the study also proved that all Islamic finance variables including total financing of Islamic banks, Sukuk issued per GDP and Takaful penetration rate have positive significance to economic growth in OIC countries. On the other hand, the variables of conventional finance have mixed results, some variables such as bank credits to private sectors, and total value stock traded per GDP have negative significance and are insignificant on economic growth while the conventional insurance penetration rate revealed positive significance to economic growth.

The findings for Islamic banks that described basing on the objective number one shown that, empirically Islamic banks have positive significant impacts on economic growth from both mainstream economics. Since this is the main and highly developed Islamic industry in many countries have been manifested their benefit to the economic growth even though there some arguments concerning of some Islamic financial transactions have imitated from conventional banks especial Bay inah. Therefore, deep discussion and analysis are required on this product that operates in some countries. Moreover, the findings proven that conventional banks have not significant impact on economic growth specifical on the real impact compare the Islamic banks.

For the second objective that demonstrate the impact of Islamic capital markets specifical Sukuk markets have found significant in all models. The growth and impact of sukuk markets have been reported to be significant on the economy, social, environment and so on. Therefore, this study comes to justify and prove these circumstances. Unfortunately, the conventional capital markets still shown have not benefited the economy because found insignificant from both mainstream economics.

The last objective explained the impact of Takaful on economic growth however, the findings are unfavourable on economic growth. The findings show that Takaful and

conventional insurance have similar effects on economic growth. Both have not significant impact. From these findings there are many arguments whether the Takaful works as conventional insurance means it imitate the procedures and products that offer or the Takaful since still work on infant stage, its impact on the economy does not exhibit. As reported of IFSB 2022 show the Takaful has only 5 percent of share Islamic finance compared to Islamic banks 69 percent and ICM is 26 percent.

Moreover, the explanatory variables such as GFCF, government expenditures, labor force and trade openness have mixed results from one objective to another. This implies that these variables have a deep impact on economic growth based on certain circumstances. Thus, these GMM results have achieved robust evidence that Islamic finance has an impact on economic growth with different variables under the endogenous and Solow model. Also, the findings have attained robust and confirm evidence that IF is more potential in OIC countries as a direct real contribution to growth under both models. Consequently, this empirical research approves with the studies of (Issa, 2022), (Ledhem & Mekidiche, 2022), (Naz & Gulzar, 2022) that found Islamic finance has an impact on economic growth. Also, these findings have achieved robust results and confirm evidence.

All in all, the findings of this study would make important additions to academic literature, as well as give insight to policymakers and policy regulators. According to the findings, Islamic financial sectors effectively played its major role as a financial intermediary on economic growth, which means that OIC countries and other countries can potentially use Islamic financial engineering to innovative Islamic financial products or services and marketing strategies such as infrastructure and human capital improvement to satisfy the future demand for Islamic financial instruments and ultimately increase the economic growth. Regarding Islamic financial components as viable strategies may result in financial stability and, ultimately, economic prosperity (Naz, 2022). Furthermore, the findings suggest that Islamic finance could potentially be used in any mainstream economics models. They should consistently examine the implementation of Islamic financial policies and their consequences for macroeconomic circumstances to protect against any financial crises that occurred in 2007 and 2008.

Despite having contributions, this research holds a significant challenge which includes concentrates just on the 21 OIC nations, even though the OIC has more than 57 member states. The non-availability of data in some nations may have an impact since the Islamic finance industry in some countries is still in its infancy and there is no data to present for study. Another limitation was that the time frame of the observations appeared to be short, throughout the time the research examined quarterly data from 2017Q1 to 2021Q4.

Finally, because several nations have just established the Islamic finance industry, making data availability is challenging. The last limitation revealed on some Islamic financial industries is not yet established in many countries, particularly Islamic insurance in comparison to Islamic banks and Islamic capital markets. Due to the unavailability of the data, some countries have been skipped in the research, for this limitation, the research employed only 15 countries for Islamic insurance and for the time range from 2018Q1 to 2021Q1, the end was difficult to include a wide range of variables in the study that could bring deeply results in every Islamic financial industry.

7.2 Recommendations of the Study

Regarding the findings, the thesis recommends that the Islamic finance components should encourage Shari'ah-compliant investments and transactions to inspire long-term savers, and avoid investing their funds in speculative transactions, behaviours and other virtual activities that could not contribute any value to the economy and finance. Recently, the high proportion of Islamic financial resources and their enlarge presence have significance in the OIC countries and other Muslim and non-Muslim countries in strengthening the real economy of the nation. Numerous empirical studies justified the determine of Islamic capital markets, and Islamic banks on economic growth. These results revealed that all selected economic growth models have a significant effect on the real economy based on Islamic finance and more interestingly Islamic insurance, ICM and Islamic banks are having a positive effect on the real economy.

Moreover, there is a need to re-channel finance to become strictly through sale, lease and sharing while delegalized interest on debt bases and other fake transactions. Under this suggestion, we are required to return to the basic function of finance redirecting the finance sectors to make it a support role for the real economy. That is to facilitate

the channelling of funds to the productive sectors instead of attracting funds and other finances from productive sectors into speculation activities. Finance becomes developmental by nature when it is based on real assets and closely related to assets that generate wealth. This is because every financial transaction predictably sends out a direct market signal that encourages producers to re-generate the assets or goods that have been prepared (IFSI, 2020). For instance, Islamic banks offer credit based on owning real goods and services and selling or leasing them or offering them as principal contributions in sharing endeavours (Kahf, 2015).

As a corollary to the findings, the study suggests that there should be a framework and initiatives that Islamic finance could interact with the conventional financial system, competing with equal terms as well as creating a way to share experiences and platforms between them. Under that framework and platform could enable the Islamic financial Industry to solve different challenges faced and it could redirect financial resources towards real investments. Eventually, economic growth and development could be achieved side by side with social impact, justice, and financial stability.

Also, there are efforts needed to refine all financial and economic institutions that operate in many countries following the principles of Islamic finance. This is because there is much evidence and events that show the failure of the conventional financial system. The global financial crisis that happened from 2007 to 2008 brings clear evidence of the failure of traditional finance. The implementation of Islamic financial principles is compulsory for all as justified by Islamic finance has grown dramatically in recent years, but Cizakca (2014) argues that this growth cannot create economic growth on its own unless specific Islamic financial precepts and requirements are met throughout the rest of the economy. Anwar (1987) suggested an interest-free economic and financial model in response to the failure of traditional finance, as evidenced by increased poverty, bankruptcy, inflation, high exchange rate volatility, hunger, poor output, environmental degradation, and exploitation of the poor by the powerful.

In parallel to the findings, there is a need to gradually eliminate of zero-sum and other speculative contracts such as betting on currency prices, and forex trading. Also, all credit and insurance derivatives that all highly and commonly operated under conventional financial sectors parallel to some speculative pattern behaviour should

be eliminated such as eliminating market makers and kicking them out of organized markets.

According to the findings of this study, all nations that have not yet initiated and implemented the Islamic financial industry should do so. This implies that the government should give more incentives to promote and create the necessary rules and regulations, as well as a friendly environment for the private and public sectors to offer Islamic financial services such as Islamic banks, Takaful, and Islamic capital markets, Education to the bankers, leaders and government regulators are needed to increase understanding, awareness and knowledge about Islamic finance that could boost the establishment these industries. For example, since many governments have committed to providing many infrastructures, it is strongly advised to develop Islamic finance like issuing Sukuk to investors so that implementation may occur very effectively and efficiently. Moreover, many witnesses prove that Islamic finance has more impactful on the economy and society. For instance, Alkhawaja (2019) reported that in Turkey the sovereign Sukuk impact on GDP increased gradually to reach 0.54% in 2017.

7.3 Area for Further Research

Based on the findings and nature of Islamic finance, there are need for future research to be carried out examine the impact of Islamic modes of financing on economic growth. As we know Islamic finance is based on the real activities that are generated under either selling, partnership or Ijarah and all these are operated on different modes such as Mudarabah, Musharakah, ijarah, Istisna, Mudarabah and so on. These transactions are carried out in all economic activities such as trading, manufacturing industries, fishing, mining, construction, agriculture, and others. Because of that, there should be a link between the Islamic modes of finance on economic growth unfortunately there is little, or no studies have been conducted to check out their support to economic growth. Since most of the studies investigate the impact of Islamic finance on the aggregate form and not based on the specific mode of finance like Mudarabah, Therefore, this study recommends that further study is needed in this area to examine the Islamic modes of finance on economic growth.

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CURRICULUM VITAE

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PERSONAL PARTICULARS

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EDUCATION BACKGROUD

INSTITUTIONS	LEVEL OF STUDY	COURSES STUDIES	TIME FRAME
Istanbul Sabahattin Zaim University	Ph.D. Student	Ph.D. of Islamic Economics and Finance	2020 - 2024
Zanzibar University	MASTER'S DEGREE	Master of Science in Economics and Finance	2014 - 2016
Zanzibar University	DEGREE	Bachelor of Art in Economics	2009- 2012

AWARDS

- Certificate of Master Degree of Economics and Finance at Zanzibar University - (2014/16)
- Transcript of the master's degree at Zanzibar University (2014/16)
- Certificate of the Degree at Zanzibar University (2012)
- Transcript of the Degree at Zanzibar University (2012)
- Certificate of ACSEE (Advanced certificate of Secondary Education Examination) (2008)
- Certificate of TAMSYA (Tanzania Muslim Students Youth Association)- (2012)

MY PUBLICATIONS

1. Ali, O. S. (2021a). Assessment of Macroeconomics Determinants on Islamic Banking Profitability and Liquidity in United Arab Emirates and Tanzania. *Asian Journal of Economics, Business and Accounting*, *21*(8), 17–28. https://doi.org/10.9734/ajeba/2021/v21i830408

2. Ali, O. S. (2021b). *Nexus Islamic Banking and Economic Growth in Bahrain*. *9414*, 180–191. https://doi.org/10.36348/sjef.2021.v05i05.001

3. Ali, O.S., (2022). The impact of corruption on the performance of Islamic banking in the United Arab Emirates: empirical evidence by using static panel analysis. Journal of Economics, Finance, and Accounting (JEFA), 9(4), 166-177. http://doi.org/10.17261/Pressacademia.2022.1639

REFEREES

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